

z/OS Communications Server



SNA Messages

Version 2 Release 2

Note:

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 1289.

This edition applies to Version 2 Release 2 of z/OS (5650-ZOS), and to subsequent releases and modifications until otherwise indicated in new editions.

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- Title and order number of this document
- Page number or topic related to your comment

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About this document

This document is intended to help network operators and system programmers in a VTAM® environment understand the meaning of VTAM messages. You can use this document as a reference for specific VTAM messages. For background reading to help understand concepts involved in VTAM operations and for examples of message output for a variety of DISPLAY commands, see z/OS Communications Server: SNA Operation.

The information in this document supports both IPv6 and IPv4. Unless explicitly noted, information describes IPv4 networking protocol. IPv6 support is qualified in the text.

Who should read this document

This document is for anyone required to interpret a VTAM message. Familiarity with VTAM concepts and terms is assumed.

How this document is organized

The messages are listed in alphanumeric order by message ID. For each message ID, the book contains the text and a description of the message. This book contains the following chapters:

- Chapter 1, “Introduction,” on page 1 contains information about message text formats, message description format, message groups and subgroups, message routing, message suppression, the online message facility, and user-selected message changes.
- Chapter 2, “ELM messages for logon manager network operators,” on page 9 contains all logon manager messages.
- Chapter 3, “IKT messages for TSO/VTAM network operators,” on page 23 contains all TSO/VTAM messages for network operators.
- Chapter 4, “IKT messages for TSO/VTAM terminal users,” on page 41 contains all TSO/VTAM messages for terminal users.
- These chapters contain VTAM messages for network operators organized in message number order:
 - Chapter 5, “IST messages for VTAM network operators IST001I – IST399I,” on page 43
 - Chapter 6, “IST messages for VTAM network operators IST400I – IST799I,” on page 139
 - Chapter 7, “IST messages for VTAM network operators IST800I – IST1199I,” on page 273
 - Chapter 8, “IST messages for VTAM network operators IST1200I – IST1599I,” on page 459
 - Chapter 9, “IST messages for VTAM network operators IST1600I – IST1999I,” on page 675
 - Chapter 10, “IST messages for VTAM network operators IST2000I – IST2446I,” on page 823

- Chapter 11, “ISTH messages for IBM Health Checker for z/OS,” on page 1059 and Chapter 12, “ISTM messages for migration checks for IBM Health Checker for z/OS,” on page 1073 contains the messages that are issued by IBM® Health Checker for z/OS®.
- Chapter 13, “IUT messages for VTAM network operators,” on page 1085 contains the IUT VTAM messages for network operators.
- Chapter 14, “IVT messages for VTAM network operators,” on page 1087 contains the IVT VTAM messages for network operators.
- Chapter 15, “USS messages,” on page 1119 contains information on unformatted system services (USS) messages.
- Chapter 16, “Command and RU types in VTAM messages,” on page 1123 lists the command and request/response unit (RU) types displayed in VTAM operator messages.
- Chapter 17, “Node and ID types in VTAM messages,” on page 1137 lists the node and ID types displayed in VTAM operator messages.
- Appendix A, “Message additions and changes,” on page 1139
- Appendix B, “Message-flooding prevention,” on page 1141
- Appendix C, “Message routing and suppression,” on page 1143
- Appendix D, “Messages affected by the MSGLVL option,” on page 1205
- Appendix E, “Message text for VTAM operator messages,” on page 1217
- Appendix F, “Related protocol specifications,” on page 1261 lists the related protocol specifications for TCP/IP.
- Appendix G, “Architectural specifications,” on page 1285 lists documents that provide architectural specifications for the SNA protocol.
- Appendix H, “Accessibility,” on page 1287 describes accessibility features to help users with physical disabilities.
- “Notices” on page 1289 contains notices and trademarks used in this document.
- “Bibliography” on page 1299 contains descriptions of the documents in the z/OS Communications Server library.

How to use this document

IP addresses in messages are displayed as either dotted decimal for IPv4, or colon-hexadecimal for IPv6.

Determining whether a publication is current

As needed, IBM updates its publications with new and changed information. The following information describes how to determine if you are looking at the most current copy of a publication:

- At the end of a publication's order number there is a dash followed by two digits, often referred to as the dash level. A publication with a higher dash level is more current than one with a lower dash level. For example, in the publication order number GC28-1747-07, the dash level 07 means that the publication is more current than previous levels, such as 05 or 04.
- If a hardcopy publication and a softcopy publication have the same dash level, it is possible that the softcopy publication is more current than the hardcopy publication. Check the dates shown in the Summary of Changes. The softcopy publication might have a more recently dated Summary of Changes than the hardcopy publication.
- To compare softcopy publications, you can check the last 2 characters of the publication's file name (also called the book name). The higher the number, the

more recent the publication. Also, next to the publication titles in the CD-ROM booklet and the readme files, there is an asterisk (*) that indicates whether a publication is new or changed.

How to contact IBM service

For immediate assistance, visit this website: <http://www.software.ibm.com/network/commserver/support/>

Most problems can be resolved at this website, where you can submit questions and problem reports electronically, and access a variety of diagnosis information.

For telephone assistance in problem diagnosis and resolution (in the United States or Puerto Rico), call the IBM Software Support Center anytime (1-800-IBM-SERV). You will receive a return call within 8 business hours (Monday – Friday, 8:00 a.m. – 5:00 p.m., local customer time).

Outside the United States or Puerto Rico, contact your local IBM representative or your authorized IBM supplier.

If you would like to provide feedback on this publication, see “Communicating your comments to IBM” on page 1303.

Conventions and terminology that are used in this document

Commands in this book that can be used in both TSO and z/OS UNIX environments use the following conventions:

- When describing how to use the command in a TSO environment, the command is presented in uppercase (for example, NETSTAT).
- When describing how to use the command in a z/OS UNIX environment, the command is presented in bold lowercase (for example, **netstat**).
- When referring to the command in a general way in text, the command is presented with an initial capital letter (for example, Netstat).

All the exit routines described in this document are *installation-wide exit routines*. The installation-wide exit routines also called installation-wide exits, exit routines, and exits throughout this document.

The TPF logon manager, although included with VTAM, is an application program; therefore, the logon manager is documented separately from VTAM.

Samples used in this book might not be updated for each release. Evaluate a sample carefully before applying it to your system.

Note: In this information, you might see the following Shared Memory Communications over Remote Direct Memory Access (SMC-R) terminology:

- RDMA network interface card (RNIC), which is used to refer to the IBM 10 GbE RoCE Express[®] feature.
- Shared RoCE environment, which means that the 10 GbE RoCE Express feature operates on an IBM z13™ (z13) or later system, and that the feature can be used concurrently, or shared, by multiple operating system instances. The RoCE Express feature is considered to operate in a shared RoCE environment even if you use it with a single operating system instance.

For definitions of the terms and abbreviations that are used in this document, you can view the latest IBM terminology at the IBM Terminology website.

Clarification of notes

Information traditionally qualified as Notes is further qualified as follows:

Note Supplemental detail

Tip Offers shortcuts or alternative ways of performing an action; a hint

Guideline

Customary way to perform a procedure

Rule Something you must do; limitations on your actions

Restriction

Indicates certain conditions are not supported; limitations on a product or facility

Requirement

Dependencies, prerequisites

Result Indicates the outcome

Prerequisite and related information

z/OS Communications Server function is described in the z/OS Communications Server library. Descriptions of those documents are listed in “Bibliography” on page 1299, in the back of this document.

Required information

Before using this product, you should be familiar with TCP/IP, VTAM, MVS™, and UNIX System Services.

Softcopy information

Softcopy publications are available in the following collection.

Titles	Order Number	Description
<i>IBM System z Redbooks Collection</i>	SK3T-7876	The IBM Redbooks® publications selected for this CD series are taken from the IBM Redbooks inventory of over 800 books. All the Redbooks publications that are of interest to the System z® platform professional are identified by their authors and are included in this collection. The System z subject areas range from e-business application development and enablement to hardware, networking, Linux, solutions, security, parallel sysplex, and many others. For more information about the Redbooks publications, see http://www-03.ibm.com/systems/z/os/zos/zfavorites/ .

Other documents

This information explains how z/OS references information in other documents.

When possible, this information uses cross-document links that go directly to the topic in reference using shortened versions of the document title. For complete titles and order numbers of the documents for all products that are part of z/OS,

see z/OS Information Roadmap (SA23-2299). The Roadmap describes what level of documents are supplied with each release of z/OS Communications Server, and also describes each z/OS publication.

To find the complete z/OS library, visit the z/OS library in IBM Knowledge Center (www.ibm.com/support/knowledgecenter/SSLTBW/welcome).

Relevant RFCs are listed in an appendix of the IP documents. Architectural specifications for the SNA protocol are listed in an appendix of the SNA documents.

The following table lists documents that might be helpful to readers.

Title	Number
<i>DNS and BIND</i> , Fifth Edition, O'Reilly Media, 2006	ISBN 13: 978-0596100575
<i>Routing in the Internet</i> , Second Edition, Christian Huitema (Prentice Hall 1999)	ISBN 13: 978-0130226471
<i>sendmail</i> , Fourth Edition, Bryan Costales, Claus Assmann, George Jansen, and Gregory Shapiro, O'Reilly Media, 2007	ISBN 13: 978-0596510299
<i>SNA Formats</i>	GA27-3136
<i>TCP/IP Illustrated, Volume 1: The Protocols</i> , W. Richard Stevens, Addison-Wesley Professional, 1994	ISBN 13: 978-0201633467
<i>TCP/IP Illustrated, Volume 2: The Implementation</i> , Gary R. Wright and W. Richard Stevens, Addison-Wesley Professional, 1995	ISBN 13: 978-0201633542
<i>TCP/IP Illustrated, Volume 3: TCP for Transactions, HTTP, NNTP, and the UNIX Domain Protocols</i> , W. Richard Stevens, Addison-Wesley Professional, 1996	ISBN 13: 978-0201634952
<i>TCP/IP Tutorial and Technical Overview</i>	GG24-3376
<i>Understanding LDAP</i>	SG24-4986
z/OS Cryptographic Services System SSL Programming	SC14-7495
z/OS IBM Tivoli Directory Server Administration and Use for z/OS	SC23-6788
z/OS JES2 Initialization and Tuning Guide	SA32-0991
z/OS Problem Management	SC23-6844
z/OS MVS Diagnosis: Reference	GA32-0904
z/OS MVS Diagnosis: Tools and Service Aids	GA32-0905
z/OS MVS Using the Subsystem Interface	SA38-0679
z/OS Program Directory	GI11-9848
z/OS UNIX System Services Command Reference	SA23-2280
z/OS UNIX System Services Planning	GA32-0884
z/OS UNIX System Services Programming: Assembler Callable Services Reference	SA23-2281
z/OS UNIX System Services User's Guide	SA23-2279
z/OS XL C/C++ Runtime Library Reference	SC14-7314
zEnterprise System and System z10 OSA-Express Customer's Guide and Reference	SA22-7935

Redbooks publications

The following Redbooks publications might help you as you implement z/OS Communications Server.

Title	Number
<i>IBM z/OS V2R1 Communications Server TCP/IP Implementation, Volume 1: Base Functions, Connectivity, and Routing</i>	SG24-8096
<i>IBM z/OS V2R1 Communications Server TCP/IP Implementation, Volume 2: Standard Applications</i>	SG24-8097
<i>IBM z/OS V2R1 Communications Server TCP/IP Implementation, Volume 3: High Availability, Scalability, and Performance</i>	SG24-8098
<i>IBM z/OS V2R1 Communications Server TCP/IP Implementation, Volume 4: Security and Policy-Based Networking</i>	SG24-8099
<i>IBM Communication Controller Migration Guide</i>	SG24-6298
<i>IP Network Design Guide</i>	SG24-2580
<i>Managing OS/390 TCP/IP with SNMP</i>	SG24-5866
<i>Migrating Subarea Networks to an IP Infrastructure Using Enterprise Extender</i>	SG24-5957
<i>SecureWay Communications Server for OS/390 V2R8 TCP/IP: Guide to Enhancements</i>	SG24-5631
<i>SNA and TCP/IP Integration</i>	SG24-5291
<i>TCP/IP in a Sysplex</i>	SG24-5235
<i>TCP/IP Tutorial and Technical Overview</i>	GG24-3376
<i>Threadsafe Considerations for CICS</i>	SG24-6351

Where to find related information on the Internet

z/OS

This site provides information about z/OS Communications Server release availability, migration information, downloads, and links to information about z/OS technology

<http://www.ibm.com/systems/z/os/zos/>

z/OS Internet Library

Use this site to view and download z/OS Communications Server documentation

www.ibm.com/systems/z/os/zos/bkserv/

IBM Communications Server product

The primary home page for information about z/OS Communications Server

<http://www.software.ibm.com/network/commserv/>

IBM Communications Server product support

Use this site to submit and track problems and search the z/OS Communications Server knowledge base for Technotes, FAQs, white papers, and other z/OS Communications Server information

<http://www.software.ibm.com/network/commserv/support/>

IBM Communications Server performance information

This site contains links to the most recent Communications Server performance reports.

<http://www.ibm.com/support/docview.wss?uid=swg27005524>

IBM Systems Center publications

Use this site to view and order Redbooks publications, Redpapers™, and Technotes

<http://www.redbooks.ibm.com/>

IBM Systems Center flashes

Search the Technical Sales Library for Techdocs (including Flashes, presentations, Technotes, FAQs, white papers, Customer Support Plans, and Skills Transfer information)

<http://www.ibm.com/support/techdocs/atmastr.nsf>

Tivoli® NetView® for z/OS

Use this site to view and download product documentation about Tivoli NetView for z/OS

<http://www.ibm.com/support/knowledgecenter/SSZJDU/welcome>

RFCs

Search for and view Request for Comments documents in this section of the Internet Engineering Task Force website, with links to the RFC repository and the IETF Working Groups web page

<http://www.ietf.org/rfc.html>

Internet drafts

View Internet-Drafts, which are working documents of the Internet Engineering Task Force (IETF) and other groups, in this section of the Internet Engineering Task Force website

<http://www.ietf.org/ID.html>

Information about web addresses can also be found in information APAR III1334.

Note: Any pointers in this publication to websites are provided for convenience only and do not serve as an endorsement of these websites.

DNS websites

For more information about DNS, see the following USENET news groups and mailing addresses:

USENET news groups

`comp.protocols.dns.bind`

BIND mailing lists

<https://lists.isc.org/mailman/listinfo>

BIND Users

- Subscribe by sending mail to `bind-users-request@isc.org`.
- Submit questions or answers to this forum by sending mail to `bind-users@isc.org`.

BIND 9 Users (This list might not be maintained indefinitely.)

- Subscribe by sending mail to `bind9-users-request@isc.org`.
- Submit questions or answers to this forum by sending mail to `bind9-users@isc.org`.

The z/OS Basic Skills Information Center

The z/OS Basic Skills Information Center is a web-based information resource intended to help users learn the basic concepts of z/OS, the operating system that runs most of the IBM mainframe computers in use today. The Information Center is designed to introduce a new generation of Information Technology professionals to basic concepts and help them prepare for a career as a z/OS professional, such as a z/OS systems programmer.

Specifically, the z/OS Basic Skills Information Center is intended to achieve the following objectives:

- Provide basic education and information about z/OS without charge
- Shorten the time it takes for people to become productive on the mainframe
- Make it easier for new people to learn z/OS

To access the z/OS Basic Skills Information Center, open your web browser to the following website, which is available to all users (no login required):

<http://www-01.ibm.com/support/knowledgecenter/zosbasics/com.ibm.zos.zbasics/homepage.html?cp=zosbasics%2F0>

Summary of changes for SNA Messages

This document contains terminology, maintenance, and editorial changes, including changes to improve consistency and retrievability. Technical changes or additions to the text and illustrations are indicated by a vertical line to the left of the change.

Changes made in z/OS Communications Server Version 2 Release 2, as updated June 2017

This document contains information previously presented in z/OS Communications Server: IP Configuration Guide, SC27-3650-06, which supported z/OS Version 2 Release 2.

New information

- IST2445I
- IST2446I

Changed information

- IST315I
- IST879I
- IST1189I
- IST1370I

Changes made in z/OS Version 2 Release 2, as updated September 2016

This document contains information previously presented in z/OS Communications Server: SNA Messages, SC27-3671-03, which supported z/OS Version 2 Release 2.

New information

- IST2424I
- IST2425I
- IST2426I
- IST2427I
- IST2428I
- IST2429I
- IST2430I
- IST2431I
- IST2432I
- IST2433I
- IST2434I
- IST2435I
- IST2436I
- IST2437I

- IST2438I
- IST2439I
- IST2440I
- IST2441I
- ISTH020I
- ISTH021E
- ISTH029I
- ISTH030E
- ISTH031I
- ISTH032E
- ISTH033I
- ISTH034E
- ISTM031I
- ISTM032E

Changed information

- IST1242I
- IST1244I
- IST1345I
- ISTH005I
- ISTH006E

Deleted information

- ISTM015I
- ISTM016E

Changes made in z/OS Version 2 Release 2, as updated March 2016

This document contains information previously presented in z/OS Communications Server: SNA Messages, SC27-3671-03, which supported z/OS Version 2 Release 2.

New information

- IST2418I
- IST2420I
- IST2421I
- IST2422I
- IST2423I
- ISTM029I
- ISTM030E

Changed information

- IST087I
- IST1221I
- IST1314I
- IST1451I
- IST1717I

- IST1865I
- IST1904I
- IST2337I
- IST2390I
- IST2391I
- IST2392I
- IST2393I
- IST2407I
- IST2409I
- IST2411I
- IST2417I
- IST2419I

Changes made in z/OS Version 2 Release 2

This document contains information previously presented in z/OS Communications Server: SNA Messages, SC27-3671-02, which supported z/OS Version 2 Release 1.

New information

- IST2412I
- IST2413I
- IST2414I
- IST2415I
- IST2416I
- IST2419I
- ISTM017I
- ISTM018E
- ISTM019I
- ISTM020E
- ISTM021I
- ISTM022E
- ISTM023I
- ISTM024E
- ISTM025I
- ISTM026E
- ISTM027I
- ISTM028E
- IVT5595I
- IVT5596I
- IVT5598I
- IVT5603I
- IVT5604I
- IVT5605I
- IVT5606I
- IVT5607I

Changed information

- IST574E
- IST2361I
- IST2403I
- IST2405I
- ISTH001I
- ISTH002I
- ISTH017E
- ISTM900I
- IVT5501I
- IVT5502I
- IVT5507I
- IVT5516I
- IVT5517I
- IVT5529I
- IVT5538I
- IVT5539I
- IVT5549I
- IVT5572I
- IVT5573I
- IVT5574I
- IVT5594I

Deleted information

- ISTM013I
- ISTM014E

Changes made in z/OS Version 2 Release 1, as updated February 2015

This document contains information previously presented in z/OS Communications Server: SNA Messages, SC27-3671-01, which supported z/OS Version 2 Release 1.

New information

- IST2417I

Changed information

- IST2361I
- IST2362I
- IST2389I
- IST2396I
- IST2397I
- IST2398I

Changes made in z/OS Version 2 Release 1, as updated September 2014

This document contains information previously presented in z/OS Communications Server: SNA Messages, SC27-3671-00, which supported z/OS Version 2 Release 1.

Summary of changes for z/OS Version 2 Release 1

For specifics on the enhancements for z/OS Version 2, Release 1, see the following publications:

- z/OS Summary of Message and Interface Changes
- z/OS Introduction and Release Guide
- z/OS Planning for Installation
- z/OS Migration

Chapter 1. Introduction

This topic contains the following information about SNA message standards:

- “Message text formats”
- “Message description format” on page 3
- “Message groups and subgroups” on page 4
- “Message routing” on page 5
- “Message suppression” on page 5
- “User-selected message changes” on page 5
- “DATE and TIME formats” on page 6

Message text formats

Most VTAM messages are preceded by an identifier, as illustrated in Figure 1. Unformatted system services (USS) messages that have been coded by the user might or might not have identifiers.

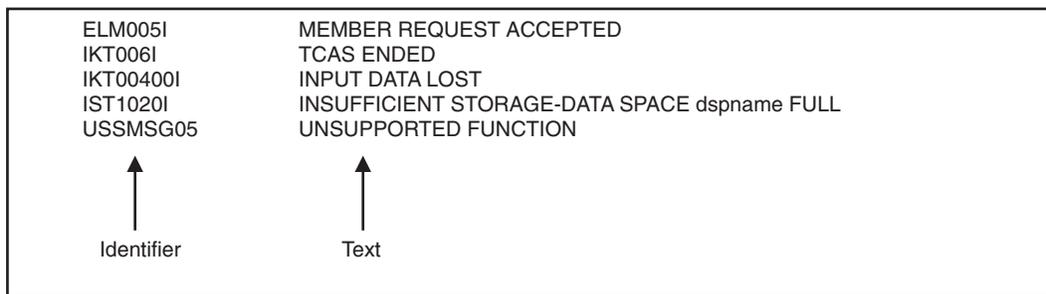


Figure 1. Sample message format

See Appendix C, “Message routing and suppression,” on page 1143 for additional information on message formats and message format differences.

Message identifiers

All message identifiers include the following sections:

- Prefix
- Message number
- Message type code

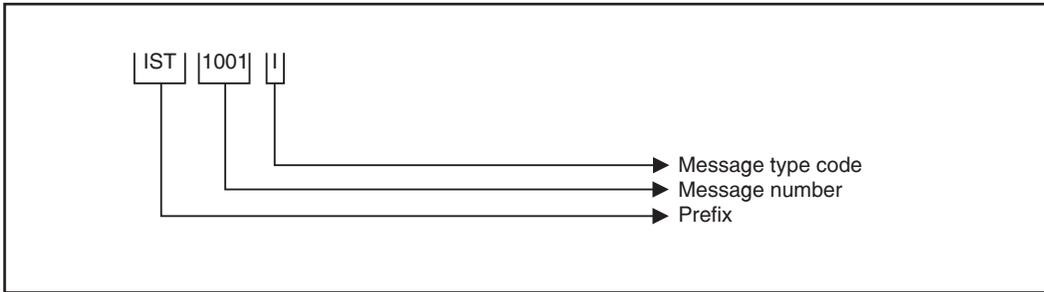


Figure 2. Sample VTAM message identifier

Prefix

Message identifiers include a prefix that identifies the source of the message.

Prefix Source

ELM	Logon manager messages
IKT	TSO/VTAM messages
IST	VTAM network operator messages
IUT	MPC connection manager messages
IVT	Communications Storage Manager (CSM) messages
USS	Unformatted system services messages

Message number

Message identifiers include a unique 2- through 5-digit message number.

Message type code

The following type codes are used in VTAM messages:

A Action:

The system is waiting for you to respond. For information about how to respond to VTAM operator messages, see "Responding to a VTAM message."

E Eventual Action:

You must eventually take some action to correct a problem. The system continues processing without waiting for your response.

I Information:

The message is for your information. This type code can be used to notify you of an error. No response is necessary, but you might need to take some action.

The following message type code is used only in IKT messages for TSO/VTAM network operators:

D Decision:

You must decide among several alternatives.

Responding to a VTAM message

The format of your response to a VTAM message, such as IST095A, is operating system dependent.

The response format for MVS and an example follow:

Format Example

r (reply ID),(response)
r 6,YES

Enter the following response to display the reply ID:

d r,r

You might be able to customize the response format. See your operating system documentation for additional information.

Syntax notation in message text

In this document, VTAM messages are described with the following syntax notation:

UPPERCASE CHARACTERS

Represent the actual text of the message.

italic characters

Represent message variables. The variables are replaced by their values in the actual message.

Braces { }

Represent a group of text strings, only one of which is displayed in the actual message. The text strings are separated by or-signs (|) in the braces.

The braces and or-signs are not displayed in the actual message.

Brackets []

Represent optional messages or optional parts of a message. Optional messages or optional parts of a message are displayed only under certain circumstances which are described in the "Explanation" section of the message. If an optional part has more than one possible value, or-signs separate the possibilities.

The brackets and or-signs are not displayed in the actual message.

Message description format

A message consists of several sections. Not all categories are used for each message. For messages that are always issued as a group, the "Explanation" section of the first message usually contains a complete description of the other messages in the group.

Explanation

Explains why VTAM issued the message and describes all text and variables in the message.

System action

Explains the state of VTAM or the operating system after VTAM issues the message. This section also indicates whether the system is waiting for a reply.

Operator response

Describes actions that the operator can or must take at the console.

Programmer response

Suggests actions, programming changes, or system definition changes that isolate or correct errors or improve the efficiency of the system.

User response (USS messages only)

Describes actions that the user can or must take at the terminal.

Message groups and subgroups

Message Groups

A message group contains two or more messages that are displayed together in response to a specific command or error condition. The following example is a message group.

```
IST1188I  VTAM level STARTED AT time ON date
IST1349I  COMPONENT ID IS dddd-ddddd-ddd
IST1348I  VTAM STARTED AS nodetype
IST1189I  option = current_value [option = current_value]
:
:
IST314I  END
```

In most cases, the "Explanation" section of the first message in the group contains an example of the group and information about all messages in the group. The message descriptions of members of the group refer back to the first message for complete information.

Message groups that are in response to DISPLAY commands are an exception. For these groups, each individual message in the group usually contains a complete message description. See z/OS Communications Server: SNA Operation for examples of these types of groups.

Message Subgroups

A message subgroup contains two or more messages that are displayed together in response to a specific command or error condition. The major differences between a group and a subgroup are that a subgroup is always displayed in a larger group, and one message in the subgroup is always displayed with the other.

Some subgroups are optional parts of the group, and this is indicated by the use of brackets at the beginning and end of the subgroup. Subgroups can also be repeated, and this is indicated by three vertical dots following the last message in the subgroup.

The following example contains several message subgroups.

```
IST951I  DISPLAY DISK INFORMATION FOR ncpname
[IST957I  NO NCP LOAD MODULE OR DUMP ON DISK]
[IST952I  DUMP NAME      DATE      TIME
IST953I  dumpname      date      time]
:
:
[IST954I  LOAD MODULE   DATE      TIME   STORE STATUS  [ACTIVE]
IST955I  loadmodname  date      time
status   [YES|NO]]
:
:
[IST924I  -----]
[IST1065I LOAD MODULE  REQUESTED IPL  ESTIMATED IPL
IST1066I load_module requested_time
estimated_time]
:
:
IST965I  AUTO DUMP/LOAD: {YES|NO}
IST314I  END
```

In this example, the following three subgroups exist in the group headed by IST951I:

IST952I and IST953I

IST954I and IST955I

These subgroups are always displayed in the larger IST951I group.

Message routing

See Appendix C, “Message routing and suppression,” on page 1143 for information on message routing.

For an explanation of message percolation and a list of percolated VTAM operator messages, see “Message rerouting and percolation” on page 1146.

Message suppression

For information on message suppression levels, see “Message suppression levels” on page 1149.

For an explanation of suppression rules for message-flooding prevention and an example of message suppression, see the z/OS Communications Server: SNA Resource Definition Reference.

Unsupported characters in WTO messages

Some characters in a message are not supported and will not be displayed by MVS. MVS documents these in a table in the z/OS MVS Programming: Assembler Services Guide.

User-selected message changes

The messages that VTAM issues appear exactly as listed in this document unless:

- You have added the name of the VTAM module to the message text by using the MSGMOD start option or the MODIFY VTAMOPTS or MODIFY MSGMOD command.
- You have changed the message text or other message characteristics.
- You have translated messages using the LANGTAB USS tables or the MVS Message Service (MMS).

Adding the originating module to the message text

You can add the name of the VTAM module that issued the message to the message text. This can be done by using the MSGMOD start option when VTAM is started or by entering the MODIFY VTAMOPTS or MODIFY MSGMOD command.

If you specify MSGMOD=YES, the last 5 characters of the name of the VTAM module that issued the message are inserted into each VTAM message between the message identifier and the message text.

For example:

- If you specify MSGMOD=NO, message IST285I will appear as follows:
IST285I *dumptype* **DUMP OF** *resourcename status*
- If you specify MSGMOD=YES, message IST285I will appear as follows:
– **IST285I** *INFXI dumptype* **DUMP OF** *resourcename status*
VTAM module ISTINFXI issued the message.

Note: If you specify MSGMOD=YES, some VTAM messages might be truncated on the right. Significant information might be lost if this occurs.

The MSGMOD start option is described in the z/OS Communications Server: SNA Resource Definition Reference. See z/OS Communications Server: SNA Operation for information on the MODIFY VTAMOPTS and MODIFY MSGMOD commands.

Changing message characteristics

You can change the following VTAM message characteristics:

- Descriptor codes
- Message text
- Routing codes
- Suppression level
- Suppression of extra blanks

See Appendix C, “Message routing and suppression,” on page 1143 for information on message descriptor codes, message routing codes, and message suppression levels. See Appendix B, “Message-flooding prevention,” on page 1141 for information on message flooding prevention.

For additional information on changing other message characteristics, see the description of the USS macro in the z/OS Communications Server: SNA Resource Definition Reference.

Selecting USS language tables

End users can select a USS table at the time a USS command is entered. This table, selected with the LANGTAB operand on USS commands, takes priority over standard USS tables when messages are issued. This allows the end user to select a language of choice for USS messages.

See the z/OS Communications Server: SNA Network Implementation Guide for additional information. For more information on the LANGTAB operand, see the z/OS Communications Server: SNA Resource Definition Reference.

Translating end-user messages

End users can select a language to be used to translate USS and TSO/VTAM end-user messages using the MVS Message Service (MMS). This language is selected using the LANG operand on USS commands.

See the z/OS Communications Server: SNA Network Implementation Guide for more information. For more information on the LANG operand, see the z/OS Communications Server: SNA Resource Definition Reference.

DATE and TIME formats

When a date is displayed in an IST message for VTAM network operators, the format of the *date* value is based on the DATEFORM start option. See the information about the DATEFORM start option in z/OS Communications Server: SNA Resource Definition Reference.

Possible *date* values are:

DATEFORM | DATEFRM=DMY
DD/MM/YY

DATEFORM | DATEFRM=MDY
(default) MM/DD/YY

DATEFORM | DATEFRM=YMD
YY/MM/DD

When a time is issued in a message, the *time* value is expressed in 24-hour system (*hh:mm:ss*). For example, 1:00 p.m. is displayed as 13:00:00.

Module

If you want the name of the module that issued a message to be displayed in a VTAM message when the message is issued, use the modifiable VTAM start option MSGMOD=YES. You can set the MSGMOD start option in the following ways:

- Specify MSGMOD=YES in your VTAM start list.
- Specify MSGMOD=YES on the START command when you start VTAM.
- Modify the start option with the F *procname*,MSGMOD=YES command.
- Modify the start option with the F *procname*,VTAMOPTS,MSGMOD=YES command.

See the information about the START command, the MODIFY MSGMOD command, or the MODIFY VTAMOPTS command in z/OS Communications Server: SNA Operation. See the information about the MSGMOD start option in z/OS Communications Server: SNA Resource Definition Reference.

Chapter 2. ELM messages for logon manager network operators

This chapter lists logon manager messages that can appear on a network operator's console.

See the z/OS Communications Server: SNA Network Implementation Guide for information on logon manager.

ELM001I REDEFINITION COMPLETE

Explanation: The logon manager MODIFY MEMBER command was entered. The new configuration definition is now in effect.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM002I LOGON MANAGER INITIALIZATION COMPLETED

Explanation: The logon manager is prepared to accept requests.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM003I NO SUBAREAS DETECTED IN CONFIGURATION DEFINITION

Explanation: The logon manager MODIFY MEMBER command was entered. The logon manager input data set contains no subarea definition records. The logon manager requires subarea definitions to process requests.

System action: The redefinition request is processed, and an empty subarea configuration takes effect.

Operator response: Reenter a logon manager MODIFY MEMBER command specifying a data set that contains a valid subarea configuration.

System programmer response: Correct the configuration-definition data set member adding required subarea definition records.

Routing code: 2,8

Descriptor code: 6

ELM004I REDEFINITION IN PROGRESS — COMMAND QUEUED

Explanation: An operator command was entered during logon manager redefinition.

System action: The command is queued for later processing.

Operator response: None.

System programmer response: None.

ELM005I • ELM009I

Routing code: 2,8

Descriptor code: 6

ELM005I MEMBER REQUEST ACCEPTED

Explanation: The logon manager MODIFY MEMBER command entered by the operator was accepted by the logon manager.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM006I REDEFINITION IN PROGRESS

Explanation: The configuration specified by the logon manager MODIFY MEMBER command is being processed. Subarea distance and index tables are updated for all subtasks.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM007I REDEFINITION UNSUCCESSFUL

Explanation: Logon manager redefinition failed.

System action: Processing continues with the previous configuration definition.

Operator response: Save the system log for problem determination.

System programmer response: Use the information issued in ELM017I, ELM020I, or ELM021I to correct the problem.

Routing code: 2,8

Descriptor code: 6

ELM008I REPLY TRUNCATED

Explanation: The response to a logon manager MODIFY HELP or logon manager MODIFY INFO command is incomplete because of a buffer shortage.

System action: Processing continues.

Operator response: Reenter the command. If the condition persists, save the system log for problem determination.

System programmer response: If necessary, increase the number of buffers by configuration definition.

Routing code: 2,8

Descriptor code: 6

ELM009I STOP REQUEST ACCEPTED

Explanation: A logon manager MODIFY STOP command entered by an operator was accepted.

System action: Termination processing begins.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM010I INFO REQUEST ACCEPTED

Explanation: A logon manager MODIFY INFO command entered by an operator was accepted by the logon manager.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM011I MINLINK REQUEST ACCEPTED

Explanation: A logon manager MODIFY MINLINK command entered by an operator was accepted by the logon manager.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM012I SELECTED RESOURCE NOT FOUND

Explanation: An operator command was entered that specified a resource not known to the logon manager.

System action: Processing continues.

Operator response: Reenter the command, specifying a valid resource.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM013I MINLINK REQUEST COMPLETED

Explanation: A logon manager MODIFY MINLINK command was completed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM014I NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:

Explanation: This message is the first in a group of messages in response to a logon manager MODIFY INFO command. A complete description of the message group follows.

ELM014I NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:

ELM040I name type status curop=curcnt conop=concnt reason inits

ELM015I

name indicates the name of the resource.

type indicates the type of the resource and is either an application (**APPL**) or channel-attached control point LU (**CLU**).

status indicates the status of the resource and can be one of the following values:

ACTIVE

Active

INACTIVE

Inactive

PENDACTV

Pending active

PENDINAC

Pending inactive

If *type* is **APPL**,

curop is link count (**LNKCNT**).

curcnt is the number of CLUs that support (handle session initiations for) application *name*.

conop is minimum link count (**MINLNK**).

concnt is the smallest link count at which application *name* remains active.

If *type* is **CLU**,

curop is session count (**SESCNT**).

curcnt is the number of sessions initiated across CLU *name* as reported by the CLU.

conop is session limit (**SESLMT**).

concnt is the largest number of sessions that can be initiated across CLU *name*.

reason indicates the reason for the current status of the resource (when known).

inits indicates the number of session initiations sent to application *name* or across CLU *name* as determined by the logon manager.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM015I NO PENDING RESOURCES FOUND

Explanation: A logon manager MODIFY INFO command for pending resources was completed. No resources were found in the pending state.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM016I LOGON MANAGER CLOSEDOWN COMPLETED

Explanation: Logon manager termination completed.

System action: Logon manager session is completed and control returns to MVS.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM017I REQUIRED STORAGE UNAVAILABLE

Explanation: An operator command was entered that required the logon manager to acquire additional storage.

System action: If the condition occurs during logon manager initialization, initialization fails and ELM110I is issued. Otherwise, the logon manager continues processing.

Operator response: If the logon manager continues processing, try the operation again.

System programmer response: Respond to MVS messages for a storage shortage. A larger region might be required.

Routing code: 2,8

Descriptor code: 6

ELM018I SA RECORD CAUSES MAXSUBA PARAMETER TO BE EXCEEDED

Explanation: The logon manager MODIFY MEMBER command was entered. The number of unique or adjacent subareas encountered in the system-definition data set exceeds the number specified in the MAXSUBA parameter at system startup.

System action: The SA record is ignored and processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that the subarea configuration in the specified member is consistent with the job-step parameters. Adjust the MAXSUBA parameter if necessary.

Routing code: 2,8

Descriptor code: 6

ELM019I LMAPPL RECORD CAUSES MAXAPLC VALUE TO BE EXCEEDED

Explanation: The logon manager MODIFY MEMBER command was entered. The number of applications defined in the LMAPPL statement exceeds either the default value or the value specified in the MAXAPLC statement.

System action: The LMAPPL record is processed. Storage fragmentation might result.

Operator response: Save the system log for problem determination.

System programmer response: Adjust the MAXAPLC value in the specified member.

Routing code: 2,8

Descriptor code: 6

ELM020I UNABLE TO ACCESS CONFIGURATION DEFINITION DATA SET MEMBER

Explanation: A logon manager MODIFY MEMBER command was entered. Either data set ELMDEFDS could not be opened, or the member specified could not be found in the data set.

System action: Processing continues with the previous configuration definition.

Operator response: Save the system log for problem determination.

ELM021I • ELM023I

System programmer response: Validate the data-set name associated with data set ELMDEFDS and the member specified in the command.

Routing code: 2,8

Descriptor code: 6

ELM021I ERROR ENCOUNTERED IN READING CONFIGURATION DEFINITION DATA SET MEMBER

Explanation: The logon manager MODIFY MEMBER command was entered. A READ error was encountered while processing the member.

System action: Processing continues with the previous configuration definition.

Operator response: Save the system log for problem determination.

System programmer response: Check the integrity of the data set ELMDEFDS.

Routing code: 2,8

Descriptor code: 6

ELM022I HELP REQUEST ACCEPTED

Explanation: A logon manager MODIFY HELP command was accepted by the logon manager.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM023I VALID COMMAND PARAMETERS ARE:

Explanation: This is the first message of the HELP message group, which is displayed after message ELM022I. The entire message group is listed below.

```
ELM022I HELP REQUEST ACCEPTED
ELM023I VALID COMMAND PARAMETERS ARE:
ELM024I HELP                ...GET VALID COMMANDS FORMATS
ELM025I INFO,ID=NNNNNNNN    ...GET STATUS FOR RESOURCE NAMED NNNNNNNN
ELM026I INFO,ID=CLU         ...GET STATUS FOR EACH CONTROL LOGICAL UNIT
ELM027I INFO,ID=CLU,PEND    ...GET STATUS FOR EACH PENDING CLU
ELM028I INFO,ID=APPL        ...GET STATUS FOR EACH SUPPORTED APPLICATION
ELM029I INFO,ID=APPL,PEND   ...GET STATUS FOR EACH PENDING APPL
ELM030I INFO,ID=ALL         ...GET STATUS FOR EACH CLU AND APPL
ELM031I INFO,ID=ALL,PEND    ...GET STATUS FOR EACH PENDING CLU AND APPL
ELM032I MEMBER=MMMMMMMM    ...PROCESS DEFINITION MEMBER MMMMMMMM
ELM033I MINLINK=VVV,ID=ALL  ...SET MINLINK VALUE TO VVV (1 - 255)
ELM034I                    FOR EACH SUPPORTED APPLICATION
ELM035I MINLINK=VVV,ID=NNNNNNNN ...SET MINLINK VALUE FOR APPL NNNNNNNN
ELM036I STOP                ...REQUESTS CLOSEDOWN
```

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM024I HELP ...GET VALID COMMAND FORMATS

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM025I INFO,ID=NNNNNNNN ...GET STATUS FOR RESOURCE NAMED NNNNNNNN

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM026I INFO,ID=CLU ...GET STATUS FOR EACH CONTROL LOGICAL UNIT

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM027I INFO,ID=CLU,PEND ...GET STATUS FOR EACH PENDING CLU

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM028I INFO,ID=APPL ...GET STATUS FOR EACH SUPPORTED APPLICATION

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM029I INFO,ID=APPL,PEND ...GET STATUS FOR EACH PENDING APPL

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM030I INFO,ID=ALL ...GET STATUS FOR EACH CLU AND APPL

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

ELM031I INFO,ID=ALL,PEND ...GET STATUS FOR EACH PENDING CLU AND APPL

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM032I • ELM040I

ELM032I MEMBER=MMMMMMMM ...PROCESS DEFINITION MEMBER MMMMMMMM

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

ELM033I MINLINK=VVV,ID=ALL...SET MINLINK VALUE TO VVV (1-255)

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM034I FOR EACH SUPPORTED APPLICATION

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM035I MINLINK=VVV,ID=NNNNNNNN ...SET MINLINK VALUE FOR APPL NNNNNNNN

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM036I STOP ...REQUESTS CLOSEDOWN

Explanation: This is part of the HELP message group that begins with message ELM023I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM037I LMAPPL RECORD IGNORED — WOULD CAUSE MAXAPLC LIMIT TO BE EXCEEDED

Explanation: The logon manager MODIFY MEMBER command was entered. One or more LMAPPL records were encountered, either exceeding the number of applications specified for MAXAPLC or resulting in more than 4095 applications being defined to the logon manager.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Check the member specified to ensure that no more than 4095 applications are defined to the logon manager.

Routing code: 2,8

Descriptor code: 6

ELM040I *name type status curop=curcnt conop=concnt reason inits*

Explanation: This message is issued as part of a message group. The first message of the group is ELM014I. See the explanation of that message for a complete description.

Routing code: 2,8

Descriptor code: 6

ELM050I SYNTAX ERROR [AFTER *keyword*] [AT *token*] IN *type*

Explanation: A syntax error has been encountered in an operator command, definition member, or job parameters.

type indicates the type of error and can be one of the following types:

OPERATOR COMMAND
DEFINITION MEMBER
JOB PARAMETERS

If any valid input was recognized, the token at which the error was detected is indicated by *token*.

If a keyword was recognized before the error was detected, the keyword is indicated by *keyword*.

System action: The input is ignored.

Operator response: Ensure that you entered the command correctly. If problems persist, save the system log for problem determination.

System programmer response: Correct the definition member or job parameters.

Routing code: 2,8

Descriptor code: 6

ELM051I INCORRECT VALUE SPECIFIED FOR *operand* IN *type*

Explanation: The value for the indicated operand is out of range.

type indicates the type of error and can be one of the following types:

OPERATOR COMMAND
DEFINITION MEMBER
JOB PARAMETERS

System action: The operand is ignored. Processing continues.

Operator response: For an operator command, check the command for errors, correct them, and try the command again. If problems persist, save the system log for problem determination.

System programmer response: Correct the definition record or job parameter.

Routing code: 2,8

Descriptor code: 6

ELM060I NO VALID VALUE FOR PARAMETER *parameter* PROVIDED

Explanation: Parameter *parameter* is missing or invalid.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM061I CURRENT VALUE OF MEMBER PARAMETER IS *membername*

Explanation: One or more parameters are missing or invalid. VTAM provides the value of the MEMBER parameter for the operator's information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

ELM062I • ELM070I

Routing code: 2,8

Descriptor code: 6

ELM062I CURRENT VALUE OF MAXSUBA PARAMETER IS *value*

Explanation: One or more parameters are missing or invalid. The value of the MAXSUBA parameter is provided for the operator's information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM063A ENTER LOGON MANAGER START PARAMETERS (OR 'END')

Explanation: One or more parameters required to start the logon manager are missing or invalid.

System action: Prompts for valid parameters.

Operator response: Enter the valid parameters. The value for any parameter specified in response to this message overrides the current value for that parameter. If you enter END instead of a parameter string, the logon manager terminates.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM070I *macro* FAILURE [FOR APPLICATION *applname*], RETURN CODE *value*

Explanation: The macro indicated by *macro* failed.

If the macro failure affected the processing of a session initiation for a specific application, the application name is indicated by *applname*.

If available, a return code (as indicated by *value*) is provided for problem determination.

value, displayed in decimal, can be one of the following values:

- 32 GETMAIN failure
- 38 Logon manager not available
- 39 CLU not found
- 52 APLB not found
- 56 Subarea address not found
- 60 Function code not valid
- 70 Logon manager exit not initialized

If *macro* is ISTIECIV and *value* is not listed above, *value* might have been returned by ELMCLUEx, the CLU search exit routine. See your ELMCLUEx exit routine for the meaning of those return codes. See z/OS Communications Server: SNA Customization for more information on the CLU search exit routine.

System action: Begins termination processing.

Operator response: Save the system log for problem determination.

System programmer response: For failure information concerning the specified macro, see z/OS Communications Server: SNA Programming or the appropriate MVS manual. For information on the APPCCMD macro, see the z/OS Communications Server: SNA Programmer's LU 6.2 Guide.

Routing code: 2,8

Descriptor code: 6

ELM075I SESSION SETUP FOR *olu* TO *dlu* FAILED, SENSE = *code*

Explanation: A dependent secondary logical unit (SLU) *olu* attempted to log on to a Transaction Processing Facility (TPF) application *dlu*, but session setup failed.

olu is the origin logical unit.

dlu is the destination logical unit.

code is the sense code and provides information about the cause of the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: The cause of this message is usually a definition or line problem. Take the following actions:

1. Ensure that *olu* is defined to the TPF system on which the TPF application *dlu* resides.
2. Ensure that the TPF application *dlu* is active and accepting session requests.
3. Ensure that VTAM has a valid session to the TPF system.
4. If you cannot identify a definition or line problem, dump Logon Manager.
5. If this message is the result of an apparent software error, take the following actions:
 - If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
 - If you do not have access to IBMLink, report the problem to the IBM software support center.

For additional information on Logon Manager and TPF, see the z/OS Communications Server: SNA Network Implementation Guide .

Routing code: 2,8

Descriptor code: 6

ELM080I ATTACH FAILED FOR SUBTASK *taskname*

Explanation: The logon manager attempted to ATTACH subtask *taskname*. The ATTACH failed.

System action: If the condition occurs during logon manager initialization, initialization fails and ELM110I is issued. Otherwise, the logon manager continues processing.

Operator response: If the message recurs, enter the logon manager MODIFY MINLINK command to stop activation attempts for this subtask.

System programmer response: None.

Routing code: 2,8

Descriptor code: 6

ELM081I BUFFER STORAGE NOT AVAILABLE FOR RECEIVE FROM CLU *cluname*

Explanation: No buffer is available to issue a receive for the channel-attached control-point logical unit (*cluname*).

System action: The session with the channel-attached control-point logical unit is ended.

Operator response: Save the system log for problem determination.

System programmer response: If necessary, increase the number of buffers by configuration definition.

Routing code: 2,8

Descriptor code: 6

ELM090I SEND TO CLU *cluname* FAILED[, RC/FB=*value*]**Explanation:** A SEND to channel-attached control-point LU *cluname* failed.

When the associated RPL can be read, the return code and feedback values are indicated by *value*. See the z/OS Communications Server: IP and SNA Codes for a description of *value*.

System action: Processing continues.**Operator response:** Try the operation that caused the SEND macro to fail again. If the condition persists, save the system log for problem determination.**System programmer response:** For additional information on the SEND macro, see z/OS Communications Server: SNA Programming .**Routing code:** 2,8**Descriptor code:** 6

ELM091I RECEIVE FROM CLU *cluname* FAILED[, RC/FB=*value*]**Explanation:** A RECEIVE from channel-attached control-point LU *cluname* failed.

When the associated RPL can be read, the return code and feedback values are indicated by *value*. See the z/OS Communications Server: IP and SNA Codes for a description of *value*.

System action: The session with the channel-attached control-point LU is terminated.**Operator response:** Save the system log for problem determination.**System programmer response:** For additional information on the RECEIVE macro, see z/OS Communications Server: SNA Programming .**Routing code:** 2,8**Descriptor code:** 6

ELM100I ACB RELEASE-LEVEL VECTOR INDICATES INCORRECT VTAM LEVEL**Explanation:** The active version of VTAM is pre-V3R2.**System action:** Begins termination processing.**Operator response:** Save the system log for problem determination.**System programmer response:** Ensure that a V3R2 VTAM or higher is installed before activating the logon manager.**Routing code:** 2,8**Descriptor code:** 6

ELM101A ENTER 'CONTINUE' WHEN VTAM IS ACTIVE (OR 'END')**Explanation:** The logon manager attempted to open its ACB and determined that VTAM was not active.**System action:** Waits for operator input.**Operator response:** Enter CONTINUE when VTAM message IST020I indicates that VTAM is active. Enter END to stop the logon manager.**System programmer response:** None.**Routing code:** 2,8**Descriptor code:** 6

ELM110I INITIALIZATION UNSUCCESSFUL

Explanation: The logon manager initialization failed.

System action: Termination processing begins.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in previous messages to assist you in correcting the problem.

Routing code: 2,8

Descriptor code: 6

Chapter 3. IKT messages for TSO/VTAM network operators

This chapter lists TSO/VTAM messages that can appear on a network operator's console.

These messages have a different prefix than TSO messages. TSO/VTAM issues messages that begin with IKT; TSO issues messages that begin with IKJ.

TSO/VTAM messages for terminal operators are described in Chapter 4, "IKT messages for TSO/VTAM terminal users," on page 41.

See the *z/OS Communications Server: SNA Network Implementation Guide* for information on TSO/VTAM. For information on diagnosing TSO/VTAM problems, see *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures*.

IKT001D *nnnn* USER(S) ACTIVE REPLY 'U', 'SIC', OR 'FSTOP'

Explanation: An operator entered a start command to activate TCAS. *nnnn* users were found to be active from a previous session. This situation can occur if TCAS previously failed, and users were not properly terminated.

System action: The system waits for the operator to reply.

Operator response: Check to determine whether the users tried to enter a logoff command before a new start command for TSO was entered. If logoff was entered and the users' address space is still active, there might be a VTAM/TSO interface problem. Otherwise, take one of the following actions:

- Reply "U" to continue start command processing and to allow the active users to remain active.
- Reply "SIC" to cancel the active users normally, allowing any messages queued for them to be received. Start command processing will then continue.
- Reply "FSTOP" to force immediate cancellation of the active users. Start command processing will then continue. Use "FSTOP" only if "SIC" is ineffective.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT002I TCAS IS TERMINATING, REASON CODE=*code*

Explanation: TCAS was unable to continue its normal processing because of an error, indicated by *code*:

- 04 The attempt to activate TCAS was invalid because TCAS was already active in the system.
- 16 The TCAS main task was unable to attach the VTAM interface subtask.
- 20 The TCAS main task was unable to attach the user interface subtask.
- 24 The TCAS main task was unable to attach the console communication subtask.
- 28 TCAS was unable to obtain storage for the TCAS table (TCAST) in the common service area (CSA).
- 32 The TCAS main task was abnormally terminated and unable to recover.
- 48 The VTAM interface subtask was abnormally terminated and unable to recover.
- 52 The user interface subtask was abnormally terminated and unable to recover.
- 56 The console communication subtask was abnormally terminated and unable to recover.

System action: TCAS terminates normally for codes 04, 48, 52, and 56. TCAS terminates abnormally for codes 16, 20, 24, 28, and 32.

IKT003D

Operator response: Obtain a dump by specifying "DUMP" in response to TCAS termination message IKT012D. Save the system log for problem determination.

System programmer response: The reason code indicates the reason TCAS is terminating. Correct the problem as determined from the TCAS dump and console output provided by the operator. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on termination problems.

Routing code: 1,8

Descriptor code: ***

IKT003D TCAS UNABLE TO ACCEPT LOGONS, REASON CODE=*code* REPLY 'RETRY' OR 'TERM'

Explanation: TCAS issues this message when VTAM fails to open the TCAS access method control block (ACB) or to accept logons to TSO. This is either an OPEN ACB or SETLOGON macro failure.

code (in decimal) indicates the reason for the problem.

- 16 The SETLOGON macro, issued by TCAS to allow VTAM to accept logons, failed.
- 20 A VTAM OPEN macro could not be processed because of a temporary shortage of storage.
- 36 TCAS tried to open an ACB. The password in the ACB did not match the password in the corresponding APPL entry, or the ACB did not specify a password when one was specified in the APPL entry.
- 82 The VTAM operator entered a HALT command, and VTAM is shutting down.
- 84 Either the address supplied in the ACB's APPLID field lies beyond TCAS's addressable range, or the name indicated by the ACB's APPLID field is not defined to VTAM. If the OPEN macro was specified correctly, you might have left out TSO's application program ID (which is TSO) during VTAM definition.
- 86 A match for application program ID TSO was found, but it was for an entry other than an APPL statement.
- 88 Another ACB, already opened by VTAM, indicates the same application program ID (TSO) that this ACB does. You might have assigned the same application program ID to two different versions of TSO. This is valid only if the programs do not run (or at least do not open their ACBs) concurrently.
- 90 The name (TSO) indicated by the ACB's APPLID field is not defined to VTAM. This error might have occurred because:
 - 1. No APPL definition statement was coded for TSO.
 - 2. The major node containing the APPL definition statement for TSO has not been activated.
 - 3. The major node containing the APPL definition statement for TSO has been deactivated.
- 92 VTAM has been included as part of the operating system, but it is inactive.
- 96 An apparent system error occurred. Either there is a defect in VTAM's logic, or there is an error in TCAS's use of the OPEN macro that VTAM did not properly detect.
- 112
The ACB failed to open because close processing was not completed.

System action: Processing continues.

Operator response:

- Reply 'RETRY' to cause TCAS to try again to accept logons.
- Reply 'TERM' to cause TCAS to terminate.

Save the system log for problem determination.

System programmer response: See z/OS Communications Server: SNA Programming for a description of the OPEN ACB and SETLOGON macros. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on logon problems.

Routing code: 1,8

Descriptor code: ***

IKT004D INVALID PARAMETERS SPECIFIED, RESPECIFY OR REPLY 'U'

Explanation: One or more invalid parameters were specified when trying to start, modify, or stop TCAS. For more information, see z/OS MVS Initialization and Tuning Reference.

System action: The system waits for the operator to reply.

Operator response: Check for an invalid parameter. Respecify all the parameters, or reply 'U' to cause the command to be ignored.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT005I TCAS IS INITIALIZED

Explanation: TCAS initialization began in response to a START TSO command and is now complete.

System action: Unless they are suppressed, logons to TSO/VTAM are now accepted.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT006I TCAS ENDED

Explanation: TCAS has ended normally.

System action: TSO/VTAM is terminated.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT007I TCAS ACCEPTING LOGONS

Explanation: Logons are allowed with an operator START or MODIFY command.

System action: Logons to TSO/VTAM are now accepted.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT008I TCAS NOT ACCEPTING LOGONS

Explanation: TCAS has stopped accepting logons in response to an operator's command (for example, MODIFY TSO USERMAX=...). No new logons will be accepted until requested by the operator.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT009I TPEND HAS OCCURRED, TCAS TERMINATION IN PROGRESS

Explanation: VTAM has notified TCAS of a VTAM abend (TPEND exit driven). A HALT command was entered to stop VTAM, or TCAS is terminating.

System action: TCAS performs termination processing.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT010D *nnnnn* USER(S) ACTIVE, REPLY 'SIC' OR 'FSTOP'

Explanation: A STOP command was entered to stop TCAS, but *nnnnn* terminal users are still active.

System action: The system waits for the operator to reply.

Operator response: The two acceptable replies are:

- Reply 'SIC' to cancel the active users normally. This allows them to receive any messages queued for them. It allows TSO/VTAM to perform its normal termination processing.
- Reply 'FSTOP' to force immediate cancellation of the active users. The users will not receive any messages queued for them. TSO/VTAM will not perform its normal termination processing; that is, task resource manager processing will be circumvented. Use 'FSTOP' only if 'SIC' did not work in a previous attempt.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT011I TCAS UNABLE TO {ACCEPT|QUIESCE} LOGONS, REASON CODE=*code*

Explanation: TCAS issues this message in response to a TSO MODIFY command requesting that TCAS accept or quiesce logons. VTAM either failed to open the TCAS ACB or failed to accept or quiesce logons to TSO.

code (in decimal) indicates the reason for the problem.

- 16** The SETLOGON macro, issued by TCAS to request VTAM to accept or reject logons, failed.
- 20** A VTAM OPEN macro could not be processed because of a temporary storage shortage.
- 82** The VTAM operator entered a HALT command, and VTAM is shutting down.
- 84** Either the address supplied in the ACB's APPLID field lies beyond TCAS's addressable range, or the name indicated by the ACB's APPLID field is not defined to VTAM. If the OPEN macro was specified correctly, you might have left out TSO's application program ID (which is TSO) during VTAM definition.
- 86** A match for application program ID TSO was found, but it was for an entry other than an APPL entry.
- 88** Another ACB, already opened by VTAM, indicates the same application program ID (TSO) that this ACB does. You might have assigned the same application program ID to two different versions of TSO. This is valid only if the programs do not run (or at least do not open their ACBs) concurrently.
- 90** The name (TSO) indicated by the ACB's APPLID field is not defined to VTAM. This error might have occurred because:
 - 1. No APPL definition statement was coded for TSO.
 - 2. The major node containing the APPL definition statement for TSO has not been activated.
 - 3. The major node containing the APPL definition statement for TSO has been deactivated.
- 92** VTAM has been included as part of the operating system, but it is inactive.
- 96** An apparent system error occurred. Either there is a defect in VTAM's logic, or there is an error in TCAS's use of the OPEN macro that VTAM did not properly detect.

100

No more TSO user APPLIDs are available. You might have defined too few TSO user APPLIDs.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and reason code to assist you in correcting the problem. See z/OS Communications Server: SNA Programming for a description of the OPEN ACB and SETLOGON macros. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM logon problems.

Routing code: 1,8

Descriptor code: ***

IKT012D TCAS TERMINATION IN PROGRESS — SPECIFY 'U' OR 'DUMP'

Explanation: TCAS is terminating. An SVC dump can be requested. This message might be due to an abend. See IKT002I for more information.

System action: The system waits for the operator to reply.

Operator response:

- Reply 'U' to continue termination processing without a dump.
- Reply 'DUMP' to produce a dump of virtual storage.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT013I PARAMETER FILE CANNOT BE OPENED - DEFAULT PARAMETERS USED

Explanation: An error occurred while TCAS was trying to open the TSO parameter file. This caused TSO/VTAM default parameters to be used. The parameter file can be found in:

- The data set defined by the PARMLIB DD statement in the TSO start procedure
- A data set in the logical parmlib concatenation (for z/OS)
- SYS1.PARMLIB

System action: TCAS initialization continues.

Operator response: If the defaults are not acceptable, stop TSO/VTAM. Save the system log for problem determination.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM problems.

Routing code: 1,8

Descriptor code: ***

IKT014I I/O ERROR READING MEMBER *member_name* - DEFAULT PARAMETERS USED

Explanation: An I/O error occurred while TCAS was reading TSO/VTAM parameters from the parameter member *member_name*. This caused TSO/VTAM default parameters to be used. The parameter member *member_name* can be found in:

- The data set defined by the PARMLIB DD statement in the TSO start procedure
- A data set in the logical parmlib concatenation (for z/OS)
- SYS1.PARMLIB

member_name is the name of the member of the parameter data set.

System action: TCAS initialization continues.

IKT015I • IKT018I

Operator response: If the defaults are not acceptable, stop TSO/VTAM. Save the system log for problem determination.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM problems.

Routing code: 1,8

Descriptor code: ***

IKT015I MODIFY COMMAND REJECTED, INVALID PARAMETERS SPECIFIED

Explanation: A TSO MODIFY command entered to modify TCAS specified one or more invalid parameters.

System action: The command is ignored.

Operator response: Reenter the command using the correct parameters. See z/OS MVS System Commands for additional information on commands.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT016D INVALID REPLY — RESPECIFY

Explanation: While processing the STOP command, TCAS asked the operator a question and the operator gave an invalid reply.

System action: The system waits for the operator to reply.

Operator response: Specify a valid reply, either 'FSTOP' or 'SIC'. See IKT010D for descriptions of 'FSTOP' and 'SIC'.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT017I FILE FOR PRINTING TSO/VTAM TIME SHARING PARAMETERS CANNOT BE OPENED

Explanation: An error was encountered during TCAS initialization while trying to open the file for printing TSO/VTAM parameters.

System action: The parameters are not printed, but TCAS initialization continues.

Operator response: None.

System programmer response: Determine if the file should be open and if so, open it.

Routing code: 1,8

Descriptor code: ***

IKT018I I/O ERROR PRINTING TSO/VTAM TIME SHARING PARAMETERS, PRINTING STOPPED

Explanation: An error was encountered during TCAS initialization while printing TSO/VTAM parameters.

System action: Printing of the parameters is stopped, but TCAS initialization continues.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT020I TCAS CONSOLE COMMUNICATION TASK ABENDED, RECOVERY IN PROGRESS

Explanation: A TCAS subtask abended.

System action: TCAS reattaches the terminated task.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT026D TCAS ABEND IN PROGRESS — SPECIFY 'U' OR 'DUMP'

Explanation: TCAS is abending. You can request an SVC dump.

System action: The system waits for the operator to reply.

Operator response:

- Reply 'U' to continue termination processing without a dump.
- Reply 'DUMP' to produce a dump of virtual storage.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT028I RC= *aabbcc* SENSE= *code* TERMINAL *termid* CANNOT BE CONNECTED OR RELEASED BY VTAM

Explanation: A user tried unsuccessfully to log on to TSO/VTAM from terminal *termid*.

The reason code is made up of three parts:

aa Indicates the general reason that the message is being issued.

01 CLSDST to terminal *termid* failed.

04 OPNDST to terminal *termid* failed.

06 OPNDST to terminal *termid* failed when trying to issue message IKT00201I to indicate that the maximum number of users are logged on.

bb RPLRTNCD field in the RPL (return code).

cc RPLFDB2 field in the RPL (feedback code).

See the z/OS Communications Server: IP and SNA Codes for a description of *bb* and *cc*.

code is the sense code and represents the RPLFDBK2 field in the RPL. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

termid is the terminal identifier. If VTAM issues a network-qualified name, *termid* is in the form *netid.name*.

System action: Processing continues. If no action is taken, the terminal might be unavailable for use until the next time TSO is started.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and the descriptions of *aabbcc* and *code* to assist you in correcting the problem.

Routing code: 1,8

Descriptor code: ***

IKT029I RC= *aabbcc* SENSE= *code* **TERMINAL** *termid* **ABOUT TO BE RELEASED BY VTAM**

Explanation: A user tried to log on to TSO/VTAM from terminal *termid*. An error occurred that prevented a connection between the terminal and TCAS. As a result, the terminal is about to be freed.

The reason code is made up of three parts:

aa Indicates the general reason that the message is being issued.

- 01 CLSDST to terminal *termid* failed.
- 02 INQUIRE device characteristics failed.
- 03 INQUIRE session parameters failed.
- 04 OPNDST to terminal *termid* failed.
- 06 OPNDST to terminal *termid* failed when trying to issue message IKT0020I to indicate that the maximum number of users are logged on.
- 20 GETMAIN for work area failed.
- 21 Invalid session parameters.
- 22 Invalid device characteristics.

bb If an RPL-based macro failed, *bb* contains the RPLRTNCD field in the RPL. Otherwise, it is 0.

cc If an RPL-based macro failed, *cc* contains the RPLFDB2 field in the RPL. Otherwise, it is 0.

If *bb* and *cc* are not 0, see the z/OS Communications Server: IP and SNA Codes for a description of these codes.

If an RPL-based macro failed, *code* is the sense code and represents the RPLFDBK2 field in the RPL. Otherwise, it is 0. If *code* is not 0, see the z/OS Communications Server: IP and SNA Codes for a description of *code*.

termid is the terminal identifier. If VTAM issues a network-qualified name, *termid* is in the form *netid.name*.

System action: Processing continues, and TCAS tries to release the terminal.

Operator response: If you VARY LOGON to TSO either by using the VARY LOGON command or by specifying LOGAPPL=TSO in a definition statement, a new logon attempt is made when the user session ends, even if it ends in error. If this occurs, this message is issued repeatedly with SENSE=0821. Enter the VARY NOLOGON command to correct the situation.

Otherwise, save the system log for problem determination.

System programmer response: Use the system log and the description of *aabbcc* and *code* to assist you in correcting the problem.

- If RC = 220000, this might indicate that FEATUR2=EDATS is coded on the LOCAL definition statement for a channel-attached non-SNA device. To correct this error, remove the FEATUR2 operand from the LOCAL definition statement. Deactivate and reactivate the major node to use the new definition. See the z/OS Communications Server: SNA Resource Definition Reference for additional information on coding the LOCAL definition statement and the FEATUR2 operand.
- If RC = 061001, this might indicate that FASTPASS=NO should be coded on the SLU definition statement so that the SLU can support the type of session initiation required. See the section on common subarea network problems, in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about this problem.

Routing code: 1,8

Descriptor code: ***

IKT030I TCAS LOGON PROCESS FAILURE PLU=*pluname* SLU=*sluname* [SENSE= *code*]

Explanation: TCAS has received notification in its NSEXIT that a session failure occurred while processing a logon request to TSO.

pluname is the primary logical unit.

- If *pluname* is the name of the TCAS address space, no sense information is displayed, and the session has been terminated for one of the following reasons:
 - Session outage occurred.
 - The operator terminated the session.
 - A logoff TYPE(FORCE) was entered.
- If *pluname* is not the name of the TCAS address space, *code* is the sense code and indicates the reason for the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

sluname is the secondary logical unit. If VTAM issues a network-qualified name, *sluname* is in the form *netid.name*.

System action: The address space created for the logon request is canceled. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and explanation of *code*, if issued, to assist you in correcting the problem.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM logon problems.

Routing code: 1,8

Descriptor code: ***

IKT031I PARAMETER(S) SPECIFIED IN MEMBER *member_name* NOT VALID

Explanation: One or more parameters that are not valid were specified in the *member_name* member of the parameter data set. This caused TSO/VTAM default parameters to be substituted for the parameters that are not valid. The parameter member *member_name* can be found in:

- The data set defined by the PARMLIB DD statement in the TSO start procedure
- A data set in the logical parmlib concatenation (for z/OS)
- SYS1.PARMLIB

member_name is the name of the member of the parameter data set.

System action: Default values are substituted for the values that are not valid. Processing continues.

Operator response: If the defaults are not acceptable, stop TSO/VTAM. Save the system log for problem determination. Save the output from the procedure used to start TSO/VTAM.

System programmer response: See the TSO/VTAM output to identify parameters that are not valid. This output will be on the device specified by the PRINTOUT DD statement of the procedure or on the device specified by the device name operand of the MVS operator START command. For additional information on the MVS START command, see z/OS MVS System Commands.

Routing code: 2,8

Descriptor code: ***

IKT032I *macro* FAILED FOR *gname* RPLRTNCD *aa* RPLFDB2 *bb*

Explanation: TSO/VTAM issues this message when an error occurs from a macro used to create or terminate a generic name association.

macro specifies the failing request type and can be either:

- SETLOGON OPTCD=GNAMEADD
- SETLOGON OPTCD=GNAMEDEL.

gname is the generic resource name.

aa is the RPLRTNCD field in the RPL (return code).

bb is the RPLFDB2 field in the RPL (feedback code).

IKT033I • IKT103I

System action: When the request type is SETLOGON GNAMEADD:

- If there are no active users, TSO/VTAM processing stops.
- If there are active users, processing continues but no generic name support is available for TSO/VTAM.

When the failing request type is SETLOGON GNAMEDEL, TSO/VTAM processing continues.

Operator response: Save the system log for problem determination.

System programmer response: See the z/OS Communications Server: IP and SNA Codes for a description of the return and feedback codes.

Routing code: 1,8

Descriptor code: ***

IKT033I TCAS USERMAX VALUE SET TO *count*

Explanation: TSO/VTAM issues this message to indicate the successful completion of an MVS MODIFY TSO, USERMAX command.

count is the number of TSO/VTAM users that can be active concurrently.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 1,8

Descriptor code: ***

IKT100I USERID *userid* CANCELED DUE TO UNCONDITIONAL LOGOFF

Explanation: A VTAM USS unconditional logoff command was entered by a terminal user *userid*. The session with *userid* is terminated.

System action: The address space created for the session is canceled. Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 4

IKT103I UNKNOWN ENTRY CODE *code* TO VTAM LOSTERM EXIT

Explanation: The return code given to the LOSTERM exit routine of TSO/VTAM is not recognized. Either a list of entry codes is outdated or there is a parameter list error.

code is the return code in error.

System action: *code* is written to the LOGREC data set. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on the LOGREC data set.

Routing code: 2,8

Descriptor code: 4

IKT105I LOGON REJECTED DUE TO INVALID APPLICATION ID

Explanation: TCAS assigned an invalid application program ID to a terminal user attempting to log on to TSO/VTAM.

System action: The terminal user's address space is terminated and dumped. System processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Find the invalid application ID (offset 0 in TVWA) in that dump. SYS1.VTAMLST contains valid application IDs.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM logon problems.

Routing code: 1,8

Descriptor code: 4

IKT106I LOGON REJECTED, CANNOT OPEN ACB, ACBERFLG=X'mm

Explanation: A terminal user was unable to log on to TSO/VTAM because of an OPEN ACB failure.

mm is the ACB error flag value in hexadecimal. See the z/OS Communications Server: IP and SNA Codes for a description of *mm*.

System action: The OPEN ACB failure causes a dump. The user address space is terminated. System processing continues.

Operator response: Save the system log and dump for problem determination.

System programmer response: Correct the problem as determined from the ACB error flag *mm*, and the output from the system log and dump.

Routing code: 1,8

Descriptor code: 4

IKT109I TSO/VTAM LOSTERM FAILED DUE TO VTAM SHORTAGE OF UECB/VRPL

Explanation: The TSO/VTAM LOSTERM exit could not be scheduled because of a shortage of storage for required control blocks.

System action: The user's address space is terminated.

Operator response: If VTAM continues to issue this message, save the system log and request a dump to determine current storage usage.

System programmer response: Increase storage as required.

Routing code: 2,8

Descriptor code: 4

IKT111I APPLNAME=*applname* FAILED DUE TO: *reason*

Explanation: This message always follows IKT117I.

applname is the application name running in this TSO user's address space.

reason indicates the reason for the failure. The following reasons are valid:

GETMAIN FAILURE (GLOBAL 239)

GETMAIN FAILURE (LOCAL 229)

INSUFFICIENT STORAGE FOR QUEUE ELEMENTS

INVALID TERMINAL TYPE

OPEN ACB, INSUFFICIENT STORAGE

OPEN ACB, VTAM IS NOT ACTIVE

OPNDST, INSUFFICIENT STORAGE

IKT112I

OPNDST, RPLRTNCD= *aa*, RPLFDB2= *bb*, RPLFDBK2= *code*

SETLOGON G NAMESUB, RPLRTNCD= *aa*, RPLFDB2= *bb*

TCAS CLSDST PASS FAILURE

TCAS TERMINATED

System action: Logon is terminated. The user's address space is terminated.

Operator response: For insufficient storage errors, if VTAM has been initialized, wait a short time and reenter the command. If VTAM continues to issue this message, save the system log and request a dump to determine current storage usage.

If VTAM initialization failed, save the system log for problem determination.

System programmer response: *reason* determines the recommended action.

GETMAIN FAILURE (GLOBAL 239)

Review CSA storage requirements. Increase storage as required.

GETMAIN FAILURE (LOCAL 229)

Review storage requirements for TCAS. Increase storage as required.

INSUFFICIENT STORAGE FOR QUEUE ELEMENTS

Contact the IBM software support center. This is a TSO/VTAM control block problem.

INVALID TERMINAL TYPE

Ensure the terminal is supported by TSO/VTAM.

OPEN ACB, INSUFFICIENT STORAGE

The OPEN ACB return code from VTAM indicates a storage shortage. Review VTAM storage requirements.

OPEN ACB, VTAM IS NOT ACTIVE

Make sure VTAM is active.

OPNDST, INSUFFICIENT STORAGE

The OPNDST return code from VTAM indicates a storage shortage. Review VTAM storage requirements.

OPNDST, RPLRTNCD= *aa*, RPLFDB2= *bb*, RPLFDBK2= *code*

OPNDST failed.

aa is the RPLRTNCD field in the RPL (return code), and *bb* is the RPLFDB2 field in the RPL (feedback code). See the z/OS Communications Server: IP and SNA Codes for a description of these codes.

code is the sense code and represents the RPLFDBK2 field in the RPL. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

SETLOGON G NAMESUB, RPLRTNCD= *aa*, RPLFDB2= *bb*

SETLOGON failed.

aa is the RPLRTNCD field in the RPL (return code), and *bb* is the RPLFDB2 field in the RPL (feedback code). See the z/OS Communications Server: IP and SNA Codes for a description of these codes.

TCAS CLSDST PASS FAILURE

TCAS issued a CLSDST PASS to place the terminal in ownership of the newly created user address space, and the CLSDST has failed. Examine the API records in the VTAM internal trace to determine the cause for the CLSDST failure in TCAS. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information.

TCAS TERMINATED

Make sure TCAS is active and not in the process of terminating or abending when the logon is attempted.

Routing code: 2,8

Descriptor code: 4

IKT112I {SEND | RECEIVE} ERROR DURING QUERY PROCESSING FOR *applname*, RPLRTNCD=
aa, RPLFDB2= *bb*, SENSE= *code*

Explanation: During logon for application *applname*, TSO/VTAM tried to issue a QUERY 3270 data stream to a terminal in order to determine the terminal's characteristics. The SEND or RECEIVE failed for the reason described by the return code *aa*, feedback code *bb*, and sense code *code*.

aa is the RPLRTNCD field in the RPL (return code) and *bb* is the RPLFDB2 field in the RPL (feedback code). See the z/OS Communications Server: IP and SNA Codes for a description of these codes.

code is the sense code and represents the RPLFDBK2 field in the RPL. See the z/OS Communications Server: IP and SNA Codes for a description of *code*. See the z/OS Communications Server: IP and SNA Codes for a description of sense information for a 3270 SNA or non-SNA device.

System action: The logon continues. Default terminal characteristics as specified by the LANG operand of the terminal's MODEENT entry in the logon mode table were assumed.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and the descriptions of *aa*, *bb*, and *code* to assist you in correcting the problem.

See z/OS Communications Server: SNA Programming for information on the SEND and RECEIVE macros.

Routing code: 2,8

Descriptor code: 4

IKT115I TSO UNABLE TO DISCONNECT TERMINAL *luname*

Explanation: A terminal user logged off from TSO/VTAM. The VTAM ACB associated with the user was closed, but a VTAM error has prevented the user's disconnection from TSO. *luname* is the logical unit that TSO was unable to disconnect. If VTAM issues a network-qualified name, *luname* is in the form *netid.name*.

System action: The user address space terminates with ABEND code hexadecimal 0AB (register 15 contains X'0105'). The terminal that could not be disconnected is not available to other users.

Operator response: Try to make the terminal available to other users by varying it offline, deactivating it, and then reactivating it.

System programmer response: None.

Routing code: 2,8

Descriptor code: 4

IKT116I *userid* {SEND|RECEIVE} ERROR,RPLRTNCD= *aa*, RPLFDB2= *bb*, SENSE= *code*, WAITING FOR RECONNECTION *termid*

Explanation: A SEND or RECEIVE request entered by the TSO/VTAM user *userid* at terminal *termid* had an I/O error. If VTAM issues a network-qualified name, *termid* is in the form *netid.name*.

aa is the RPLRTNCD field in the RPL (return code) and *bb* is the RPLFDB2 field in the RPL (feedback code). See the z/OS Communications Server: IP and SNA Codes for a description of these codes.

code is the sense code and represents the RPLFDBK2 field in the RPL. See the z/OS Communications Server: IP and SNA Codes for a description of *code*. See the z/OS Communications Server: IP and SNA Codes for a description of sense information for a 3270 SNA or non-SNA device.

System action: The user's connection to *termid* has failed, and the LOSTERM exit is scheduled. The user's address space is still intact. It can be reconnected to a terminal with a LOGON *userid* RECONNECT command. If the command is not entered, the address space will terminate at the end of the reconnect time limit (RECONLIM) specified in the TSO/VTAM parameter file.

Operator response: This is probably a hardware error. Save the system log for problem determination.

System programmer response: Use the system log and the descriptions of *aa*, *bb*, and *code* to assist you in correcting the problem.

See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM problems and terminal problems. See z/OS Communications Server: SNA Programming for information on the SEND and RECEIVE macros.

Routing code: 2,8

Descriptor code: 4

IKT117I TSO/VTAM INITIALIZATION FAILED FOR APPLNAME=*applname*, LUNAME=*luname*

Explanation: This message always precedes message IKT111I.

applname is the application name running in this TSO user's address space.

luname is the LU name of the device being used. If VTAM issues a network-qualified name, *luname* is in the form *netid.name*.

See the explanation of message IKT111I for additional information.

Routing code: 2,8

Descriptor code: 4

IKT118I INVALID QUERY REPLY, TERMINAL ID: *termid*

Explanation: During a logon for the TSO application, TSO/VTAM issued a QUERY 3270 data stream to a terminal in order to determine the terminal's characteristics. The response to the query had a field length of zero, which in an invalid length value.

termid is the terminal identifier. If VTAM issues a network-qualified name, *termid* is in the form *netid.name*.

System action: The logon continues. It will use the terminal characteristics from the valid part of the query response.

Operator response: Terminal *termid* has a hardware problem. Save the system log for problem determination. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on service aid programs.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2,8

Descriptor code: 4

IKT119I *langcode* MESSAGES NOT AVAILABLE FOR LU *luname*, USING DEFAULT

Explanation: TSO/VTAM issues this message when a TSO/VTAM terminal user message cannot be sent to a terminal in the desired language. This might occur for one of the following reasons:

- The terminal user message was defined using a double-byte character set, but the terminal does not support double-byte character sets.
- The desired language is not currently available from the MVS message service.

Note: This message is not issued when *langcode* is **ENU**, the default language.

langcode is a 3-character language code that indicates the preferred language for TSO/VTAM terminal user messages.

- *langcode* corresponds to the value of the PLANG operand on the PROFILE command or is passed on the CINIT during session initiation. See the *z/OS Communications Server: SNA Customization* for additional information.
- See the *z/OS Communications Server: SNA Programming* for a list of valid language code settings.

luname is the name of the LU to which the message is being sent. If VTAM issues a network-qualified name, *luname* is in the form *netid.name*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: This message might be useful for problem determination if a terminal user is not receiving translated messages as desired. The MVS message service might need to be updated to support the desired language.

Routing code: 2,8

Descriptor code: 4

IKT120I CLOSE ACB FOR *applname* FAILED, CODE= *returncode* ERROR= *acberflag*

Explanation: TSO/VTAM issues this message when CLOSE ACB failed during the termination of a TSO session with application program *applname*.

returncode provides information about the cause of the failure and is one of the following register 15 values:

Value **Meaning**

4 (X'04')

One or more ACBs were not successfully closed. Depending on the type of error, the OFLAGS field can indicate that the ACB is closed even though the CLOSE has failed (for example, the ACB might never have been opened).

8 (X'08')

One or more ACBs were not successfully closed. Inspect the ERROR field for the cause of the failure. Another CLOSE macro can be used.

12 (X'0C')

One or more ACBs were not successfully closed. Another CLOSE macro cannot be issued.

acberflag is the value set by VTAM in the ERROR field of the ACB. See the z/OS Communications Server: IP and SNA Codes for a description of *acberflag*.

- A nonzero value in this field provides additional information about the cause of the failure.
- If *acberflag* is 0, this indicates that the operating system rejected the close.

System action: The session is terminated. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and the values of *returncode* and *acberflag* to assist you in correcting the problem. For more information about the CLOSE macro, see z/OS Communications Server: SNA Programming.

Routing code: 2,8

Descriptor code: 4

IKT121I TCAS SEND/RECEIVE NOT POSTED FOR TERMINAL *termid*

Explanation: During a logon for the TSO application, TCAS issued a 3270 data stream to a terminal. Terminal *termid* is not responding to the TCAS SEND/RECEIVE request.

This message is issued to the system console, rather than a TSO/VTAM terminal, because TCAS cannot issue an IKTnnnnnI message to the terminal for this error.

System action: The logon is terminated, and the terminal is released by TCAS.

Operator response: Terminal *termid* has a hardware problem. Save the system log for problem determination. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on service aid programs.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on TSO/VTAM problems and terminal problems. See z/OS Communications Server: SNA Programming for information on the SEND and RECEIVE macros.

IKT122I • IKT124I

Routing code: 2,8

Descriptor code: 4

IKT122I IPADDR..PORT *ipaddr..portno*

Explanation: TSO/VTAM issues this message when a TN3270 client attempts to logon to TSO/VTAM but fails to do so.

ipaddr is the IP address of the TN3270 client that is attempting to log on.

portno is the port number associated with the IP address.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log, the *ipaddr*, and the *portno* to assist you in correcting the problem.

Routing code: 1,8

Descriptor code: 4

IKT123I DNS NAME: *dns_name*

Explanation: TSO/VTAM issues this message when a TN3270 client attempts to logon to TSO/VTAM but fails to do so.

It is issued when a DNS Name is available and an APPL, CDRSC, or LU resource is associated with a TN3270 connection. This message is optional and will only be displayed if a DNS name is received from the TN3270 Server. If the message ends with the (..) characters, it means that the DNS name was truncated as passed to z/OS Communications Server from the TN3270 Server. See the z/OS Communications Server: IP Configuration Reference for information about enabling messages.

dns_name is the DNS NAME of the TN3270 client.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and the *dns_name* to assist you in correcting the problem.

Routing code: 2

Descriptor code: 5

IKT124I *dns_name_continued*

Explanation: This message is a continuation of message IKT123I. It is issued as many times as necessary to display the entire DNS name. If the message ends with the (..) characters, it means that the DNS name was truncated as passed to z/OS Communications Server from the TN3270 Server.

dns_name_continued is the continuation of the DNS NAME displayed in IKT123I.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and the *dns_name_continued* to assist you in correcting the problem.

Routing code: 2

Descriptor code: 5

IKT125I TSO LOGON REJECTED: QUERY REPLY TOO LARGE - TERMINAL ID: *termid*

Explanation: During a logon for the TSO application, TSO/VTAM issued a QUERY 3270 data stream to determine the characteristics of the terminal. The response to the query was more than the allowed 4096 bytes.

In the message text:

termid

The LU name of the terminal.

System action: The user address space ends and ABEND0AB RC 204 is issued. System processing continues.

Operator response: Save the dump and system log for problem determination. Contact the system programmer.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM Software support center.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server TCP/IP: TSO/SNA

Module: IKTXINIT

Routing code: 1,8

Descriptor code: 4

Automation: Not applicable.

Example:

IKT125I TSO LOGON REJECTED: QUERY REPLY TOO LARGE - TERMINAL ID: NETA.L7201A

Chapter 4. IKT messages for TSO/VTAM terminal users

This chapter lists TSO/VTAM messages that can appear on a terminal user's console.

See the *z/OS Communications Server: SNA Network Implementation Guide* for information on TSO/VTAM. For additional information on diagnosing TSO/VTAM problems, see *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures*.

IKT00201I MAXIMUM USERS LOGGED ON, TRY LATER

Explanation: TSO issues this message when a logon to TSO fails because it exceeded the maximum number of TSO users allowed on the system.

System action: Processing continues.

Operator response: If you want to temporarily allow more users to log on to TSO concurrently, issue the system MODIFY command. If the maximum allowed users should be changed permanently, contact the system programmer.

See *Modifying TSO/VTAM Time Sharing in z/OS MVS System Commands*.

System programmer response: If you want to permanently allow more users to log on to TSO concurrently, update the USERMAX parameter in the system parmlib member, TSOKEY00.

See *Statements/parameters for TSOKEY00 in z/OS MVS Initialization and Tuning Reference*.

User response: If your user ID is in a disconnect state, you can attempt to logon again using LOGON user ID RECONNECT. If your logon attempts continue to fail, contact the operator.

Problem determination: Not applicable.

Source: z/OS Communications Server VTAM: TSO/VTAM

Example:

```
IKT00201I MAXIMUM USERS LOGGED ON, TRY LATER
```

IKT00202I INSUFFICIENT STORAGE AVAILABLE FOR REQUIRED CONTROL BLOCKS

Explanation: During the logon process, TCAS issued a GETMAIN to obtain storage for control blocks. The GETMAIN failed, and the LOGON is terminated.

IKT00203I ADDRESS SPACE CREATION FAILED

Explanation: During the logon process, TCAS issues an SVC 34 to obtain address space. The return code indicates that no more storage is available for address spaces. The logon is terminated.

IKT00204I LOGON FAILED, NO USER APPLID AVAILABLE

Explanation: During logon processing, no VTAM application program name was available to assign to the user's address space. The logon is terminated.

IKT00300I LOGON RECONNECT SUCCESSFUL, SESSION ESTABLISHED

Explanation: A TSO/VTAM terminal session was successfully reestablished.

IKT00301I LOGON RECONNECT UNSUCCESSFUL DUE TO SYSTEM ERROR

Explanation: A TSO/VTAM terminal session could not be reestablished because storage for the I/O manager could not be obtained.

IKT00400I INPUT DATA LOST

Explanation: Data was not properly received by VTIOC, data could not be placed on a VTIOC input queue, or data was lost from a VTIOC input queue.

IKT00401I OUTPUT DATA LOST

Explanation: Data was lost from a VTIOC output queue.

IKT00402I REENTER DATA BEGINNING WITH *text*

Explanation: A BREAKIN TPUT occurred during input. *text* indicates the last text received during input processing. Reenter data including what is indicated by *text*.

IKT00403I ERROR ON OUTPUT, RETRY IN PROGRESS

Explanation: VTIOC encountered a problem while sending output to the terminal. It is attempting to resend the output.

IKT00405I SCREEN ERASURE CAUSED BY ERROR RECOVERY PROCEDURE

Explanation: TSO/VTAM erased the screen as part of the I/O error recovery procedure.

Chapter 5. IST messages for VTAM network operators IST001I – IST399I

This chapter lists the VTAM messages beginning with IST in the range of IST001I through IST399I. These messages can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

Note: Messages that begin with the prefix **ISTF** are issued by the VTAM dump analysis tool and the VTAM internal trace (VIT) analysis tool. Help information is available as a part of each tool by pressing F1. Therefore, **ISTF** messages are not documented in z/OS Communications Server: SNA Messages. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

IST001I VTAM START REJECTED — *reason*

Explanation: VTAM initialization has been terminated for one of the following *reasons*:

CANNOT LOCATE *name*

Load of module *name* failed.

CANNOT LOCATE *name* **IN** **ISTCSLOD**

Module *name* could not be located in ISTCSLOD.

CANNOT LOCATE *name* **IN** *library*

Member *name* could not be located in *library*.

ERROR DEFINING TABLE *tablename*

An error occurred while defining table *tablename*.

ESTAE FAILED

An attempt to create an ESTAE exit was unsuccessful. The necessary storage is not available if VTAM abends before initialization has completed.

FAILURE ATTEMPTING TO FIX STORAGE

Not enough real storage is available for VTAM to make required pages nonpageable.

INCONSISTENT VTAM RELEASE STARTED

A different release of VTAM than was previously active was started without re-IPLing MVS.

INSUFFICIENT 24-BIT CSA AVAILABLE

There is not enough 24-bit CSA storage available to initialize VTAM.

INSUFFICIENT 31-BIT CSA AVAILABLE

There is not enough 31-bit CSA (ECSA) storage available to initialize VTAM.

INVALID ENVIRONMENT

The current release of VTAM has been initialized on an unsupported operating system.

ISTCSLOD SET *name* **AS AN ALIAS**

Either the alias module *name* could not be located in the vector list of its load module or the alias module was loaded before the vector list.

LOAD SUBTASK *name* **INOPERATIVE**

An abend occurred in the directed load subtask *name*.

name **NOT A VALID USS TABLE**

Table *name* did not have the USS table format that VTAM expected.

IST001I

name TABLE HAS NO TYPE ID

Table *name* did not have a valid control block ID field (CBID).

name TABLE LOAD HAD I/O ERROR

An attempt to load table *name* during a search of load library directory data on a disk caused a permanent I/O error.

name TABLE LOAD HAD I/O TIMEOUT

An attempt to load table *name* caused a timeout while building a directory entry list from load library directory data on a disk. The disk I/O might be hung.

name LIBRARY NOT APF AUTHORIZED

Named VTAM load library is not APF-authorized.

OPERATOR REQUESTED TERMINATION

Termination was selected in response to message IST1216A.

PROCESSING ERROR

VTAM internal resources failed because of a duplicate resource name.

TERMINATION IN PROGRESS

VTAM was terminating during an initialization call.

UNABLE TO ALLOCATE STORAGE

Request for storage has failed during initialization.

System action: VTAM initialization has terminated. An attempt to start VTAM has failed.

Operator response: Save the system log for problem determination.

System programmer response:

CANNOT LOCATE *name*

Verify that *name* is present in the definition library. Verify that SYS1.SISTCLIB is APF authorized. Also, ensure that the linkage editor output from the VTAM generation and maintenance has appropriate entries.

CANNOT LOCATE *name* IN ISTCSLOD

Contact the IBM Support Center.

CANNOT LOCATE *name* IN *library*

Check the directory of *library*, and determine if *name* is present. If not, add *name* to *library*. If *name* is of the form ATCSTR xx or ATCCON xx , verify that the xx that was specified on the LIST or CONFIG start option correctly identifies the number.

ERROR DEFINING TABLE *tablename*

You must correct the definition of *tablename*. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

ESTAE FAILED

Increase the size of the VTAM address space prior to restarting VTAM. See the z/OS Communications Server: New Function Summary for help to determine the storage requirements for VTAM.

FAILURE ATTEMPTING TO FIX STORAGE

See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.

INCONSISTENT VTAM RELEASE STARTED

If you are trying to start a different release of VTAM than was previously active, you must re-IPL MVS, then restart the different VTAM release. If you are trying to start the release of VTAM that was previously active, specify the correct release.

INSUFFICIENT 24-BIT CSA AVAILABLE

You must define a sufficient amount of 24-bit CSA storage. See the z/OS Communications Server: New Function Summary to determine the amount of 24-bit CSA storage required.

INSUFFICIENT 31-BIT CSA AVAILABLE

You must define a sufficient amount of 31-bit CSA (ECSA) storage. See the z/OS Communications Server: New Function Summary to determine the amount of ECSA storage required.

INVALID ENVIRONMENT

Run this VTAM only on MVS licensed processors and operating systems.

ISTCSLOD SET *name* AS AN ALIAS

Contact the IBM Support Center.

LOAD SUBTASK *name* INOPERATIVE

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on diagnosing VTAM problems.

***name* NOT A VALID USS TABLE**

Check the contents of the CSECT for the table *name*. If errors are found, rebuild the load library with the corrected CSECT.

***name* TABLE HAS NO TYPE ID**

Check the contents of the CSECT for the table *name*. If errors are found, rebuild the load library with the corrected CSECT.

***name* TABLE LOAD HAD I/O ERROR**

Determine if the disk containing the load library is accessed correctly and access it again if it is not.

***name* TABLE LOAD HAD I/O TIMEOUT**

Check the disk and determine whether the problem is poor I/O performance or hung disk I/O for the directed load subtask.

***name* LIBRARY NOT APF AUTHORIZED**

Authorize the named VTAM load library.

OPERATOR REQUESTED TERMINATION

None.

PROCESSING ERROR

Check the definition library to ensure that all requirements for VTAM are correct for your system.

TERMINATION IN PROGRESS

None.

UNABLE TO ALLOCATE STORAGE

Use the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.

Routing code: 2

Descriptor code: 5

IST003I ABEND OCCURRED DURING NETWORK DEFINITION OF CONFIG *configname*, CODE = *code*

Explanation: VTAM issues this message when the VTAM network definition of configuration *configname* has abnormally terminated. Network definition occurs:

- During VTAM start processing to process the CONFIG operand
- In response to one of the VARY commands

code is the abend code. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: *configname* is not defined to VTAM and must be activated or deactivated with a VARY command. Other processing continues.

Operator response: Save the system log and dump for problem determination.

System programmer response: Use the system log and the description of *code* to assist you in correcting the problem. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.

Routing code: 2

Descriptor code: 5

IST009I VTAM IS ALREADY ACTIVE — START REJECTED

Explanation: VTAM issues this message when the operator attempted to start VTAM, and VTAM is already active.

System action: VTAM ignores the start request.

Operator response: If you want to restart VTAM, halt the first instance of VTAM.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST010I *command* COMMAND INVALID

Explanation: VTAM issues this message when the *command* failed because an incorrect command format was entered through the program operator interface. The only valid commands are VARY, MODIFY, and DISPLAY.

The most frequent cause for this message is that a START or HALT command was entered.

System action: VTAM does not execute *command*. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the program operator application. See the z/OS Communications Server: SNA Programming for information about writing program operator applications.

Routing code: 2

Descriptor code: 5

IST011I *command* FOR *npcname* status

Explanation: VTAM issues this message in response to a MODIFY DUMP command for NCP *npcname*.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

status can be one of the following values:

COMPLETE

The dump is complete.

FAILED, SENSE = code

The dump failed.

REJECTED – NCP LEVEL

The NCP is an NCP release prior to V5R2. MODIFY DUMP,ACTION=PURGE is valid only for NCP V5R2 and later releases.

System action: Other processing continues.

Operator response:

COMPLETE

None

FAILED, SENSE = code

Check the value of *code* for a possible hardware problem. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

REJECTED – NCP LEVEL

Ensure that you do not enter a MODIFY DUMP command for an NCP release prior to V5R2.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST013I I/O ERROR FOR member IN datasetname

Explanation: VTAM attempted to load *member* in the data set associated with DDNAME *datasetname* and encountered an I/O error.

System action: If *member* is critical to VTAM, another message will be issued. Otherwise, VTAM continues processing.

Operator response: This is probably a hardware error. If *member* is not critical to the VTAM task, but is needed by an application program, halt VTAM and try to restart it with alternate devices or volumes.

If problems persist, save the system log for problem determination. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2,10

Descriptor code: 4

IST015A ERROR PROCESSING LIST IDENTIFIER — ENTER LIST ID OR BLANK

Explanation: VTAM detected an error while processing the LIST start option.

System action: VTAM waits for a reply to this prompt.

- If a list identifier *xx* is entered, VTAM will attempt to read the specified start list, ATCSTR*xx*.
- If a blank is entered, VTAM will not process any list. It will use the previously processed start options.

After the reply is received, VTAM will process any additional options specified by the operator in response to a previous prompt for start options, or when the START command was entered.

Operator response: Enter the list identifier specified by your installation (2 characters) or use the previously processed start options by entering a blank.

System programmer response: Check that the identifier to be used is valid and has been correctly communicated to the VTAM operator, or respond with the identifier for the default start option list.

See the z/OS Communications Server: SNA Resource Definition Reference for information on the LIST start option. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation of starting VTAM and a description of the types of start options and how start options are processed.

Routing code: 1

Descriptor code: 2

IST018I CONFIG COULD NOT BE INITIALIZED — VTAM START CONTINUES

Explanation: This message is the first in a group of messages that VTAM issues when the network configuration specified on the CONFIG start option could not be initialized. A complete description of the message group follows the example.

```
IST018I CONFIG COULD NOT BE INITIALIZED - VTAM START CONTINUES
IST523I REASON = reason
IST314I END
```

The second message in the group explains the reason for the failure. *reason* can be one of the following values:

ERROR IN CONFIG LIST

The configuration list contains an error. This error might be caused by a missing data set definition statement.

IST020I

ERROR READING VTAMLST FILE

The specified configuration list could not be found, or an error occurred while reading the list. For example, CONFIG=*xx* was specified, but there is no corresponding ATCCON*xx* configuration list in the appropriate library.

Another cause might be that a syntax error in the ATCCON*xx* configuration list is discovered and reported in the IST1249I message group. When a list itself contains a syntax error, the entire list is ignored.

INSUFFICIENT STORAGE

There is not enough storage available.

NAME IN CONFIGURATION LIST IS NOT VALID

The configuration list contains a major node name or a path definition name that does not follow the correct naming convention. VTAM will issue the message, but proceed with the remaining nodes.

System action: VTAM initialization continues.

- If the list itself contains a syntax error, the entire list is ignored.
- If reason is NAME IN CONFIGURATION LIST IS NOT VALID, VTAM continues processing the remaining nodes in the list.
- For all other reasons, VTAM ignores the rest of the nodes in the list after the error was encountered.

Operator response: To make the network usable while this error is being investigated, activate parts (or all) of the network using VARY ACT commands for specific nodes in the network.

- If *reason* is **INSUFFICIENT STORAGE**, enter the DISPLAY BFRUSE command or the DISPLAY STORUSE command. Save the system log and request a dump for problem determination.
- For all other *reasons*, save the system log for problem determination.

System programmer response:

- If *reason* is **INSUFFICIENT STORAGE**, verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTR*xx*) and restart VTAM to use the start option.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- For all other *reasons*, if you want the specified configuration, halt VTAM and correct the configuration list specified by the start option or a start list. Then have the operator restart VTAM.

Routing code: 2

Descriptor code: 5

IST020I VTAM INITIALIZATION COMPLETE FOR *level*

Explanation: VTAM issues this message when initialization of VTAM is complete. Previous messages identify start options that were not processed.

level is the version (*x*) and release (*y*) of VTAM for z/OS Communications Server that is being run. For example, CSV*xRy* is displayed for VTAM for z/OS Communications Server Version *x* Release *y*.

This message is followed by message IST1348I, which provides the node type of this host, and message IST1349I, which provides the component identifier of the version of VTAM that is running.

System action: Processing continues.

Operator response: You can now enter VTAM network operator commands (VARY, MODIFY, DISPLAY, or HALT) and start VTAM application programs.

If the logon manager has been activated, you should now enter END or CONTINUE in response to message ELM101A.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST025I **BLDL FAILED FOR** *member* **IN** *library*

Explanation: Build link-list failed because VTAM could not find *member* in *library*.

System action: VTAM issues another message stating the VTAM action taken as a result of this condition.

Operator response: Save the system log for problem determination.

System programmer response: Check *library* for *member*. If the *member* does not exist and is needed, add it.

Routing code: 2

Descriptor code: 5

IST033I *command* **COMMAND CANCELLED**

Explanation: VTAM cancelled *command* as a result of unavailable resources. For example, VTAM might not be able to obtain a lock.

command is either the START trace option or the MODIFY TRACE command.

System action: VTAM does not execute the command.

Operator response: When the resources become available, reenter the command. If problems persist, save the system log for problem determination.

System programmer response: Check the system log provided by the operator to ensure that all requirements for VTAM are correct for your system. When you have corrected the error condition, ask the operator to reenter the command.

Routing code: 2

Descriptor code: 5

IST037I *command* **FAILED — SYNTAX ERROR**

Explanation: The *command* failed because of one or more of the following syntax errors:

- Does not have expected delimiters or punctuation
- Has an operand that exceeds 8 characters in length
- Might have quotation marks around a keyword
- Might have a non-EBCDIC character in one of the operands.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the command with the correct format. For information on command formats, see z/OS Communications Server: SNA Operation.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST038I VARY FAILED FOR ID = *cdmname* — HOST CDRM IS NOT ACTIVE

Explanation: A VARY ACT command to activate an external cross-domain resource manager *cdmname* failed because this domain's CDRM has not been activated.

System action: VTAM rejects the command.

Operator response: To start a session with *cdmname*, enter a VARY ACT command to activate the host's CDRM. Enter a DISPLAY ID command for your host's CDRM to make sure that it is active before reentering the command for *cdmname*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST039I *command* FAILED — CANNOT IDENTIFY COMMAND TYPE

Explanation: The *command* does not contain an identifiable keyword that distinguishes the type of command. For example, the VARY command does not contain an identifiable keyword such as ACT, ACQ, or LOGON.

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the command with the correct keyword. See z/OS Communications Server: SNA Operation for a list of operands.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST040I START OPTION *option* REQUIRED — REENTER WHEN PROMPTED

Explanation: VTAM issues this message when a required start option was either not specified or was specified incorrectly.

option is the name of the start option in error.

System action: VTAM continues processing the other start options and prompts for additions or corrections. VTAM initialization cannot complete until a valid value for *option* is entered.

Operator response: Enter the required option when prompted.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST043I *value* INVALID VALUE FOR KEYWORD *keyword*

Explanation: An unacceptable value was specified for *keyword* in a VTAM operator command. *value* is the first 8 characters of the invalid value.

System action: VTAM rejects the command.

Operator response: Correct the keyword *keyword* and reenter the command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST049I VTAM START REJECTED – *macroname* FOR [*acbtype*] ACB FAILED

Explanation: This message is the first in a group of messages issued when VTAM is terminated because an access method control block (ACB) or SETLOGON macro failed.

macroname is the name of the macro that failed. Possible values are: **OPEN** or **SETLOGON**.

The second message in the group explains the reason for the failure. Possible message groups follow:

- If *macroname* is **OPEN**, the following message group is displayed.

```
IST049I  VTAM START REJECTED – OPEN FOR [acbtype] ACB FAILED
IST1218I ACB ERROR FIELD = acberflg
IST314I  END
```

IST049I

– *acbtype* describes the ACBs associated with VTAM and indicates which host ACB failed.

- If the **OPEN** ACB failed for a control point, *acbtype* is **CP**.
- If the **OPEN** ACB failed for an SSCP, *acbtype* is not displayed.

IST1218I

acberflg is the error field of the ACB. It is a hexadecimal value returned by the OPEN macro and indicates the specific nature of the error encountered. See the z/OS Communications Server: IP and SNA Codes for a description of *acberflg*.

- If *macroname* is **SETLOGON**, the following message group is displayed.

```
IST049I  VTAM START REJECTED – SETLOGON FOR [acbtype] ACB FAILED
IST1219I RTNCD = rtncd, FDB2 = fdb2
IST314I  END
```

IST049I

– *acbtype* describes the ACBs associated with VTAM and indicates which host ACB failed.

- If the **SETLOGON** ACB failed for a control point, *acbtype* is **CP**.
- If the **SETLOGON** ACB failed for an SSCP, *acbtype* is not displayed.

IST1219I

rtncd is the error field RPLRTNCD. It is a hexadecimal value returned by the SETLOGON macro.

fdb2 is the feedback field RPLFDB2. It is a hexadecimal value returned by the SETLOGON macro.

See the z/OS Communications Server: IP and SNA Codes for a description of the *rtncd-fdb2* combination.

System action: VTAM is terminated.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and return code information to assist you in correcting the problem.

For a description of *acberflg* in message IST1218I, see the z/OS Communications Server: IP and SNA Codes.

For a description of the *rtncd-fdb2* combination in message IST1219I, see the z/OS Communications Server: IP and SNA Codes.

For additional information on the OPEN and SETLOGON macros, see z/OS Communications Server: SNA Programming.

Routing code: 2

Descriptor code: 5

IST050I *command* COMMAND REJECTED — OPEN FOR VTAM DATA SET *datasetname* FAILED

Explanation: In response to a *command*, VTAM attempted to open data set *datasetname*, which could not be opened but is required to continue processing.

System action: VTAM rejects the command. Other processing continues.

IST051A • IST054I

Operator response: Ensure that you entered the command correctly. If the problem persists, save the system log for problem determination.

System programmer response: Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system. Review the system definition, the VTAM definition statement, and the VTAM start procedure. Verify VTAM data set construction and allocation. When you have corrected the error condition, ask the operator to reenter the command.

Routing code: 2

Descriptor code: 5

IST051A ENTER VTAM START PARAMETERS

Explanation: VTAM issues this message when the PROMPT start option was coded in the default start list, ATCSTR00. VTAM is prompting the operator to enter start options to override the default start options already stored or to provide additional options.

System action: VTAM waits for the reply and then processes the options entered.

Operator response: Take one of the following actions:

- Enter the start options recommended by the system programmer or contained in your operator instructions. (If you cannot fit all the required start options on one line, put a comma after the last option on the line. This causes message IST1311A to be issued, allowing you to specify more start options.)
- Enter a blank to cause VTAM to use the start options from the default start list.

Note: If you enter a LIST start option, ensure that you enter it correctly. VTAM will not give you an opportunity to correct a spelling error. You cannot enter the LIST start option in response to message IST1311A. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VTAM start options.

System programmer response: None.

Routing code: 1

Descriptor code: 2

IST052I *parameter* IS AN INVALID START OPTION KEYWORD – IGNORED

Explanation: The operator specified parameter *parameter* as a VTAM start option, but this is an invalid keyword.

System action: VTAM ignores this option and continues processing any other start options.

Operator response: When prompted by VTAM, enter the correct keyword and options, or enter a blank to indicate that you do not want to enter any options.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST054I *member* IN *library* {NOT FOUND|IS EMPTY} – START PROCESSING CONTINUES

Explanation: VTAM issues this message during start processing when a specified library member is empty or is not found.

member is either ATCSTR00 or ATCSTRxx, where xx is from the LIST start option.

library is the DDNAME specified for the definition library.

System action: VTAM ignores *member* and continues processing the other start options.

Operator response: Save the system log for problem determination.

System programmer response: Verify that *member* was either intentionally left empty or not found. If *member* is necessary to your system, halt and restart VTAM with the correct library member.

Routing code: 2

Descriptor code: 5

IST056A LIST = *listid* IS INVALID — ENTER LIST ID OR BLANK

Explanation: The value specified for *listid* in the LIST start option is invalid. One of the following situations is true:

- No corresponding member exists for this identifier.
- The identifier is more than the allowable 2 characters long. If more than 3 characters were entered, only the first 3 are printed in the message.
- The identifier contains characters other than the allowed alphanumeric characters.

System action: VTAM waits for a reply to this message.

Operator response: If you enter an identifier in response to this message, VTAM will attempt to process the options in the definition library.

If you select a default list, VTAM will prompt you to enter individual start options. Take one of the following actions:

- Determine the correct identifier, and enter it.
- Invoke the default list by entering a blank.

System programmer response: Ensure that the specified member actually exists. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VTAM start options.

Routing code: 1

Descriptor code: 2

IST057I KEYWORD MISSING AFTER TRACE/NOTRACE OPTION ON START PARMS

Explanation: VTAM issues this message when a required keyword did not follow the TRACE or NOTRACE keyword in the start options.

System action: VTAM does not process the TRACE or NOTRACE options but continues to process any remaining start options.

Operator response: Correct the trace option by responding to IST1311A or ignore the error by entering a blank.

System programmer response: Examine the VTAM start options contained in ATCSTRxx, and verify that the correct options are specified. See the z/OS Communications Server: SNA Resource Definition Reference to verify the appropriate options for ID or TYPE keywords on the TRACE/NOTRACE start option and for more information about VTAM start options.

Routing code: 2

Descriptor code: 5

IST058I *keyword1* AND *keyword2* OPTIONS HAVE DUPLICATE VALUES

Explanation: The same value was specified for start options *keyword1* and *keyword2*. This situation occurs when you enter values for the HOSTPU and SSCPNAME start options or two VTAM coupling facility structures have been assigned the same name.

System action: If *keyword1* is HOSTPU and *keyword2* is SSCPNAME, then HOSTPU defaults to ISTPUS. VTAM issues message IST1311A, which prompts you to reenter any start option overrides.

Operator response: If the duplicate keywords were in a start list, save the system log for problem determination. If not, enter any start option overrides when prompted by message IST1311A. For coupling facility structures, you will continue getting prompted with IST1311I until the options specified by *keyword1* and *keyword2* have unique values.

System programmer response: If the duplicate keywords were in a start list, change them so that they have unique values. See the z/OS Communications Server: SNA Network Implementation Guide for more information about VTAM coupling facility structures. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VTAM start options.

Routing code: 2

Descriptor code: 5

IST059I *text* **IGNORED – INSUFFICIENT STORAGE**

Explanation: VTAM could not obtain sufficient storage to complete the operation indicated by *text*:

TRACE FOR *nodename*

A TRACE start option for node *nodename*.

PATH *pathname* **FOR** *nodename*

Update of dynamic path update set named *pathname* for node *nodename*.

System action: If *text* indicates:

TRACE FOR *nodename*

If the *nodename* value is **VTAM** and you are trying to start an internal trace (for example, type=VTAM), initialization continues without a VTAM internal trace table.

If the *nodename* value is anything other than **VTAM**, VTAM issues message IST1311A, which prompts you to reenter any start option overrides.

PATH *pathname* **FOR** *nodename*

VTAM does not update dynamic path update set *pathname*.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

For a VTAM internal trace, enter a MODIFY TRACE command, specifying a smaller buffer size.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST061I *command* **FOR** *nodename* **FAILED — NODE UNKNOWN TO VTAM**

Explanation: The operator entered a *command* for a resource *nodename* that is not defined to VTAM. A null name (one consisting entirely of blanks) is also an identifier that is not valid.

System action: VTAM rejects the command.

Operator response: Ensure that you entered the command correctly.

- If you were trying to activate a minor node, the message indicates that there is no such minor node in any currently active major node. In this case, the major node containing minor node *nodename* must be activated first. You can issue the DISPLAY MAJNODES command to determine which major nodes are active.
- If you were trying to activate a major node, the message indicates that there is no such major node in the definition library.
- If you were trying to deactivate either a major or minor node, the message indicates that there is no such node currently defined to VTAM.

Save the system log for problem determination.

System programmer response: Validate that the *nodename* value is correct, and provide the operator with the correct

name. If necessary, change the VTAM definition statements to use the correct name.

Routing code: 2

Descriptor code: 5

IST066I *command* **FAILED — CONFLICTING OR INVALID OPTIONS**

Explanation: The operator entered the *command* with an operand or combination of operands that was not valid. Two or more options might be mutually exclusive, or a particular option might be valid only for some types of nodes. This message might also occur when an NCP or channel-to-channel adapter is already activated with different parameters.

System action: VTAM rejects the command.

Operator response: Ensure that you entered the command correctly. If the problem persists, save the system log and print the major node definition for problem determination.

System programmer response: Check the command description for restrictions on the use of operands.

- If this message was the result of the activation of a major node that was already active, such as an NCP, the conflict is probably between an operand on the command and either:
 - An operand on a definition statement, or
 - An operand specified on the prior activation.
- If the major node in question is not active, instruct the operator to simply reenter the command with corrected options.
- If, however, the major node is already active and the conflict is between an operand specified on the new activation and the one used on a prior activation, you will need to deactivate the major node if the new operand is required, then reactivate it.

Note: Deactivating the major node will disrupt any active sessions that use the node.

Routing code: 2

Descriptor code: 5

IST072I *command* **FOR ID = nodename FAILED DURING NETWORK DEFINITION**

Explanation: VTAM issues this message when the *command* entered to activate or acquire the major node *nodename* failed during network definition.

command is the command that failed. Possible values are:

VARY ACT or VARY ACQ

The VARY ACT or VARY ACQ command for a major node definition is in error.

VARY DRDS

Processing of a VARY DRDS (dynamic reconfiguration data set) command failed, and the entire definition was rejected.

MODIFY DR

A MODIFY DR command failed.

nodename is the name of the major node specified on the command.

System action: The command fails. The major node or DRDS definition and its resources remain inactive, and VTAM cannot use them.

Operator response: Save the system log and print the major node definition for problem determination.

System programmer response: Previous messages provide information about the cause of the failure.

- If this is a definition error, correct the major node definition or DRDS definition to resolve the problem before the operator reenters the command.
- If this is not a definition error, tell the operator to reenter the command using the correct major node name. See z/OS Communications Server: SNA Operation for more information about *command*.

Routing code: 2

Descriptor code: 5

IST073I *command* **FOR ID = nodename FAILED — MORE POWERFUL REQUEST IN PROGRESS**

Explanation: VTAM issues this message when the *command* fails because *nodename* has a deactivation request pending.

Note: If the command was a VARY INACT command, the pending deactivation is of a stronger type (Immediate or Force).

System action: VTAM rejects the command.

Operator response: Monitor the progress of the deactivation by using the DISPLAY command. When *nodename* is deactivated, reenter the command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST074I *command* **FOR ID = nodename FAILED — INSUFFICIENT STORAGE**

Explanation: A *command* for *nodename* failed because VTAM could not obtain a work area to process the request.

System action: VTAM rejects the command.

Operator response: Messages IST561I, IST562I, IST563I, IST564I, IST565I or IST566I might be issued prior to this message to indicate the type of storage affected.

Issue the DISPLAY BFRUSE command to display storage used by VTAM buffer pools and information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

If *nodename* is an independent logical unit that is being converted to a definition for a resource in another domain, then the NCP major node for *nodename* must be deactivated. Activate the NCP major node when the storage shortage no longer exists.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST075I **NAME = name, TYPE = type**

Explanation: This message is part of several different message groups that VTAM issues in response to one of the following commands:

- DISPLAY ID=*nodename*
- DISPLAY EE

- DISPLAY GRPREFS
- DISPLAY LUGROUPS
- DISPLAY MODELS, ID=model_name
- DISPLAY TRACES,TYPE=NODES,ID=nodename1, nodename2,..., nodenamen
- DISPLAY TRACES,TYPE=NODES,ID=*
- DISPLAY TRACES,TYPE=ALL
- DISPLAY TRL,TRLE=trl_element
- DISPLAY TSOUSER,ID=nodename
- DISPLAY TRACES,TYPE=EXIT,ID=exitname
- DISPLAY VTAMSTOR,NETADDR=(subarea_address,element_address)
- DISPLAY VTAMSTOR,RESOURCE=resource_name
- MODIFY NOTRACE,TYPE=EXIT,ID=exitname,OPT=optionlist
- MODIFY TRACE,TYPE=EXIT,ID=exitname,OPT=optionlist.

name is the name of the resource or ID type that is displayed.

See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for a description of *type*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST077I SIO = *sio* CUA = *device_address* [, SLOWDOWN = YES]

Explanation: VTAM issues this message in response to a DISPLAY ID command requesting the status of a channel-attached node. For a DISPLAY ID command for a local NCP, this message is issued for every channel-attached link station defined from the host to the PU type 4.

sio is the number of start I/O operations counted for the channel. This number is cumulative (from the time that the node was last activated) and is expressed in decimal. The value of *sio* is never larger than 65535. If *sio* is 65535, its value is reset to 0 when the next start I/O operation takes place.

device_address is the hexadecimal address of the channel-attached device. This field contains *NA if the device address is not available.

SLOWDOWN=YES, if present, indicates that the node is in slowdown.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST080I *resource1 status1 resource2 status2 resource3 status3*

Explanation: This message is part of a group of messages that VTAM issues in response to one of the following commands:

DISPLAY APPLS command

This message lists the resources and gives the status of each.

DISPLAY ID command

This message lists the resources and gives the status of each.

IST081I

DISPLAY LINES command

This message lists the resources and gives the status of each.

DISPLAY LUGROUPS command

This message lists the resources but does not display status since *resource* represents a symbolic resource name.

DISPLAY PENDING command

This message lists the resources and gives the status of each.

DISPLAY TERMS command

This message lists the resources and gives the status of each.

If there are more than three nodes, the message is repeated as many times as necessary to display all the nodes. This message is preceded by a message that identifies the type of resources that are listed.

resource is the name of the resource.

If a DISPLAY APPLS, DISPLAY ID, DISPLAY LINES, DISPLAY PENDING, or DISPLAY TERMS command was entered, see the z/OS Communications Server: IP and SNA Codes for *status* information.

If a DISPLAY LUGROUPS command was entered, the *status* field is blank.

See z/OS Communications Server: SNA Operation for information on commands. See the z/OS Communications Server: SNA Resource Definition Reference for information on LUGROUPS.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST081I **LINE NAME** = *linename*, **LINE GROUP** = *groupname*, **MAJNOD** = *nodename*

Explanation: VTAM issues this message in the following situations:

- In response to a DISPLAY ID command
- When a connection request for resource *nodename* in message IST680I has been rejected. See the description of IST680I for more information.
- When a switched connection between VTAM and a physical unit was unsuccessful because the station identifier *stationid* displayed in message IST690I did not resolve to a node name in an active switched major node. See the description of IST690I for more information.

linename is the line to which *nodename* is connected.

groupname is the line group to which the line *linename* belongs.

nodename is the major node with which the line is associated.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST082I **DEVTYPE = *devicetype* [, CONTROLLING LU = *luname*]**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command.

devicetype is the device type. If *devicetype* is **INDEPENDENT LU / CDRSC**, the node is an independent LU that is represented by a CDRSC.

luname is the name of the controlling LU that was previously specified on the LOGAPPL operand of the definition statement or on the LOGON operand of the VARY LOGON command. If there is no controlling application program, VTAM does not display **CONTROLLING LU = *luname***.

System action: Processing continues.

Operator response: None

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST084I **NETWORK RESOURCES:**

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ID command requesting status of a line, local SNA major node, or switched SNA major node. The message immediately following this message will provide details about subordinate nodes associated with the displayed node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST085I **DISPLAY FAILED — INFORMATION NOT AVAILABLE**

Explanation: VTAM cannot execute a DISPLAY PATHTAB or a DISPLAY STATS,TYPE=CFS command because VTAM cannot gather the requested information.

If the operator specified ADJSUB on the DISPLAY PATHTAB command, there are no routes passing through the named adjacent subarea. If the operator specified DESTSUB on the DISPLAY PATHTAB command, there are no routes going to the named destination subarea.

If the message was issued in response to a DISPLAY STATS,TYPE=CFS command, it will be followed by message IST1366I. See the description of that message for more information.

System action: VTAM rejects the command.

Operator response: For the DISPLAY PATHTAB command ensure that you entered the command correctly. If problems persist, save the system log for problem determination.

For the DISPLAY STATS,TYPE=CFS command see the description of message IST1366I.

System programmer response: For the DISPLAY PATHTAB command see the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more problem determination information.

For the DISPLAY STATS,TYPE=CFS command see the description of message IST1366I.

Routing code: 2

Descriptor code: 5

IST087I

IST087I **TYPE** = *line_type*, **CONTROL** = *line_control*, **HPDT** = *hpdvalue*

Explanation: This message is part of several different message groups that VTAM issues in response to DISPLAY ID or DISPLAY TRL commands.

line_type indicates the type of line and can be one of the following values:

LEASED
SWITCHED DIAL-IN
SWITCHED DIAL-OUT
SWITCHED DIAL-INOUT

line_control can be one of the following values:

BSC
Binary synchronous communication

CTCA
Channel-to-channel attached

ISM
Internal shared memory

MPC
Multipath channel

NCP
Channel-attached NCP

ROCE
Remote Direct Memory Access (RDMA) over Converged Ethernet

SDLC
Synchronous data link control

SS Start-stop

TCP
Transmission Control Protocol

USER
User-defined protocol

XCF
Cross-system coupling facility

hpdvalue can be one of the following values:

YES
Indicates the connection is capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NO Indicates the connection is not capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NA
Is displayed when *line_control* is not MPC or when the connection is not active.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST089I *nodename* **TYPE = search=nodeid.nodetype, search=rescd.status** {[,CUA=*device_address*] | [,PHYS=*puname*]}

Explanation: This message is part of several different message groups that VTAM issues in response to DISPLAY ID commands or DISPLAY commands that display the status of a particular category of resources in a domain.

nodename is the name of the resource or ID type that is displayed.

See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for a description of *nodetype*.

See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

device_address is the hexadecimal channel address of the node. It provides attachment for the communication controller normally attached by the physical unit type 4 *nodename*. VTAM issues *NA if *device_address* is not available.

puname is the name of the PU that is the physical resource for *nodename* and is specified on the PHYSRSC operand of the GROUP definition statement. *puname* is issued only with **TYPE=LINE** or **TYPE=LINE GROUP**.

If the physical unit, defined in the NCP definition, whose name is specified by the PHYSRSC keyword is a switched PU that is not currently connected, then *highernode* is the physical line.

System action: Processing continues.

Operator response: For more information about the *nodename* value, enter a DISPLAY ID command.

Note: The DISPLAY ID command is not valid for model LU or PU nodes. For more information about a model LU or PU node, enter a DISPLAY MODELS command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST092I **REQUESTED** *limit* **LESS THAN CURRENT ALLOCATION – REQUEST** {**REJECTED** | **ACCEPTED**}

Explanation: The value specified on the CSALIMIT start option, the CSA24 start option, or the MODIFY CSALIMIT command, is less than the common service area (CSA) size currently being used by VTAM. VTAM rejects a MODIFY CSALIMIT request unless F was indicated in the command to force the change.

During VTAM start, the requested start option is always rejected.

limit is one of the following:

- **CSALIMIT**, which indicates total CSA
- **CSA24 LIMIT**, which indicates CSA below 24-bit addressable storage.

System action:

- If **ACCEPTED** is indicated, the operator entered a MODIFY CSALIMIT command with the F operand. VTAM sets the *limit* to the new value specified in the command.
- If **REJECTED** is indicated after the operator entered a MODIFY CSALIMIT command, VTAM rejects the command and the *limit* remains unchanged.
- If **REJECTED** is indicated during VTAM start, VTAM rejects the command, the *limit* remains unchanged, and the operator is prompted to enter an acceptable (larger) value for *limit*.

Operator response: If VTAM accepts the request, no action is required. If VTAM rejects the request:

- For a START command, reenter either the CSALIMIT option or the CSA24 option with an acceptable (larger) value.
- **Restriction:**
 - If the specified *limit* is too low and you force this limit to take effect by using the F operand of the MODIFY CSALIMIT command, you cannot enter other VTAM commands (except HALT and CANCEL) until usage falls below the specified limit. This is because this storage is needed to process all VTAM operator commands except HALT or CANCEL.

If the CSA usage does not fall below the new level, you can use the MODIFY VTAMOPTS command to revise the CSALIMIT value. Verify that circumstances warrant limiting the amount of common service area (CSA) available to VTAM to an amount less than the size that is already in use.

IST093I • IST095A

System programmer response: If necessary, redefine either CSALIMIT or CSA24 limit with an appropriate value. Otherwise, no response is necessary.

Routing code: 2

Descriptor code: 5

IST093I *nodename* **ACTIVE**

Explanation: VTAM issues this message in response to a VARY command when resource *nodename* has been successfully activated. Active states of resources include the connectable (CONCT) state.

Notes:

1. If you specify or accept the default value BASE for the MSGLVL option, you receive this message twice if the resource is the host SSCP. See Appendix D, "Messages affected by the MSGLVL option," on page 1205 for additional information.
2. If you are expecting this message to confirm activation of a resource and it is not issued, this can occur if the VARY command was overridden by other VTAM processing.
For example, if an NCP INOPs prior to completion of a VARY ACT command and recovery is attempted, then VTAM activates the resource rather than the operator command. In this situation, message IST493I or IST1141I might be displayed indicating that the VARY ACT command was overridden.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST095A **OPTION TO DUMP** *controller* **AVAILABLE — REPLY 'YES' OR 'NO' OR 'YES,DUMPSTA=*linkstaname*'**

Explanation: This message prompts the VTAM operator to determine whether VTAM should dump the communication controller associated with the network control program represented by *controller*.

The prompt occurs when the communication controller has failed and AUTODMP has not been specified on the PCCU macro. Therefore, the operator can choose whether or not to dump the contents of the communication controller.

System action: VTAM waits for a valid reply.

Operator response:

- Reply YES for a dump of the contents of the communication controller using the link station specified at NCP generation or by the VARY ACT command.
- Reply YES,DUMPSTA=*linkstaname*, where *linkstaname* is the value coded for the DUMPSTA operand of the PCCU macro in the NCP generation.
If you specify YES,DUMPSTA= without naming the link station, VTAM selects a default dump station.
- Reply NO if you do not want to dump the contents of the communication controller.

Notes:

1. You should have instructions from the system programmer as to which of the replies you should enter at your console. Operators of multiple-channel or multiple-link attached communication controllers should avoid replying YES simultaneously to this message. Only one operator should reply YES to this message. Other operators should wait for that operator's dump to be completed and then should enter NO.
2. For additional information on how to respond to this message, see "Responding to a VTAM message" on page 2.

System programmer response: None.

Routing code: 1

Descriptor code: 2

IST096I *command* **FAILED — DUPLICATE *parameter* PARAMETERS SPECIFIED**

Explanation: VTAM issued this message when *parameter* was specified more than once in the *command*.

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the command as many times as necessary, but specify *parameter* only once each time.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST097I *command* **ACCEPTED**

Explanation: VTAM accepted the *command* for initial processing. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

System action: The syntax of the command is correct and VTAM begins processing *command*.

Operator response: Wait until VTAM completes any command for a node before entering another affecting that node.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST101I *command* **FAILED — *operand_name* NOT SPECIFIED**

Explanation: VTAM issues this message when the *command* was entered without the required operand *operand_name*. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the command with the required operand. See z/OS Communications Server: SNA Operation for more information about *command*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST102I **VTAM IS NOW INACTIVE**

Explanation: VTAM has terminated, either because of an error or because of a HALT command.

System action: System processing continues. VTAM processing stops.

Operator response: No response is required unless you need to restart VTAM. In that case, follow your normal VTAM start procedure.

System programmer response: None.

Routing code: 2,8

Descriptor code: 4

IST105I *nodename* **NODE NOW INACTIVE**

Explanation: The operator successfully deactivated the node *nodename*. In most cases, this is the result of a VARY INACT command. If *nodename* is a cross-domain resource manager (CDRM) in another domain, then deactivation could be the result of a deactivation request from the domain of *nodename*.

System action: Processing continues.

Operator response: None.

IST107I • IST115I

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST107I TIME AND DATE NOT SET IN *ncpname* DUE TO INVALID TIMER IN HOST

Explanation: VTAM found the time-of-day clock in the host processor to be in error or not operational. Therefore VTAM did not set the time and the date in the NCP *ncpname* after it was loaded.

System action: VTAM completes activation of *ncpname* normally except for setting the time and date.

Operator response: If time and date are required in the communication controller, deactivate the NCP, set the time-of-day clock in the host processor, and reactivate the NCP.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST109I *function* IS NOW TERMINATED

Explanation: VTAM issues this message when an ABEND occurred while processing was in the tuning statistics (TNSTAT) subtask.

function will always be TNSTAT.

System action: Tuning statistics support ended.

Operator response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about collecting documentation for an abnormal end (ABEND.)

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about collecting documentation for an abnormal end (ABEND) then contact the IBM Software Support Center for service.

Routing code: 2

Descriptor code: 5

IST113I *uservar* IS A USERVAR WITH VALUE *value* IN NETWORK *netid*

Explanation: VTAM issues this message in response to a DISPLAY SESSIONS or DISPLAY ID=*uservar* command.

uservar is a user-defined name for a network resource with the value of *value* in network *netid*.

If *uservar* is both a user variable and a network resource, VTAM will display the resource and ignore the user variable value. Otherwise, VTAM will display the resource represented by the value of the USERVAR, *value*. Message IST075I contains the name of the resource being displayed for DISPLAY ID.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST115I INSUFFICIENT STORAGE TO READ *member* MEMBER OF VTAM DEFINITION LIBRARY

Explanation: VTAM issues this message when insufficient storage existed in the common service area (CSA) or partition to read *member* in the definition library. A subsequent message indicates which VTAM function is affected.

System action: See the **System Action** of the next message that appears on the console.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST116I MEMBER *member* NOT FOUND ON VTAM DEFINITION LIBRARY

Explanation: VTAM searched the definition library, and failed to locate *member*. A subsequent message indicates which VTAM function is affected.

System action: If *member* is a resource specified in a VARY ACT command, the VARY ACT command fails. If *member* is a model name table or an associated LU table, the table is not defined, but the VARY ACT command is not affected.

Operator response: If VTAM issues this message because the USSTAB start option is not valid, you can enter a MODIFY TABLE command to supply a new USS table represented by ISTNOP. Save the system log for problem determination.

System programmer response: Check the VTAM definition library, and correct the problem.

Routing code: 2

Descriptor code: 6

IST117I I/O ERROR READING *member* MEMBER OF VTAM DEFINITION LIBRARY

Explanation: An I/O error prevented VTAM from reading *member* in the definition library.

System action: See the **System Action** of the next message that appears on the console.

Operator response: See the **Operator Response** of the next message that appears on the console.

System programmer response: See the **Programmer Response** of the next message that appears on the console.

Routing code: 2,10

Descriptor code: 4

IST118I ANOMALY FOUND NEAR RECORD *count* IN MEMBER *member* – CODE = *code*

Explanation: VTAM detected inconsistent syntax in the coding of a definition statement in *member* in the definition library.

VTAM issues this message when the syntax used in the statement being processed leaves the intent of the statement unclear. The message does not indicate a syntax error. The error is probably an error of omission or text placement.

count is the approximate count of 80-byte logical records read from the beginning of the member (including all comment lines) to the point of detection. This number will be equivalent to the line or record number seen for that record when the member is viewed under an editor.

code can be one of the following:

Code	Description
------	-------------

IST120I • IST124I

- 2 While processing major node *member*, VTAM detected a record that ended in a comma, indicating continuation, but column 72 was blank, indicating no continuation records follow. Major node activation continues.
- 3 While processing major node *member*, VTAM detected a properly structured record with a non-blank character in column 72, indicating continuation. However, the continuation record began in column 17 or beyond, which caused VTAM to consider it a comment and ignore it. A scan of the ignored record shows that it contains an equal sign (=), and might therefore contain operands which were not intended to be ignored.
- 4 While processing major node *member*, VTAM detected a record containing an asterisk (*) in column 1, indicating that it is a full-line comment. Column 72 contained a nonblank character, indicating to VTAM that the next record should also be treated as a comment.

VTAM will consider each proceeding line a comment, and ignore it, until it reads a record in which column 72 is blank, indicating that the records should no longer be considered a comment. This code will be issued for each of the ignored records, which will most probably be sequential records in a group.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the information provided by *member*, *count*, and *code* to confirm that the syntax of the record is correct. If the syntax is correct, then this message can be ignored, or you can restructure the text to eliminate the message.

Routing code: 2

Descriptor code: 5

IST120I NODE *nodename* NOW HAS CONTROLLING LU *luname*

Explanation: VTAM has finished processing the LOGON operand of either a VARY ACT or VARY LOGON command. When logical unit *nodename*, or the logical units associated with *nodename*, are not in session with another application program, VTAM will automatically log them on to application program *luname*. Resources must be active in order for the logon to complete. This does not mean that a session with the application program has been initiated.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST122I ATTACH OF VTAM SUBTASK *subtask* FAILED

Explanation: VTAM cannot attach one of the VTAM subtasks, *subtask*, because VTAM could not find the named subtask on SYS1.LINKLIB.

System action: A message will follow indicating the action that the system takes as a result of this error.

Operator response: Save the system log for problem determination.

System programmer response: Make sure that *subtask* is in the system library and restart VTAM.

Routing code: 2

Descriptor code: 6

IST124I STOP COMMAND REJECTED — NOT SUPPORTED FOR VTAM

Explanation: The operator entered a STOP command for the VTAM task. VTAM does not support this command.

System action: VTAM rejects the command. Other VTAM processing continues.

Operator response: To stop the VTAM task, enter a HALT command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST126I *modename* **MODE NOT SUPPORTED DUE TO LOADING FAILURE**

Explanation: VTAM cannot load *modename*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: No action is necessary if the absence of the indicated mode will not affect operations. Otherwise, check the system libraries for the presence of *modename*. If it is not there, you must include it. This message follows message IST001I or IST013I, which identifies the module and system library to be checked.

Routing code: 2

Descriptor code: 5

IST127I *modename* **STILL ACTIVE — VTAM TERMINATION WAITING FOR** *text*

Explanation: VTAM cannot terminate because application program *modename* has not yet closed its ACB.

text is **JOB =** *jobname* **STEP =** *stepname*.

System action: VTAM waits for **JOB =** *jobname* **STEP =** *stepname* to close its ACB.

Operator response: Either wait for **JOB =** *jobname* **STEP =** *stepname* using *modename* to be completed, or cancel **JOB =** *jobname* **STEP =** *stepname* to allow VTAM to terminate.

System programmer response: None.

Routing code: 2

Descriptor code: 6

IST128I **HALT OF VTAM ALREADY IN PROGRESS**

Explanation: The operator entered a HALT command, but a previously entered HALT command is in progress. The only valid duplication of HALT commands is HALT followed by HALT QUICK or HALT CANCEL.

System action: VTAM rejects the command.

Operator response: If you want to close down the VTAM network at once, enter a HALT QUICK or HALT CANCEL command. Otherwise, allow the normal HALT to continue.

System programmer response: None.

Routing code: 2

Descriptor code: 6

IST129I **UNRECOVERABLE OR FORCED ERROR ON NODE** *nodename* **— VARY INACT SCHED**

Explanation: VTAM scheduled a VARY INACT command for the resource *nodename* because one of the following occurred:

Reason Description

- 1 An unrecoverable error occurred in a communication controller, physical unit, logical unit, link, or link station. Message IST259I precedes this message and provides additional information.
- 2 The operator issued a VARY INACT,TYPE=FORCE command.
- 3 If the maximum RU size was exceeded on the SSCP-LU session or the SSCP-PU session, VTAM scheduled an internal VARY INACT,TYPE=FORCE command.

System action: VTAM automatically issues a VARY INACT command for the resource *nodename*.

IST130I

Operator response:

- For **Reason 1**, save the system log for problem determination. See the explanation of message IST259I for additional problem determination actions.
- For **Reason 3**, save the system log for problem determination. A buffer trace can provide additional information regarding the cause of the error.

System programmer response:

- For **Reason 1**, use the system log and the explanation of message IST259I to assist you in correcting the problem. If you cannot determine the cause of the problem and need additional assistance, contact the IBM hardware support center.
- For **Reason 3**, use the system log and buffer trace, if provided, to assist you in correcting the problem.
 - Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the EREP User's Guide for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert or an event was recorded for this problem. If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.
 - If this message is the result of an apparent software error, take the following actions:
 - If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
 - If you do not have access to IBMLink, report the problem to the IBM software support center.

Routing code: 2,8,1

Descriptor code: 5

IST130I VTAM SUBTASK *subtask* INACTIVE — ABEND THRESHOLD EXCEEDED

Explanation: VTAM issues this message when *subtask* abnormally terminated more than four times in the last 30 minutes. VTAM tried to reattach it by using the ETXR exit routine but could not because the abend threshold for the subtask was exceeded.

System action: VTAM will make no further attempts to attach the subtask. VTAM continues without the support of the subtask.

subtask can be one of the following subtasks:

ISTATM00

VTAM termination subtask

ISTINCAV

ACTLINK/DACTLINK subtask

ISTINCDP

Dump/load/restart subtask

ISTINCTS

Tuning statistics subtask.

ISTINMLS

Directed load subtask

ISTCSCEX

Configuration services XID exit subtask

ISTCSCSD

SDDLU exit subtask

ISTPDCLU

LU subtask interface with session monitor or NLDM

ISTPUCX0

Virtual route selection subtask

Operator response: Save the system log for problem determination. It might be necessary to halt VTAM and start it again if you need this subtask.

System programmer response: Examine the output from the operator to determine the cause of the problem. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.

Routing code: 2

Descriptor code: 4

IST132I VTAM SUBTASK *subtask* NOT REATTACHED — CANNOT BE FOUND

Explanation: VTAM issues this message when *subtask* ended abnormally. *subtask* was not reattached because VTAM could not find it in the system library.

System action: VTAM continues but without the support of the subtask.

subtask can be one of the following:

ISTATM00

VTAM termination subtask

ISTINCDP

Dump/load/restart subtask

ISTINCTS

Tuning statistics subtask.

ISTINMLS

Directed load subtask

ISTCSCEX

Configuration services XID exit subtask

ISTCSCSD

SDDLU exit subtask

ISTPDCLU

LU subtask interface with session monitor or NLDM

ISTPUCX0

Virtual route selection subtask

ISTSDCLM

System definition subtask

Operator response: Save the system log for problem determination.

System programmer response: Ensure that *subtask* is present in the system library and restart VTAM.

Routing code: 2

Descriptor code: 5

IST133I VTAM TERMINATION IN PROGRESS

Explanation: VTAM is terminating, either because of an unrecoverable error or because the operator issued a HALT command.

System action: The reason for termination of VTAM can be one of the following:

- The operator entered the HALT command.
- The operator entered the HALT QUICK command.
- The operator entered the HALT CANCEL command.
- VTAM detected an unrecoverable error.

IST134I • IST136I

For detailed descriptions of the processing of the different HALT commands, see z/OS Communications Server: SNA Operation. If VTAM detected an unrecoverable error, the processing is similar to that which follows the HALT CANCEL command. See that description in z/OS Communications Server: SNA Operation.

Operator response: If this message is the result of a HALT command, no response is required. If it is caused by an abnormal termination, determine the cause of the termination from prior messages.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST134I **GROUP =** *groupname*, **MAJOR NODE =** *nodename*

Explanation: This message is part of a group of messages that VTAM issues in response to:

- A DISPLAY ID command for a line
- Failed activation of an ATM native connection network

When the message is issued in response to a DISPLAY ID command, *groupname* is the symbolic name of the line group in which the line being displayed is defined.

nodename is the name of the major node in which the line group is defined.

When the message is issued in response to a failed ATM native connection network activation, it is part of a group of messages. The first message in the group is IST1166I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST135I **PHYSICAL UNIT =** *puname* [,**CUA =** *device_address*]

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a logical unit.

puname is the name of the physical unit associated with the logical unit.

device_address is the hexadecimal device address of the physical unit and is issued only if the display is for a logical unit in a local SNA major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST136I **[[SWITCHED|LOCAL]] SNA MAJOR NODE =** *majornode*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command.

- **SWITCHED** or **LOCAL** is the type of SNA major node in which the logical unit or physical unit exists (if it is defined in a local or remote SNA major node).
 - **SWITCHED** means that the node is accessed by dial lines.
 - **LOCAL** means that the node is channel-attached to the host processor.
- *majornode* is the name of the local or remote SNA major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST137I **CONFIG** *configname* **BYPASSED – LOCAL ADDRESS OF LU** *luname* **IS INVALID**

Explanation: The local address (LOCADDR) value specified in the definition statement of configuration *configname* for logical unit *luname* is not valid. A local major node definition or switched definition containing dependent LUs requires all dependent LUs to have a unique valid value coded for LOCADDR.

System action: Processing continues. VTAM does not include the configuration containing *luname* in the VTAM network.

Operator response: Save the system log and print the major node or switched definition for problem determination.

System programmer response: Correct the local address statements and file them in the definition library using the same name originally assigned to that local major node or switched definition. You need to deactivate and reactivate the major node or switched definition to use the new definition values.

See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM definition statements.

Routing code: 2

Descriptor code: 5

IST142I **CONFIG** *configname* **BYPASSED — PATH MACRO** *macroname* **ERROR, REASON CODE** *code*

Explanation: While processing macro *macroname* during activation of a switched SNA major node, VTAM bypassed configuration *configname* because of an error shown by *code*, as follows:

Code

Meaning

- 1 The MAXDLUR, MAXNO, or MAXGRP value on the VBUILD definition statement is zero or is the default.
- 2 The MAXPATH value on the preceding physical unit definition statement is zero or is the default.
- 3 The number of paths specified exceeds the MAXPATH value of this physical unit.
- 4 The number of unique dial numbers and unique line names exceeds the MAXNO value specified on the VBUILD definition statement.
- 5 The number of unique group names exceeds the MAXGRP value specified on the VBUILD definition statement.
- 6 The number of unique dial numbers and unique line names exceeds the MAXNO value specified on the VBUILD definition statement.
- 7 The number of PATH definition statements that code DLCADDR for a single switched major node exceeds the maximum allowed.

System action: Processing continues. VTAM does not add the configuration specified in the message to the VTAM network.

Operator response: Save the system log for problem determination. Keep a record of the occurrences of this message.

System programmer response: Correct the problem indicated by *code* in this message. After correcting the error, tell the operator to use the VARY command to activate the configuration again.

Routing code: 2

Descriptor code: 5

IST146I **LINE NAME =** *linename*, **STATUS =** *status*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TERMS command requesting the status of all LUs in a domain. The message gives the status of the line *linename* that provides attachment for subsequently listed LUs.

IST148I • IST149I

For *status* information, see the z/OS Communications Server: IP and SNA Codes.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST148I DIAL OUT PATH INFORMATION FOR PHYSICAL UNIT *puname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY PATHS command for physical unit *puname*. The message gives the name of the physical unit for which the paths are being displayed. This physical unit is a minor node in a switched SNA major node and can use the displayed paths to communicate with an NCP.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST149I LINE GRP TELEPHONE NUMBER OR LINE NAME PID GID CNT

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY PATHS command. A complete description of the message group follows.

```
IST149I LINE GRP TELEPHONE NUMBER OR LINE NAME PID GID CNT
IST168I linegroup {phonenum|linename|blanks} pid gid cnt {AVA|NAV} {MAN|AUT|DIR}
[IST1575I DIALNO PID: pid[instance]]
[IST1318I parameter_value]
[IST1319I parameter_value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
:
:
IST314I END
```

IST149I

This message is a header message for the information displayed in message IST168I.

IST168I

linegroup is the line group name for this path.

phonenum is a telephone number (for non-X.21 lines). This information is not displayed for PATH statements that describe Enterprise Extender (HPR/IP) connections.

linename is a line name for X.21 lines only.

pid is the path identifier (PID).

gid is the group identifier (GID) for a group of paths across all physical units.

cnt is the number of times the dial operation is to be tried again at the NCP.

AVA indicates that the path is available for use by VTAM.

NAV indicates that the path is not available for use by VTAM.

MAN indicates manual dial.

AUT indicates automatic dial for non-X.21 lines.

DIR indicates direct dial for X.21 lines.

IST1318I

parameter_value is the first 60 characters of the DIALNO value specified on the PATH definition statement, when the number of characters exceeds 32.

IST1319I

This message is used to display overflow information from *parameter_value* in message IST1318I.

IST1575I

- This message is issued when the DIALNO operand specified on the PATH definition statement exceeds 32 characters and cannot be displayed in message IST168I.

pid is the path identifier specified on the PATH definition statement.

instance indicates that *parameter_value* in messages IST1318I and IST1319I that follow correspond to the *instance* instance of the message IST168I with *pid* of 000. You must count the group of IST168I messages to find the *instance* instance of message IST168I with a *pid* of 000. *instance* is only displayed when *pid* is 000.

IST1680I

- This message is issued when the PATH definition statement describes an Enterprise Extender (HPR/IP) connection to a remote node.
 - *type* is REMOTE.
 - *ip_address* is the the IP address of the remote Enterprise Extender node. An ****NA**** in this field indicates that the value is not available because the name-to-address resolution of the HOSTNAME value associated with this PATH definition has not completed or was unsuccessful.

IST1909I

- This message is issued when the PATH definition statement describes an Enterprise Extender (HPR/IP) connection to a remote node, and the HOSTNAME operand was specified on the PATH definition statement.
 - *value* is the value, or up to the first 44 characters of the value, specified on the HOSTNAME operand on the PATH definition statement. If the value is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed using one or more IST1911I messages.

IST1911I

value is the continuation of *value* on IST1909I. IST1911I is repeated as often as necessary to display the entire *value*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST150I RRT LOAD MODULE *rrtname* DOES NOT CONTAIN RESOURCE SEGMENT [EXTENSION]

Explanation: While processing definition statements, VTAM could not find the resource segment or resource segment extension in the resource resolution table (RRT) named *rrtname*. The RRT was produced during NCP generation. VTAM uses the resource segment (together with its entries) to correlate a minor node with its network address, and uses the resource segment extension to correlate the name of a physical unit type 4 with a transmission group number. Both the resource segment and resource segment extension are stored in the data set where the NCP load module is linked.

System action: The activation of the NCP fails. Processing continues.

Operator response: You can use the network only if the NCP is not essential. Save the system log for problem determination.

System programmer response: Do one of the following:

1. If the NCP generation process did not complete successfully, check the output from the NCP generation to see whether the resource resolution table was produced. If it was, restart VTAM definition processing. If it was not, regenerate the NCP, restart VTAM definition processing.

IST153I • IST154I

2. If the resource resolution table has been damaged, take a dump of the RRT load module to determine whether it contains a resource segment or resource segment extension or both.

In either case, correct or reproduce the RRT load module by regenerating the NCP. Restart the VTAM definition processing.

Routing code: 2

Descriptor code: 5

IST153I PENDING DEACTIVATION OF *nodename* OVERRIDDEN

Explanation: A stronger deactivation request from another domain has overridden a VARY INACT command and placed *nodename* in deactivate-pending status. A VARY INACT,TYPE=FORCE command or VARY INACT,TYPE=IMMED command entered from another domain will override a VARY INACT command entered in the current domain.

System action: The system processes the stronger command. The overridden command will probably be canceled.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 6

IST154I EXPANSION FAILED FOR *bp* BUFFER POOL — CODE *code* ,USERID= ***NA***

Explanation: The number of available buffers in VTAM buffer pool *bp* dropped to or fell below the expansion point value specified for that pool, and VTAM attempted to expand the pool. VTAM could not expand the pool for the reason indicated by *code*.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information. *bp* is the name of the buffer pool.

VTAM issues the following *codes* when a failure occurs during a deferred expansion.

Code	Description
------	-------------

- | | |
|---|---|
| 4 | Not enough CSA storage was available for the expansion. |
| 5 | Not enough fixed storage available for the expansion. |
| 7 | Storage is not available because VTAM's CSA limit has been exceeded. |
| 8 | Expansion would have caused the pool to exceed its <i>xpanlim</i> specification. See the z/OS Communications Server: SNA Network Implementation Guide for additional information about <i>xpanlim</i> . |

VTAM issues the following *codes* when a failure occurs during an immediate expansion.

Code	Description
------	-------------

- | | |
|----|---|
| 14 | Not enough CSA storage was available for the expansion. |
| 15 | Not enough fixed storage available for the expansion. |
| 17 | Storage is not available because the VTAM CSA limit has been exceeded. |
| 18 | Expansion would have caused the pool to exceed its <i>xpanlim</i> specification. See the z/OS Communications Server: SNA Network Implementation Guide for additional information about <i>xpanlim</i> . |

System action: VTAM did not expand the buffer pool this time. When VTAM contracts other buffer pools, it will try again to expand this pool. Performance might be adversely affected by this failure to obtain more buffers.

Operator response: See the explanation of IST930I when that message is issued.

If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

System programmer response: See the explanation of IST930I when that message is issued.

If APPL-APPL sessions are not paced at the session level, storage expansion failures can occur. If an APPL-APPL session is not paced at the session level, there is no limit to the number of VTAM I/O buffers that the session can use. See the section on common subarea network problems in the *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* for more information about this problem.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the *z/OS Communications Server: SNA Resource Definition Reference* for a description of VTAM start options.
- See *z/OS Communications Server: SNA Operation* for information about the DISPLAY BFRUSE command and the MODIFY VTAMOPTS command.
- See the *z/OS Communications Server: SNA Network Implementation Guide* for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* for additional information.

Routing code: 2

Descriptor code: 5

IST155I SUBTASK *subtask* HAS ABENDED, CODE *code*

Explanation: VTAM issues this message when *subtask* abnormally terminates.

code is the system abend code and indicates the reason for the abend. Check your operating system abend code manual for a description of code.

System action: The system action is determined by the value of *subtask*:

ISTCPCRY

VTAM processing continues. This subtask is invoked to perform cryptographic management services.

ISTENQIO

VTAM terminates the disk I/O processing associated with a specific instance of the subtask. This subtask is invoked during initialization or by the MODIFY CHKPT command.

ISTINCXI

VTAM terminates the dump (static or dynamic). For a static dump, deactivation of the NCP continues. This subtask is invoked by the MODIFY DUMP command.

ISTINCMX

VTAM terminates the remote static dump, dynamic dump, or dump transfer. This subtask is invoked by the MODIFY DUMP command.

ISTINC05

Loading of the communication controller is terminated. The command fails. This subtask is invoked by conditional, unconditional, and nondisruptive loads of a 37XX communications controller.

ISTINCR6

The configuration might not be restored to checkpointed status (START command) or the major node checkpoint record might be lost (VARY command), but processing of the command continues. This subtask is invoked by a checkpoint on a major node.

ISTINCOQ

The module assumes a default reply. This subtask is invoked by an attempt by a VTAM module to write a message that requires an operator reply.

ISTINCY0

If an application program issued an open destination (OPNDST), the request fails. Verify that the physical path to the control unit is available. Make sure the unit is online and is operational. If the operator issued a VARY ACT or VARY INACT command, processing continues, but the connection or disconnection of the 3791 fails. This subtask is invoked by a dial abandon, a dial contact, a dial out, or a dial enable answer.

Operator response: Save the system log for problem determination. Check your operating system abend code manual for a description of code.

IST159I • IST167I

System programmer response: Use the output provided and the meaning of *code* to assist in determining the cause of the abend. Make sure that the failing job step includes a SYSABEND DD statement. When the error is corrected, ask the operator to try the command again.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.

Routing code: 2

Descriptor code: 5

IST159I THE FOLLOWING NODES ARE IN A PENDING STATE

Explanation: VTAM issues this message in response to a DISPLAY PENDING command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST165I CDRM *cdmname* HAS AN INVALID ELEMENT VALUE — 1 IS ASSUMED

Explanation: VTAM issues this message when a value other than 1 has been defined as the element address for CDRM *cdmname*. Every VTAM cross-domain resource manager (CDRM) must have an element address of 1 in its own network.

System action: VTAM gives the definition of *cdmname* a network address with an element address of 1. All other hosts that processed this CDRM statement have the CDRM defined with an element value other than 1. Thus, other domains cannot communicate through *cdmname* with this domain. This applies only to CDRMs in the same network.

Operator response: Save the system log and print the CDRM definition for problem determination.

System programmer response: The CDRM is now defined as a CDRM in this domain. If you want to change *cdmname* to a non-VTAM domain, deactivate the major node in which *cdmname* is defined and change the *cdmname* definition in the definition library.

After changing the *cdmname* definition, use an operating system utility program to delete a member of a partitioned data set. Then reactivate the major node in which *cdmname* is defined.

Notes:

1. If *cdmname* was meant to define this host's CDRM, then change the element address to 1 in the definition of *cdmname*.
2. If *cdmname* was meant to define another host's CDRM, then change the subarea address to something other than this VTAM's HOSTSA start option.

Routing code: 2

Descriptor code: 5

IST167I NO DIAL OUT PATH FOR *puname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY PATHS command for *puname*. No dial out paths exist for physical unit *puname*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST168I *linegroup {phonenum \linename} pid gid cnt {AVA|NAV} {MAN |AUT|DIR}*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is either IST149I or IST1351I. See the explanation of either message for a complete description.

Routing code: 2

Descriptor code: 5

IST169I **DISCONNECTION CAUSED VARY** *action FOR PU = puname*

Explanation: One of the following conditions occurred:

- All LU-LU sessions have ended. If you specified DISCNT=YES on the PU statement for *puname*, *action* will be **INACT**.
- VTAM received an immediate or normal REQDISCONT request from the PU.
 - If the PU is local, action will be **REACT**.
 - If the PU is switched, action will be **INACT**.
 - If the PU is attached via a leased line, action depends on the CONTACT option in the request.
- VTAM disconnected the PU because the time specified on DISCNT=(DELAY has lapsed.
- The last LU-LU session has ended as a result of a **TERM-SELF RU** request or the end-user issued a **LOGOFF HOLD=NO** command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST170I **LINES:**

Explanation: This message is a header line that VTAM issues in response to a DISPLAY LINES command or a DISPLAY ID command for a subarea physical unit. Subsequent messages indicate the name and status of the lines associated with the subarea physical unit.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST171I **ACTIVE SESSIONS = sessions, SESSION REQUESTS = requests**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command.

sessions is the number of active sessions, including XRF backup sessions.

requests is the number of pending or queued logon requests or both. *requests* does not apply to SSCP-SSCP sessions.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST172I

IST172I NO *text*

Explanation: VTAM issues this message in response to various DISPLAY commands. *text* can be any of the following:

ADJCLUST TABLE EXISTS
ADJCP FOUND
ADJCP MAJOR NODE EXISTS
ADJLISTS EXIST
ADJSSCP TABLE EXISTS
ADJSSCP TABLES EXIST
APPLICATIONS {ACTIVE|ACTONLY|ACTSESS|CONCT|EXIST| INACTIVE|INACTONLY|PENDING|RESET}
APPN COS ENTRIES EXIST
APPNTOSA TABLE EXISTS
BLOCKED VIRTUAL ROUTE
CDRMS {ACTIVE|ACTONLY|ACTSESS|CONCT|EXIST| INACTIVE|INACTONLY|PENDING|RESET}
CDRSCS {ACTIVE|ACTONLY|ACTSESS|CONCT|EXIST| INACTIVE|INACTONLY|PENDING|RESET}
CONNECTIONS ACTIVE
COSMAP TABLE EXISTS
DLUR NODES SERVED
HELD VIRTUAL ROUTE
LINES {ACTIVE|ACTONLY|ACTSESS|CONCT| EXIST| INACTIVE|INACTONLY|PENDING|RESET}
LOGICAL UNITS {ACTIVE|ACTONLY|ACTSESS|CONCT|EXIST| INACTIVE|INACTONLY|PENDING|RESET}
LUGROUP NODES EXIST
MAJOR NODES {ACTIVE|EXIST|INACTIVE}
MODELS EXIST
MODEL SEGMENTS EXIST
NETWORK NODES {ACTIVE|EXIST|INACTIVE}
RTPS FOUND
SAMAP TABLE EXISTS
SATOAPPN TABLE
SAW SENSE FILTER
SESSIONS {ACTIVE|EXIST|PENDING|QUEUED}
STRUCTURE CONNECTIONS EXIST
TRL EXISTS
TRLES EXIST
USERVARS EXIST
VIRTUAL ROUTES EXIST

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST176I *command* **FAILED** — *option1* **AND** *option2* **ARE CONFLICTING OPTIONS**

Explanation: The *command* failed because the options specified (*option1* and *option2*) are mutually exclusive and should not appear on the command simultaneously.

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the *command* using only one of the options specified above and verifying that no other conflicting options appear. When VTAM completes processing of the *command*, reenter the command with the remaining option, if desired.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST180I **OPEN FAILED ON CKPT DS** *datasetname* **MAJ NODE** *nodename* **RTNCD =** *major* *minor*

Explanation: The VSAM OPEN function failed for the specified checkpoint data set.

datasetname is the DDNAME for the checkpoint data set.

nodename is the major node name.

major is the register 15 return code from VSAM (hexadecimal).

minor is the ACBERFLG return code from VSAM (hexadecimal).

System action: VTAM terminates checkpointing for this major node.

Operator response: Save the system log for problem determination.

System programmer response: See the appropriate VSAM documentation for the correct response to each return code.

Routing code: 2

Descriptor code: 5

IST181I **CLOSE FAILED ON CKPT DS** *datasetname* **MAJ NODE** *nodename* **RTNCD =** *major* *minor*

Explanation: The VSAM CLOSE function failed for the specified checkpoint data set.

datasetname is the DDNAME for the checkpoint data set.

nodename is the major node name.

major is the register 15 return code from VSAM (hexadecimal).

minor is the ACBERFLG return code from VSAM (hexadecimal).

System action: VTAM terminates checkpointing for this major node.

Operator response: Save the system log for problem determination.

System programmer response: See the appropriate VSAM documentation for the correct response to each return code.

Routing code: 2

Descriptor code: 5

IST182I **UNABLE TO GET STORAGE FOR CKPT** *datasetname* **MAJOR NODE** *nodename*

Explanation: VTAM was unable to obtain VTAM private storage for checkpointing of the specified major node.

datasetname is the checkpoint data set DDNAME.

nodename is the major node name.

System action: VTAM terminates checkpointing for this major node. If *nodename* is a major node named in a VARY ACT command (with the WARM operand), processing of the command terminates.

Operator response: Issue the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for information about the DISPLAY STORUSE command.

Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required.

- See z/OS Communications Server: SNA Operation for additional information.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST183A *controller* FOUND LOADED WITH *ncpname* — REPLY 'YES' TO REIPL OR 'NO' TO CONTINUE

Explanation: During the restart of a configuration, VTAM found the specified *controller* to be loaded with NCP *ncpname*. You specified AUTOSYN=NO or VFYLM=YES on the PCCU macro in the NCP generation when you defined the NCP. The operator can therefore decide to reload the specified NCP or continue with it as it is.

System action: Processing continues.

Operator response: If you want to reload the indicated NCP, reply YES. A reply of NO will continue to activate the NCP without reloading. Exercise caution with multiple-channel or multiple-link attached communication controllers. If you want to reload the NCP, only one of the hosts sharing the communication controller should reply YES. The others should wait until the load is completed before replying NO. This requires operator communication across domains.

Note: For additional information on how to respond to this message, see “Responding to a VTAM message” on page 2.

System programmer response: None.

Routing code: 2

Descriptor code: 2

IST184I I/O ERROR ON CKPT DS *datasetname* MAJOR NODE *nodename* RTNCD = *major minor*

Explanation: An I/O error occurred for the specified checkpoint data set.

datasetname is the DDNAME for the checkpoint data set.

nodename is the major node name.

major is the RPLRTNCD hexadecimal return code from VSAM.

minor is the RPLERRCD hexadecimal return code from VSAM.

System action: VTAM terminates checkpointing for this major node. If *nodename* is a major node name on a VARY ACT command (with the WARM operand), VTAM stops processing the command.

Operator response: This is probably a hardware error. Save the system log for problem determination.

System programmer response: See the applicable VSAM documentation for appropriate responses.

Routing code: 2

Descriptor code: 5

IST185I LOGICAL ERROR ON CHECKPOINT DS *datasetname* MAJOR NODE *nodename*

Explanation: An incompatibility exists between the checkpoint data set and the current VTAM configuration.

datasetname is the DDNAME for the checkpoint data set.

nodename is the major node name.

System action: VTAM terminates checkpointing for this major node.

Operator response: Save the system log for problem determination.

System programmer response: Compare the contents of the data set against the current VTAM configuration to check for incompatibilities.

Routing code: 2

Descriptor code: 5

IST186I *command* **FOR ID = nodename CONTINUES COLD — CHECKPOINT DATA SET datasetname {EMPTY|ERROR}**

Explanation: The operator entered a VARY ACT *command* with the WARM operand to start VTAM. However, because the configuration restart data set (checkpoint data set) for the node *nodename* contained no records, VTAM activated the node to its initial (cold) status.

datasetname is the DDNAME for the checkpoint data set.

- An empty configuration restart data set indicates that the node has not been previously activated with checkpointing. You cannot perform a warm activation for a node that was not previously activated.
- If the message indicates an error, a previous message will give an explanation of the error.

NOT AVAILABLE

The checkpoint data set does not exist.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST187I *command* **FOR ID = nodename FAILED — CHECKPOINT DATA SET reason**

Explanation: The operator entered a VARY ACT *command* with the WARM operand for the node *nodename* and VTAM rejected the command for one of the following *reasons*:

cpdsname **EMPTY**

Configuration-restart data set (checkpoint data set) *cpdsname* contained no records. (An empty configuration-restart data set generally indicates that the node has not been previously activated with checkpointing. You cannot reactivate a node to a warm status if the node was not previously activated.)

cpdsname **ERROR**

VTAM encountered an error while processing the configuration-restart data set (checkpoint data set) *cpdsname*. A previous message provides an explanation of the error.

NOT AVAILABLE

The checkpoint data set does not exist.

System action: The command fails. Other processing continues.

Operator response: To activate the node to initial (cold) status, reenter the VARY ACT command without the WARM operand.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST191I *command* **SYNTAX ERROR**

Explanation: A syntax error occurred in the *command* that was entered by a program operator application.

System action: VTAM rejects the command. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the syntax of the *command* in the program operator application. See z/OS Communications Server: SNA Operation for the correct command syntax.

Routing code: 2

Descriptor code: 5

IST192I **POA MSG TRANSFER FAILED — INSUFFICIENT STORAGE**

Explanation: VTAM issues this message to the system console when the program operator interface could not allocate VTAM private storage for a VTAM message to be transferred to a program operator application.

System action: Processing continues. If the VTAM message is a write-to-operator with reply (WTOR) or an unsolicited VTAM message, VTAM will reroute the “failing” message to the system console. Other messages will be discarded.

Operator response: Wait a short time and reenter the command. If PPOLOG=YES is in effect, messages being written to the primary program operator log could be causing VTAM private storage to be depleted. Issue a MODIFY PPOLOG=NO command to stop logging.

If VTAM continues to issue this message, enter the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information. Save the system log and request a dump to determine current private storage usage.

System programmer response:

- Review the amount of private storage allocated to VTAM. Verify that the size of the user region for VTAM is defined properly.
- You might want to cancel program operator applications that are using excessive private storage.
- If PPOLOG=YES was in effect, verify that all VTAM messages have been received by the primary program operator (PPO) by issuing RCVCMDC macros.

Note: If PPOLOG=YES and the no-storage condition has cleared, the primary program operator application might also receive this message.

IST193I **REPLY *id* IGNORED — REPLY TOO LONG FOR REQUESTOR**

Explanation: A program operator application program entered a REPLY *id* command. The reply text was too long for the requirements of the requested reply.

Note: Only two digits will appear in the REPLY *id* even if more than two digits were entered.

System action: VTAM rejects the REPLY *id* command and processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the program operator application.

Routing code: 2

Descriptor code: 5

IST194I REPLY *id* NOT OUTSTANDING

Explanation: A program operator application entered a REPLY *id* command. However, there is no outstanding reply request with the identification *id*. Either the message reply request was already answered or the message reply identification *id* is incorrect.

Note: Only two digits will appear in the REPLY *id* even if the program operator application entered more than two digits.

System action: VTAM rejects the REPLY *id* command.

Operator response: Save the system log for problem determination.

System programmer response: Correct the program operator application.

Routing code: 2

Descriptor code: 5

IST195I REPLY *id* IGNORED — NON-DECIMAL ID

Explanation: A program operator application entered a REPLY *id* command specifying a nondecimal identification. The REPLY *id* command must be entered as decimal digits, with or without a leading zero, in identification 00–99.

Note: Only two digits will appear in the REPLY *id* even if the program operator application entered more than two digits.

System action: VTAM rejects the REPLY *id* command. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the program operator application.

Routing code: 2

Descriptor code: 5

IST198I VTAM INTERNAL TRACE ACTIVATION FAILED — GTF NOT ACTIVE

Explanation: The operator entered a MODIFY or START command for the VTAM internal trace with a MODE=EXT operand. This operand specifies that the trace records be written to a general trace facility (GTF) data set. However, GTF is not active.

System action: VTAM rejects the MODIFY or START command for the internal trace and does no tracing.

Operator response: Activate the general trace facility. Then reenter the command to activate the VTAM internal trace.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST199I OPTIONS = *optionlist*

Explanation: VTAM issues this message as part of several message groups. Possible message groups follow:

- If IST199I is preceded by IST315I, see the description of IST315I for more information.
- This message group is issued in response to one of the following commands:
 - MODIFY TRACE,TYPE=EXIT,ID=*exitname*,OPT=*optionlist*
 - MODIFY NOTRACE,TYPE=EXIT,ID=*exitname*,OPT=*optionlist*
 - DISPLAY TRACES,TYPE=EXIT,ID=*exitname*
 - DISPLAY TRACES,TYPE=ALL

IST075I NAME = *exitname*, TYPE = EXIT

IST199I OPTIONS = *optionlist*

IST314I END

IST199I

Note: ID is a required parameter for TYPE=EXIT, but only ISTECA, ISTECCS, or ISTECDM is valid.

- This message group is issued in response to a DISPLAY TRACES,TYPE=STATE or a DISPLAY TRACES,TYPE=MODULE command.

```
IST350I DISPLAY TYPE = type
IST199I OPTIONS = optionlist
IST314I END
```

- This message group is issued when MODULE or STATE tracing is initiated.

```
IST1515I tracetype TRACE ACTIVE
IST199I OPTIONS = optionlist
:
:
IST314I END
```

- This message group is issued in response to a DISPLAY EXIT,ID=*exitname* or DISPLAY EXIT,ID=*

```
IST350I DISPLAY TYPE = EXIT
IST1250I NAME          LEVEL          MODULE          STATUS
IST1251I exitname     exitlevel    module          status
:
:
[IST1315I DISPLAY TRUNCATED AT MAX = number]
[IST199I  OPTIONS = {NONE|optionlist}]
:
:
IST1454I count  EXIT(S) DISPLAYED
IST314I END
```

IST075I

exitname is the resource being displayed. For this message group, *type* is always **EXIT**.

IST199I

If TYPE = EXIT on the DISPLAY TRACES, MODIFY TRACE, or MODIFY NOTRACE command, or if DISPLAY EXIT,ID=*exitname* or DISPLAY EXIT,ID=* is entered, *optionlist* can include the following options:

- For ISTECA:

ACCTING

Initial and final accounting

ADJSSCP

Adjacent SSCP selection

ALIAS Alias translation

ALL All functions of the exit are traced

ALS Adjacent link station selection

BEGIN Begin function

END End function

GWPATH

Gateway path selection

INITAUTH

Initial authorization

REPL Exit replacement and replaced function

SECAUTH

Secondary authorization

VRSEL Virtual route selection

HPRVRSEL

HPR Virtual Routes Selection

HPRP_OLU

HPR OLU RTP node role authorization

- HPRP_DLU**
HPR DLU RTP node role authorization
- HPRP_ANR**
HPR ANR RTP node role authorization
- XRF** XRF session switch
- **For ISTECCCS:**
 - BEGIN** Begin function
 - CONNSTAT**
Connection Status
 - DYN_XID**
XIDs for DYNAMIC PUs
 - PRED_XID**
XIDs for PREDEFINED PUs
 - END** End function
 - **For ISTECCDM:**
 - BEGIN** Begin function
 - INITAUTH**
Initial authorization
 - BN_SEL**
Border Node Selection
 - CDS_SEL**
Central Directory Server Selection
 - ADS_SEL**
Alt. Central Directory Server Selection
 - CRR_SEL**
Central Resource Registration Selection
 - ICN_SEL**
Interchange Node Selection
 - REPL** Exit replacement and replaced function
 - END** End function

If TYPE = MODULE on the DISPLAY TRACES, MODIFY TRACE, or MODIFY NOTRACE command, or the TRACE,TYPE=MODULE start option was specified, *optionlist* can include the following options:

- COMMAND(CMD)**
Modules associated with command processing are being traced
- CONNECTION(CON)**
Modules associated with connection processing are being traced
- DEFINITION(DEF)**
Modules associated with definition processing are being traced
- INTERFACES(INT)**
Modules associated with interfaces processing are being traced
- MANAGEMENT(MGMT)**
Modules associated with management processing are being traced
- NOEXIT**
Module exit tracing has been started or stopped
- NONE** No modules are being traced

IST206I

PURGE

Information in the module tracing buffers has been written to VTAM internal trace (VIT) entries

SESSION(S)

Modules associated with session processing are being traced

If TYPE = STATE on the DISPLAY TRACES, MODIFY TRACE, or MODIFY NOTRACE command, or the TRACE,TYPE=STATE start option was specified, *optionlist* can include the following options:

ADJCP States of all adjacent control points are being traced

APPL States of all applications are being traced

CDRM States of all cross-domain resource managers are being traced

CDRSC

States of all cross-domain resources are being traced

GROUP

States of all groups are being traced

LINE States of all lines are being traced

LU States of all logical units are being traced

NCP States of all type 4 and type 5 nodes are being traced

NONE No resource types are being traced

PU States of all physical units are being traced

IST1315I

VTAM issues this message when the number of exits to be displayed exceeds the value specified on the MAX operand.

number is the value specified for the MAX operand.

IST1454I

This message gives the number of exits displayed.

IST1515I

tracetype will be **MODULE** or **STATE**.

System action:

- If this message is in response to a DISPLAY TRACES command, other processing continues.
- If this message is in response to a MODIFY TRACE,TYPE=MODULE or a MODIFY TRACE,TYPE=STATE command, the trace begins for the options selected.
- If this message is in response to a MODIFY NOTRACE,TYPE=EXIT; MODIFY NOTRACE,TYPE=MODULE; or MODIFY NOTRACE,TYPE=STATE command, the trace stops for the options selected.

Operator response: None.

System programmer response: None.

See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on traces and to z/OS Communications Server: SNA Operation for information on the DISPLAY and MODIFY commands.

Routing code: 2

Descriptor code: 5

IST206I SESSIONS:

Explanation: This message is a header for the message IST634I group which is generated as the result of a DISPLAY ID command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST208I UNABLE TO TERMINATE SESSIONS FOR ID = *minornode* — INSUFFICIENT STORAGE

Explanation: VTAM could not terminate sessions for *minornode* because the system lacked the storage necessary to complete termination processing.

System action: VTAM rejects the command.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command and the MODIFY VTAMOPTS command.

Routing code: 2

Descriptor code: 5

IST211I NCP SLOWDOWN INITIATED FOR *controller*

Explanation: The communication controller *controller* has entered system slowdown mode because the NCP SLOWDOWN buffer threshold has been reached. NCP reduces the number of PIUs it will accept from VTAM, and will stop accepting PIUs if buffer depletion continues and the CWALL limit is reached.

System action: VTAM performs no direct VTAM action. The actual function of entering slowdown occurs at a channel interface level.

Operator response: Save the system log for problem determination and obtain an NCP dump with the NCP dump utilities.

System programmer response: Make the necessary changes to the NCP generation. See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for more information about NCP dumps.

Routing code: 2

Descriptor code: 4

IST212I ACBNAME = *acbname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application program. The message appears only if the ACBNAME keyword *acbname* does not match the application program's APPL definition statement label.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST213I ACBNAME FOR ID = *applname*

Explanation: The operator entered a DISPLAY ID command for an application program. The name of the application program's APPL definition statement is *applname*. The name specified in the DISPLAY ID command was the ACBNAME keyword used in the APPL statement.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST214I NCP SLOWDOWN TERMINATED FOR *controller*

Explanation: Slowdown mode has ended in communication controller *controller* and the communication controller is now accepting outbound PIUs.

System action: VTAM performs no direct action. Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST219I I/O ERROR ON READ FOR *nodename* – BYTECNT MISMATCH

Explanation: VTAM issues this message when an input buffer error is detected during a READ operation for one of the following:

- Channel attached NCP *nodename*
- Channel attached local SNA control unit *nodename*.
- Channel attached multipath channel (MPC) line, where *nodename* is the name of the line.

The data count field for the PIU does not match the amount of data transferred (BYTECNT).

System action: VTAM deactivates *nodename*.

If the node is attempting to send more data than VTAM can receive, the operating system might generate message IOS000I.

Operator response: This is probably a hardware error. Save the system log for problem determination. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the EREP User's Guide for more information on using EREP.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 4

IST221I *majornode* : *minornode* IS INVALID, *n*, UNSUPPORTED OPTION — *option*

Explanation: VTAM attempted to activate a logical unit that requires cryptography in a system that does not support cryptography. Only MVS has a data encryption facility.

majornode is the name of a major node being activated by a VARY ACT command.

minornode is the name of a node in *majornode*.

n is either 1 or 2. This number indicates the method that specified cryptography for the logical unit:

- If *n* is 1, a checkpoint-restart data set specified cryptography.
- If *n* is 2, a definition statement specified cryptography.

option is the name of the unsupported option that caused the rejection of the VARY command for *minornode*. The option names are:

ENCR=REQD OR SEL

The data encryption facility is necessary for a node requiring these levels of encryption.

MAC=REQD AND DES

The data encryption facility is necessary for a node that has a message authentication code (MAC), which is required, and MACTYPE=DES. If the node did not explicitly code an encryption value, ENCR=SEL was used.

System action: VTAM activates *majornode*, but not *minornode*.

Operator response: If *minornode* is required for network operation, save the system log for problem determination.

System programmer response: If *minornode* is required, remove the requirement for cryptography from the definition statements.

Routing code: 2

Descriptor code: 5

IST223I MODIFY [*type*] COMMAND COMPLETED

Explanation: VTAM issues this message when the MODIFY command has successfully completed.

type, if displayed, indicates the type of MODIFY command. *type* is not displayed for the following commands:

- MODIFY CSALIMIT
- MODIFY INOPDUMP
- MODIFY IOPD
- MODIFY MSGMOD
- MODIFY PPOLOG
- MODIFY SUPP

See z/OS Communications Server: SNA Operation for more information about MODIFY commands.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST225I *command* FOR ID = *nodename* FAILED — *reason*

Explanation: VTAM issues this message when the *command* failed for *reason*.

reason indicates the cause of the failure and can be one of the following:

ALSNAME NOT VALID

A MODIFY TRACE,TYPE=GPT command was entered for *nodename*. The adjacent link station name (ALSNAME) that was either specified or used by default was not in a valid state when the command was entered. If ISTAPNPU was used by default because it was the only entry in the adjacent link station list, then this is the reason the command failed. ISTAPNPU is the name of the generic APPN adjacent link station. A real adjacent link station name must be specified for the command to succeed.

IST225I

ALSNAME PARAMETER OMITTED

A MODIFY TRACE,TYPE=GPT command was entered for *nodename*. No ALSNAME was specified, and a default ALSNAME could not be determined because of one of the following:

- The adjacent link station list for *nodename* contains no entries.
- The adjacent link station list for *nodename* contains two or more entries (other than ISTAPNPU).

ARM REJECTED

A MODIFY TRACE command or TRACE start option was specified with TYPE=QDIOSYNC. An Arm request was initiated and the reply indicates that the OSA-Express2 or later adapter supports the QDIOSYNC function, but an error occurred while attempting to arm the OSA-Express2 or later adapter.

CALL SECURITY ERROR

VTAM detected a mismatch of the encrypted security data fields during the XID exchange. This mismatch might be caused by:

- An unauthorized subarea dial physical unit attempting to establish a connection over a switched line
- The absence of the PRCT operand
- Not having the correct password coded for both the caller and receiver
- One of the subarea nodes that is of a level that does not support call security verification

CURRENT LEVEL HIGHER

The operator entered a MODIFY ENCR command or MODIFY SECURITY command for *nodename* to lower (make less secure) the level of cryptographic session for the logical unit or application program indicated by *nodename*. The level of cryptographic session for a logical unit or application program can only be raised (made more secure). For example, if you have defined an LU as *selective*, you cannot modify it to *optional*. You can modify it to *required*.

DYNAMIC CDRSC NOT VALID

nodename is a dynamic cross-domain resource; this is not valid for the TRACE command you entered.

EXIT IS NOT FOUND

The operator entered a DISPLAY EXIT command for a VTAM installation-wide exit which could not be located.

FUNCTION NOT OPERATIONAL

The Cryptographic Facility is not available to process a MODIFY ENCR command.

FUNCTION NOT SUPPORTED

A MODIFY ENCR command was entered for *nodename* and the cryptographic facility is not supported by this host.

INSUFFICIENT STORAGE

The operator entered a MODIFY ENCR command for *nodename* and the VTAM address space has insufficient storage.

INVALID MODEL LU

The operator entered a DISPLAY LUGROUPS command for *nodename*. Model LU *nodename* was not found in the LUGROUP specified on the GROUP operand of the DISPLAY LUGROUPS command.

INVALID STATE FOR CDRSC

Giveback processing or internal delete for node *nodename* failed. VTAM found a predefined CDRSC to be **not** active, and VTAM was not able to transfer the active sessions from the LU to the CDRSC.

ISTLSXCF NOT ACTIVE

Another node in the sysplex attempts to establish a connection with an XCF node, but the connection is not established because the dynamic local SNA major node, ISTLSXCF, is not in an active state.

ISTLSXCF NOT FOUND

Another node in the sysplex attempts to establish a connection with an XCF node, but the connection is not established because the dynamic local SNA major node, ISTLSXCF, does not exist.

ISTTRL NOT FOUND

Another node in the sysplex attempts to establish a connection with an XCF node, but the connection is not established because the TRL major node, ISTTRL, does not exist.

MACLNTH NOT VALID

The operator entered a MODIFY SECURITY command with a MACLNTH value that is not valid. The

MACLNTH value is dependent on the most recent specification of MACTYPE. The MACTYPE value might have been specified on a MODIFY SECURITY command or on the APPL definition statement.

MACTYPE NOT VALID

The operator entered a MODIFY SECURITY command with a MACTYPE value that is not valid with the most recent specification of MACLNTH. The MACLNTH value might have been specified on a previous MODIFY SECURITY command or on the APPL definition statement.

MODULE LOAD FAILED

Attempt to load XCF modules fails.

NODE HAS NO KEY

The operator entered a MODIFY ENCR command or a MODIFY SECURITY command for *nodename*, and the node *nodename* does not have a properly defined cryptographic key in the cryptographic key data set.

NO SUITABLE RESOURCES FOUND

The operator entered a VARY ACQ or a VARY REL command, but it had no effect on the NCP.

Either all the resources were acquired or released already, or the OWNER specified on the command did not match any of the owner names specified on the NCP resources. Two different networks cannot share the same native resources.

NOT AN APPLICATION PROGRAM

The operator entered a MODIFY ENCR command or MODIFY SECURITY command for *nodename* for one of the following purposes:

- To set the encryption level to CONDITIONAL
- To set the values of MACLNTH or MACTYPE

MACLNTH, MACTYPE, and the CONDITIONAL encryption level are valid only if *nodename* is an application program.

NOT SUPPORTED

A MODIFY TRACE command or TRACE start option was specified with TYPE=QDIOSYNC. When the OSA-Express2 or later adapter was contacted, it was discovered that it does not support the QDIOSYNC function.

REJECTED BY INSTALLATION EXIT

The operator entered a MODIFY ENCR command for *nodename*, and VTAM rejected the MODIFY ENCR command because of user-written routines related to the GENKEY function.

RESOURCE NOT VALID

The operator entered a MODIFY SECURITY command with the CKEY operand for *nodename*, but *nodename* is not a device type LU.

RTP PU NOT VALID

A VARY ACT command for an RTP PU is issued. This is a dynamic PU and activates automatically if RTP is supported. A VARY ACT of a RTP PU is invalid.

SECURITY MANAGER ERROR

A security error occurred while VTAM was processing the command *command*.

SECURITY MANAGER NOT AVAILABLE

The security manager is not available or the resource class APPCLU is not active.

SUBORDINATE NODE PENDING INACT

VTAM rejected a VARY INACT, TYPE=GIVEBACK or VARY REL, TYPE=GIVEBACK command because a logical unit subordinate to *nodename* has LU-LU sessions and is pending deactivation.

SYSPLEX JOIN FAILED

VTAM is attempting to join the sysplex, but a nonzero return code is sent from MVS.

SYSPLEX UNAVAILABLE

VTAM is attempting to join the sysplex, but the sysplex is not active.

UNABLE TO ALLOCATE CDRSC

Giveback processing or internal delete for node *nodename* failed. VTAM has insufficient resources to allocate a cross-domain resource or does not support a dynamic CDRSC and was not able to transfer the active sessions from the LU to a CDRSC.

IST225I

VTAM ERROR

One of the following occurred:

- VTAM abended while processing a MODIFY PROFILES command.
- VTAM abended while processing a MODIFY ENCR command for *nodename*. The error might be due to the improper cleanup of the cryptographic facility (that is, the operator cancelled the cryptographic facility via the CANCEL command).

XCF BUILD FAILED

A VARY ACT command fails for a dynamic local SNA major node.

XCF PU NOT FOUND

A D TRL,XCFCP=*cp_name* command was issued for *nodename*. The nodename is the CP name specified in the display command. The associated dynamic PU for that CP was not located.

XCF TRLE NOT FOUND

One of the following occurred:

- A D TRL,XCFCP=*cpname* command was issued for *nodename*. The nodename is the CP name specified in the display command. The associated dynamic TRLE for that CP was not located.
- A V ACT,ID=ISTLSXCF command was issued. An XCF connection is in the process of being deactivated and an activation request is received. The dynamic TRLE which is required for activation does not exist.

System action: The command is not completed. Processing continues.

CALL SECURITY ERROR

VTAM terminates the switched connection and deactivates the PU.

DYNAMIC CDRSC NOT VALID or UNABLE TO ALLOCATE CDRSC

LU *nodename* remains known to VTAM in an inactive state with active sessions.

FUNCTION NOT OPERATIONAL, NOT SUPPORTED, or ARM REJECTED

The command is not executed.

FUNCTION NOT SUPPORTED

Install Cryptographic Facility.

SECURITY MANAGER ERROR or SECURITY MANAGER NOT AVAILABLE

VTAM does not refresh the profiles and continues to use the profiles that are in storage.

Operator response: The *reason* determines the response:

ALSNAME NOT VALID

Enter a DISPLAY ID command for *nodename* to determine the correct adjacent link station and reenter the command.

The state (active or inactive) of the PU with which the independent LU is associated must be as follows:

- Active if it has been dynamically reconfigured in the NCP
- Active if it is on an NCP switched line
- Active or inactive if it is on an NCP nonswitched line

ALSNAME PARAMETER OMITTED

Enter a DISPLAY ID command for *nodename* to determine the correct adjacent link station, and reenter the command.

CALL SECURITY ERROR

Monitor the console for further occurrences of this message. If VTAM continues to issue this message, use the VARY ANS command to take the line out of answer mode.

DYNAMIC CDRSC NOT VALID or UNABLE TO ALLOCATE CDRSC

Activate a CDRSC major node that defines a CDRSC with *nodename*.

FUNCTION NOT OPERATIONAL

Make sure the Cryptographic Facility is installed and operational.

INSUFFICIENT STORAGE

If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

ISTLSXCF NOT ACTIVE

Enter a VARY,ACT,ID=ISTLSXCF to activate ISTLSXCF.

MACLNTH NOT VALID

Try the command again with a valid value for MACLNTH.

MACTYPE NOT VALID

Try the command again with a valid value for MACTYPE.

MODEL LU NOT VALID

Check that *nodename* is correct and try the command again. If problems persist, save the system log for problem determination.

NO SUITABLE RESOURCES FOUND

Verify that all of the NCP resources have been acquired or released or that the OWNER specified on the command matches the owner name specified on the resources to be acted upon.

NOT SUPPORTED

Issue the DISPLAY NET,TRL,TRLE=*trlename* command to display the active OSA-Express2 or later TRLE. Look for message IST1716I or IST2263I in the response. The OSA CODE LEVEL field is at the end of these messages. Record this value of the OSA CODE LEVEL field for the system programmer. See the description of IST1716I or IST2263I for more information.

RESOURCE NOT VALID

Check that *nodename* is correct and try the command again. If problems persist, save the system log for problem determination.

SECURITY MANAGER ERROR

Try the command again. If VTAM continues to issue this message, contact the security administrator.

SUBORDINATE NODE PENDING INACT

Wait until all subordinate nodes have completed deactivation and try the command again.

VTAM ERROR

Save the system log and dump for problem determination. If the error was due to the improper cleanup of the cryptographic facility, enter the STOP command to stop the cryptographic facility, and save the system log for problem determination.

XCF PU NOT FOUND

Check the CP name specified on the parameter XCFCP to ensure it is correct and try the command again. Issue a DISPLAY TRL,CONTROL=XCF to determine whether any XCF TRLEs exist. Issue a DISPLAY ID=ISTLSXCF to determine whether an associated dynamic PU exists for the connection.

XCF TRLE NOT FOUND

Check the CP name specified on the parameter XCFCP to ensure it is correct and try the command again. Issue a DISPLAY TRL,CONTROL=XCF to determine whether any XCF TRLEs exist.

All other reasons

Save the system log for problem determination.

System programmer response: The *reason* determines the response:

ARM REJECTED

Perform the following traces to help you determine the cause of the rejection:

- A CCW trace of the TRLE read and write control channels taken at the time of the first attempt to arm the adapter. This trace will show the Arm request being written and the Arm reply being read. Use a CCW trace data length of 256 bytes.
- A CTRACE using the VTAM and VTAMDATA options.
- A VTAM internal trace using the CIA and CIO options.

CALL SECURITY ERROR

Verify that all nodes involved in the dial process are at a level that supports call security verification. The passwords used to verify the identity of the caller and the receiver must match. See the PRTCT keyword on the PU statement in the switched major node definition.

CURRENT LEVEL HIGHER

If you want to lower the cryptographic session level of a node, you must redefine the system definition cryptographic option in SYS1.VTAMLST and reactivate the major node that contains *nodename*.

IST225I

DYNAMIC CDRSC NOT VALID

Reenter the TRACE command with a resource that is not a dynamic cross-domain resource. You cannot trace a dynamic cross-domain resource.

EXIT IS NOT FOUND

Make sure the VTAM installation-wide exit that could not be found has been installed on your system.

INSUFFICIENT STORAGE

If this error occurs often, review the VTAM storage allocation. Increase storage as required.

- Use the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

INVALID MODEL LU

Check the definition of *nodename* to ensure that it is correct.

NODE HAS NO KEY

Define the cryptographic key for node *nodename* in the cryptographic key data set. For information about defining cryptographic keys, see the z/OS Cryptographic Services ICSF System Programmer's Guide and the z/OS Communications Server: SNA Network Implementation Guide.

NOT AN APPLICATION PROGRAM

Make sure *nodename* is the correct node name. If *nodename* is the correct name, see z/OS Communications Server: SNA Operation for more information on valid encryption levels. Otherwise, reenter the MODIFY ENCR command with the correct value for *nodename*.

NOT SUPPORTED

The OSA CODE LEVEL determined by the operator indicates the OSA processor code level of the OSA-Express2 or later adapter. That value will show that the OSA-Express2 or later processor code level is insufficient. You must upgrade to a level that supports QDIOSYNC to use the function.

REJECTED BY INSTALLATION EXIT

GENKEY failed with RETURN CODE 16 from the common cryptographic architecture product (CCA) or the IBM Cryptographic Unit Support product (CUSP).

For further information, see the documentation for the cryptographic facility that you are using.

SYSPLEX JOIN FAILED

Trace the return code from MVS. Verify that the sysplex environment exists and restart VTAM.

UNABLE TO ALLOCATE CDRSC

Take VTAM down and restart it so that it supports dynamic CDRSCs.

VTAM ERROR

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure. If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM software support center.

If the error was due to the improper cleanup of the cryptographic facility, start the cryptographic facility if it is not already started.

XCF BUILD FAILED

Restart VTAM with full XCF support.

XCF PU NOT FOUND

Verify that XCF support is active for this VTAM.

XCF TRLE NOT FOUND

Verify that XCF support is active for this VTAM.

For all other *reasons*, no further action is recommended.

Routing code: 2

Descriptor code: 5

IST226I *command* **FOR ID = nodename NOT EFFECTIVE DURING CURRENT OR QUEUED SESSIONS**

Explanation: The operator entered the MODIFY ENCR *command* and changed the cryptographic session level of *nodename*. However, node *nodename* is in session or has queued sessions. The change will not affect the current or queued sessions, but will affect future sessions for *nodename*.

nodename is the name of the node specified on the command.

System action: VTAM retains the new cryptographic session level specified in the MODIFY ENCR command and uses it when processing subsequent session-establishment requests.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST228I **ENCRYPTION = encryption_level , TYPE = min_type**

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ID, DISPLAY LUGROUPS, or a DISPLAY MODELS command for an application or a logical unit. This message indicates the level of cryptography supported by the node in question. A complete description of the message group follows.

```
IST228I ENCRYPTION = encryption_level , TYPE = min_type
IST1563I CKEYNAME = ckeyname CKEY = ckey_value CERTIFY = certify_value
IST1552I MAC = mac_level MACTYPE = mac_type
IST314I End
```

IST228I

- *encryption_level* describes the levels of cryptography and can be one of the following:

REQUIRED

Indicates that VTAM must encrypt all messages that this application program sends and decrypt all messages that the application program receives.

CONDITIONAL

If the session partner supports cryptography, VTAM must encrypt all messages that this application program sends and must decrypt all messages that the application program receives.

If the session partner does not support cryptography, VTAM will set up a session without encryption.

SELECTIVE

Indicates that this application program can choose which messages are encrypted by VTAM.

OPTIONAL

Indicates that the application program has no special cryptographic requirements; its cryptographic capability is the same as the host processor's capability.

NONE

Indicates that the application program has no special cryptographic requirements; its cryptographic capability is the same as the host processor's capability.

- *min_type* describes the minimum type of cryptography and can be one of the following:

DES

Indicates that VTAM must use a minimum of DES encryption using an 8-byte key, if the session uses encryption.

TDES24

Indicates that VTAM must use a minimum of Triple-DES encryption using a 24-byte key, if the session uses encryption.

IST228I

See the z/OS Communications Server: SNA Network Implementation Guide for information about cryptography.

IST1552I

- *mac_level* describes the message authentication code (MAC) levels and can be one of the following:

REQUIRED

Indicates that VTAM must use message authentication codes for all messages this application program sends and verify all messages the application program receives.

CONDITIONAL

Indicates that if the session partner supports message authentication codes, VTAM must use message authentication codes for all messages this application program sends and must verify all messages the application program receives. If the session partner does not support message authentication codes, VTAM will set up a session without them.

NONE

Indicates that the application program will not use message authentication codes.

- *mac_type* describes the method used to generate the MAC and can be one of the following:

CRC

Indicates that VTAM will use a cyclic redundancy checking (CRC) algorithm to perform message authentication code functions.

DES

Indicates that VTAM will use the data encryption standard (DES) to perform message authentication code functions. If a session partner is using CRC, that method is used during the session.

TDES

Indicates that for sessions utilizing Triple DES, Triple DES encryption (not DES encryption) will be used even if the operand value is DES.

NONE

Indicates that VTAM does not perform message authentication code functions. This value is displayed only when MAC=NONE.

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- *keyname* indicates the cryptographic key name of a key-encryption-key (KEK) in the cryptographic key data set (CKDS) for the defined resource, and is used to encrypt session keys. It is always the resource name for applications and cross-domain resources.
- *key_value* can be one of the following:

PRIMARY

Indicates that cryptographic session keys are generated using the primary cryptographic key name (the name on the LU definition statement, or the value of the CKEYNAME operand). CKEY is always set to PRIMARY for applications and cross-domain resources.

ALTERNATE

Indicates that cryptographic session keys are generated using the alternate cryptographic key name with the suffix **.ALT**.

- *certify_value* can be one of the following:

YES

Indicates that cryptographic sessions are authenticated at both the SLU and the PLU, if the session uses encryption.

NO Indicates that cryptographic sessions are authenticated only at the SLU, if the session uses encryption.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST231I *nodetype* MAJOR NODE = *majornode*

Explanation: VTAM issues this message in response to a DISPLAY command for a major node.

nodetype lists the type of the major node. See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for a description of *nodetype*.

For a DISPLAY command for LINES, STATIONS, or TERMS, *majornode* is the major node that contains the resources listed in subsequent messages.

For a DISPLAY ID command that has a group name specified, *majornode* is the major node that contains the group definition.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST232I *linename, status[, CUA = device address] [, CONTROL = MPC]*

Explanation: VTAM issues this message in response to a DISPLAY command for a communication adapter, a LAN major node, or a multipath channel (MPC) attached resource.

linename is the name of a leased line defined for a type 5 physical unit, a switched line defined for a type 2 physical unit, or a VCNS line.

status is the condition or state of the channel-to-channel adapter or the token-ring subsystem. See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

device address is the hexadecimal device address of *linename*. *device address* is only displayed for a communication adapter.

CONTROL = MPC is displayed if the resource is multipath channel (MPC) attached.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST234I I/O ERROR *terminalname, command, ncsresponse[, bscstatus]*

Explanation: VTAM issues this message when an I/O error occurred on a BSC 3270 terminal or control unit.

terminalname is the name of a terminal or control unit.

command is the basic transmission unit (BTU) command and modifier. It represents the command that the NCP received when the I/O error occurred. For more information, see *NCP and EP Reference Summary and Data Areas* for the 3725 and 3745.

ncsresponse is the system or extended response that the NCP sends upon receiving the command. For more information, see *NCP and EP Reference Summary and Data Areas* for the 3725 and 3745.

bscstatus is the BSC status information. For more information, see the *3174 Functional Description*.

System action:

- For an I/O error on a BSC 3270 terminal, VTAM sends an error indication to the application program.
- For an I/O error on a BSC 3270 control unit, depending on NCP response and the number of failures, VTAM might resume polling for the data from the control unit.

Operator response: This is probably a hardware error. If the problem persists, save the system log for problem determination.

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System programmer response: Use the output provided to assist you in determining the cause of the problem.

Routing code: 2,8,1

Descriptor code: 4

IST238I *runame* {REQ|RES} FOR ID = *nodename* RCVD *text*

Explanation: VTAM has received a request (REQ) or response (RES) unit *runame* for *nodename*. For a description of *runame*, see Chapter 16, "Command and RU types in VTAM messages," on page 1123.

text provides additional information about *runame* and VTAM actions. Possible values are:

RECOVERY IN PROGRESS

VTAM is recovering *nodename*. See the subsequent message for the results of the recovery attempt.

ACTIVATION IS RESTARTED

VTAM is restarting the activation of *nodename*. Previous activation messages no longer require operator action and might be repeated by this reactivation.

RU DATA-TYPE= *type*, CAUSE = *cause*

For an AM GUNBIND (DACTPU) request, *type* and *cause* values are included in this message. See *SNA Formats* for a definition of DACTPU.

Following are the RU DATA-TYPE fields and the RU DATA-CAUSE fields (expressed in hexadecimal):

type **Meaning**

- 01 Final use, physical connection might be broken.
- 02 Not final use, physical connection should not be broken.
- 03 Session outage notification (SON).

cause **Meaning**

- 07 VR-INOP: The virtual route carrying the SSCP-PU session has become inoperative forcing deactivation of the SSCP-PU session.
- 08 REX-INOP: The route extension serving the SSCP-PU session has become inoperative forcing deactivation of the SSCP-PU session.
- 09 HIERARCHICAL RESET: VTAM is deactivating the identified session because of a positive response to ACTPU.
- 0B DACTVR: VTAM deactivated the identified SSCP-PU session because of a forced deactivation of the virtual route that the session was using.
- 0C FAIL: VTAM reset the identified session because the SSCP-PU session ended.
- 0E FAIL: RECOVERABLE. VTAM reset the identified session because the SSCP-PU session ended.
- 0F CLEANUP: The SSCP is resetting its half-session before receiving the response from the PU that is being deactivated.
- 10 ALS RESET: VTAM should reset the peripheral adjacent link station (ALS) owned by the sending SSCP.
- 11 GIVEBACK: The sending SSCP relinquishes ownership of owned resources.

System action: The system continues recovery or activation of *nodename*.

Operator response: Wait for additional messages indicating the success or failure of the recovery or activation.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST240A WAIT STATE IN VTAM DUE TO INSUFFICIENT NUMBER OF I/O BUFFERS SPECIFIED BY USER

Explanation: A VTAM process needs more I/O buffers than were allocated to the I/O buffer pool. This condition can occur if the number of buffers in the I/O buffer pool is less than the MAXBFRU value specified during NCP generation or is less than the number of buffers needed for a local 3270.

System action: The VTAM process that requested I/O buffers enters a wait state. Other VTAM processing might continue.

Operator response: *If VTAM has been initialized*, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination. *If VTAM has not been initialized*, save the system log for problem determination.

System programmer response: Since this is a VTAM definition error on the start option, specify a greater number of I/O buffers when you restart VTAM. Use the z/OS Communications Server: SNA Network Implementation Guide to determine the I/O buffer requirements for all devices connected by VTAM. Adjust this requirement as needed.

See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for an overview of the wait procedure.

Routing code: 2

Descriptor code: 2

IST241I *command* COMMAND COMPLETE FOR *nodename*

Explanation: VTAM issues this message when the *command* for *nodename* has been processed.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST242I *command* COMMAND FAILED FOR ID = *nodename* SENSE = *code*

Explanation: VTAM issues this message when the *command* for *nodename* failed for the reason indicated by *code*.

Note: If you are attempting a DISPLAY DISK command or a DISPLAY NCPSTOR command, and the command fails (most probably with a sense code of X'1005xxxx'), verify that the command is supported by the release of NCP you are using.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: VTAM rejects the command. Other processing continues.

Operator response: Ensure that you entered *command* correctly. If problems persist, use *code* to help you determine the cause of the error.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST243I • IST246I

IST243I **FRAMES SENT = *sent*, RCVD = *received*, RCVD WITHOUT ERRORS = *noerrors***

Explanation: VTAM issues this message as part of a group of messages. The first message is IST549I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST244I **NCP *type* STORAGE FOR ID = *ncpname***

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY NCPSTOR command.

```
IST244I NCP type STORAGE FOR ID = ncpname
IST245I address  xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx
:
:
IST314I END
```

type is one of the following depending on the value specified in the STORAGE operand:

type **STORAGE**

MAIN **MAIN**

DUMP VECTOR
 DUMPVEC

DUMP MAIN
 DUMPMAIN

ncpname identifies the address *address* of the NCP whose storage is displayed by one or more IST245I messages. *xxxxxxx* is one word of storage in hexadecimal. Each occurrence of IST245I contains 4 words of storage.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST245I ***address xxxxxxxx xxxxxxxx xxxxxxxx xxxxxxxx***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY NCPSTOR command. The first message in the group is IST244I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST246I ***function_code return_code***

Explanation: This message is seen at the console only when the Program Operator Application (POA) is not active.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST247I **LOAD/DUMP PROCEDURE STATUS** = *status* [, **RU COUNT** = *rucount*]

Explanation: VTAM issues this message in response to a DISPLAY ID command for an NCP (PU type 4).

status is the load or dump procedure state for the PU type 4 being displayed. The finite state machine values describe whether the procedure is load or dump and the current status of that procedure. See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

If *status* is **RESET**, the load or dump procedure is not in progress at the time of the display.

rucount indicates the number of IPLTEXT (**PLOAD**) or DUMPTEXT (**PFDMP**) request units that have been sent to the controller. This field can be used to monitor the progress of a dump or load of a remote NCP. VTAM displays **RU COUNT** = *rucount* only when *status* is **PLOAD** or **PFDMP**.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST257I **VTAM SDUMP FAILED WITH RETURN CODE** *code* **REASON** X'*reason*'

Explanation: VTAM started an SVC dump (**SDUMP**) for an abend, or for a first-failure-data-capture (FFDC) detected error, and the system could not complete the dump successfully.

- *code* indicates the return code received from MVS SDUMP and might be one of the following:

- 4 The system obtained only a partial dump. The dump data set or file might be too small. When *code* is 4, *reason* will be X'00'.
- 8 The system was unable to schedule a dump. When a return code of 8 is received, a hexadecimal reason code (*reason*) is returned.

reason indicates the cause of the SDUMP failure.

System action: VTAM takes no further action to obtain a dump. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If *code* is 4, look for system message IEA911E for further information. Message IEA911E includes reason codes that explain why the system could not execute a complete dump. Message IEA911E is documented in the z/OS MVS System Messages, Vol 6 (GOS-IEA).

If *code* is 8, see z/OS MVS Programming: Authorized Assembler Services Reference LLA-SDU for an explanation of the return code and reason code for the SDUMP macro.

Routing code: 2,8

Descriptor code: 4

IST258I **STMT IN ERROR** = *text*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1249I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST259I **INOP RECEIVED FOR** *nodename* **CODE** = *code* [*text*]

Explanation: VTAM received an INOPERATIVE RU for *nodename*. The *code* field gives the INOP reason code.

Note: If the resource that is going INOP is attached remotely off an NCP, then the NCP, not VTAM, generates the INOP.

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If *code* is hex 0F, *text* supplies additional information about the INOP type.

code (expressed in hexadecimal) can be:

- 01 Station INOP: There was a loss of contact, unexpected loss of connection, or a connection establishment failure.
This error type normally occurs after a successful connection has been established. When link-level errors occur, the boundary function will attempt link-level recovery procedures to recover the session. One of the definitions that affects this recovery activity is the RETRIES operand on the GROUP, LINE or PU definition statements. When normal recovery fails, a higher level of recovery is needed. That recovery is identified by this message.
This type of failure is normally followed by message IST619I and later by IST621I or IST129I to report the success or failure of the recovery actions. A RECMS RU should always accompany this error. The RECMS is saved as a miscellaneous data record (MDR) on the system error recording data set or is passed to NPDA. Use Netview/NPDA or EREP to do the analysis.
- 02 Link failure.
- 03 Station INOP: SDLC Disconnect request received. An SNA-PU SDLC connection has terminated its link manager and is informing the primary station that it is not available (for example, it is offline).
- 04 Station INOP: SDLC Request Disconnect response received. During normal SDLC link activity, a RR poll received a DISC. This usually means that the secondary station is requesting a DISC from the primary.
- 05 Station INOP: SDLC Disconnect Mode received. The transmitting secondary SDLC station is disconnected.
- 06 Station INOP: IPL or dump in progress.
- 07 Station INOP: Remote power off (RPO) in progress.
- 08 Link: Unconditional reset by force deactivate DACTLINK.
- 0A X.21 switched link: Outgoing call establishment failed because the X.21 call-progress signal was received but is not included in bytes 6-7.
- 0B X.21 switched link: Outgoing call establishment failed because of data circuit-terminating equipment (DCE) signaling DCE clear condition.
- 0C X.21 switched link: Outgoing call establishment failed because of expiration of time-out on changing DCE conditions.
- 0D X.21 switched link: There was an unexpected loss of connection during the X.21 call phase.
- 0E X.21 switched link: A failure occurred during the X.21 call-clearing phase.
- 0F X.21 switched link: An outgoing call establishment failed. X.21 call progress signals were received and are included in the INOP.
- FD BSC line: BSC cluster PU=YES modem failure occurred. The line and the PU will be deactivated.
- FE Station INOP: Station INOP on S/370 channel-link occurred.
- FF Link: S/370 channel-link failure occurred.

text is displayed if *code* is hex 0F, and describes the call progress signal (CPS).

text can be one of the following:

- CPS = UNRECOGNIZED CALL PROGRESS SIGNAL
- CPS = *yy* - [*descr*]

The values of *yy* (expressed in decimal) and optionally *descr* can be one of the following:

yy descr

- 20 NO CONNECTION
- 21 NUMBER BUSY
- 22 PROCEDURE ERROR
- 23 TRANSMISSION ERROR

- 41 ACCESS BARRED
- 42 CHANGED NUMBER
- 43 NOT OBTAINABLE
- 44 OUT OF ORDER
- 45 CONTROLLED NOT READY
- 46 UNCONTROLLED NOT READY
- 47 DCE POWER OFF
- 48 INVALID FACILITY REQUEST
- 49 NETWORK FAULT IN LOCAL LOOP
- 51 CALL INFORMATION SERVICE
- 52 INCOMPATIBLE USER
- 61 NETWORK CONGESTION
- 71 L.T. NETWORK CONGESTION
- 72 RPOA OUT OF ORDER
- 81 REGISTRATION/CANCELLATION CONFIRMED

System action: Processing continues.

Notes:

1. VTAM does not attempt recovery for error code **02**. Link failures are not recoverable.
2. If an INOP occurs before processing of an earlier INOP, VTAM does not attempt recovery. The node is deactivated.
3. For switched PUs:
 - For peripheral PUs, VTAM does not attempt recovery for any error codes.
 - For subarea PUs, VTAM attempts recovery only for error code **01**.

Operator response: This is probably a hardware error. Save the system log for problem determination. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on service aid programs.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this INOP code.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information on non-VTAM subarea network problems associated with this message and for examples of IST259I problems and diagnosis.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 8

Descriptor code: 4

IST260I *ncpname* — *sscpname* **SESSION LOST, SA** *subarea* **CODE** *code*

Explanation: The session between SSCP *sscpname* and NCP *ncpname* failed. *subarea* is the subarea of *ncpname*. The hexadecimal reason code *code* can be one of the following:

- 07** Virtual route inoperative: VR INOP received for the virtual route used by the SSCP-PU session.
- 0A** Forced deactivation of the SSCP-PU session: DACTPU received by the PU.
- 0B** Virtual route deactivated: A forced deactivation occurred for the virtual route used by the SSCP-PU session.

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0C SSCP failure.

Note: If *sscpname* is *****NA*****, the name for this SSCP was not available or could not be determined.

System action: None.

Operator response: If you have been instructed to provide backup procedures for *ncpname*, do so.

System programmer response: Define the recovery procedures that the network operator should perform when VTAM issues this message.

Routing code: 2

Descriptor code: 5

IST262I {**ACBNAME**|**LUNAME**} = *nodename*, **STATUS** = *status*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TSOUSER command. It appears twice in the group, first with **ACBNAME** displaying the application status *status* of the application name *nodename* with which the TSO user ID is associated, and second with **LUNAME** displaying the status *status* of the logical unit *nodename*.

See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

Note: Other messages in this group display the name of the TSO user ID associated with the application and the logical unit (LU). This message is followed by message IST486I, which indicates the current status of the TSO user ID.

If the TSO user ID has been disconnected from the LU, the LU *status* will still be **ACT/S** (active and in session) if it is in session with another application. To find the LU's session partner, you may enter a DISPLAY ID command for the logical unit *nodename*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST264I **REQUIRED** *resource* [*luname*] *reason*

Explanation: VTAM issues this message as part of a group of messages when a resource requests a session, and the session initiation request fails for one of the reasons listed below. The first message in the group is IST663I.

Message IST664I, which is part of the IST663I message group, shows the names of the partners for which a session could not be established.

The combination of *resource* and *reason* might be any of the following:

ADJSSCP TABLE

UNDEFINED

COS NAME *cosname*

UNDEFINED

LOGMODE NAME *logmode*

UNDEFINED

RESOURCE *luname*

UNDEFINED

RESOURCE *luname*

NOT ACTIVE

RESOURCE *luname*

UNSTABLE (device-type LUs only)

RESOURCE *luname*
DISABLED

RESOURCE *luname*
QUIESCING

RESOURCE *luname*
BLOCKING LOGONS (for application PLUs only)

STORAGE
NOT AVAILABLE

luname appears when *resource* is **RESOURCE**. *luname* is the real name of the LU or application that was in error. If the SLU is not known, *****NA***** is displayed for *luname*.

- If *luname* is the SLU, the resource is undefined, not active, disabled, or quiescing.
- If *luname* is the PLU, the resource is undefined, not active, disabled, quiescing, or blocking logons.
- For *cosname*, no CoS (class of service) entry with that name has been defined. *cosname* is blank if the default Class of Service was used.
- For *logmode*, the logon mode is not valid for the SLU because:
 - The logon mode is not in the logon mode table for the SLU in the VTAM definition statements.
 - No logon mode table is associated with the SLU, and the logon mode is not included in the default logon mode table.
 - No valid logon mode table is associated with the SLU, and no default logon mode table exists.
- If *logmode* is not provided or contains blanks, IST264I is still issued. *****NA***** is displayed for *logmode*.

System action: VTAM rejects the session initialization request. The session setup fails.

Operator response: Follow the appropriate action:

- If the required resource is **UNDEFINED**, enter a VARY ACT command to activate the resource major node in which the resource is defined.
- If the required resource is **NOT ACTIVE**, enter a VARY ACT command to activate the resource. If the resource is an application program, start it.
- If the required resource is **UNSTABLE**, it might be going through some type of error recovery process. This can be due to ERP, an INOP, or session termination. Display the resource and try the request again after it has recovered.
- If the required resource is **DISABLED** and it is a device type LU, check to determine whether it is powered on.
- If the required resource is **DISABLED** and it is an application program, start the application program or ensure that the application has issued SETLOGON START.
- If the required resource is an application program and is **QUIESCING**, SETLOGON QUIESCE is in effect. The application program is shutting down and cannot accept new sessions unless VTAM closes and reopens the ACB.
- If the required resource is an application program, and the ACB was opened with MACRF=NLOGON, it is **BLOCKING LOGONS**. The only LU-LU sessions allowed for the application program are those initiated by the application program itself using OPNDST OPTCD=ACQUIRE.
- For a **LOGMODE** problem, verify that the resource specified the correct logon mode on the request. You can use the DISPLAY ID command to determine the table identified for the resource. You can use the MODIFY TABLE command to change the logon mode table name associated with a resource.
- If **STORAGE** is **NOT AVAILABLE**, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response:

- For a **COS** problem, verify that you have defined the Class of Service.
- For a **LOGMODE** problem, either correct the logon mode table currently assigned to the SLU or assign a different logon mode table that does contain the correct mode.
- For a **STORAGE** problem, increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.

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- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 8

Descriptor code: 4

IST265I *command* **FOR ID = nodename1 FAILED — DUP nodename2 HL highernode**

Explanation: VTAM rejected *command* for node *nodename1* because this domain already has an active resource *nodename2*. *highernode* is the higher level nodename (either a PU name or a major node name) of *nodename2*.

System action: VTAM rejects the command.

Operator response: If the network requires *nodename1*, deactivate the segment that contains *nodename2* with the higher level node *highernode*, or enter a VARY REL command to release it.

If *nodename1* and *nodename2* are required simultaneously, one of the names must be changed. Save the system log for problem determination.

System programmer response: Change one of the resource names if both are needed simultaneously.

Routing code: 8

Descriptor code: 4

IST266I *subtask* **STARTED**

Explanation: VTAM issues this message in response to a MODIFY SUBTASK,FUNCTION=ATTACH command to start a specific *subtask*. The *subtask* could be TPRINT, subsystem support services, batch transfer program, or any routine for which the operator can enter a MODIFY SUBTASK,FUNCTION=ATTACH command. This message indicates that VTAM has successfully attached *subtask* as a subtask of VTAM.

System action: VTAM successfully completed processing the MODIFY command.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST270I **LOAD OF ncpname COMPLETE — LOAD MODULE = loadmodname**

Explanation: In response to a VARY ACT command, or to an NCP reload after an error recovery procedure, VTAM successfully loaded the communication controller NCP *ncpname* with load module *loadmodname*. The communication controller is now ready for use.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST271I **JOBNAME = *jobname*, STEPNAME = *stepname*, DSPNAME = *dspname***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application program. The *jobname* and *stepname* listed are those of the job controlling the application program at the time of the request.

dspname is the name of the data space associated with the application program. The data space name is generated automatically when the data space is created by VTAM and is in one of the following formats:

ACY*cccc*

cccc is 0-FFFFC

IST*cccc*

cccc is 0-FFFFC

*cccc***IST**

cccc is 1-99999

If *jobname*, *stepname*, or *dspname* are not available, VTAM issues ***NA***.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST272A **NO INITIAL TEST FOR *controller* — REPLY 'U' TO BYPASS — OR CANCEL**

Explanation: While processing a VARY ACT command or during error recovery processing, VTAM attempted to load the communication controller *controller*. However, VTAM could not use the initial test routine of the load utility program prior to loading because VTAM could not use the file containing the initial test program.

The reason for this is either a permanent I/O error or erroneous or missing job control statements.

System action: VTAM waits for a reply.

Operator response: Either:

- Enter 'U' to bypass the initial test routine, that is, to initiate loading of the NCP without testing the hardware.
- Enter 'CANCEL' to cancel the loading operation.

Note: For additional information on how to respond to this message, see "Responding to a VTAM message" on page 2.

System programmer response: Check that the job control statements for the VTAM start procedure contain a DD statement with DDNAME INITEST and that the initial test program resides on SYS1.LINKLIB.

Routing code: 1

Descriptor code: 2

IST278A **INVALID REPLY FOR ID = *controller* LOAD — ENTER 'U' — OR CANCEL**

Explanation: The operator issued an invalid response to message IST272A. The message asked whether to load the communication controller *controller* with an NCP. The only valid responses are:

- 'U'—to bypass the initial test routine. In this case, the NCP is loaded without testing the hardware.
- 'CANCEL'—to cancel the request.

System action: VTAM waits for a valid reply.

Operator response: Examine previous messages about the communication controller in question and then make a valid reply. Any unacceptable reply will cause a repetition of this message.

IST282A • IST284A

Note: For additional information on how to respond to this message, see “Responding to a VTAM message” on page 2.

System programmer response: None.

Routing code: 1

Descriptor code: 2

IST282A **INVALID REPLY FOR ID = *controller action reason***

Explanation: The operator issued an invalid response to message IST095A or IST284A.

action can be one of the following:

- **RELOAD**
- **DUMP**

reason can be one of the following:

- **SYNTAX ERROR**
- **DUMPSTA = *dumpstaname* IS NOT AVAILABLE**
- **LOADSTA = *loadstaname* IS NOT AVAILABLE**

Valid responses are:

NO Applies to IST095A and IST284A

YES Applies to IST095A and IST284A

YES,DUMPSTA=*dumpstaname*
Applies to IST095A only

YES,LOADSTA=*loadstaname*
Applies to IST284A only

If the message indicates that dump *dumpstaname* or load station *loadstaname* is not available, then the link station is not active or is not connected to the communication controller *controller*, or the dump station *dumpstaname* does not support dump.

System action: VTAM reissues the original message.

Operator response: Enter YES if you want to dump or load the communication controller contents, NO if not.

Note: For additional information on how to respond to this message, see “Responding to a VTAM message” on page 2.

System programmer response: None.

Routing code: 1

Descriptor code: 3

IST284A **OPTION TO RELOAD *controller* AVAILABLE — REPLY ‘YES’ OR ‘NO’ OR ‘YES,LOADSTA=LINKSTANAME’**

Explanation: The NCP running in communication controller *controller* has failed.

- If you want to reload the communication controller (over a channel), VTAM will determine whether the communication controller still needs to be loaded, and will proceed with the reload, if necessary.
- If you want to reload the communication controller (over an SDLC link), VTAM loads the communication controller automatically.
- If this host is not to reload the communication controller, as in the case of a shared communication controller where another host performs the reload, those link stations formerly in contact with the failed NCP will be activated. Reply NO after the completion of such a reload by another host.

System action: VTAM waits for a reply. The nodes associated with this communication controller are inaccessible.

Operator response: If this communication controller is multiple-channel or multiple-link attached, coordinate your reply with the reply of the operators of the other affected domains.

Each recovery operation **must** be completed before the next one is started.

To start reloading the controller in your domain using the default link station specified at VARY ACT or NCP generation, enter a reply of YES.

To specify a different link station, enter YES,LOADSTA=*linkstaname* where *linkstaname* is the name of the link station. If YES,LOADSTA= is specified without a link station name, VTAM chooses a default link station.

If you do not want this host to reload the communication controller, enter a reply of NO. In this case, if another host does not reload this communication controller, the communication controller's resources will be unusable. You can enter a VARY INACT command to deactivate the NCP.

If all hosts sharing this communication controller specified NO and you subsequently decide to reload it with a VARY ACT command, you must enter a VARY INACT command **first** to deactivate it.

Note: For information on how to respond to this message, see "Responding to a VTAM message" on page 2.

System programmer response: None.

Routing code: 1

Descriptor code: 2

IST285I *dumptype* DUMP OF *resourcename* status

Explanation: VTAM issues this message when the contents of the communication controller have been scheduled to be dumped to a disk, or have successfully or unsuccessfully been dumped to a data set.

resourcename is one of the following:

- The name of the NCP.

The data set is named in the DUMPDS operand of the MODIFY DUMP command or the DUMPDS, CDUMPDS, or MDUMPDS operands on the PCCU definition statement for the specified NCP.

- The name of an SDLC link station in an NCP in a communication controller that is adjacent to the communication controller containing the NCP to be dumped.

dumptype can be one of the following:

STATIC

NCP processing stops. The contents of the communication controller are dumped by microcode services, and VTAM deactivates the major node associated with *resourcename*.

DYNAMIC

NCP processing continues while the NCP contents are dumped. VTAM does not deactivate the NCP.

MOSS

VTAM transfers a maintenance operator subsystem dump contained on the MOSS disk in the IBM 3720, 3725, or 3745 Communication Controller to a host data set.

CSP

VTAM transfers a communication scanner processor dump contained on the MOSS disk to a host data set.

TRANSFER

VTAM transfers an NCP dump contained in the IBM 3720, 3725, or 3745 Communication Controller to a host data set.

status can be one of the following:

CANCELLED – PATH BLOCKED

VTAM attempted the dump but was unable to access the controller because it was being dumped or loaded by another host.

CANCELLED – PATH NOT OPERATIONAL

VTAM attempted the dump but was unable to access the controller because the channel path was not

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operational. This is probably because the controller is in the process of being dumped or loaded by another host. However, this can also indicate a hardware or software problem.

COMPLETE

The dump is complete.

PARTIALLY COMPLETE

During dump processing, a permanent I/O error occurred on the communication controller, the dump data set, or the SDLC link. A portion of the dump is not usable. The dump data set might be too small to contain the entire dump.

Note: If ACTION=TRANSFER and either TYPE=CSP or TYPE=MOSS were specified on the MODIFY DUMP command, the BER log, CDF, TIC dump, and CA dump are transferred from the hard disk even when the CSP or MOSS dump is not present on the disk. This message indicates that data has been transferred to the dump data set even though the specified dump was not present.

SCHEDULED TO DISK

The dump to disk request has been forwarded to the NCP *resourcename*.

STARTED

The dump has begun.

FAILED – PERMANENT I/O ERROR

During dump processing, an unrecoverable I/O error occurred on the communication controller or the dump data set. The dump is unusable.

FAILED – *ddname* CANNOT BE OPENED

VTAM attempted the dump, but could not open the dump data set defined by *ddname*. Dump processing terminated.

FAILED – UNSUPPORTED DEVICE TYPE

VTAM attempted the dump, but could not open the dump data set because it was located on an unsupported device. Dump processing terminated.

System action: If *status* is:

CANCELLED – PATH BLOCKED

The dump terminates, and VTAM waits for contact with NCP *resourcename* to be re-established.

CANCELLED – PATH NOT OPERATIONAL

The dump terminates, and VTAM waits for contact with NCP *resourcename* to be re-established.

COMPLETE

Processing continues.

PARTIALLY COMPLETE

The dump terminates.

SCHEDULED TO DISK

Processing continues.

STARTED

The dump has begun.

FAILED – PERMANENT I/O ERROR

The dump terminates.

FAILED – *ddname* CANNOT BE OPENED

The dump terminates.

FAILED – UNSUPPORTED DEVICE TYPE

The dump terminates.

Operator response: If *status* is:

CANCELLED – PATH BLOCKED

None.

CANCELLED – PATH NOT OPERATIONAL

If contact with NCP *resourcename* is not re-established in a few minutes, save the system log for problem determination.

COMPLETE

You can format the entire dump using the NCP dump utility program.

PARTIALLY COMPLETE

If the dump is valid and enough data was saved, you can format and print the portion of the dump that was taken using the NCP dump utility program. Dump utility messages will provide information about the validity of the dump and data saved.

Attempt to dump the NCP using the NCP dump utilities. See the *NCP, SSP, and EP Diagnosis Guide* for information on using the NCP dump utilities.

Save the system log for problem determination, and run your operating system service aid program. See the *EREP User's Guide and Reference* for more information on using EREP.

SCHEDULED TO DISK

Re-establish communication with the NCP *resourcename* and query the MOSS disk for the dump status. If the dump is present, you can use the MODIFY DUMP command to transfer the dump to a host data set. The dump can be formatted and printed using the utility program.

STARTED

None.

FAILED – PERMANENT I/O ERROR

This is probably a hardware error.

- Make sure the communication controller is powered on.
- Check the HARD STOP and PROGRAM STOP indicators on the communication controller operator panel. If either indicator is on, press the LOAD switch.
- If the communication controller is switchable between processors, make sure the communication controller is switched to the VTAM host processor.
- Attempt to dump the NCP using the NCP dump utilities. See the *NCP, SSP, and EP Diagnosis Guide* for information on using the NCP dump utilities.
- Save the system log for problem determination, and run your operating system service aid program. See the *EREP User's Guide and Reference* for more information on using EREP.

FAILED – *ddname* CANNOT BE OPENED

If you specified the dump data set name correctly, save the system log for problem determination.

FAILED – UNSUPPORTED DEVICE TYPE

Ensure that the dump data set resides on a supported access device. If the problem persists, save the system log for problem determination.

System programmer response: If *status* is:

CANCELLED – PATH BLOCKED

None.

CANCELLED – PATH NOT OPERATIONAL

Take the following actions:

1. Check the channel definition in the NCP definition library to ensure that the channel adapter that failed is defined to NCP *resourcename*.
2. If the channel adapter is correctly defined to NCP *resourcename*, this is probably a hardware error. Ensure that the channel adapter is online from MOSS.
3. If the channel adapter is online, and you continue to have problems, contact the IBM hardware support center.

COMPLETE

None.

PARTIALLY COMPLETE

You might need to increase the size of the dump data set. If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

IST302I • IST303I

SCHEDULED TO DISK

None.

STARTED

None.

FAILED – PERMANENT I/O ERROR

If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

FAILED – *ddname* CANNOT BE OPENED

Ensure that

- The dump data set name is spelled correctly on either the DUMPDS operand of the MODIFY DUMP command or the DUMPDS, CDUMPDS, or MDUMPDS operands of the PCCU definition statement.
- The appropriate JCL statements are included with the VTAM start options.

Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system. When you have corrected the error condition, ask the operator to reenter the command.

FAILED – UNSUPPORTED DEVICE TYPE

Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system. When you have corrected the error condition, ask the operator to reenter the command.

Routing code: 2

Descriptor code: 5

IST302I INVALID DEFINITION TYPE IN MEMBER *member* IN VTAM DEFINITION LIBRARY

Explanation: VTAM issues this message when:

- The first definition statement or macro in major node definition *member* is not valid. The statement in error can be an operand on the definition statement. One possible cause of this error is that a definition statement is in the wrong column.
- The first definition statement or macro in major node definition *member* is not compatible with a VTAM start option or the start option is not specified correctly.

Note: Activating an NCP requires special consideration. VTAM selects the PCCU definition statement associated with this host by comparing the SUBAREA keyword value with the subarea of this host (specified by HOSTSA start option). If VTAM finds no PCCU definition statement with that subarea value, VTAM issues this message. For further information, see the descriptions of the PCCU definition statement and the HOSTSA start option in the z/OS Communications Server: SNA Resource Definition Reference.

System action: VTAM does not include major node *member* in the VTAM network.

Operator response: Save the system log for problem determination, and print the major node definition.

System programmer response: Correct the definition that is not valid and update *member* in the definition library.

Routing code: 2

Descriptor code: 5

IST303I INSUFFICIENT STORAGE TO BUILD CONFIGURATION *configname*

Explanation: VTAM terminated processing of major node *configname* because the storage required for internal VTAM tables associated with that major node is not available.

The size of the storage requested exceeds the limit that can be allocated for a single request. This can occur when you activate a major node with too many resources defined. The storage limit on the size of a major node is 33 554 423 bytes.

System action: VTAM does not include major node *configname* in the VTAM network.

Operator response: Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

If necessary, reduce the number of resources in the major node *configname* being activated.

System programmer response: This message indicates an underestimation of storage requirements for the VTAM address space.

- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command and the MODIFY VTAMOPTS command.

Routing code: 2

Descriptor code: 5

IST309I **UNABLE TO LOAD MODULE** *loadmodname* **FROM LIBRARY** [*libraryname*]

Explanation: VTAM could not load the communication controller (NCP, RRT) specified by *loadmodname* from library *libraryname*.

System action: VTAM could not activate the communication controller associated with the load module and library combination.

Operator response: Save the system log for problem determination.

System programmer response: Inspect *libraryname* for missing or misnamed *loadmodname*. If *loadmodname* is missing, assume that the NCP was not generated successfully. Check the NCP generation output, correct the NCP system generation, and try the activation again.

Routing code: 2,4,8

Descriptor code: 5

IST310I **INVALID SPACE REQUEST FOR CONFIGURATION** *majornode*

Explanation: VTAM issues this message in response to a VARY ACT command for *majornode*. VTAM cannot proceed because it encountered an entry that does not fit in the preallocated build area.

System action: The VTAM network will not contain major node *majornode*.

Operator response: Try the VARY ACT command again for this major node. If the condition persists, save the system log for problem determination.

System programmer response: Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on diagnosing VTAM problems.

Routing code: 2

Descriptor code: 5

IST311I **NCP LOAD MODULE LIBRARY** *libraryname* — **FAILED TO OPEN**

Explanation: VTAM attempted to open the communication controller NCP load module library *libraryname*, but the OPEN failed.

System action: VTAM cannot activate a communication controller whose NCP system generation output is on library *libraryname*.

Operator response: Ensure that you entered *libraryname* correctly. If problems persist, save the system log for problem determination.

System programmer response: Use the output provided to assist you in determining the reason for the failure. When the problem is corrected, try the activation of the communication controller again.

Routing code: 2,4,8

Descriptor code: 5

IST314I • IST315I

IST314I **END**

Explanation: This message marks the end of a message group. See previous messages in the group for more information.

Routing code: 2

Descriptor code: 5

IST315I **VTAM INTERNAL TRACE ACTIVE – MODE = *modename*, SIZE = *size unit***

Explanation: This message is part of a group of messages. Possible message groups follow.

- This message group is issued in response to a MODIFY TRACE,TYPE=VTAM command or MODIFY NOTRACE,TYPE=VTAM command .

Note: The IST2445I message will only be displayed when the VITCTRL value of FULL is in effect and is only associated with the VTAM internal trace. The IST2446I message will be displayed when disabling a VIT option contained in the STDOPPTS group with both VITCTRL value of FULL is in effect and an active CSDUMP with either a message or sense code trigger.

```
IST315I  VTAM INTERNAL TRACE ACTIVE – MODE = EXT, SIZE = bfrnum BUFFERS
IST199I  OPTIONS = {NONE|optionlist}
IST315I  VTAM INTERNAL TRACE ACTIVE – MODE = INT, SIZE = size MB
[IST2445I VTAM INTERNAL TRACE CONTROL IS IN FULL MODE]
IST199I  OPTIONS = {NONE|optionlist}
[IST2446I DISABLING A VIT OPTION IN STDOPPTS GROUP WHILE CSDUMP ACTIVE]
IST1730I SUBTRACE subtrace ACTIVE UNDER TRACE OPTION traceopt
IST314I  END
```

- This message group is issued in response to a DISPLAY TRACES command when TYPE=VTAM or TYPE=ALL is specified on the command.

Note: The IST2445I message will be displayed only when the VITCTRL value of FULL is in effect and is only associated with the VTAM internal trace.

```
IST350I  DISPLAY TYPE = TRACES,TYPE=VTAM
IST315I  VTAM INTERNAL TRACE ACTIVE – MODE = EXT, SIZE = bfrnum BUFFERS
IST199I  OPTIONS = {NONE|optionlist}
IST315I  VTAM INTERNAL TRACE ACTIVE – MODE = INT, SIZE = size MB
[IST2445I VTAM INTERNAL TRACE CONTROL IS IN FULL MODE]
IST199I  OPTIONS = {NONE|optionlist}
IST1730I SUBTRACE subtrace ACTIVE UNDER TRACE OPTION traceopt
IST314I  END
```

IST350I

This message identifies the type of information shown in the display. For this message group, *type* is always **TRACES,TYPE=VTAM**, and the display contains the status of the VTAM internal trace.

IST315I

- *modename* is **EXT** (external) or **INT** (internal) and indicates where the VTAM internal trace data is recorded.
 - If **MODE = EXT**:
 - The external trace is writing records to a generalized trace facility (GTF) data set.
 - *bfrnum* specifies the number of 8K GTF buffers that VTAM is using for external trace processing. VTAM will accumulate approximately 8K of external trace data prior to sending the data to GTF via GTRACE. If 0 is indicated then VTAM is sending each trace record (or logical group of trace records) individually to GTF via GTRACE. Running in this mode should be avoided due to the large system overhead involved. It is only provided for backward compatibility reasons.
 - *unit* is always **BUFFERS** for **MODE = EXT**.
 - If **MODE = INT**:
 - The internal trace is writing records in an internal trace table.
 - *size* specifies the number of megabytes allocated for the internal trace table. When this area has been filled, the table wraps.

The default and minimum internal trace table size is 4 (megabytes).
Storage for the internal trace table is obtained from the 64-bit common area.

- *unit* is always MB for **MODE = INT**.

| IST2445I

| VTAM issues this message when a value of FULL is coded for the VITCTRL Start Option in z/OS Communications Server: SNA Resource Definition Reference. VTAM only includes this message when *modename* is INT on message IST315I.

| When VTAM Start Option VIT Control (VITCTRL) is set to FULL, all trace options are under the user's full control. VTAM only starts the default set of VIT options, as defined in the VIT option set STDOPPTS, during VTAM start processing or when another VIT option set is activated for internal mode VIT processing. In addition, *optionlist* in message IST199I contains the current set of VIT options exactly as specified by the user. When a CSDUMP message or code trigger is active the following exceptions apply to a user's full control of the internal VIT:

- For VTAM start processing the VIT option set STDOPPTS will be enabled.
- You cannot disable the VIT MSG option with a MODIFY NOTRACE command when MODE=INT is specified.

| IST2446I

| VTAM issues this message when disabling a VIT option contained in the STDOPPTS group with both VITCTRL=FULL in effect and an active CSDUMP with either a message or sense code trigger. See z/OS Communications Server: SNA Resource Definition Reference. VTAM only includes this message when *modename* is INT on message IST315I.

| When VTAM Start Option VIT Control (VITCTRL) is set to FULL and there is an active CSDUMP with either a message or sense code trigger then all trace options except for MSG are under the user's full control. In addition, *optionlist* in message IST199I contains the current set of VIT options exactly as specified by the user.

| IST199I

| This message displays the functions being traced. A list of all user-selected options being traced for TYPE=VTAM appears in this message.

- If *modename* is INT on message IST315I, and message IST2445I is displayed, *optionlist* includes the list of user-selected options exactly as specified by the user. If **OPTIONS=NONE**, no user-selected internal trace options are active.
- If *modename* is INT on message IST315I, and message IST2445I is not displayed, *optionlist* displays the list of user-selected options being traced, but additional VTAM default trace options (API, PIU, MSG,SSCP, CIO, and NRM) are also active even if they do not appear in *optionlist*. If **OPTIONS= NONE**, no user-selected internal trace options are active, and only exception conditions and VTAM default trace options are being traced.
- If *modename* is EXT on message IST315I, *optionlist* includes the list of user-selected options exactly as specified by the user.

optionlist can include the following options:

API

Application program interface

APPC

LU 6.2 communication

CFS

Coupling facility services

CIA

Channel I/O Auxiliary

CIO

Channel I/O

CMIP

CMIP services and the VTAM topology agent

IST315I

CSM

Communications storage manager

ESC

Execution sequence control

HPR

High performance routing

LCS

LAN channel station

LOCK

VTAM locking services

MSG

Message to operator

NRM

Network resource management

PIU

Path information unit

PSS

Process scheduling services

SMS

Storage management services

SSCP

System services control point

TCP

VTAM to TCP/IP interface events

VCNS

VTAM Common Network Services

XBUF

Extended buffer list

XCF

Cross coupling facility

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about VTAM internal trace options.

IST1730I

subtrace is the SUBTRACE type currently active. The values for *subtrace* are **TREE** and **ARBP**.

traceopt is the trace option associated with the SUBTRACE type. The values for *traceopt* are **SSCP** and **HPR**.

This message displays an active SUBTRACE type and its associated trace option. The trace option must be specified on the command used to activate or deactivate the subtrace type.

The SUBTRACE type TREE under trace option SSCP traces APPN routing trees used for APPN sessions.

The SUBTRACE type ARBP under trace option HPR traces ARBP entries for all RTP connections utilizing the ARBP algorithm.

System action:

- If this message is in response to a MODIFY TRACE command or a TRACE start option, the VTAM internal trace (VIT) begins.
- If this message is in response to a DISPLAY TRACES command, other processing continues.

| **Operator response:** If the setting of the VITCTRL start option is not correct, issue MODIFY VTAMOPTS to correct
| the start option value. If the list of VIT options is not the desired set of VIT options, issue the **MODIFY**
| **TRACE,TYPE=VTAM** command to set the correct VIT options. If you want to dump the trace records, use your
| installation-defined procedure or obtain instructions from the system programmer. See z/OS Communications Server:

| SNA Diagnosis Vol 1, Techniques and Procedures for more information on the VTAM internal trace.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST316I VTAM INTERNAL TRACE USER OPTIONS ARE NOT ACTIVE

Explanation: VTAM issues this message in response to a DISPLAY TRACES command or a MODIFY NOTRACE,TYPE=VTAM,OPT=END command. This message indicates that all user-selected internal trace options are now inactive.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST317I VTAM INTERNAL TRACE ACTIVATION FAILED — INSUFFICIENT STORAGE

Explanation: VTAM attempted to activate its internal trace as a result of a MODIFY TRACE,TYPE=VTAM command, or as a result of a TRACE,TYPE=VTAM start option. The attempt to obtain storage for a trace table failed.

System action: VTAM rejects the request.

Operator response: Contact the system programmer.

System programmer response: An attempt to allocate the VIT table from HVCOMMON failed or an attempt to acquire ECSA to support the VIT failed.

You might need to increase the HVCOMMON parameter value on the IEASYSxx parmlib member of SYS1.PARMLIB. Refer to MVS Initialization and Tuning for more information.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command and the MODIFY VTAMOPTS command.

Routing code: 2

Descriptor code: 5

IST319I CONFIGURATION *configname* FIRST SPECIFICATION USED *reason*

Explanation: During the activation of configuration *configname*, VTAM encountered an error in an NCP definition statement or a VTAM definition statement.

reason can be one of the following:

COMBINATION ERROR
DUPLICATE PARAMETER
EXTRA PARAMETER
EXTRA VALUE

A second message, IST323I, provides details of the error.

System action: The VTAM network will include *configname* defined with the first specification found.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in this message and in message IST323I to determine the cause of the error. Correct the definition statement in error for future use.

The NCP definition statements are described in the *NCP Resource Definition Guide* and the *NCP Resource Definition Reference*.

IST320I

The VTAM definition statements are described in the z/OS Communications Server: SNA Resource Definition Reference .

Routing code: 2

Descriptor code: 5

IST320I DEFINITION *configname* NOT SUCCESSFUL — *reason*

Explanation: During activation of configuration *configname*, VTAM detected an error in an NCP definition statement or VTAM definition statement.

reason can be one of the following:

DUPLICATE MACRO
INSUFFICIENT STORAGE
INVALID MAJOR NODE NAME
INVALID NAME
INVALID PARAMETER
INVALID VALUE
MISSING PARAMETER
MISSING MACRO
MISSING NAME
PARAMETER CONFLICT
SEQUENCE ERROR
SYNTAX ERROR

A second message, IST323I, provides details of the error.

System action: The VTAM network will not include configuration *configname*. If *reason* is **INVALID MAJOR NODE NAME**, the dynamic PUs and LUs supplied by the VTAM Configuration Services Exit will not be created.

Operator response: If *reason* is **INSUFFICIENT STORAGE** and *VTAM has been initialized*, wait a short time and attempt to reactivate *configname*. If VTAM continues to issue this message, enter the DISPLAY BFRUSE and DISPLAY STORUSE commands. Save the system log and request a dump for problem determination. If *VTAM initialization failed*, save the system log for problem determination.

For all other *reasons*, save the system log for problem determination.

System programmer response: Use the information in this message and in message IST323I to determine the cause of the error. Correct the definition statement.

- If the error is in an NCP definition statement, correct the statement and regenerate the NCP.
- If the error is in a VTAM definition statement, update the VTAM definition library to correct the definition of configuration *configname*. For more information on VTAM definition statements, see the z/OS Communications Server: SNA Resource Definition Reference .
- If *reason* is **INSUFFICIENT STORAGE**, the storage required for internal VTAM tables is not available. Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
 - See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
 - See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
 - See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

- If *reason* is **INVALID MAJOR NODE NAME**, the VTAM Configuration Services Exit, ISTECCS, has supplied a major node name to VTAM that is not valid. The following rules apply to the name supplied:
 - *configname* must be 1-8 characters
 - The first character must be alphabetic or national; remaining characters must be alphabetic, national, or numeric
 - *configname* must not start with IST

Based on the preceding rules, if a valid name is supplied and the major node already exists, the following rules must also apply to the major node name:

- The resource must be a switched major node.
- The switched major node must be dynamic.
- The major node must be in an ACTIVE state.

You can use the MODIFY EXIT command to install a new version of ISTECCS.

Routing code: 2

Descriptor code: 5

IST321I CONFIGURATION *configname* **DEFAULT TAKEN** — *reason*

Explanation: During activation of configuration *configname*, VTAM encountered an error in an NCP definition statement or a VTAM definition statement.

reason can be one of the following:

COMBINATION ERROR
DUPLICATE PARAMETER
EXTRA PARAMETER
EXTRA VALUE
INVALID PARAMETER
INVALID VALUE
MISSING PARAMETER
PARAMETER CONFLICT

A second message, IST323I, provides details of the error.

System action: VTAM assumes the appropriate defaults and continues processing.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in this message and in message IST323I to determine the cause of the error. Correct the definition statement in error for future use. The NCP definition statements are described in the *NCP Resource Definition Guide* and the *NCP Resource Definition Reference*. The VTAM definition statements are described in the *z/OS Communications Server: SNA Resource Definition Reference*.

Routing code: 2

Descriptor code: 5

IST322I CONFIGURATION *configname* **ERROR IGNORED** — *reason*

Explanation: During activation of configuration *configname*, VTAM encountered an error in an NCP definition statement or in a VTAM definition statement.

VTAM is ignoring the definition statement or an operand for one of the following *reasons*:

COMBINATION ERROR
DUPLICATE NAME
DUPLICATE PARAMETER
DUPLICATE VALUE
EXTRA MACRO

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EXTRA PARAMETER
EXTRA VALUE
INVALID LENGTH ERROR
INVALID MACRO
INVALID NAME
INVALID PARAMETER
INVALID VALUE
MISSING MACRO
MISSING NAME
MISSING PARAMETER
MISSING VALUE
PARAMETER CONFLICT
SEQUENCE ERROR
SYNTAX ERROR
TABLE LOAD FAILURE
TABLE NOT FOUND
TABLE NOT VALID

Two additional messages, IST323I and IST330I, provide details of the error.

System action: VTAM continues processing the definition statement, but ignores the incorrect operand.

Operator response: If *reason* is **TABLE LOAD FAILURE**, **TABLE NOT FOUND**, or **TABLE NOT VALID**, try loading the table with the MODIFY TABLE command after the configuration is complete.

For all other *reasons*, save the system log and network logs, and print the major node definition for problem determination.

System programmer response: Use the information in this message and in messages IST323I or IST330I to isolate the cause of the error.

If *reason* is **TABLE LOAD FAILURE** or **TABLE NOT FOUND**, ensure that the table exists in the system library.

If *reason* is **TABLE NOT VALID**, ensure that a valid table name was coded for the type of table being created. If not, correct the table name on the definition statement and reactivate the configuration *configname*. If *reason* is **TABLE NOT VALID** during a dynamic reconfiguration attempt involving a USS table, make sure the USSTAB is coded with FORMAT=DYNAMIC.

For all other *reasons*, correct the statement in error for future use. The NCP definition statements are described in the *NCP Resource Definition Guide* and the *NCP Resource Definition Reference*. The VTAM definition statements are described in the *z/OS Communications Server: SNA Resource Definition Reference*.

Routing code: 2

Descriptor code: 5

IST323I LABEL = *labelname* — MACRO TYPE = *macrotype* — KEYWORD = *keyword*

Explanation: This message supplements messages IST319I, IST320I, IST321I, IST322I, IST363I, IST886I, and IST979I. Although the definition can contain mixed cases, all values displayed in the message are in uppercase.

labelname is the name or label of the macro or statement in error.

macrotype is the type of macro.

keyword shows the actual keyword (or the first 8 characters of the keyword) that was in error.

Tip: If PORTNAME is being specified on a TRLE definition and *keyword* is READ, the READ address must be an even number that is one less than the address specified on the corresponding WRITE operand. For example, if you specify 500 on the READ operand, you must specify 501 on the WRITE operand.

System action: The action carried out is given in the preceding message.

Operator response: Save the system log for problem determination.

System programmer response: Locate the keyword in error on the macro labeled *labelname*. Use the previous error message for the specific problem with that keyword.

If *macrotype* is **PU** and *labelname* is a model PU, check the definition to determine whether the TRLE keyword is coded. The TRLE keyword signifies that the model PU is for XCF. An XCF model PU definition requires specific values to be coded for some keywords or to be allowed to default to the correct values.

See the z/OS Communications Server: SNA Resource Definition Reference for the correct use of VTAM operands on NCP definition statements.

Note: If *macrotype* is * and *keyword* is *****NA*****, then the error is due to miscoding a comment line in the definition deck. Comment lines must have an asterisk (*) in column one. Placing the asterisk in a different column will generate this error message.

Routing code: 2

Descriptor code: 5

IST324I *procedure* **IN PROGRESS WITH ID = nodename DUE TO runame REQUEST**

Explanation: VTAM issues this message when *procedure* for *nodename* is in progress.

procedure was initiated by request unit *runame* (a cross-domain request), which was sent from *nodename* to this domain's cross-domain resource manager (CDRM). Possible values are: **INACT**, **ACTIVATE**, or **RESET**.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*.

System action: Processing continues.

Operator response: Check with the operator of *nodename's* domain. Determine whether further action is required in order to complete this request.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST326I **REQUEST = runame FAILED FOR procedure ID = nodename, SENSE = code**

Explanation: The processing of *procedure* for request unit (RU) *runame* in resource *nodename* failed. The cause of the failure is indicated by the sense *code*.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*.

See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: Processing continues. VTAM should complete processing of *procedure* successfully in this domain, but the status of *procedure* in *nodename's* domain is uncertain.

Operator response: If VTAM completes processing of *procedure* successfully, no response is necessary in this domain. However, notify the operator of *nodename's* domain because action will be required to complete that domain's processing of *procedure*.

For example,

REQUEST = DACTCDRM FAILED FOR INACT ID = nodename, SENSE = 80020000

One of the SNA requests sent during a cross-domain resource manager (CDRM) deactivation procedure is DACTCDRM. This request did not reach *nodename* because of a link failure (sense code 8002).

VTAM completes deactivation successfully in this domain, but the deactivation processing in *nodename's* domain is waiting for the lost DACTCDRM. In this example, the operator in *nodename's* domain should enter a **DISPLAY ID** command for *nodename* followed by a **VARY INACT,TYPE=FORCE** command for this domain's CDRM in order to complete the deactivation procedure. Ask the operator of the other domain to complete the problem determination action.

Save the system log for problem determination.

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System programmer response: Use the output provided by the operator and the description of *code* to assist in determining the reason for the failure. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on diagnosing VTAM problems.

Routing code: 2

Descriptor code: 5

IST327I *procedure* ID = *nodename* INCOMPLETE, REQUEST = *runame*, SENSE = *code*

Explanation: VTAM is unable to complete the processing of procedure *procedure*. This procedure (either INACT or ACTIVATE) was initiated by request unit (RU) *runame*. The cause is indicated by the sense *code*.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*.

See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: VTAM has not completed the processing of *procedure*.

Operator response: Notify the operator of *nodename*'s domain that commands might have to be entered from that domain as well as from yours. Find out the commands and operands that were entered from that domain.

For example,

INACT ID = *nodename* INCOMPLETE, REQUEST = CDTAKEDOWN, SENSE = 08090000:

One of the requests sent during a cross-domain resource manager (CDRM) deactivation procedure is CDTAKEDOWN. CDRM *nodename* rejected this request because it and this domain's CDRM are not synchronized (08090000 indicates mode inconsistency). This could be caused by operator commands entered in the different domains interfering with each other, or by a system error in one of the CDRMs. Enter a VARY INACT command in both domains to complete the deactivation procedure.

System programmer response: Consult *Systems Network Architecture Format and Protocol Reference Manual: Architectural Logic* for a description of how cross-domain protocols operate.

Routing code: 2

Descriptor code: 5

IST328I COMMUNICATION WITH CDRM ID = *cdmname* LOST

Explanation: Communication with cross-domain resource manager *cdmname* is no longer possible. *cdmname*'s subarea failed or a subarea in a migration mode path to *cdmname* failed.

System action: Although *cdmname* and its existing sessions remain active, VTAM marks *cdmname* as lost. VTAM can establish no new sessions with cross-domain resources managed by *cdmname*. Existing sessions remain active as long as the physical path being used still exists.

Operator response: To determine whether any sessions are active, enter a DISPLAY ID command for *cdmname* and then enter a DISPLAY ID command for each cross-domain resource listed as active. This will show you which resources have sessions with *cdmname*.

To establish new sessions, deactivate and then reactivate *cdmname*. To deactivate *cdmname*, use the VARY INACT,TYPE=FORCE command.

Follow the same procedure at other hosts involved in the lost subarea issue.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST330I TABLE TYPE = *tabletype* NAME = *tablename*

Explanation: This message supplements message IST322I. VTAM could not load the table type *tabletype*, table name *tablename*.

For information about coding tables, see the z/OS Communications Server: SNA Resource Definition Reference.

System action: VTAM continues processing using the previously loaded table.

Operator response: If the problem persists, save the system log for problem determination.

System programmer response: Ensure that *tablename* is the name of a *tabletype* table and that it exists in the definition library.

Routing code: 2

Descriptor code: 5

IST331I CONFIG *configname* BYPASSED — 'MAXSUBA' VALUES CONFLICT

Explanation: VTAM could not add the major node *configname* to the network for one of the following reasons:

- The MAXSUBA start option value in effect at the time the major node was first activated does not equal the value specified in the MAXSUBA start option.
- If the major node is a communication controller, the MAXSUBA value specified in the NCP BUILD generation definition statement does not equal the value specified in the MAXSUBA start option.

MAXSUBA is used only for migration purposes in order to communicate with a pre-V3R1 level of VTAM.

System action: VTAM does not include major node *configname* in the VTAM network.

Operator response: Save the system log for problem determination.

System programmer response: The MAXSUBA values must match. Change the appropriate VTAM definition in the definition library.

- If the MAXSUBA value in the start option does not match the value that was in effect when the major node was activated, restart VTAM with the correct MAXSUBA value.
- For a communication controller, if the MAXSUBA value specified in the BUILD definition statement is incorrect, correct the BUILD definition statement, and regenerate the NCP.

Note: MAXSUBA can be coded on the NETWORK definition statement in the NCP. In a nonnative network, this is the MAXSUBA value that must match.

See the z/OS Communications Server: SNA Resource Definition Reference for more information on the MAXSUBA start option and the BUILD definition statement.

Routing code: 2

Descriptor code: 5

IST333I CONFIG *configname* USING DUPLICATE RESOURCE NAME *minornode* — CODE 3

Explanation: VTAM issues this message when the node name *minornode* used in major node *configname* duplicates a name already known to VTAM. All node names in a domain must be unique.

System action: The node name *minornode* defines a subordinate node in an NCP definition. The major node *configname* is not included in the VTAM network.

Operator response: Save the system log and print the major node definition for problem determination.

System programmer response: Correct the duplicate names in the major node, and if the major node is the NCP, then also regenerate the NCP. Deactivate the major node containing the node that caused the failure.

Routing code: 2

Descriptor code: 5

IST336I THIS NCP MAJOR NODE WAS *action*

Explanation: VTAM issues this message in response to a DISPLAY ID command for an NCP major node that VTAM has acquired.

action is one of the following:

- **ACQUIRED BEFORE ACTIVATION**
This indicates that the NCP major node was acquired before being activated.
- **ACTIVATED BEFORE ACQUISITION**

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This indicates that the NCP major node was activated before being acquired.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST339I CONFIG *configname* BYPASSED — *minornode* UNKNOWN TO THE NCP

Explanation: VTAM did not include the major node *configname* in the network configuration because *minornode* was unknown to the NCP. The NCP generation was probably not completed. VTAM issues this message when it cannot find a resource resolution table (RRT) extension or when an entry fails to meet DR ADD requirements.

System action: VTAM did not add major node *configname* to the VTAM network.

Operator response: Save the system log for problem determination.

System programmer response: Rerun the NCP generation, ensuring that it runs to completion. You might need to include the LUDRPOOL macro in the NCP generation. See the *NCP Generation and Loading Guide* for more information.

Routing code: 2

Descriptor code: 5

IST348I UNABLE TO PROCESS DISCONNECTION FOR PU = *puname* DUE TO LACK OF STORAGE

Explanation: VTAM issues this message when the disconnection of physical unit *puname* failed because of lack of storage.

System action: Processing continues.

Operator response: Enter a VARY INACT,TYPE=FORCE command for *puname*. If you have frequent command failures because of insufficient storage, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the *z/OS Communications Server: New Function Summary* to determine the storage requirements for VTAM.
- See the *z/OS Communications Server: SNA Resource Definition Reference* for a description of VTAM start options.
- See *z/OS Communications Server: SNA Operation* for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the *z/OS Communications Server: SNA Network Implementation Guide* for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the *z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps* and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST350I DISPLAY TYPE = *type*

Explanation: This message is part of several different message groups and subgroups that VTAM issues in response to a DISPLAY command.

This message serves as a header message for the display and identifies the type of information shown in the display. The message group contains further identification and status information.

type is the type of information or resource being displayed and can be one of the following:

ADJACENT CLUSTER TABLE

The display contains the adjacent subnetwork routing list for the specified network ID and the status of each border node in the list.

ADJACENT CONTROL POINT

The display contains the attributes of a specific adjacent control point node definition and the connections that are assigned to it.

ADJACENT SSCP TABLE

The display contains a list of adjacent SSCPs used for routing session initiation requests.

APPL MAJ NODES/NAMES

The display contains the name and status of all active application program major nodes in the domain and the application programs contained in those nodes.

APPN COS

The display contains a list of APPN class of service (CoS) entries and the name of the last APPNCOS table that was used to create or update the CoS entry .

APPNTOSA

The display shows the corresponding APPN and subarea class of service (CoS) mappings.

AUTOLOG

The display contains information relative to pending autologon requests.

BLOCKED VIRTUAL ROUTES

The display shows the blocked Virtual Routes.

BNCOSMAP

The display shows the corresponding nonnative and native class of service (CoS) names.

BUFFER POOL DATA

The display describes VTAM buffer storage usage.

CDRMS

The display contains the status of cross-domain resource managers known to this host processor.

CDRSCS

The display contains the status of cross-domain resources known to this domain.

CLUSTERS/PHYS UNITS

The display contains the name and status of physical units in the domain.

CSDUMP TRIGGERS

The display contains the message and sense CSDUMP triggers.

DIRECTORY

The display contains directory services information about resources.

DLURS

The display contains the dependent LU requesters (DLURs) that are supported by the dependent LU server (DLUS) and their CPSVRMGR session pipe status. The CPSVRMGR pipe consists of two LU 6.2 sessions, a contention winner (conwinner) and a contention loser (conloser). The status of both sessions is displayed.

EE The display contains Enterprise Extender information known to this APPN node.

EEDIAG

The display contains Enterprise Extender (EE) diagnostic information known to this APPN node for specific EE connections that meet specified thresholds.

EXIT

The display contains the name and status of user-written exit routines.

GENERIC AFFINITY

The display contains information about generic resource affinities in the generic resource coupling facility structure.

GR PREFERENCES TABLE

The display shows the generic resource preference table.

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GROUPS

The display contains the name and status of each group in the domain.

HELD VIRTUAL ROUTES

The display shows the Held Virtual Routes.

LINES

The display contains the name and status of lines in the domain.

LOGICAL UNITS/TERMS

The display contains the name and status of logical units in the domain.

LUGROUP MAJOR NODES

The display contains the names of all LUGROUP major nodes in the domain.

MAJOR NODES

The display contains the status of all active major nodes in the domain.

MODELS

The display contains either the names of model major nodes in the domain and the model minor nodes contained in those major nodes, or the name, if any, of a model application definition.

NETWORK NODE SERVER LIST

The display contains the names of all the network nodes currently allowed to act as network node server for this end node.

NETWORK SEARCH

The display contains the results of an operator-initiated search for a specified resource name.

PATH TABLE CONTENTS

The display contains a listing of paths defined to this host processor.

PENDING

The display contains the names of all nodes in a pending state.

RSCLIST

The display contains information about resources whose names match a particular pattern.

SAMAP TABLE

The display shows the mapping of a desired session path through a composite network node (CNN) environment. The table can be used to specify the desired session path through other CNNs in the network if the subarea numbers are unique across all of the CNNs in the APPN subnetwork.

SATOAPPN

The display shows the corresponding SA and APPNCOS mappings.

SESSIONS

The display contains a count of all queued, pending, and active sessions in the domain. The display might also contain the status and partner names for each session in the domain.

SNSFILTR

The display contains user-specified sense codes.

SRCHINFO

The display contains outstanding search request information.

STATIONS

The display contains the name and status of link stations in the domain.

STATS,TYPE=CFS

The display contains the current statistics for the coupling facility structure.

STATS,TYPE=COMPRESS

The display contains compression levels and the number of half-sessions (one end of a session) using that level of compression on input or output session traffic.

STATS,TYPE=VTAM

The display contains VTAM storage estimates statistics in response to the DISPLAY STATS command.

STORAGE USAGE

The display describes VTAM utilization of storage pools and data spaces.

SUBAREA COS

The display contains the class of service (CoS) table name for a particular network or all networks associated with a specified PU type 4 or 5.

TDU DIAGNOSTICS

The display contains TDUDIAG diagnostic information that can be used for problem determination about topology database updates (TDUs) for topology resources (nodes and TGs). A DISPLAY TOPO command with LIST=TDUDIAG provides this information.

TDU INFORMATION

The display contains information that can be used for problem determination about topology database updates (TDUs) that were received and sent for topology resources (nodes and TGs). A DISPLAY TOPO command with LIST=TDUINFO provides this information.

TGPS

The display contains the currently defined transmission group profiles by name, along with the transmission group characteristics they represent.

TNSTAT

The display contains the settings of both global and TRLE group tuning statistics, as well as whether the tuning statistics reports are being displayed at the system console and the tuning statistics reporting interval. The display will also indicate if SMF is unavailable.

TOPOLOGY

The display contains topology information that can be used for problem determination and network verification purposes. It provides information such as link outages, unacceptable routing nodes or links, and node connectivity.

TRACES,TYPE=CNM

The display contains the status of the CNM buffer trace. CNM buffer traces are PDPIUBUF (Problem Determination PIU buffer) and SAWBUF (Session Awareness buffer).

TRACES,TYPE=MODULE

The display contains information about module tracing.

TRACES,TYPE=NODES

The display contains the status of the BUF, GPT, IO, LINE, SIT, and TG trace for a particular resource and its subordinate nodes.

TRACES,TYPE=ROUTE

The display contains the status of the APPN route selection trace.

TRACES,TYPE=STATE

The display contains information about resource state tracing, for example, which types of resources are being traced.

TRACES,TYPE=SMS

The display contains the status of the SMS buffer trace.

TRACES,TYPE=TSO

The display contains the status of the TSO trace for one or more TSO user IDs.

TRACES,TYPE=VTAM

The display contains the status of the VTAM internal trace.

TRL

The display contains the status and data link control of each element in the active transport resource list.

USERVAR

The display contains the name and status of all USERVARs in the domain.

VTAMSTOR

The display contains the storage contents associated with VTAM modules and resources.

System action: Processing continues.

Operator response: None.

System programmer response: None.

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Routing code: 2

Descriptor code: 5

IST351I LOCAL 3270 MAJOR NODE = *majornode*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TERMS command. This message identifies the local non-SNA 3270 major node *majornode* to which the logical units listed in subsequent messages in the display belong. This message might be followed by message IST089I.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST352I LOCAL SNA MAJOR NODE = *majornode*

Explanation: This message is part of a group of messages that VTAM issues in the following situations:

- In response to a DISPLAY TERMS command. *majornode* is the local SNA major node (local cluster controller) to which the physical units and logical units listed in subsequent messages are attached. Subsequent messages list *majornode's* subnodes.
- When a connection request has been rejected for resource *nodename* in message IST680I. *majornode* is the local SNA major node (local cluster controller). See the description of message IST680I for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST353I SWITCHED SNA MAJOR NODE = *majornode*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TERMS command. *majornode* is the switched SNA major node to which the physical units and logical units listed in subsequent messages are attached.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST354I PU T4/5 MAJOR NODE = *majornode*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command for COS, LINES, or TERMS, or for a DISPLAY ID command which has a group name specified.

For a DISPLAY COS command, *majornode* is the PU type 4 or 5 major node that subsequently listed Class of Service information, lines, physical units, and logical units are associated with.

For a DISPLAY TERMS command, *majornode* is the PU type 4 or 5 major node that subsequently listed lines, physical units, and logical units are associated with.

For a DISPLAY LINES command, *majornode* is the channel-attached PU type 4 or 5 major node that subsequently listed lines are associated with.

For a DISPLAY ID command which specifies a group name, *majornode* is the PU type 4 or 5 major node that the group is defined in.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST355I LOGICAL UNITS:

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command. This message indicates that the nodes listed in subsequent messages are logical units.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST356I *bpid[Q] [F] bufsize curtot curavail maxtot maxused times exp/cont incr*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY BFRUSE,BUFFER=SHORT command. See IST632I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST359I ATTACHMENT = *linetype*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TERMS command. This message indicates the type of line that connects one node to another.

linetype can be LEASED or SWITCHED.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST360I APPLICATIONS:

Explanation: This message is issued in response to a DISPLAY APPLS or DISPLAY ID command for an application major node only. The message indicates that the nodes in subsequent messages are application program nodes.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST361A *nodename/subarea* FOUND LOADED WITH *loadmodname/subarea* REPLY 'YES' TO RELOAD OR 'NO' TO CANCEL ACTIVATION

Explanation: While processing a VARY ACT command, VTAM found the specified *nodename* and *subarea* already loaded with NCP load module *loadmodname* or already defined for *subarea*. If the load module is not known, VTAM displays ***NA*** for *loadmodname*.

VFYLM=YES was specified on the NCP's PCCU definition statement. The operator might therefore decide to reload the specified communication controller or terminate the activation.

Note: VTAM continues to issue message IST361A until you enter a correct response.

System action: Processing continues.

Operator response: Reply 'YES' if you want to reload the communication controller. Other VTAMs sharing the communication controller will be affected when you reload.

Reply 'NO' if you want to stop the activation of the communication controller. This will result in a load module mismatch between the load module that is active for this VTAM and the load module that is active for another VTAM which is sharing the same communication controller.

System programmer response: None.

Note: For additional information on how to respond to this message, see "Responding to a VTAM message" on page 2.

Routing code: 2

Descriptor code: 2

IST362I GROUP *groupname* DEVICES UNAVAILABLE — MISSING SYSCNTRL OPTION

Explanation: While activating a BSC or start-stop group, *groupname*, VTAM found the RIMM or MODE option to be missing on the SYSCNTRL definition statement.

Note: The BHSASSC option might be required on the SYSCNTRL definition statement if you are using block handlers. (You specified BHSET in the GROUP definition statement.)

System action: VTAM does not include the BSC or start-stop group *groupname* in the network.

Operator response: Save the system log for problem determination.

System programmer response: Specify the required SYSCNTRL options. See the z/OS Communications Server: SNA Resource Definition Reference for more information on the SYSCNTRL options.

Routing code: 2

Descriptor code: 5

IST363I CONFIG *configname* NODES AND SUBNODES SET UNAVAILABLE — *reason*

Explanation: While activating configuration *configname*, VTAM detected an error in an NCP generation definition statement or a VTAM definition statement.

reason can be one of the following:

- DUPLICATE MACRO
- DUPLICATE VALUE
- INVALID NAME
- INVALID PARAMETER
- INVALID VALUE
- MISSING MACRO
- MISSING NAME
- MISSING PARAMETER
- PARAMETER CONFLICT

REPEATED VALUE
SEQUENCE ERROR
SYNTAX ERROR

A second message, IST323I, provides details of the definition statement in error.

System action: VTAM continues processing the macro or definition statement. Message IST323I provides the name of the node that is unavailable. The subnodes of this node are also unavailable.

Operator response: Save the system log for problem determination.

System programmer response: Correct the macro or statement in error.

- If the error is in an NCP generation definition statement, regenerate the NCP after correcting the error.
- If the error is in a VTAM definition statement, update the VTAM definition library to correct the definition of configuration *configname*.

Routing code: 2

Descriptor code: 5

IST366I CONFIG *configname* UNABLE TO DEFINE *nodename* — MAXIMUM NUMBER OF NETWORK ADDRESSES FOR HOST SUBAREA EXCEEDED

Explanation: While activating configuration *configname*, VTAM exceeded the maximum number of network addresses in the host subarea. VTAM cannot define a new element in the host subarea. If an Enterprise Extender (EE) line, an EE PU, or an RTP PU was being activated, the request exceeded the limit of 16 776 960 extended element addresses. Therefore, VTAM failed to define a new network address for the resource.

System action: If *nodename* is all asterisks, the activation of *configname* fails. VTAM did not assign an element address to nodes in the major node definition.

If *nodename* is not all asterisks, the activation of *configname* continues and the node identified by *nodename* is marked invalid and is unusable in the VTAM network.

Operator response: Deactivate any unneeded segment in the host subarea to free network addresses, and deactivate and then activate *configname*. If VTAM continues to issue this message, save the system log for problem determination.

System programmer response: Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system.

Since the maximum number of elements that can be assigned by VTAM in the host subarea has been reached, examine the possibility of allocating devices and applications to other subareas.

To use higher-order element addresses for LUs, you can specify YES for the ENHADDR start option. You must modify the start options file (ATCSTRxx) and restart VTAM to use the start option. For more information, see the z/OS Communications Server: SNA Network Implementation Guide.

Routing code: 2

Descriptor code: 5

IST367I NO STORAGE TO DEFINE NODE *nodename* CONFIG *configname*

Explanation: VTAM did not have sufficient storage to define node *nodename*.

System action:

- If *nodename* is all asterisks, the activation of *configname* fails. VTAM did not assign an element address to nodes in the major node definition.
- If *nodename* is not all asterisks, the activation of *configname* continues, and *nodename* is unusable as it was defined in *configname*.
 - If *nodename* did not previously exist, it is unavailable to the VTAM network.
 - If *nodename* did previously exist (for example, as an independent LU), then the existing node is not affected by the definition that failed.

Operator response: *If VTAM has been initialized*, deactivate any active segment in the host subarea that is not needed to free network addresses. After you deactivate any active segment in the host subarea that is not needed to free network addresses, deactivate and activate *configname*. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Do one of the following:

- Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system. Determine if any major nodes can be deleted from the configuration so that more storage is available.
- Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
 - See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
 - See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
 - See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST368I FUNCTION GROUP *functiongroup* FAILED

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST886I or IST1277I. See the explanation of the first message in the group for a complete description.

Routing code: 2

Descriptor code: 5

IST380I ERROR FOR ID = *nodename* — REQUEST: *runame*, SENSE: *code*

Explanation: VTAM issues this message when the request *runame* for the resource *nodename* failed.

code is the sense code and indicates the reason for the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

runame is the name of the request that failed. See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*.

System action: VTAM does not perform the request *runame*.

When VTAM receives a failing activation request for RUs such as ACTLINK, CONTACT, ACTLU, or ACTPU, VTAM usually deactivates the resource and all subordinate resources, regardless of whether the resource was being activated or deactivated.

Operator response:

- Attempt to activate or trace the node again.
- If a failure still occurs, save the system log for problem determination.
- If VTAM issues this message repeatedly, disable the line and save the system log for problem determination.
- If *code* indicates a storage problem, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command to display storage used by VTAM buffer pools and information about the common service area (CSA). Message IST981I displays total VTAM private storage information. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.
- **Sense Code 081Cmmmm**

Correct the cause indicated by the user portion of the sense code (*nnnn*), and try the command again.

Note: Only some of the possible sense codes issued in this message are described here. For a complete description of the sense codes, see the z/OS Communications Server: IP and SNA Codes.

System programmer response:

- If *code* indicates a storage problem, increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
 - See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
 - See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
 - See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

• **Sense Code 081Cnnnn**

If an ACTLINK request failed on a VARY ACT request with the sense code of **081Cnnnn**, check the CUADDR operand of the PU (local SNA) or PCCU definition statement to make sure that the correct device address was specified for the node *nodename*.

If sense code 081C0010 is received and message IST1386I is issued, see the return code and reason code in message IST1386I to determine the cause of the failure.

• **Sense Code 08A30001**

If VTAM issues sense code 08A30001 repeatedly, determine the subarea node that is attempting to establish a switched connection. If the SSCP is authorized to request that connection, verify that both SSCPs have identical PRTCT operands coded for their PU statements on the switched major nodes. Also verify that both nodes and their SSCPs are of a level that supports call security verification.

VTAM might issue this message with sense code 08A30001 because an unauthorized subarea node is attempting to establish a switched connection to the host that received the message.

- You might need to include the LUDRPOOL macro in the NCP generation.
- Make sure that the device is available to the system and that there are no hardware problems.

Routing code: 2

Descriptor code: 5

IST381I *command* **FOR ID = *nodename* FAILED – CANNOT DEFINE NODE**

Explanation: VTAM stopped processing *command*. VTAM could not define the resource *nodename* for one of the following reasons:

- *nodename* has the same name as another resource in this domain.
- *nodename* has the same network address as another resource in this domain.
- The value for VNNAME for *nodename* matches the value for CPNAME on a PU in this domain.
- The value for VNNAME for *nodename* refers to an ADJCP for which VN=YES is not specified.

command is the command that failed. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

nodename is the name of the resource specified on the command.

System action: VTAM rejects the command.

Operator response: Display *nodename*:

- If the resource already exists, *command* failed because the resource was already defined.

IST382I • IST384I

- If *nodename* is a communication controller, enter a DISPLAY STATIONS command.
- If the subarea of *nodename* is listed as an adjacent subarea in the display, another communication controller has been defined for that subarea. The communication controller might still exist if the link to that subarea is still active. To correct the problem, enter a VARY INACT command for the link to the adjacent subarea.
- If the resource does not exist, display VNNNAME. If VNNNAME already exists, *command* failed because the VNNNAME was already defined with a different nodetype.

Save the system log for problem determination.

System programmer response: Ensure that *nodename* has a unique name, unique network address, or unique VNNNAME. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VNNNAME definitions.

Routing code: 2

Descriptor code: 5

IST382I *command* FOR ID = *nodename* FAILED — STATE: *state* NOT VALID FOR REQUEST

Explanation: VTAM rejected *command* because *nodename* was not in a state that is valid for the request.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*. See the z/OS Communications Server: IP and SNA Codes for a description of *state*.

System action: VTAM rejects the command.

Operator response: Use the DISPLAY ID command to monitor the progress of *nodename*. When processing is completed, enter the commands required to obtain the network configuration or device state required.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST383I DEACTIVATION OF ID = *nodename* FAILED — REQUEST: *request* SENSE: *code*

Explanation: VTAM cannot complete deactivation of *nodename* because *request* has failed with a sense code of *code*.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *request*.

See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: VARY deactivate processing for *nodename* is pending. The node is not available to VTAM.

Operator response: Enter a VARY INACT,TYPE=FORCE command to deactivate the node. If the problem persists, save the system log for problem determination.

System programmer response: Use the output provided and the description of *code* to assist in determining the cause of the problem.

Routing code: 2

Descriptor code: 5

IST384I *command* FOR ID = *nodename* FAILED

Explanation: VTAM issues this message when processing of the *command* for *nodename* failed. For example, a deactivate command failed because no storage was available to continue.

nodename is the name of the resource and is either an NCP or logical unit (LU).

System action: VTAM rejects the command.

Operator response:

- If message IST383I or IST1268I precedes this message, enter a VARY INACT,TYPE=FORCE command to deactivate the resource.

- If this is a storage problem, messages IST561I, IST562I, IST563I, IST564I, IST565I or IST566I may be issued prior to this message to indicate the type of storage affected.

If message IST467I is displayed with contacted error type 5, see the programmer response of that message for additional information.

Issue the DISPLAY BFRUSE command to display storage used by VTAM buffer pools and information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

System programmer response: For a storage problem, verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx), and restart VTAM to use the start option.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE, DISPLAY STORUSE, and MODIFY VTAMOPTS commands. The z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures provides additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST388I DYNAMIC CDRSC DEFINITION SUPPORT = {YES|NO}

Explanation: VTAM issues this message in response to a DISPLAY ID command for a host cross-domain resource manager. This message indicates whether the named host will process session initialization requests from cross-domain resources that are not explicitly defined to the host. If you specified CDRDYN=YES on the host CDRM definition statement, the host will support sessions for dynamically defined resources.

A value of YES in this message combined with a value of OPT in message IST389I means that VTAM will build a dynamic CDRSC entry if necessary.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST389I PREDEFINITION OF CDRSC = {OPT|REQ}

Explanation: VTAM issues this message in response to a DISPLAY ID command for an external CDRM. It indicates whether explicit definition of the CDRM's CDRSCs is optional or required.

A value of OPT in this message combined with a value of YES in message IST388I means that VTAM will build a dynamic CDRSC entry, if necessary, when it initiates a session.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST391I **ADJ LINK STATION** = *linkstation*, **LINE** = *linkname*, **NODE** = *majornode*

Explanation: This message is part of the output from a DISPLAY ID command entered for a PU type 4 (NCP) major node. This message describes the attachment of the displayed NCP.

linkstation is the adjacent link station.

linkname is the connecting link.

majornode is the major node that the link is defined in. For a leased station, *majornode* is also the major node that the link station is defined in.

linkname and *majornode* will be *****NA***** if the link station is not defined in an active major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST393I **PU T4/5 MAJOR NODE** *majornode*, **SUBAREA** = *subarea*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STATIONS command. It identifies a PU type 4 (NCP) major node *majornode* or a PU type 5 (host) major node *majornode* for which associated link stations will subsequently be listed. *subarea* is the subarea address of *majornode*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST394I **ADJACENT LINK STATIONS NOT OWNED BUT AWAITING ACTIVATION**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STATIONS command. This message serves as a heading for message IST395I, which will appear as many times as necessary.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST395I *linkstation1 linkstation2 linkstation3 linkstation4 linkstation5 linkstation6*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STATIONS command. It lists, for a given PU type 4 or PU type 5 major node, the unowned adjacent link stations that are awaiting activation. Each variable *linkstation* represents an adjacent link station.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST396I LNKSTA STATUS CTG GTG ADJNODE ADJSA NETID ADJLS

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

DISPLAY ID command for a link station and the associated line

Shows the link station and the associated line.

DISPLAY ID command for a line that has one or more associated link stations

Message IST397I is issued for each link station associated with the line. Message IST610I is not issued.

DISPLAY STATIONS command

Shows all of the link stations in each PU type 4 and PU type 5 major node. Messages IST397I and IST610I are repeated for each link station line pair. Message IST610I displays the line name *linename* and its status *linestatus*.

A complete description of the message group follows.

IST396I	LNKSTA	STATUS	CTG	GTG	ADJNODE	ADJSA	NETID	ADJLS
IST397I	linkstation	status	ctg	gtg	adjnode	adjsa	netid	adjls

[IST610I LINE *linename* - STATUS *linestatus*]

The following fields are displayed in the messages:

linkstation

Link station name.

status Link station status. See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

ctg Current transmission group.

gtg Generated transmission group.

adjnode

Adjacent PU type 4 or 5, if available. (This is blank if this is a migration NCP or a VTAM to VTAM connection.)

adjsa Subarea associated with adjacent PU type 4 or 5. (This is 0 if not known.)

netid The name of the network of the associated PU type 4 or 5.

adjls The name of the adjacent link station if known.

linename

Line name (associated with link station).

linestatus

Status of line *linename*. See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST397I linkstation status ctg gtg adjnode adjsa netid adjls

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY command. See the explanation of message IST396I for a complete description of the group.

See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

Routing code: 8

Descriptor code: 5

IST398I **LOAD OF *controller* FAILED — *loadmodname* HAS ZERO ENTRY POINT**

Explanation: The NCP load module *loadmodname* was generated without a valid entry point. Zero was assumed during the last load of communication controller *controller*.

System action: VTAM neither loads *controller* nor activates *loadmodname*.

Operator response: Save the system log for problem determination.

System programmer response: Regenerate the NCP with the correct entry point.

Routing code: 8

Descriptor code: 5

IST399E **ISTSDCOS IS NOT A CLASS OF SERVICE TABLE — ISTSDCOS DELETED**

Explanation: VTAM loaded table ISTSDCOS but determined that the named table was not a class of service (CoS) table.

System action: VTAM deletes ISTSDCOS and initialization continues. Since the COS table does not exist, any session initiation requests that require a COS name other than ISTVTCOS or blank (for which defaults are provided) will fail.

Operator response: You can issue the DISPLAY COS,ID=ISTPUS to determine whether VTAM has loaded ISTSDCOS. If VTAM has not loaded ISTSDCOS, you can issue the MODIFY TABLE command to load it.

Save the system log for problem determination.

System programmer response: ISTSDCOS is the name reserved for the user-written Class of Service table. You must create ISTSDCOS using the COSTAB, COS, and COSEND macros to create a valid COS table. If you want a COS table, assemble a valid version of ISTSDCOS, and reload the result into the system library. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

Routing code: 2

Descriptor code: 3

Chapter 6. IST messages for VTAM network operators IST400I – IST799I

This chapter lists the VTAM messages beginning with IST in the range of IST400I through IST799I. These messages can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

Note: Messages that begin with the prefix **ISTF** are issued by the VTAM dump analysis tool and the VTAM internal trace (VIT) analysis tool. Help information is available as a part of each tool by pressing F1. Therefore, **ISTF** messages are not documented in z/OS Communications Server: SNA Messages. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

IST400I TERMINATION IN PROGRESS FOR APPLID *applname*

Explanation: The VTAM termination task is about to close the ACB of VTAM application ACBNAME with the *applname*, which has terminated (either normally or abnormally).

applname is the ACBNAME if ACBNAME is coded in the APPL definition. If ACBNAME is not coded, *applname* is the NAME as coded on the APPL definition statement.

System action: Processing continues.

Operator response: Any attempts to reopen the ACB for *applname* before VTAM issues message IST805I will fail. If you do not see message IST805I, save the system log for problem determination.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on diagnosing VTAM problems.

Routing code: 2

Descriptor code: 5

IST401I *command* INITIATED FOR ID = *nodename*

Explanation: VTAM has successfully started the *command* for resource *nodename*.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST403I *command* COMMAND FAILED — MULTIPLE OPTIONS FOR *operand_name* NOT ALLOWED

Explanation: The *command* failed because VTAM does not accept multiple values for operand *operand_name*.

System action: VTAM rejects the command. Other processing continues. If *command* is **START**, VTAM prompts the operator for corrections. Processing continues.

Operator response: Reenter the command, and specify only one option for *command*. See the z/OS Communications Server: SNA Resource Definition Reference for the format of the VTAM start options.

IST410I • IST412I

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST410I *bp* **BUFFER POOL COULD NOT BE BUILT — CODE** *code*

Explanation: VTAM could not build the *bp* buffer pool.

bp is the name of the buffer pool. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.

code indicates the reason for the failure and can be one of the following:

2 Pages could not be fixed in storage.

3 Building the pool would exceed the CSALIMIT or CSA24 limit.

4-99 GETMAIN failure return code. See the z/OS MVS Programming: Authorized Assembler Services Reference EDT-IXG for more information.

System action: VTAM start processing fails. VTAM is terminated.

Operator response: Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options by modifying the VTAM start options file (ATCSTRxx) before restarting VTAM.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 1

Descriptor code: 5

IST411I *command* **COMMAND REJECTED DUE TO TERMINATION IN PROGRESS**

Explanation: VTAM rejected the *command* because termination is in progress.

System action: VTAM termination processing continues.

Operator response: If you did not halt VTAM, have the system log available for problem determination action.

System programmer response: If VTAM was not halted by issuing the HALT command, use the system log to help you determine why HALT was in progress.

Routing code: 2

Descriptor code: 5

IST412I **VTAM COMMAND PROCESSING TERMINATED**

Explanation: VTAM is in the process of terminating, and rejects any commands that are entered during termination.

System action: VTAM termination processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST413I VTAM DUMPING FOR JOB *jobname* STEP *stepname*

Explanation: VTAM has encountered a problem with the indicated job *jobname* and step *stepname*. The system will attempt an SDUMP.

System action: Processing continues. VTAM takes a dump if the system dump data set is usable at this time. If VTAM successfully initiates the SDUMP, the performance for other jobs might be degraded until VTAM completes the SDUMP.

Operator response: Save the system log and the contents of the SDUMP for problem determination.

System programmer response: Review the contents of the SDUMP to determine the correct problem determination action. If the SVC dump failed, message IST257I might have been issued and can be found in the system or network log. If no SVC dump was written to a dump data set, check the system log for write to operator with reply (WTOR) system message IEA793A. The message indicates that no dump data sets are available and that MVS dump services is waiting for operator action to free up a dump data set.

Routing code: 2

Descriptor code: 5

IST414I *command* FOR ID = *nodename* FAILED — PROCESS UNAVAILABLE

Explanation: VTAM issues this message when the *command* failed because *nodename* is not active. See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

Either of the following conditions might have occurred.

- A forced deactivate command was entered for *nodename*, and the resource is already inactive.
- A forced reactivate command was entered for *nodename*. The resource is being activated, but the activate processing has not proceeded far enough.

System action: VTAM stops processing *command*.

Operator response: Ensure that you entered the command for the correct node. If so, save the system log for problem determination.

System programmer response: Use the system log to assist you in correcting the problem. When you have corrected the error condition, ask the operator to reenter the command.

Routing code: 2

Descriptor code: 5

IST416I SDUMP ISSUED DUE TO ADDRESS SPACE TERMINATION

Explanation: An abend has occurred in the VTAM address space.

System action: The minimum cleanup required for a restart of VTAM will be performed. A dump is taken if the system-dump data set is usable.

Operator response: Save the system log and dump for problem determination.

System programmer response: Review the contents of the SDUMP for problem determination.

Routing code: 2,8

Descriptor code: 4

IST422I I/O ERROR ON DS *datasetname* RTN CD = *major, minor*

Explanation: An I/O error occurred on the checkpoint data set *datasetname*. *major* and *minor* are major and minor return codes from VSAM.

System action: VTAM terminates checkpointing.

Operator response: Save the system log for problem determination.

System programmer response: This is probably a hardware error. Consult the applicable VSAM documentation for appropriate responses.

IST423I • IST425I

If this message is issued with RTNCD=X'0808' and *datasetname* specifies the NODELST data set or the CONFIGDS data set, then verify that the VSAM CLUSTER definition is correct. The KEYS parameter of the CLUSTER definition must specify the correct key length as stated in the z/OS Communications Server: SNA Network Implementation Guide

Routing code: 2

Descriptor code: 5

IST423I UNABLE TO GET STORAGE FOR DS *name*

Explanation: VSAM was unable to obtain VTAM private storage for the checkpoint data set identified by *name*.

System action: VTAM terminates checkpointing.

Operator response: If VTAM has been initialized, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information. Save the system log and request a dump for problem determination.

If VTAM initialization failed, save the system log for problem determination.

System programmer response: Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system. Re-evaluate your storage needs for the VTAM address space and increase storage as required. To restart checkpointing, halt and restart VTAM.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST424I CLOSE FAILED ON DS *name* RTN CD = *major, minor*

Explanation: The VSAM CLOSE function failed for the major node checkpoint data set or book identified by *name*. The major return code from VSAM (*major*) is register 15. The minor return code from VSAM (*minor*) is ACBERFLG.

System action: VTAM terminates checkpointing.

Operator response: Save the system log for problem determination.

System programmer response: This is probably a hardware error. Consult the applicable VSAM documentation for further appropriate responses.

Routing code: 2

Descriptor code: 5

IST425I OPEN FAILED ON DS *name* RTN CD = *major, minor*

Explanation: The VSAM OPEN function failed for the major node checkpoint data set or book identified by *name*. The major return code from VSAM (*major*) is register 15. The minor return code from VSAM (*minor*) is ACBERFLG.

System action: VTAM terminates checkpointing.

Operator response: Save the system log for problem determination.

System programmer response: Consult the applicable VSAM documentation for further responses. To avoid this problem, use the VERIFY operation as a regular part of the VTAM start routine to ensure that the data set is properly closed. Consult the applicable VSAM documentation for further appropriate responses.

Routing code: 2

Descriptor code: 5

IST430I *runame* **FOR ID = nodename DISCARDED**

Explanation: VTAM did not process the *runame* for node *nodename* because there was insufficient storage available to process the recovery of the node.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *runame*.

System action: Node *nodename* might appear active to VTAM, but it cannot process any requests. Any logical units associated with this node are inaccessible.

Operator response: Enter a DISPLAY ID command for *nodename*. If *nodename* is still active, enter a VARY INACT,TYPE=FORCE command for *nodename* to deactivate the node. Then enter VARY ACT,ID=*nodename* to reactivate it.

If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST433I **COMMAND REJECTED — TUNING STATISTICS TASK NOT ATTACHED**

Explanation: VTAM rejected a MODIFY TNSTAT command because tuning statistics support is not part of the system. During VTAM initialization, the attempt to start the tuning statistics subtask failed.

System action: System processing continues.

Operator response: Tuning statistics cannot be collected at this time.

System programmer response: If you want to collect tuning statistics, determine and correct the reason for the failure to start the VTAM tuning statistics subtask.

Routing code: 2

Descriptor code: 5

IST435I **UNABLE TO RECORD ON TUNSTATS FILE, RETURN CODE = code**

Explanation: An error occurred when the tuning statistics subtask, ISTINCTS, tried to open or write to the tuning statistics file.

ISTINCTS, is active in VTAM, but failed to write a tuning statistics record to the system management facility (SMF) data set.

code is a reason code, in decimal, that indicates why the write attempt failed. For explanations of the reason codes, see the return codes from the SMFWTM macro located in z/OS MVS System Management Facilities (SMF).

System action: The tuning statistics record is lost. System processing continues.

Operator response: Save the system log for problem determination.

System programmer response: For the appropriate responses to *code*, see the return codes from the SMFWTM macro

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located in z/OS MVS System Management Facilities (SMF).

Routing code: 2

Descriptor code: 5

IST436I STORAGE NOT AVAILABLE FOR TUNING STATISTICS DATA

Explanation: The tuning statistics subtask, ISTINCTS, is active in VTAM, and no storage was available to temporarily store a tuning statistics record.

System action: VTAM will include the data in the record in the next tuning statistics record. System processing continues.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST440I TIME = time DATE = date ID = id

Explanation: This message is the first in a group of messages that displays tuning statistics for a SNA controller. A complete description of the message group follows.

```
IST440I    TIME = time        DATE = date        ID = id
IST441I    DLRMAX = dlrmx     CHWR = chwr        CHRD = chrd
IST442I    ATTN = attn       RDATN = rdatn        IPDU = ipdu
IST443I    OPDU = opdu       RDBUF = rdbuf      SLODN = slodn
IST1568I   INLP = inlp       ONLP = onlp        BFNLP = bfnlp
IST314I    END
```

IST440I

time indicates the time (in hours, minutes, seconds, and hundredths of seconds) at which the record is recorded. For example, 07431380 means that the record was recorded at the 7th hour, 43rd minute, 13th second, and 80 one-hundredths of a second of the day.

date is the date on which the tuning statistics report is recorded. The date is in the form *yyddd*, where *yy* is the last two digits of the numeric year and *ddd* is the numeric day of the year. For example, 00190 means the record is recorded on the 190th day of 2000.

id is the name of the user-defined channel-attached SNA cluster controller or the name of the channel link that attaches the communication controller for which the statistics are gathered. For a VTAM-generated channel-link name, this field contains the channel unit address followed by "-L."

IST441I

- *dlrmax* is a decimal value that indicates the maximum number of dump-load-restart requests that were awaiting processing or were being processed at one time during the interval. This number refers to the entire domain, not to the SNA controller named in the report. The dump-load-restart subtask processes the following types of requests:
 - Dump, load, or restart of an NCP
 - Some VTAM messages to the operator that require a reply
 - Session establishment and termination processing for a local major node
 - Any I/O to a configuration restart or NODELST file.
- This value can be used to determine the proper setting for the DLRTCB start option, which determines how many dump-load-restart requests can be processed concurrently. If DLRMAX consistently exceeds DLRTCB, it indicates that VTAM is serializing requests on the available TCBS and that performance might be affected.
- *chwr* is a decimal value that indicates the total number of write channel programs issued during the interval covered by this record.
- *chrd* is a decimal value that indicates the total number of read channel programs issued to read data. It does not include the read that informs the cluster controller to clear its buffers.

IST442I

attn is a decimal value that indicates the total number of attention interrupts received from a controller, including the total number of READ ATTENTIONs (RDATN).

rdatn is a decimal value that indicates the total number of times that the attention is included in the ending status on a read channel program (that is, the number of times that VTAM, after reading data, is requested with an attention to read more data).

ipdu is a decimal value that indicates the total number of inbound (to VTAM) PDUs received from this controller.

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- *opdu* is a decimal value that indicates the total number of outbound (from VTAM) PDUs sent to this controller.
- *rdbuf* is a decimal value that indicates the total number of read buffers used.
- *slodn* is a decimal value that indicates the total number of times the controller has entered a slowdown condition; for NCP, this is the number of times the CWALL buffer threshold has been reached.

Note: The SLODN field is not related to message IST211I. This message is issued at a threshold value greater than CWALL.

IST1568I

inlp is a decimal value that indicates the total number of inbound (to VTAM) NLPs received from this controller.

onlp is a decimal value that indicates the total number of outbound (from VTAM) NLPs sent to this controller.

bfnlp is a decimal value that indicates the total number of bytes read from inbound NLPs.

System action: Processing continues.

Operator response: Follow the instructions of the system programmer to tune the system. To discontinue statistics recording, enter the MODIFY NOTNSTAT command.

System programmer response: For additional information on tuning and analyzing tuning statistics, see the z/OS Communications Server: SNA Network Implementation Guide

Routing code: 2

Descriptor code: 4

IST441I **DLRMAX** = *dlrmax* **CHWR** = *chwr* **CHRD** = *chrd*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST440I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST442I *ATTN = attn RDATN = rdatn IPDU = ipdu*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST440I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST443I *OPDU = opdu RDBUF = rdbuf SLODN = slodn*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST440I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST447I **BUFFER SIZE WAS IGNORED FOR ONE OR MORE POOLS**

Explanation: VTAM issues this message when the programmer specified the buffer size in a pool that does not allow buffer size specification. You might specify only the IOBUF buffer size.

System action: The incorrect buffer size was ignored. The default size was used. VTAM start procedure continues.

Operator response: Save the system log for problem determination.

System programmer response: Specify the size of the buffer for IOBUF.

Routing code: 2

Descriptor code: 5

IST448I *option* **OPTION IGNORED** – *reason*

Explanation: VTAM issues this message during processing of VTAM start options or in response to a DISPLAY VTAMOPTS or MODIFY VTAMOPTS command when an error is encountered while processing *option*.

option is the name of the start option that was ignored.

reason indicates the reason for the problem and is determined by when the error occurred.

- If the error occurred during the processing of VTAM start options, *reason* can be one of the following:

COUPLING FACILITY NOT SUPPORTED

The coupling facility is not supported by the current version of MVS. There is no active CFRM policy or no CFRM data set.

CPC IS NOT A MEMBER OF AN ENSEMBLE

The central processing complex (CPC) is not configured as a member of an ensemble network.

HARDWARE SUPPORT NOT AVAILABLE

The required hardware support associated with this option is not available.

HPR FUNCTION NOT SUPPORTED

This start option requires the NODETYPE to be NN.

HPR PATH SWITCH NOT SUPPORTED

This start option requires the specification of HPR=RTP.

INSUFFICIENT STORAGE

There was insufficient common or private storage to process this start option.

LLINES NO LONGER SUPPORTED

This value (LLINES) for the OSITOP0 start option is not supported by the current version of VTAM.

NO LONGER SUPPORTED

This start option is not supported by the current version of VTAM.

NOLLINES NO LONGER SUPPORTED

This value (NOLLINES) for the OSITOP0 start option is not supported by the current version of VTAM.

NOT A USS TABLE

The table identified by the USSTAB start option is not a USS table.

NOT VALID DUE TO HPR CAPABILITY

This start option requires the specification of HPR=RTP.

RESULTING STRUCTURE NAME TOO LONG

Either the MNPS structure name specified by the STRMNPS start option or the Generic Resource structure name specified by the STRGR start option is too long (longer than 14 characters) to be suffixed by the XCFGRPID value specified.

VALID ONLY FOR ICN

This start option is valid only for an interchange network node.

VALID ONLY FOR ICN OR MDH

This start option is valid only for an interchange network node or migration data host.

VALID ONLY FOR NETWORK NODE OR MDH

This start option is valid only for a network node or migration data host. It is not valid for an end node that supports only APPN functions.

XCF NOT SUPPORTED

Either the sysplex is unavailable or you are running with a level of MVS that does not support XCF.

- If the error occurred in response to a DISPLAY VTAMOPTS command, *reason* can be one of the following:

CANNOT BE DISPLAYED

This start option is not valid on the DISPLAY VTAMOPTS command.

HAS NOT BEEN MODIFIED

This start option cannot be displayed because FORMAT=MODIFIED was specified on the command, and this start option has not been modified since VTAM was initialized.

UNRECOGNIZED OPTION

option is not a valid VTAM start option.

- If the error occurred in response to a MODIFY VTAMOPTS command, *reason* can be one of the following:

CANNOT BE MODIFIED

This start option is not valid on the MODIFY VTAMOPTS command.

CANNOT VERIFY IF CONFLICT EXISTS

This start option cannot be modified because VTAM is unable to verify if the start option is in conflict with other start options specified on the MODIFY command. VTAM can process up to eight conflicting start options on a MODIFY VTAMOPTS command. If more than eight are specified, VTAM cannot verify whether a conflict actually exists.

CPC IS NOT A MEMBER OF AN ENSEMBLE

The central processing complex (CPC) is not configured as a member of an ensemble network.

EE XCA MAJOR NODE MUST BE INACTIVE

This start option cannot be modified while the XCA major node representing Enterprise Extender connections is active.

HARDWARE SUPPORT NOT AVAILABLE

The required hardware support associated with this option is not available.

INSUFFICIENT STORAGE

There was insufficient private storage to process this start option.

IPADDR OBTAINED FROM TCP STACK

This start option cannot be modified because VTAM has acquired the local IP address to use for all Enterprise Extender connections from the TCP/IP stack.

LLINES NO LONGER SUPPORTED

This value (LLINES) for the OSITOPO start option is not supported by the current version of VTAM.

NOLLINES NO LONGER SUPPORTED

This value (NOLLINES) for the OSITOPO start option is not supported by the current version of VTAM.

IST448I

SAWDATA REQUIRES SAW DATA FILTER

This value (SAWDATA) for the SAVERSCV start option is not valid on the MODIFY VTAMOPTS command because there is not an active SAW filter table.

SPECIFIED VALUE NOT VALID

The specified value for this start option is not a valid value for this option.

UNRECOGNIZED OPTION

option is not a valid VTAM start option.

VALID ONLY FOR A NETWORK NODE

This start option is not valid on the MODIFY VTAMOPTS command because it applies only to a network node configuration. This VTAM must be configured as a network node in order for this start option to be modifiable.

VALID ONLY FOR AN APPN NODE

This start option is not valid on the MODIFY VTAMOPTS command because it applies only to an APPN configuration. This VTAM must be configured as a network node, interchange node, end node, or migration data host in order for this start option to be modifiable.

VALID ONLY FOR AN END NODE OR MDH

This start option is only valid at end nodes and migration data hosts (MDH).

VALID ONLY FOR ICN

This start option is not valid on the MODIFY VTAMOPTS command because it applies only to an interchange network node configuration.

VALID ONLY FOR ICN OR MDH

This start option is not valid on the MODIFY VTAMOPTS command because it applies only to an interchange network node or migration data host configuration.

VALID ONLY FOR NETWORK NODE OR MDH

This start option is not valid on the MODIFY VTAMOPTS command because it applies only to a network node or migration data host configuration. It is not valid for an end node that supports only APPN functions. This VTAM must be configured as a network node or migration data host in order for this start option to be modifiable.

System action:

- Processing of VTAM start options
 - If *reason* is **STRUCTURE NOT DEFINED**, a connection attempt will not be made to the coupling facility structure. VTAM initialization continues.
 - If *reason* is **NOT A USS TABLE**, VTAM uses the IBM-supplied default USS table.
 - If *reason* is **LLINES NO LONGER SUPPORTED**, or **NOLLINES NO LONGER SUPPORTED**, VTAM will ignore this value for OSITOPO. If other values have been specified for OSITOPO, they will be processed.
 - For all other *reasons*, VTAM ignores this start option, but the processing of VTAM start options continues.
- DISPLAY VTAMOPTS command
 - VTAM does not display this start option.
- MODIFY VTAMOPTS command
 - VTAM ignores this start option. If there are other valid options specified on the MODIFY VTAMOPTS command, processing of the command continues.

Operator response:

- Processing of VTAM start options
 - For **INSUFFICIENT STORAGE**, if VTAM has been initialized, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command to display information about the common storage area. Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.
- If VTAM initialization failed, save the system log for problem determination.

- For **STRUCTURE NOT DEFINED**, check the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option. The value is the name of a coupling facility structure. If the value is incorrect, restart VTAM with the correct value. If the value is correct, the structure has not been defined in the active CFRM policy. Provide the structure name to the system programmer.
- For all other *reasons*, save the system log for problem determination.

Provide the start options used to start VTAM.

- DISPLAY VTAMOPTS command

- For **CANNOT BE DISPLAYED** or **UNRECOGNIZED OPTION**, ensure that you entered *option* correctly. See z/OS Communications Server: SNA Operation to check options that are valid for the DISPLAY VTAMOPTS command.

- MODIFY VTAMOPTS command

- For **CANNOT VERIFY IF CONFLICT EXISTS**, issue multiple MODIFY VTAMOPTS commands with a single start option specified instead of issuing a single MODIFY VTAMOPTS with multiple start options specified. In particular, do not specify two or more conflicting start options on the MODIFY command. See the z/OS Communications Server: SNA Resource Definition Reference and z/OS Communications Server: SNA Operation for details about start option conflicts when specified on MODIFY VTAMOPTS.

- For **EE XCA MAJOR NODE MUST BE INACTIVE** and **IPADDR OBTAINED FROM TCP STACK**, the XCA major node that represents the Enterprise Extender connections must be inactive before this start option can be modified. Issue VARY INACT,ID=XCA_majornode_name to deactivate the XCA major node if the start option modification must be made immediately; otherwise, wait for all Enterprise Extender connections to end and then issue the VARY INACT command.

- For **INSUFFICIENT STORAGE**, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command to display information about total VTAM private storage. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

- For **SPECIFIED VALUE NOT VALID**, ensure that you entered *option* correctly. See z/OS Communications Server: SNA Operation to check values that are valid for this start option.

- For **UNRECOGNIZED OPTION**, ensure that you entered *option* correctly. See z/OS Communications Server: SNA Operation to check options that are valid for the MODIFY VTAMOPTS command.

- For **VALID ONLY FOR A NETWORK NODE**, save the system log for problem determination. Message IST1348I is issued during VTAM initialization and in response to the DISPLAY VTAMOPTS command and displays the node type of this VTAM.

If node type in message IST1348I is **NETWORK NODE** or **INTERCHANGE NODE**, this VTAM is a network node.

- For **VALID ONLY FOR AN APPN NODE**, save the system log for problem determination. Message IST1348I is issued during VTAM initialization and in response to the DISPLAY VTAMOPTS command and displays the node type of this VTAM.

If node type in message IST1348I is **END NODE**, **INTERCHANGE NODE**, **MIGRATION DATA HOST**, or **NETWORK NODE**, this VTAM is an APPN node. Otherwise, this node is a **SUBAREA NODE**.

- For **VALID ONLY FOR ICN**, save the system log for problem determination. Message IST1348I is issued during VTAM initialization and in response to the DISPLAY VTAMOPTS command and displays the node type of this VTAM.

If node type in message IST1348I is **INTERCHANGE NODE**, this start option can be modified in this VTAM.

- For **VALID ONLY FOR ICN OR MDH**, save the system log for problem determination. Message IST1348I is issued during VTAM initialization and in response to the DISPLAY VTAMOPTS command and displays the node type of this VTAM.

If node type in message IST1348I is **INTERCHANGE NODE**, or **MIGRATION DATA HOST**, this start option can be modified in this VTAM.

- For **VALID ONLY FOR NETWORK NODE OR MDH**, save the system log for problem determination. Message IST1348I is issued during VTAM initialization and in response to the DISPLAY VTAMOPTS command and displays the node type of this VTAM.

If node type in message IST1348I is **NETWORK NODE**, **INTERCHANGE NODE**, or **MIGRATION DATA HOST**, this start option can be modified in this VTAM.

System programmer response:

- Processing of VTAM start options

IST449I

- For **HPR FUNCTION NOT SUPPORTED**, stop VTAM, modify the NODETYPE start option to specify NN, and restart VTAM.
- For **HPR PATH SWITCH NOT SUPPORTED**, stop VTAM, modify the HPR start option to specify RTP, and restart VTAM.
- For **INSUFFICIENT STORAGE**, increase storage as required. You can modify the CSALIMIT and CSA24 start options using the MODIFY VTAMOPTS command.
- For **NOT A USS TABLE**, supply the operator with the name of a valid USS table. The MODIFY TABLE command can be entered with ID=ISTNOP to change the USS table used for operator messages and commands.
- For **NOT VALID DUE TO HPR CAPABILITY**, stop VTAM, modify the HPR start option to specify RTP, and restart VTAM.
- For **RESULTING STRUCTURE NAME TOO LONG**, specify a shorter (less than 15 characters) name on the STRGR or STRMNPS start option keyword, and add a structure definition to the active CFRM policy for the structure name suffixed by each of the possible subplex (XCFCGRPID) values.
- For **STRUCTURE NOT DEFINED**, define the structure name in the active CFRM policy. See z/OS MVS Setting Up a Sysplex for more information on how to define a structure in the CFRM policy.
- DISPLAY VTAMOPTS command
 - None.
- MODIFY VTAMOPTS command
 - For **EE XCA MAJOR NODE MUST BE INACTIVE** and **IPADDR OBTAINED FROM TCP STACK**, specify the start option in the start option list used to activate VTAM.
 - For **INSUFFICIENT STORAGE**, increase storage as required.
 - For **VALID ONLY FOR A NETWORK NODE**, review the system log to correct the command issued and the definition statements (if appropriate). To configure this VTAM as a network node, you must specify NODETYPE=NN during start processing.
 - For **VALID ONLY FOR AN APPN NODE**, review the system log from the operator to correct the command issued and the definition statements (if appropriate). To configure this VTAM as an APPN node, you must specify NODETYPE=NN or NODETYPE=EN during start processing.
 - For **VALID ONLY FOR ICN**, review the system log from the operator to correct the command issued and the definition statements (if appropriate). To configure this VTAM as an interchange network node, you must specify NODETYPE=NN, HOSTSA=*n*, and SACONNS=YES during start processing.
 - For **VALID ONLY FOR ICN OR MDH**, review the system log from the operator to correct the command issued and the definition statements (if appropriate). To configure this VTAM as an interchange network node, you must specify NODETYPE=NN, HOSTSA=*n*, and SACONNS=YES during start processing. To configure this VTAM as a migration data host, you must specify NODETYPE=EN, HOSTSA=*n*, and SACONNS=YES during start processing.
 - For **VALID ONLY FOR NETWORK NODE OR MDH**, review the system log from the operator to correct the command issued and the definition statements (if appropriate). To configure this VTAM as a network node, you must specify NODETYPE=NN during start processing. To configure this VTAM as a migration data host, you must specify NODETYPE=EN, HOSTSA=*n*, and SACONNS=YES during start processing.

Routing code: 2

Descriptor code: 5

IST449I *limitname = csa, CURRENT = current, MAXIMUM = maxlevel*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY BFRUSE command. This message displays information about VTAM common service area (CSA) usage. A complete description of the message follows.

```
IST449I  limitname = csa, CURRENT = current, MAXIMUM = maxlevel
IST790I  MAXIMUM type USED = maxK
IST1667I SYSTEM CSA LIMIT = sys_csa_limit
IST1831I percent OF SYSTEM CSA STORAGE REMAINING = sys_csa_avail
[IST449I  CSA24 LIMIT = csa, CURRENT = current, MAXIMUM = maxlevel]
[IST790I  MAXIMUM type USED = maxK]
IST595I  IRNLIMIT = irnlimitK, CURRENT=currentirnK MAXIMUM = maximumirnK
IST981I  VTAM PRIVATE: CURRENT = currentK, MAXIMUM USED = maximumK
IST924I  -----
```

```

IST1565I type    MODULES = currentK
IST1565I type    MODULES = currentK
IST1565I type    MODULES = currentK
IST314I  END

```

Note: Values are expressed in kilobytes.

IST449I

limitname is either **CSALIMIT** (the request is to set the CSA limit) or **CSA24 LIMIT** (the request is to set the CSA limit for 24-bit addressable storage).

csa is the maximum amount of the particular type of CSA that VTAM can use for buffers. Limits are enforced on the requested amount of storage, but *csa* can be **NO LIMIT**, which means VTAM can request as much as is available.

current is the current VTAM CSA allocation for buffers.

maxlevel is the largest CSA allocation level for buffers since the last DISPLAY BFRUSE command.

IST595I

irrlimit is the maximum amount of VTAM storage that can be used for intermediate routing node slowdown traffic.

currentirn is the amount of storage currently in use for intermediate routing node slowdown traffic.

maximumirn is the largest allocation level since the last DISPLAY BFRUSE command.

IST790I

- *type* can be one of the following:

CSA 31-bit and 24-bit addressable common storage

CSA24 24-bit addressable common storage

- *maxK* is the maximum amount of *type* ever in use for buffers since VTAM was started.

IST981I

This message shows the private storage (both above and below the 16M line) that VTAM explicitly acquires (with GETMAIN).

currentK is the amount of VTAM private storage currently in use. This does not include the amount of private storage required to load the VTAM modules.

maximumK is the maximum amount of VTAM private storage ever in use since VTAM was started.

IST1565I

- *type* can be one of the following:

CSA 31-bit and 24-bit addressable common storage acquired for VTAM modules

CSA24 24-bit addressable common storage acquired for VTAM modules

PRIVATE

Private storage used to load VTAM modules

- *currentK* is the current VTAM CSA/ECSA allocation for modules.

IST1667I

- *sys_csa_limit* is the maximum amount of system CSA and is determined by adding the total amount of CSA and ECSA defined in the system. The maximum amount that VTAM will use is derived by multiplying the *sys_csa_limit* by 0.9 (in other words, VTAM will never use more than 90 percent of the total CSA for the system). See z/OS Communications Server: SNA Resource Definition Reference for more information about how the system CSA limit relates to the CSALIMIT Start Option.

IST1831I

- *percent* is the percentage of system CSA plus Extended CSA available for use.
- *sys_csa_avail* is the current total amount of system CSA plus Extended CSA available for use.

System action: Processing continues.

IST450I • IST452I

Operator response: Inspect the data to determine whether further action is required.

If the current allocation is close to the limit, it might not be reasonable to begin significant modifications to the system configuration or workload. Save the system log for problem determination.

System programmer response: Review this data before making significant changes to the system configuration or workload. Use this data to ensure that storage requirements are being met and that CSA and private storage are being used effectively in the management of VTAM's storage resources.

Routing code: 8

Descriptor code: 5

IST450I *INVALID command* COMMAND SYNTAX

Explanation: VTAM issues this message when the *command* has invalid syntax.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*. If VTAM cannot determine the command type because of the syntax error, the *command* field in this message will be blank.

System action: VTAM rejects the command.

Operator response: Reenter the command with the correct syntax. See *z/OS Communications Server: SNA Operation* for the correct syntax.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST450I,1) on the USSMSG macro. This will define IST450I and USS message 1 to be identical in the operation-level USS table. See the *z/OS Communications Server: SNA Resource Definition Reference* for information on the USSMSG macro for VTAM operator messages.

Routing code: 2

Descriptor code: 5

IST451I *command* COMMAND UNRECOGNIZED, PARAMETER=*parameter*

Explanation: VTAM issues this message when the *command* with the specified parameter is not supported on this operating system.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

System action: VTAM rejects the *command*.

Operator response: Reenter the command correctly. See *z/OS Communications Server: SNA Operation* for the correct syntax.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST451I,2) on the USSMSG macro. This will define IST451I and USS message 2 to be identical in the operation-level USS table. See the *z/OS Communications Server: SNA Resource Definition Reference* for information on the USSMSG macro for VTAM operator messages.

Routing code: 8

Descriptor code: 5

IST452I *parameter* PARAMETER EXTRANEIOUS

Explanation: VTAM issues this message when an extraneous parameter *parameter* is specified for an operator command. The parameter might not be valid for the command because it might conflict with another parameter entered for the command.

Notes:

1. This message might be issued as the result of conflicting verbs being specified on the command. For example, **ACT** and **INACT** are conflicting verbs on the following command:

V ACT,INACT,ID=*name*

2. The parameter might be valid for other combinations of parameters and resource types.
3. Parameters on the operator commands are not processed in the order they are provided in the command.
4. All positional parameters in a command that occur before the first positional keyword parameter will be labeled Px, starting with P1.

System action: VTAM rejects the command.

Operator response: Reenter the command correctly. See z/OS Communications Server: SNA Operation for the correct syntax.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST452I,3) on the USSMSG macro. This will define IST452I and USS message 3 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 8

Descriptor code: 5

IST453I *parameter* **PARAMETER VALUE** *value* **NOT VALID**

Explanation: VTAM issues this message when *parameter* was specified on an operator command and is not valid. *value* is the first 17 characters of the value specified for *parameter*. If no value is displayed for *value*, then the value of the parameter specified was of zero length (e.g. NETID=).

Possible reasons for this message include:

- If the value specified for *parameter* is a network name, the name might be undefined or the resource might be inactive.
- If the value specified for *parameter* is a network name, and IDTYPE was also specified on the command, this message can be displayed when:
 - The network name *parameter* does not exist.
 - The network name *parameter* might be correct, but does not exist with the IDTYPE that was specified on the command.

Notes:

1. The parameter might be valid for other combinations of parameters and resource types or might have been omitted when required.
2. Parameters on operator commands are not processed in the order they are entered on the command.

System action: The command is not executed.

Operator response: Ensure that you entered the command correctly. For additional information on commands and command syntax, see z/OS Communications Server: SNA Operation.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST453I,4) on the USSMSG macro. This will define IST453I and USS message 4 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 8

Descriptor code: 5

IST454I *command* **COMMAND FAILED, INSUFFICIENT STORAGE**

Explanation: Not enough storage is available for successful processing of *command*. If VTAM cannot determine the command because of lack of storage, the *command* portion of the message will be null.

System action: VTAM rejects the command.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

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Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Note: If you modify this message, you must specify MSG=(IST454I,8) on the USSMSG macro. This will define IST454I and USS message 8 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 8

Descriptor code: 5

IST455I *parameters* SESSIONS ENDED

Explanation: VTAM ended LU-LU sessions as a result of the VARY TERM command. NOTIFY=YES was specified or was taken by default. *parameters* are the parameters from the VARY TERM command, and will always be network qualified. For example:

```
LU1=NETC.APPC2 SESSIONS ENDED
```

System action: Processing continues.

Operator response: None.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST455I,11) on the USSMSG macro. This will define IST455I and USS message 11 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 2

Descriptor code: 5

IST456I [*keyword*] REQUIRED PARAMETER OMITTED

Explanation: VTAM issues this message when a required parameter is missing from an operator command. The *keyword* value might not be displayed.

keyword is the name of the missing parameter, if known; otherwise, *keyword* is the name of the command that was not entered correctly.

System action: VTAM rejects the command.

Operator response: Correct and reenter the command. See z/OS Communications Server: SNA Operation for more information on VTAM commands and their parameters.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST456I,12) on the USSMSG macro. This will define IST456I and USS message 12 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 8

Descriptor code: 5

IST457I **POSITIVE** *command* **COMMAND RESPONSE**

Explanation: VTAM has accepted the VARY TERM command *command*. Either no applicable sessions exist or session termination will be performed for all applicable sessions as requested. In either case, VTAM issues message IST455I when all applicable sessions have ended (or immediately if no sessions exist), if the NOTIFY=YES parameter has been specified.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST457I,0) on the USSMSG macro. This will define IST457I and USS message 0 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 2

Descriptor code: 5

IST458I **USS MESSAGE** *number* **NOT DEFINED**

Explanation: The user-defined unformatted system services (USS) table that supports this program operator application program (POA) does not contain a USSMSG macro to define the text for the USS message *number*.

System action: If *number* is 0 or 11, VTAM has completed the command successfully. Otherwise, VTAM does not execute the command.

Operator response: Save the system log for problem determination.

System programmer response: Add the necessary message to the user-defined USS table.

Note: If you modify this message, you must specify MSG=(IST458I,14) on the USSMSG macro. This will define IST458I and USS message 14 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 2

Descriptor code: 5

IST459I *command* **FAILED** — ID = *nodename* — ADJ NODE *adjnode* *reason*

Explanation: The *command* for *nodename* failed because of an error on the adjacent node *adjnode*.

reason is one of the following:

INVALID

This *reason* occurs in the following situations:

- Link station *nodename* contacted adjacent node *adjnode* which was not a PU type 4 or a PU type 5.
- Communication controller *nodename* specified link station *adjnode* for a load or dump, but *adjnode* is not a link station, is a switched link station, or is not associated with NCP *nodename*.
- The link station was not found.

CANNOT BE DEFINED

Link station *nodename* attempted to contact an adjacent node (*adjnode*) that was unknown to VTAM. VTAM was unable to define this adjacent node because of insufficient storage.

STATE *statename* **INVALID**

Link station *adjnode* was chosen as the load/dump station for communication controller *nodename* to load or dump, but it cannot be used for loading or dumping in its current state *statename*.

IST459I

CA / NCP CONFLICT

Link station *nodename*, which is being activated, is a communication-adapter SDLC link station associated with the NCP *adjnode*. (VTAM allows communication adapters to contact an NCP over a communication-adapter SDLC link or to activate an NCP over a channel- or noncommunication-adapter SDLC link, but not both at the same time.)

UNAVAILABLE

Link station *nodename* is not associated with NCP *adjnode*.

System action: VTAM deactivates the node, and the command is rejected.

Operator response:

INVALID

Activate link station *nodename*. Then enter or reenter *command*, and do not specify the load or dump station on the command (let VTAM choose it).

CANNOT BE DEFINED

Try to activate the link station later. Issue the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

STATE *statename* INVALID

Activate link station *nodename*. Then enter or reenter *command*, but do not specify the load or dump station (let VTAM choose it) on the command.

CA / NCP CONFLICT

Issue the DISPLAY ID command for *adjnode* (*adjnode* is the NCP that is adjacent to *nodename*). Save the system log for problem determination.

UNAVAILABLE

Save the system log for problem determination.

System programmer response:

INVALID

Look at the adjacent node to determine the cause of the problem.

CANNOT BE DEFINED

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

STATE *statename* INVALID

Look at the adjacent node to determine the cause of the problem.

CA / NCP CONFLICT

If you want the NCP represented by *adjnode* to be contacted through the communication adapter SDLC link station, ask the operator to enter a VARY INACT command for *adjnode* to deactivate the NCP. The operator might then contact the NCP represented by *adjnode* through the communication adapter SDLC link station by issuing a VARY ACT command for *nodename*.

UNAVAILABLE

Issue the DISPLAY STATIONS command and review the output for *adjnode*. The link station *nodename* might not have been genned into the adjacent NCP *adjnode* so is therefore unavailable.

If you cannot determine the cause of the problem from the output provided, take the following action:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Routing code: 2

Descriptor code: 5

IST460I *command* FOR U/RNAME ENTRY ID = *nodename* FAILED: *reason*

Explanation: The *command* for *nodename* failed for one of the following reasons:

- The U or RNAME operands were specified on a VARY ACT command for a communication controller.
- The U or RNAME operands were defined in the communication controller deck, and processed when the communication controller was activated.

reason can be one of the following:

ALREADY CONNECTED

The link station specified in the RNAME list is in contact with or is attempting connection to another communication controller.

INSUFFICIENT STORAGE

Because of insufficient storage, VTAM was unable to build the dummy link station to represent a channel device address or a link station that was unknown to VTAM.

STATE *state* INVALID

The current state of the link station specified in the RNAME list or its higher level node is no longer appropriate. For example, the node might be in the process of being deactivated or might be undergoing error recovery. See the z/OS Communications Server: IP and SNA Codes for a description of *state*.

NODE CANNOT BE DEFINED

VTAM was unable to define a duplicate name, device address, or a link station that was unknown to VTAM.

NODE INVALID

The node specified in the RNAME list was not a channel adapter, SDLC line, or link station.

NO SWITCHED LINK AVAILABLE

A switched link station connection cannot be established because no switched subarea links are usable.

System action: VTAM ends activation for the U or RNAME entry.

Operator response:

INSUFFICIENT STORAGE

Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

STATE *state* INVALID

Deactivate the node (or its higher level node). Then activate the node (or its higher level node).

NO SWITCHED LINK AVAILABLE

Activate the switched major node after the VARY ACT commands for the communication controllers have been processed. If the switched major node was activated before the communication controllers, activate the communication controllers first and then activate the switched major node. In all cases, display U or RNAME entry *nodename*, and for problem determination.

For errors in start options or definition lists, save the system log for problem determination.

System programmer response: Ensure that the generated RNAME list or the RNAME list provided to the operator for the communication controller activation contains the correct name of the link station to be connected to the communication controller.

INSUFFICIENT STORAGE

Provide more storage at VTAM start time. You might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

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NO SWITCHED LINK AVAILABLE

Verify that the path definitions for *nodename* are enabled and CALL=OUT or CALL=INOUT is coded.

For errors in start options or definitions lists, ensure that all requirements for VTAM are correct for your system. When you have corrected the error condition, ask the operator to reenter the command.

Routing code: 2

Descriptor code: 5

IST461I ACTIVATE FOR U/RNAME ENTRY ID = *nodename* STARTED

Explanation: A VARY ACT command for a communication controller specified *nodename* as an RNAME operand on that command or as a U generated value.

System action: Activation of *nodename* is started if the link of the U or RNAME entry *nodename* is active. For an inactive link, the link is activated first, followed by activation of the *nodename*.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST462I ACTIVATION OF LINK STATION *nodename* IS DEFERRED PENDING HIGHER LEVEL NODE ACTIVATION

Explanation: *nodename* was specified in the RNAME list for a communication controller that is being activated. VTAM cannot activate *nodename* because the communication controller containing it is not known to VTAM.

System action: VTAM has queued the activation for *nodename* and will activate it when the communication controller containing it is activated.

Operator response: If the connection with the communication controller containing *nodename* is desired, enter a VARY ACT command for that communication controller. If the connection is not desired, enter a VARY INACT command for *nodename* to deactivate the link station.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST464I LINK STATION *nodename1* HAS CONTACTED *nodename2* SA *subarea*

Explanation: The link station *nodename1* successfully contacted the node *nodename2* in subarea *subarea*. If *nodename2* is blank and *subarea* is zero, VTAM has contacted a subarea node in another network. Because this VTAM node is nongateway-capable, it cannot identify the network and subarea address of the contacted node. If the link station is in state PCTD1 and is not on an NCP link-station queue, VTAM does not obtain a dummy NCP to queue the link station, so *nodename2* is blank and *subarea* is zero. *nodename2* is ***NA*** in a VTAM to VTAM connection.

System action: VTAM activates the link station.

Operator response: If VTAM has contacted a subarea node in another network, and that is not your intention, deactivate the link station.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST465I *command* **FOR ID = nodename FAILED — NO {LOAD|DUMP|LINK} STATION AVAILABLE**

Explanation: VTAM issues this message when the *command* failed for *nodename* because the necessary load, dump or link station was not available for one of the following reasons:

1. VTAM tried to select a default dump or load station, and none was available.
2. The load or dump station was deactivated while a load or dump was being performed.
3. VTAM was unable to establish connectivity between *nodename* and any link station in the RNAME list from the VARY ACT command.

System action: VTAM deactivates *nodename* and rejects the command. Other processing continues.

Operator response: Display *nodename* and all link stations to check spelling and status. Save the system log for problem determination.

- For reasons 1 and 2, allow VTAM to choose the default load or dump station.
- For reason 3, activate the link stations before reissuing the command to activate the communication controller.

VTAM will issue other error messages for each link station that failed to establish a connection with the communication controller. See those messages for further help.

System programmer response: Check that the link stations in the RNAME list are valid and can be used to establish connectivity with the communication controller. Correct the RNAME list if needed.

Routing code: 2

Descriptor code: 5

IST466I *command* **FOR ID = controller CONTINUES — UNABLE TO DO text**

Explanation: During the deactivation or recovery of a communication controller *controller*, VTAM was unable to find a link station to load, dump, or remotely power off (RMPO) the communication controller.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

text is one of the following:

LOAD — NO LINK STATION AVAILABLE

DUMP — NO LINK STATION AVAILABLE

RMPO — NO LINK STATION AVAILABLE

System action: VTAM continues to process the *command* for *controller*. The load, dump, or remote power-off (RMPO) is not performed.

Operator response: Display *controller* and all link stations to check status. If the communication controllers containing the link stations are not usable, save the system log for problem determination.

System programmer response: If a communication controller containing a link station in the VARY ACT RNAME list is not usable and it should be, instruct the VTAM operator whether or not to dump and then reload the communication controller.

Routing code: 2

Descriptor code: 4

IST467I **CONTACTED ERROR TYPE type FOR ID = nodename**

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

```

IST467I CONTACTED ERROR TYPE type FOR ID = nodename
[IST1580I  XID RECEIVED BY VTAM:]
[IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data]
:
:
[IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data]
[IST1582I  CONTROL VECTOR X'22' ANALYSIS:]
[IST1583I  BYTE OFFSET OF FIRST BYTE IN ERROR = byteoffset]
[IST1584I  BIT OFFSET OF FIRST BIT IN ERROR = bitoffset]
[IST1585I  SENSE CODE = sense]
```

IST467I

```
[IST1586I  XID SENT BY VTAM:
[IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data]
.
[IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data]
[IST1582I  CONTROL VECTOR X'22' ANALYSIS:]
[IST1583I  BYTE OFFSET OF FIRST BYTE IN ERROR = byteoffset]
[IST1584I  BIT OFFSET OF FIRST BIT IN ERROR = bitoffset]
[IST1585I  SENSE CODE = sense]
IST314I  END
```

IST467I

- The activation procedure for *nodename* failed because of an error specified by the CONTACTED RU error *type*.

Notes:

1. If the XID received from the adjacent node contains no data (XID(NULL)), VTAM does not issue messages IST1574I, IST1580I, or IST1582I through IST1585I.
 2. For a *type* of **05**, **07**, and **08**, VTAM displays the XID data received from and sent to the adjacent node. The information received from the adjacent nodes is displayed in messages IST1580I and IST1574I. The information sent to the adjacent nodes is displayed in messages IST1586I and IST1574I. The IST1582I subgroup follows the XID to which it refers.
 3. For a *type* of **0B**, VTAM displays the XID data received from the adjacent node, or sent to the adjacent node, or both. The information received from the adjacent nodes is displayed in messages IST1580I and IST1574I. The information sent to the adjacent nodes is displayed in messages IST1586I and IST1574I. The IST1582I subgroup follows the XID to which it refers.
- *type* can be one of the following:
 - 02** Load Required. No fields follow.
 - 03** A CONTACT RU error occurred during processing; no XIDs are available. The routes between the activating host and the target NCP might be defined incorrectly.
 - 05** Exchanged XID parameters are not compatible. Possible reasons include:
 - The transmission group numbers do not match or the transmission group number is zero in both nodes.
 - The adjacent PU is not able to accept the XID parameter.
 - If this is not a transmission group problem, ensure that HOSTSA has been coded in your start list. If HOSTSA is not coded in either start list, you might get this error.
 - There might be a lack of storage in the channel-attached hosts.
 - 07** No routing capability to the adjacent node.
 - 08** VTAM cannot add the link station to the currently active TG. Possible reasons include:
 - XID parameters are incompatible with other links in an NCP multilink transmission group.
 - There is another active TG with the same TG number connecting the same two subareas. One of the subareas is a VTAM host.
 - This host has a connection to another node with the same subarea number as the one being activated.
 - NCP will set this error type if the MLTG segment size of the new link is smaller than the MLTG size currently in use by the TG.
 - 09** The NCP is loaded, but is in another subnetwork.
 - 0A** Unable to contact the link station. This error type is set if the PU is in INACT status. Type 0A will be used when both the SSCP and the sending PU support the attachment of T2.1 nodes. Format 3 XID fields are present when the CONTACTED node is a T2.1 node.
 - 0B** The 2.1 boundary function detected an XID error during a contact sequence for a PU type 2.0 or 2.1 node.

IST1574I

This message displays the XID received from (if preceded by message IST1580I) or sent to (if preceded by message IST1586I) the adjacent node.

offset is the hexadecimal offset in the XID.

hexdata_1, *hexdata_2*, *hexdata_3* and *hexdata_4* each display 4 bytes of the XID in hexadecimal format.

EBCDIC_data displays 16 bytes of the XID in EBCDIC format. Unprintable characters are represented by periods.

IST1580I

This message is a header for the information displayed in messages IST1574I and IST1582I through IST1585I for the XID received from the adjacent node.

IST1582I

This message is a header for the information displayed in messages IST1583I through IST1585I. Messages IST1582I through IST1585I are present only if CV X'22' is present in the XID.

The IST1582I subgroup follows the XID to which it refers.

IST1583I

This message is issued only if *byteoffset* in message IST1583I is nonzero or *bitoffset* in message IST1584I is nonzero. *byteoffset* is the hexadecimal offset of the byte containing the error, as noted by the adjacent node. Offsets are from byte 0 in the XID.

IST1584I

This message is issued only if *byteoffset* in message IST1583I is nonzero or *bitoffset* in message IST1584I is nonzero. *bitoffset* is the hexadecimal offset of the bit containing the error, as noted by the adjacent node. Offsets are from bit 0 in the XID.

IST1585I

This message is issued only if sense data is included in CV X'22'.
sense is the SNA sense code set by the adjacent node identifying the reason the XID is rejected.

IST1586I

This message is a header for the information displayed in message IST1574I for the XID sent by VTAM to the adjacent node.

System action: Activation of *nodename* fails. VTAM deactivates the node.

Operator response: Save the system log and print the major node definition for problem determination.

System programmer response: For *types 03, 05, 07, 08, and 0B*, verify that the network definitions for the nodes involved are correct.

Additional recommended actions include:

- A *type* of **02** indicates that the communications controller is not loaded.
- A *type* of **03** indicates one of the following problems:
 - A link-hardware problem during CONTACT processing. In this case, follow the installation problem determination procedure for the link.
 - There is an emulator program in the communication controller you are attempting to activate.
 - The adjacent link station on the NCP side of the channel connection has not been activated.
- For a *type* of **05**:
 - Make sure that the applicable link and link-station definitions are compatible.
 - Ensure that HOSTSA has been coded in your start list.
 - For a storage problem, check the *bufsize* value specified for the IOBUF buffer pool. If a channel-attached NCP is in this domain, this value must match or be greater than the value used for the UNITSZ operand on the HOST statement in the NCP definition. For an explanation of the *bufsize* value, see the description of buffer pool start options in the z/OS Communications Server: SNA Resource Definition Reference.
- For a *type* of **07**, make sure the proper route definitions have been supplied in each subarea node.
- For a *type* of **08**, make sure that the applicable link and link-station definitions are compatible. Issue a DISPLAY STATIONS command for a summary of connections to this subarea.
- For a *type* of **0B**, either the sent or received XID might contain an appended CV X'22' that provides more detailed information about the cause of the error. The last 4 bytes of the CV X'22' might contain sense data.

IST473I • IST475I

For *type 05, 07, 08, or 0B*, see the section on common subarea problems, in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional examples and problem determination actions. See *SNA Network Product Formats* or z/OS Communications Server: SNA Data Areas Volume 1 for additional information on interpreting the CV 'X'22' and sense data, if provided in messages IST1582I through IST1585I.

For an apparent software problem, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Routing code: 8

Descriptor code: 5

IST473I **CONNECTIVITY TEST TO** *terminalname* **TERMINATED AFTER** *n* **ECHOES DUE TO I/O ERROR,**
SENSE = *code*

Explanation: A host-connectivity (echo) test to terminal *terminalname*, initiated by an IBMTEST command entered by *terminalname*, was terminated.

code is the sense code and indicates the reason for the error. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

n is the number of times, in decimal, the requested data was sent to *terminalname* before the I/O error.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: This is probably a hardware error. Determine the cause of the error, and reenter the command if desired. Follow the installation problem-determination procedure for the link error.

Routing code: 2,8

Descriptor code: 4

IST475I *command* **FAILED FOR** *nodename* **REQUEST** *runame* **SENSE** *code*

Explanation: VTAM is unable to complete *command* for *nodename*. The error occurred during the processing of request unit *runame*.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command* and *runame*.

code is the sense code and indicates the reason for the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: VTAM rejects the command.

Operator response: If you can correct the reason for the failure, do so and reenter the command. If *nodename* is a resource in another domain, the error can be in either domain. Notify the operator of the other domain if action is required in that domain as well.

For example,

- **ACTIVATE FAILED FOR** *cdmname* **REQUEST ACTCDRM SENSE 08120000:**
 - The activation of an SSCP-SSCP session, started by an ACTCDRM request from the other domain, failed because of insufficient storage in this domain.
 - The operator can restart the activation in this domain by issuing a VARY ACT command for *cdmname*.
 - If the activation continues to fail:
 - Use the MODIFY CSALIMIT command to increase VTAM's common service area storage.
 - Deactivate other network resources to provide the necessary storage.
- **ACTIVATE FAILED FOR** *cdmname* **REQUEST ACTCDRM SENSE 084E0000:**
 - The activation of an SSCP-SSCP session failed because the NETID in the ACTCDRM request or response does not match the NETID coded in the CDRM definition.

- **ACTIVATE FAILED FOR *cdmname* REQUEST ACTCDRM SENSE 08810000:**

- If this host is not a gateway host, and the operator issues the VARY ACT command for *cdmname* for a gateway SSCP, the gateway NCP sends REQACTCDRM to the gateway SSCP. The gateway SSCP then attempts to activate the SSCP-SSCP session.
- If this host is a gateway host and in a back-to-back configuration, the gateway NCP sends REQACTCDRM to the other gateway host to cause the SSCP-SSCP session to be established.

For a storage problem, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST476I CDRM TYPE = {HOST | EXTERNAL} [, GATEWAY CAPABLE]

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a cross-domain resource manager (CDRM). The message indicates whether the CDRM is in this host (**HOST**), or external to it (**EXTERNAL**).

If **HOST** is indicated and this CDRM is gateway capable, **GATEWAY CAPABLE** is displayed. Otherwise, no optional parameter is displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST477I CDRMS:

Explanation: This message is the header for a group of messages that VTAM issues in response to a DISPLAY ID command for a cross-domain resource manager (CDRM) major node or a DISPLAY CDRMS command. One or more IST482I messages will follow to list the CDRM minor nodes in the major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST478I CDRSCS:

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY CDRSCS command for a cross-domain resource (CDRSC) major node. Following this heading, message IST483I lists the cross-domain resources that are defined to VTAM and managed by the CDRM or a part of the CDRSC major node being displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST479I CDRM NAME = *cdrmname*, VERIFY OWNER = {YES|NO}

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a cross-domain resource (CDRSC). This message identifies the cross-domain resource manager (CDRM) that owns the CDRSC for which the display was requested. *cdrmname* will be *****NA***** if the CDRSC was not defined with a CDRM.

Owner verification of a CDRSC is optional, and is accomplished with the VFYOWNER keyword in the definition of a CDRSC.

VERIFY OWNER = YES indicates that owner verification is required in this host. When owner verification is in effect, VTAM will reject session setup requests that contain a conflicting owner.

VERIFY OWNER = NO indicates that owner verification is not required, so VTAM can automatically change CDRM ownership of a CDRSC.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST482I *cdrmname* status, SA subarea, EL element, NETID = *cdrmnetid*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command concerning the cross-domain resource manager (CDRM). This message is the result of one of the following:

- A DISPLAY ID command for a cross-domain resource manager major node
- A DISPLAY CDRMS command requesting information about cross-domain resource managers (CDRMs) defined to this domain.

This message lists the CDRM (*cdrmname*), its status (*status*), its subarea address (in decimal) (*subarea*), and its element address (in decimal) (*element*). If the subarea address or element address is not available, *element* will be *****NA*****.

cdrmnetid is the network ID of *cdrmname*.

VTAM repeats this message as many times as needed to list the CDRMs in this major node or domain. See the z/OS Communications Server: IP and SNA Codes for a description of *status*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST483I *cdrsname status, CDRM = cdrmname, NETID = cdrscnetid*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command concerning cross-domain resources (CDRSC). It is the result of one of the following:

- A DISPLAY ID command that specifies a CDRSC major node.
- A DISPLAY ID command that specifies a model CDRSC.
- A DISPLAY CDRSCS command requesting information about cross-domain resources defined to this domain.

The message lists the resource name, its status, the name of the controlling CDRM, and the CDRSC's network ID.

VTAM repeats this message as many times as needed to list all the cross-domain resources in this major node, in this domain, or that were created from this model CDRSC.

cdrsname is name of the resource.

status is the status of the resource. See z/OS Communications Server: IP and SNA Codes for a description of *status*.

cdrmname is the name of the controlling CDRM. If the CDRM is not available, *cdrmname* will be ***NA***.

cdrscnetid is the network ID of *cdrsname*. If the NETID is not available, *cdrscnetid* will be ***NA***.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST484I **SUBAREA = subarea [GATEWAY CONTROL function_type]**

Explanation: VTAM issues this message as part of several different message groups in response to a DISPLAY ID command for information about a PU type 4, a DISPLAY ID,IDTYPE=RESOURCE or IDTYPE=DIRECTRY command for directory information for a logical unit, or a DISPLAY DIRECTRY command for directory information for a logical unit.

subarea is the subarea number of the resource (in decimal).

GATEWAY CONTROL function_type is displayed when the PU type 4 is gateway-capable and is in session with this host. *function_type* can be one of the following:

SHARED

Gateway functions are distributed between SSCPs.

EXCLUSIVE

Gateway functions are performed only by this SSCP.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST486I **STATUS= currentstatus, DESIRED STATE= desiredstate**

Explanation: VTAM issues this message as part of several different message groups in response to a DISPLAY ID , DISPLAY TRL, or DISPLAY TSouser command.

currentstatus is the current status of the node. See the z/OS Communications Server: IP and SNA Codes for a description of *currentstatus*.

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desiredstate is the node state that is desired. See the z/OS Communications Server: IP and SNA Codes for a description of *desiredstate*. If VTAM cannot determine the desired state, *desiredstate* will be *****NA*****.

System action: Processing continues.

Operator response: When the *currentstatus* and *desiredstate* values are both CONCT, no activation request has been received. CONCT is not an error state but a "ready for activation" state.

Contact the system programmer to activate the device.

System programmer response: Activate the device, as requested by the operator.

Routing code: 8

Descriptor code: 5

IST487I *command2* **FOR ID = nodename SCHEDULED BY** *command1*

Explanation: VTAM issues this message when *command2* has been scheduled for *nodename*. *command1* is responsible for scheduling *command2*. For example, explicit deactivation of a peripheral node will cause implicit deactivation of that node's LUs.

System action: Processing of *command2* continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST488I *command* **FOR ID = puname FAILED — DUPLICATE NODE:** *luname*

Explanation: VTAM rejected this VARY ACQ command because this domain already has an active resource named *luname*. VTAM cannot acquire physical unit *puname* until its logical unit *luname* has a unique name in this domain.

System action: VTAM rejects the command.

Operator response: Find the duplicate *luname* by entering a DISPLAY ID command for *luname*.

- If you cannot deactivate the major node containing this node because the major node is needed in the network, save the system log for problem determination.
- Otherwise, deactivate the duplicate *luname's* major node and reenter the VARY ACQ command.

If the problem continues, save the system log for problem determination.

System programmer response: If the resources with duplicate names are needed simultaneously, change the name of this domain's resource in both the NCP macros and the VTAM definition statements. This requires a partial NCP regeneration.

Routing code: 2

Descriptor code: 5

IST489I *command* **FOR ID = nodename CONTINUES – CANNOT DEFINE NODE:** *name*

Explanation: During processing of the *command*, VTAM determined that it cannot define *name* as a part of *nodename* for one of the following reasons:

- Adjacent control point *name* is not a valid node type.
- NCP frame relay switching equipment set (FRSESET) *name* has the same name as another FRSESET in this domain.
- Resource *name* contains one of the following errors:
 - *name* has the same name as another resource in this domain.
 - *name* has the same network address as another resource in this domain.
 - *name* has the same value for CPNAME as another resource in this domain.
 - *name* has the same value for LUALIAS as another resource in this domain.
 - *name* has the same values for IDBLK and IDNUM as another resource in this domain.

- *name* is in an NCP major node definition, and there is a CDRM definition with the same SUBAREA address as the NCP major node definition.
- *name* has a value for VNNAME that matches the value for CPNAME on a PU in this domain.
- *name* has a value for VNNAME that refers to an ADJCP for which VN=YES is not specified.
- *name* has the same transmission group number (TGN) as another resource in this domain.
- A pre-defined CDRSC is being activated when an MNPS application of the same name is already active on the node.
- Storage is not available to process the request.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

System action: Processing of *command* continues. However, VTAM cannot use *name*.

Operator response:

- This is usually a definition error. Enter a DISPLAY ID command for *name* to check for duplicate names. Save the system log for problem determination.
- If you cannot find a definition error, check for an insufficient storage problem by entering the DISPLAY BFRUSE command. Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

This message might be issued during session takeover processing. See the section on common APPN problems, the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for a description of session takeover problems.

This message might be issued while processing a VARY ACT command with the UPDATE=ALL option specified. The resource specified by *name* did not complete processing. Issue the command again to allow this resource to process completely.

System programmer response:

- If the definition failed because of a definition error, use the system log to assist you in correcting the problem. If there are duplicate operands on NCP and VTAM definition statements, you must change one or both of the duplicate statements if you want both resources to be defined at the same time. See the section on common subarea network problems, the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about this problem. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VNNAME definitions.
- If the definition failed because of insufficient storage, increase storage as required for the VTAM address space.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
 - See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, and the DISPLAY STORUSE command.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST490I *command2* FOR ID = *nodename* FAILED — *command1* IN PROGRESS

Explanation: Processing of *command1* causes VTAM to reject *command2* for *nodename* because *command1* takes precedence over *command2*. For example, the VARY REL command causes any subsequent VARY INACT for the same node to fail.

Note: If this message is displayed on a VARY ACT of an NCP with *command2* having the value **SSCP TKOVR** and *command1* having the value **INACT GVBK**, then the switched major node has not been activated before the NCP. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command1* and *command2*.

System action: Processing of *command1* continues, but VTAM rejects *command2*.

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Operator response: Monitor the progress of *command1* with DISPLAY commands. When *command1* processing has completed, enter the command required to achieve the desired network configuration or device.

In the above example, if you want *nodename* to be an active part of the network, enter a VARY ACQ command for *nodename* followed by a VARY ACT command for *nodename*. Save the system log for problem determination.

System programmer response: Check the system log to determine the series of commands that caused the problem.

Routing code: 2

Descriptor code: 5

IST493I *command1* FOR ID = *nodename* OVERRIDDEN BY *command2*

Explanation: VTAM issues this message when *command2* for *nodename* overrides *command1*. This occurs even if *command1* was entered first.

VTAM might have issued *command2* when it could not complete *command1*. For example:

- A VARY INACT,TYPE=IMMED command for a physical unit causes VTAM to reject a VARY REL command for the same device. The VARY INACT,TYPE=IMMED command is processed, and the VARY REL command is not executed, because the release processing is part of the deactivation processing.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for descriptions of *command1* and *command2*.

System action: Processing of *command2* continues. VTAM rejects *command1*.

Operator response: VTAM cannot process *command1* and *command2* concurrently. *command1* is always rejected. Check the system log to determine the reason for the sequence in which the two commands were entered.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST494I *command* FOR ID = *nodename* FAILED — ALREADY IN DESIRED STATE

Explanation: VTAM issues this message when the resource *nodename* was specified on the *command* but was already acquired in the desired state. For example, a VARY ACQ command was entered for *nodename* which specified a node that was already acquired.

System action: VTAM rejects the command.

Operator response: Ensure that *nodename* was entered correctly.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST495I *type* HAS BEEN SET TO *value*

Explanation: VTAM issues this message when one of the following occurs:

- The operator entered a MODIFY VTAMOPTS,CSALIMIT or a MODIFY CSALIMIT command and the value specified was above the system CSA limit or was 0. This message is part of a group of messages. The first message is either IST1665I or IST1666I. See the explanation of the first message in the group for a complete description.
- The operator entered the CSALIMIT start option and the value specified was above the system CSA limit. This message is part of a group of messages. The first message is IST1665I. See the explanation of the first message in the group for a complete description.
- The operator entered a MODIFY VTAMOPTS,CSALIMIT, a MODIFY VTAMOPTS,CSA24, a MODIFY CSALIMIT, or a MODIFY BFRUSE command and VTAM processed it successfully.
- The operator entered a MODIFY BFRUSE command and the XSPANLIM value specified was outside the acceptable range. See z/OS Communications Server: SNA Operation for more information about the MODIFY BFRUSE command.

type is one of the following:

- **CSALIMIT**, which indicates total CSA.
- **CSA24 LIMIT**, which indicates CSA below 24-bit addressable storage.
- **XPANLIM**, which indicates total IOBUF CSA usage.

value is one of the following:

- If *type* is CSALIMIT and the specified value was 0 or was above the system CSA limit, *value* is set to the system CSA limit. See the z/OS Communications Server: SNA Resource Definition Reference for more information about CSALIMIT and start options.
- If *type* is CSA24 LIMIT and the specified value was 0, *value* is NO LIMIT.
- If *type* is XPANLIM and the specified value was 0 or was above the system CSA limit, *type* is set to the VTAM CSA limit. If the specified value was less than the storage amount currently in use for the IOBUF pool, *type* is set to the current amount of storage in use. See the z/OS Communications Server: SNA Resource Definition Reference for more information about the XPANLIM parameter of the IOBUF start options.
- Otherwise, *value* is the value specified on the command in kilobytes.

System action: If this message is in response to a MODIFY VTAMOPTS command for CSALIMIT or CSA24, or a MODIFY CSALIMIT command, the use of CSA by VTAM will be limited to *value*.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST496E *function_name* FUNCTION INOPERATIVE DUE TO ABEND

Explanation: VTAM issues this message when several consecutive abnormal terminations have caused the VTAM function *function_name* to become inoperative.

function_name can be one of the following:

- **DYNAMIC CDRSC DELETION**
- **I/O RESPONSE MONITOR**
- **I/O RESPONSE TIMEOUT**

System action: Processing continues. The cause of the repeated abends might also result in the failure of other VTAM operations.

Operator response: Save the system log for problem determination.

- If *function_name* is **DYNAMIC CDRSC DELETION**, monitor the usage of dynamic cross-domain resources (CDRSCs) with the DISPLAY ID=ISTCDRDY,SCOPE=ALL command. Issue a VARY INACT command to delete CDRSCs that have no active sessions.
- If *function_name* is **I/O RESPONSE MONITOR**, monitor I/O response activity with the DISPLAY PENDING command.
- If *function_name* is **I/O RESPONSE TIMEOUT**, assess the importance of the pending I/O that is not receiving a response to determine whether VTAM should be restarted.

System programmer response: You can correct any resulting failures of VTAM operations individually, but you might have to halt and restart VTAM if there are too many failures.

Routing code: 8

Descriptor code: 3

IST499I DISK FUNCTIONS FOR *ncpname* NOT PERFORMED

Explanation: This message is the first in a group of messages that VTAM issues in response to one or both of the following:

- A VARY ACT command that specified LOADFROM, SAVEMOD, or DUMPLOAD for NCP *ncpname*
- A PCCU definition statement that specified LOADFROM, SAVEMOD, or DUMPLOAD for NCP *ncpname*.

IST507I • IST510I

A complete description of the message group follows.

IST499I DISK FUNCTIONS FOR *ncpname* NOT PERFORMED
IST523I REASON = *reason*

reason in message IST523I is one of the following:

LOAD NOT NECESSARY

The operator entered a VARY ACT command specifying LOAD=U. Because no load occurs, the functions are not set in NCP *ncpname*.

CCU NOT CORRECT LEVEL

NCP NOT CORRECT LEVEL

SSP NOT CORRECT LEVEL

The controller (CCU), NCP, or SSP does not support the function requested. An NCP release prior to NCP V5R2 cannot be loaded with the LOADFROM, SAVEMOD, or DUMPLOAD operands. These operands are valid only for NCP V5R2 or a later release.

System action: Activation continues. The LOADFROM, SAVEMOD, and DUMPLOAD operands are ignored.

Operator response:

- If VTAM issued this message in response to a VARY ACT command **and** *reason* is **LOAD NOT NECESSARY**, you must enter a VARY ACT command, specifying LOAD=YES if you want the new functions to be set in NCP *ncpname*.

For all other *reasons*, save the system log for problem determination.

- If you did not enter a VARY ACT command, notify the system programmer.

System programmer response: Ensure that the NCP, SSP, and CCU are at the correct level. To use the LOADFROM, SAVEMOD, and DUMPLOAD operands on the VARY ACT command, the NCP must be NCP V5R2 or a later release, and the SSP must be SSP V3R4 or a later release.

Routing code: 2

Descriptor code: 5

IST507I *name* NOT ACTIVE, TSO TRACE REQUEST IGNORED

Explanation: VTAM issues this message in the following situations:

- A MODIFY TRACE,TYPE=TSO command was entered to request a TSO/ VTAM TGET/TPUT/TPG trace for a user ID *name* that is not logged on to TSO/VTAM.
- A DISPLAY TRACES,TYPE=TSO command was entered, and TSO was not active. *name* is **TSO**.
- A DISPLAY TRACES,TYPE=TSO,ID=*name* command was entered, and the specified TSO user ID was not active.

System action: VTAM rejects the command. Other processing continues.

Operator response:

- If *name* is a TSO user ID, verify that the user ID is spelled correctly, and reenter the command.
- If *name* is **TSO**, verify that TSO is active, and start if necessary.

System programmer response: None.

Routing code: 2,8

Descriptor code: 4

IST510I ROUTE TEST *displayid* FAILED — ERS NOT DEFINED

Explanation: This message follows a message displaying route status when TEST=YES is specified on the DISPLAY ROUTE command, and the route display returns a status of UNDEFINED for all ERs in the display, indicating there are no ERs to test.

The display identification number *displayid* corresponds to the route display number in the previous message.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST511I TRACE REQUEST FAILED — *nodename* INVALID

Explanation: VTAM issues this message in response to a MODIFY TRACE command or TRACE start option. The trace that VTAM attempted for resource *nodename* failed because *nodename* does not exist or is not valid for the type of trace requested.

If the node name is CNMSTATE, this indicates that the communication manager (for example, NetView) is not active, but must be active for the trace requested to be successful.

System action: VTAM rejects the command.

Operator response: Ensure that you entered *nodename* correctly. If problems persist, verify that *nodename* is valid for the type of trace requested.

For information on the MODIFY TRACE command or TRACE start option, see z/OS Communications Server: SNA Operation.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST512I TRACE TERMINATED FOR NODE = *nodename* [ALSNAME = *alsname*]

Explanation: VTAM issues this message in response to a MODIFY NOTRACE command when VTAM has stopped the trace activity on resource *nodename*. If the SCOPE=ALL operand was specified on the command, VTAM also stops all traces on resources subordinate to *nodename*.

Note: If you specify or accept the default value BASE for the MSGLVL option, you receive this message twice if the resource is the host SSCP. See Appendix D, “Messages affected by the MSGLVL option,” on page 1205 for additional information.

ALSNAME = *alsname* is displayed if *nodename* is an independent LU. *alsname* is the name of the adjacent link station (ALS) over which LU *nodename* is traced.

System action: VTAM stops tracing *nodename*. Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST513I TRACE INITIATED FOR NODE *nodename* [ALSNAME = *alsname*]

Explanation: VTAM issues this message in response to a MODIFY TRACE command or a START command with the TRACE option when VTAM has successfully initiated trace activity for resource *nodename*. If the SCOPE=ALL operand was specified on the MODIFY TRACE command or EVERY was specified on the START command, VTAM initiates traces on all resources subordinate to *nodename*.

Note: If you specify or accept the default value BASE for the MSGLVL option, you receive this message twice if the resource is the host SSCP. See Appendix D, “Messages affected by the MSGLVL option,” on page 1205 for additional information.

ALSNAME = *alsname* is displayed if *nodename* is an independent LU. *alsname* is the name of the adjacent link station (ALS) over which LU *nodename* is traced.

System action: VTAM starts tracing *nodename*.

Operator response: None.

IST516I

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST516I DESTSUB ADJSUB TGN ER ER STATUS VR(S)

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY PATHTAB command. A complete description of the message group follows.

```
IST516I DESTSUB ADJSUB TGN ER ER STATUS VR(S)
IST517I destsa adjsa tgn er status vrlist
:
:
IST1454I count PATH(S) DISPLAYED
IST314I END
```

IST516I

Message IST516I is a header line for the display and identifies the type of information shown in the display.

IST517I

- VTAM issues message IST517I for each ER table entry to be displayed. It contains a user-defined list of the virtual routes that map to the explicit routes. It also contains the following information about explicit routes known to this host:

In the message text:

destsa

The destination subarea in which the listed explicit route terminates.

adjsa

The adjacent subarea through which the listed explicit route passes.

tgn

The transmission group number.

er

The explicit route number.

status

The current state of the listed explicit route as known to this host. For virtual routes that specify explicit routes with no table entry, the *status* value is UNDEF. (In this case, the value of *adj* is blank.)

Possible values are:

ACTIV1

The explicit route is active.

The explicit route has been defined to VTAM in a path definition set; the route is physically available to the network and has been activated by the node at the other end of the route. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route when the route is in this state.

ACTIV2

The explicit route is active.

The explicit route has been defined to VTAM in a path definition set; the route is physically available to the network, has been activated by the node at the other end of the route, and is in the process of being activated by this node. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route when the route is in this state.

ACTIV3

The explicit route is active.

The explicit route has been defined to VTAM in a path definition set; the route is physically available to the network and has been activated by this node or by both this node and the node at the other end of the route. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route when the route is in this state.

INACT

The VR is inactive.

The virtual route has been defined to VTAM in a path definition set, but is not currently active or is pending active. It will be automatically activated when it is needed for a session.

INOP

The ER is inoperative.

The explicit route has been defined to VTAM in a path definition set, but is not physically available to the network. That is, connectivity does not exist along the entire route. A route test (TEST=YES option) will fail, because the explicit route does not have physical connectivity.

PACT

The VR is pending active.

The virtual route has been defined to VTAM in a path definition set and is in the process of being activated by this node.

PDEFA

The ER is "pending definition—active".

The explicit route is physically available to the network, and activation has been attempted by the node at the other end of the route, but the route has not yet been defined to VTAM in a path definition set. The route is automatically activated by this node when an appropriate path definition set is processed. A route test (TEST=YES option) can succeed, even though the explicit route is not defined in this host. The purpose of the test is to provide information on the physical connectivity of the explicit route so that the operator can decide whether or not to define the route. In order for VTAM to carry session message traffic, the explicit route must be defined to VTAM.

PDEFO

The ER is "pending definition—operative".

The explicit route is physically available to the network, but it has not yet been defined to VTAM in a path definition set. A route test (TEST=YES option) can succeed, even though the explicit route is not defined in this host. The purpose of the test is to provide information on the physical connectivity of the explicit route so that the operator can decide whether or not to define the route. In order to be used by VTAM to carry session message traffic, the explicit route must be defined to VTAM.

UNDEF

The ER is undefined.

The explicit route has not been defined to VTAM in a path definition set and is not physically available to the network. A route test (TEST=YES option) will always fail, because the explicit route is neither defined to VTAM nor operative.

vrlist

The user-defined virtual route numbers that map onto the listed explicit route.

IST1454I

- In the message text:

count

The total number of paths displayed.

System action: Processing continues.

Operator response: The status might be used for information only or might indicate that operator action is necessary if any status does not meet expectations. In particular, a virtual route or an explicit route with a status of UNDEF might indicate that a path definition set should be activated. An explicit route with a status of INOP might indicate that a subarea node, a cross-subarea link, or a cross-subarea link station should be activated, or that there is some network problem with a node, link, or link station.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST517I *destsa adjsa tgn er status vrlist*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY PATHTAB command. The first message in the group is IST516I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST520I **UNABLE TO PROCESS** *runame* {REQ|RSP} [FROM *fromnetid*] [TO *tonetid*]

Explanation: This message is the first in a group of messages that VTAM issues in response to a lack of storage, the abnormal termination of a VTAM program, or an RU received out of sequence. A complete description of the message group follows.

- If the reason is insufficient storage or a VTAM program abend, the following message group is displayed.

```
IST520I UNABLE TO PROCESS runame {REQ|RSP} [FROM fromnetid] [TO tonetid]
[IST531I FROM SUBAREA = subarea, ELEMENT = element]
[IST531I TO SUBAREA = subarea, ELEMENT = element]
IST523I REASON = reason
```

- If the reason is an RU received out of sequence, the following message group is displayed.

```
IST520I UNABLE TO PROCESS runame {REQ|RSP} [FROM fromnetid] [TO tonetid]
IST1694I REASON = SEQUENCE NUMBER ERROR
IST314I END
```

IST520I

- *tonetid* cannot process the request or response unit (RU) *runame*. See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*. If *runame* is not in Chapter 16, "Command and RU types in VTAM messages," on page 1123, it is the 3-byte network services header of an RU preceded by a 1-byte category code.

The origin and destination of *runame* are identified by either their:

- Network names (*fromnetid* and *tonetid*) as displayed in message IST520I; or
- Network addresses (subarea address *subarea* and element address *element*) as displayed in message IST531I.

IST531I

VTAM will not display message IST531I if both **FROM** network name *fromnetid* and **TO** network name *tonetid* are known to VTAM. VTAM will display it once if one of the network names is unknown and twice if both of the network names are unknown. If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

IST523I

- The *reason* in message IST523I can be any of the following:

```
INSUFFICIENT STORAGE
VTAM PROGRAM ABEND
```

IST1694I

VTAM will display message IST1694I if the sequence number field in the TH of the RU is not the sequence number that VTAM expected.

System action: Processing continues. Because VTAM cannot process *runame*, other VTAM operations might fail.

Operator response: Save the system log for problem determination.

System programmer response: For REASON = INSUFFICIENT STORAGE

- Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.
- Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.

- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.

For REASON = VTAM PROGRAM ABEND

- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

For REASON = SEQUENCE NUMBER ERROR

- Investigate why *fromnetid* sent an RU out of sequence. If you suspect an ongoing problem, you can deactivate the session between *fromnetid* and *tonetid*. See the section on non-VTAM problems in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional problem determination actions.

Routing code: 8

Descriptor code: 4

IST521I GBIND {FAILED|QUEUED} FOR COS *cosname* [FROM *fromname*] [TO *tonetid*]

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

```
IST521I  GBIND {FAILED|QUEUED} FOR COS cosname [FROM fromname] [TO tonetid]
[IST531I  FROM SUBAREA = subarea,ELEMENT = element]
[IST531I  TO SUBAREA = subarea,ELEMENT = element]
[IST531I  VIA gatewayncp]
[IST531I  VIA SUBAREA gwsubarea]
IST528I  VIRTUAL ROUTE NUMBER vrlist
IST523I  REASON = reason
```

A generic BIND (ACTPU, ACTLU, ACTCDRM, or BIND) was queued or rejected because a virtual route was unavailable. An ACTPU, ACTLU, or ACTCDRM, sent by an SSCP to bind sessions, is queued if some virtual routes are defined, but not yet operative. Generic BINDs require virtual routes that are defined and operative, and that can be made active.

If a GBIND fails because no routes were activated, one or more virtual routes in the class of service (CoS) VR list (possibly modified by the virtual route selection exit routine) were defined and operative but could not be successfully activated (that is, either the virtual route itself or its associated explicit route could not be activated). This includes the case where the prospective session had a migration requirement for explicit route zero from the SLU to the PLU. This requirement could not be satisfied from the routes in the COS.

If a GBIND fails because no routes were operative, one or more virtual routes in the VR list were defined but not operative.

If a GBIND fails because no routes were defined, no routes in the VR list were defined. Likewise, certain GBINDs might be queued for the same reason, except that a GBIND will not be queued if no routes to the destination subarea are defined.

If a GBIND fails because of a VR selection-exit routine error, the virtual-route-selection exit routine modified the VR list from the COS to the extent that none of the exit-selected routes was usable. At least one virtual route identifier *vrlist* was outside the proper numeric bounds for a VR number (0–7) or transmission priority (0–2), or none of the virtual routes was defined.

The *vrlist* shown in message IST528I is a list of virtual route numbers (regardless of transmission priority) associated with the GBIND at the time of the queuing or failure. If failure occurs before, during, or as a result of the virtual route selection exit routine, the list is from the COS. Otherwise, the list will appear with any modifications made by the exit routine, if the exit routine is allowed modifications.

The origin and destination of the generic BIND are identified by one of the following:

- Network names (*fromname* and *tonetid*) as displayed in message IST521I
- Network addresses (subarea number *subarea* and element number *element*) as displayed in message IST531I

IST521I

- Gateway network name (*gatewayncp*) as displayed in message IST531I
- Gateway network address (subarea number *gwsubarea*) as displayed in message IST531I.

reason in message IST523I can be any of the following:

NO ROUTES DEFINED
NO ROUTES OPERATIVE
NO ROUTES ACTIVATED
VR SELECTION EXIT ERROR—UNDEFINED ROUTES
VR SELECTION EXIT ERROR—INVALID ROUTES

Notes:

1. VTAM will not issue message IST531I if both **FROM** network name *fromname* and **TO** network name *tonetid* are known to VTAM and provided in message IST521I. VTAM issues it once if one of the network names is unknown and twice if both of the network names are unknown. If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.
2. VTAM issues message IST531I specifying gateway information only if the failed or queued generic BIND was cross-network.

If the GBIND is an ACTCDRM for an SSCP in another network, VTAM issues message IST531I to specify the names of the gateway node (GWN) through which the ACTCDRM will be sent to the adjacent network when the virtual route to that gateway node (GWN) becomes available.

For a CDRM or CDRSC in another network, the gateway node name *gatewayncp* is given for the gateway node through which the bind request will be sent to the adjacent network. If the name of the gateway node is unknown, the subarea number of the gateway node is given.

COS is a designation of the path-control network characteristics, such as path security, transmission priority, and bandwidth, that apply to a particular session. If the Class of Service name *cosname* does not appear in message IST521I, VTAM used the default Class of Service entry.

System action: Processing continues, but the session setup either fails or awaits the availability of an applicable virtual route.

Operator response: If a route-activation failure caused a GBIND failure, VTAM issued previous messages to describe the route-activation failure. Correct the problem described in those messages. Re-attempt the GBIND by the SSCP or application program.

If a GBIND failure occurred because no routes were operative, use the DISPLAY ROUTE command, specifying TEST=YES, to test the applicable routes and determine where the outage is. Establish connectivity along the full length of the route.

If a GBIND failure occurred because no routes were defined, activate the appropriate path decks to define the applicable routes.

If VTAM issued IST531I to specify the name of a gateway node (GWN) through which VTAM will send the ACTCDRM to the adjacent network, and if a different GWN subsequently becomes available, use the VARY INACT command, followed by the VARY ACT command, to activate the CDRM through the newly available GWN.

Queuing of an SSCP session request might be normal if separate activation of network nodes or links or both is proceeding. If such other activations are not in progress, or if the GBIND remains queued for an extended period (indicated by subsequent appearances of message IST530I), a problem might exist. Route testing might be appropriate. Cancel the queued session request by deactivating the resource with which the SSCP was "binding" a session.

If a virtual-route-selection exit routine error caused a GBIND failure, either there is a programming error in that exit routine or the routes expected to be available to the exit routine have not been defined. If the former, halt VTAM and have the system programmer fix and replace the exit routine module. If the latter, activate the appropriate path decks to define the applicable routes.

System programmer response: If route definitions are the cause of the problem, supply the operator with the appropriate path decks. If the virtual-route-selection exit routine is the cause of the problem, fix it and reinstall the exit routine in VTAM.

For information about network routing, see the z/OS Communications Server: SNA Network Implementation Guide.

For information about VTAM routes, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 8

Descriptor code: 4

IST522I {ER|VR} *n* ACT {FAILED|REJECTED} SA *subarea1* TO SA *subarea2* [FOR TP*i*]

Explanation: This message is the first in a group of messages that VTAM issues for one of these conditions:

- A virtual or explicit route activation initiated by this VTAM node failed in the network.
- An activation request received from the network by this VTAM node was rejected.

A complete description of the message group follows.

IST522I {ER|VR} *n* ACT {FAILED|REJECTED} SA *subarea1* TO SA *subarea2* [FOR TP*i*]

IST523I REASON = *reason*

[IST524I REVERSE ER MASK = *ermask*]

[IST525I REJECTING SA *subarea3* USING TG *tg* ADJACENT SA *subarea4*]

Note: FOR TP*i* appears only when VR *n* appears.

For an explicit route activation:

IST522I

This message indicates that the activation was rejected if the reason for the failure is in this node, or indicates that the activation failed if some node along the route could not permit the activation.

n indicates the one or two-digit ER number.

subarea1 and *subarea2* are decimal subarea numbers specifying, respectively, the node that began the route activation and the node at the other end of the route.

IST523I

- This message indicates the problem in the rejecting node.
- *reason* might be one of the following:

A REQUIRED TG IS INACTIVE

A required transmission group (TG) is not active somewhere along the path of the route.

EXPLICIT ROUTE NOT DEFINED

The explicit route is not defined (in the forward direction).

EXPLICIT ROUTE NOT REVERSIBLE

A useable explicit route in the reverse direction cannot be found (because of an incompatible definition or no definition in the reverse direction).

EXPLICIT ROUTE LENGTH EXCEEDS MAXIMUM

The explicit route has a length in excess of the maximum possible length (that is, a routing loop exists).

MIGRATION NODE DOES NOT SUPPORT THIS ER

The adjacent subarea NCP or VTAM does not support extended subarea addressing and the explicit route being activated has an origin or destination subarea greater than 255, or an explicit route number greater than seven.

UNEXPECTED TYPE BYTE X'*nn*'

An unrecognizable failure code *nn* was received from the rejecting node.

IST524I

ermask is the reverse explicit route *mask* as received in an NC_ER_ACT or NC_ER_ACT_REPLY RU. This mask indicates the explicit route numbers for flow in the direction opposite the direction of ER *n*.

If the explicit route activation failed in the network, VTAM issues message IST525I, indicating the transmission group identifier (*tg*) at the point of rejection.

IST525I

IST522I

- *subarea3* is the subarea address of the network node rejecting the activation.
- *tg* is the number of the transmission group to or from an adjacent node.
- *subarea4* is the subarea address of the applicable adjacent node.

Note: The transmission group number or the subarea number of the adjacent node or both might be zero if these numbers are unknown to the rejecting node.

For a virtual route activation, messages IST522I, IST523I, and (sometimes) IST524I will appear.

Note: This message group will appear only once in a display, though multiple sessions might attempt to establish routing from *subarea1* to *subarea2*.

IST522I

n indicates the one-digit virtual route number.

subarea1 and *subarea2* specify, respectively, the node that began the route activation and the node at the other end of the route.

TPi is the transmission priority of the route activation.

IST523I

- This message indicates the problem in the rejecting node.
- *reason* might be one of the following:

ACTVR RESPONSE SENSE IS *sense*

The node that began the route activation sent the **REASON** information. See the z/OS Communications Server: IP and SNA Codes for additional information on sense codes.

UNDEFINED EXPLICIT ROUTE REQUESTED

The explicit route defined for use with the virtual route is undefined in this node.

INCORRECT EXPLICIT ROUTE REQUESTED

The node at the other end of the route specified one or more reverse explicit route numbers that are inconsistent with the route definitions in this node.

VIRTUAL ROUTE NOT DEFINED

The virtual route is not defined.

IST524I

ermask is the reverse explicit route *mask* as received in an NC_ER_ACT or NC_ER_ACT_REPLY RU. This mask indicates the explicit route numbers for flow in the direction opposite the direction of ER *n*.

System action:

- If this VTAM node rejected a route-activation attempt from another network node, processing continues with no effect on this node.
- If a route activation initiated by this node failed, then some other network node rejected the route-activation request. The failing host continues processing the generic BIND that caused the activation attempt, and places it on some other available route in its requested COS.
- If no routes are available, the generic BIND fails or is queued to wait for a usable route.

Operator response: For a route-activation indicated as FAILED:

- The problem is probably at the node that rejected the route-activation RU.
- If message IST525I is present, it identifies the rejecting node.
- If message IST525I is not present (as for a virtual route activation failure), the node at the far end of the route *subarea2* is the rejecting node.
- If an explicit route activation failed because it requires a currently inactive transmission group (TG) in order to complete the route's physical connectivity, the TG might be activated if the node containing the inactive TG is active or can be made active to this VTAM. Otherwise, call the operator of whatever host owns the node containing the inactive TG and request activation of the TG.
- If route activation failed because it is a migration ER0 that is not supported by VTAM, this is probably a route-definition error. Bring this to the attention of your system programmer.

For a route-activation indicated as REJECTED:

- If message IST522I indicates that his VTAM node rejected a route-activation RU, the problem is in this node. With the following exceptions, your system programmer will need to be informed. The exceptions are:
 - When an ER activation was rejected because the ER is not reversible.
 - When a VR activation was rejected because the VR is not defined. (An ER that is “not reversible” either is not defined or is incompatibly defined in the reverse direction, that is, in the direction from the rejecting VTAM node issuing this message to the node originating the ER activation.)

In these cases, an appropriate path definition set might be activated to cause the applicable route to become properly defined.

System programmer response: The information in this group of messages is basically that which appears in the NC_ER_ACT, NC_ER_ACT_REPLY, or NC_ACTVR request units, or the sense information that might appear in the NC_ACTVR response unit.

If this host rejected a virtual route's activation because an incorrect explicit route was requested, you might not be able to resolve the problem. The situation is one of the following:

- The explicit route for the subject virtual route is defined on a physical path different from that defined at the other end of the route (that is, inconsistent route definitions).
- The applicable path deck has only recently been activated, and the other end of the route has tried to activate a virtual route before being notified of one or more new explicit route definitions. Because this is a timing problem, there is no action that you can take. The next attempt to activate the virtual route should succeed.

Routing code: 8

Descriptor code: 4

IST523I REASON = *reason*

Explanation: This message is part of several message groups. See the explanation of the first message in the group for a complete description.

Routing code: 8

Descriptor code: 4

IST524I REVERSE ER MASK = *ermask*

Explanation: This message is part of a group of messages. The first message is IST522I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 4

IST525I REJECTING SA *subarea3* USING TG *tg* ADJACENT SA *subarea4*

Explanation: This message is part of a group of messages. The first message is IST522I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 4

IST526I ROUTE FAILED FROM *subarea1* TO *subarea2* — DSA *destsubarea* — NETID *netid*

Explanation: A transmission group between subarea number *subarea1* and subarea number *subarea2* has become inoperative. *destsubarea* is the subarea number of the destination of the route in network *netid*.

System action: Processing continues. VTAM terminates all sessions using this explicit route. An affected session might be reinitiated by the session partners if alternate routes are available to them.

Operator response: If the outage is the result of physical failure, save the system log for problem determination. If the outage is a result of some operator action in the network and was not expected, contact the operators controlling the reporting node or its adjacent node or both, to coordinate your actions.

IST528I • IST530I

Note: If the system programmer requests more information about a certain explicit route, you can supply it by issuing the DISPLAY ROUTE,TEST=YES command, specifying either *subarea1* or *subarea2* (whichever is appropriate) as the destination subarea number. If the virtual route numbers affected by this outage and the number of the transmission group number are desired, you can obtain that information by issuing the DISPLAY ROUTE,TEST=YES command, specifying *destsubarea* as the destination subarea number. If only the virtual route numbers are desired, the TEST=YES operand can be omitted.

System programmer response: If a network failure is involved, repair the network and restore the route.

Routing code: 2

Descriptor code: 5

IST528I VIRTUAL ROUTE NUMBER *vrlist*

Explanation: This message is part of a group of messages. The first message is IST521I, IST744I, or IST746I. See the explanation of those messages for a full description.

Routing code: 8

Descriptor code: 4

IST529I VR SELECTION EXIT *reason* [AND IS NOW INACTIVE]

Explanation: The virtual-route-selection exit routine has terminated.

reason can be one of the following:

ABENDED WITH CODE *code*

The VR exit selection subtask, ISTPUCX0, abnormally terminated with hexadecimal abend code *code*. See the z/OS MVS System Codes for more information.

EXCEEDED ABEND THRESHOLD

The VR exit selection subtask, ISTPUCX0, abnormally terminated more than four times in less than four minutes.

REQUESTED TERMINATION

The exit routine requested its own termination by specifying a nonzero return code when it returned control to VTAM.

IS NOT OPERATIVE DUE TO A LACK OF STORAGE

The exit routine became inoperative because of a lack of storage.

System action: Processing continues. If the exit routine has abended but has not exceeded its abend threshold, VTAM reinstates the exit routine. If the abend threshold was exceeded or the exit routine requested termination, VTAM stops using the exit routine and performs virtual route selection for session requests strictly on the basis of the requested Class of Service.

Operator response: Save the system log for problem determination.

System programmer response: If the virtual route selection exit routine abended, there is probably a programming error in the exit routine. You can replace the exit routine with the corrected version by using the MODIFY EXIT command. See z/OS Communications Server: SNA Operation for information on the MODIFY EXIT command.

If the exit routine requested its own termination, there might be a programming error.

Routing code: 8

Descriptor code: 4

IST530I *runame* PENDING FROM *fromnetid* TO *tonetid* FOR *fornodename*

Explanation: This message is the first in a group of messages that VTAM issues when the request unit (RU) *runame* has been pending on the resource *fornodename* for a period of time without receipt of a corresponding response unit. A complete description of the message group follows.

```

IST530I  runame PENDING FROM fromnetid TO tonetid FOR fornodename
[IST531I  FROM SUBAREA = subarea, ELEMENT = element]
[IST531I  TO SUBAREA = subarea, ELEMENT = element]
IST1051I EVENT CODE = code
IST1062I EVENT ID = eventid

```

Note: If *runame* remains outstanding for subsequent intervals, these messages will be repeated at such intervals until *runame* is received or until the request unit is purged.

IST530I

- *runame* is the request unit (RU) that is pending. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *runame*.
- The origin and destination of *runame* are identified by one of the following:
 - Network names (*fromnetid* and *tonetid*) as displayed in this message.
 - Network addresses (subarea number *subarea* and element number *element*) as displayed in message IST531I.

IST531I

VTAM will not issue this message if both **FROM** network name *fromnetid* and **TO** network name *tonetid* are displayed in this message.

VTAM will display this message once if one of the network names is unknown and twice if both of the network names are unknown.

If the subarea and element addresses are unknown, VTAM issues either **0** or ***NA*** in place of the address.

IST1051I

code is an event code that identifies which format of event ID is being displayed. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

IST1062I

eventid is an internal VTAM identifier of the pending request. See the z/OS Communications Server: IP and SNA Codes for a description of *eventid*.

System action: Processing continues, awaiting the corresponding response unit.

Operator response: This message group indicates that a problem might exist. The longer an RU remains outstanding (that is, the more often these messages reappear for the same RU), the more probable it is that a problem exists.

If a particular RU remains outstanding for an extended period of time, display the node for which the I/O is pending, and save the system log for problem determination.

If *runame* is **CHAR CODED**, this message group indicates that VTAM sent a USSMSG to the LU and is waiting for a response. To correct the situation, enter a VARY INACT command for the resource *fornodename* and then enter a VARY ACT for the same resource.

You can use the MODIFY IOPD command to change the time-out interval controlling the display of this message. See z/OS Communications Server: SNA Operation for additional information.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for corrective actions for the common problems.

- If *runame* is **CD DSEARCH**, this message group might indicate one of the following problems:
 - A low IOINT value and no ADJSSCP table values were coded.
 - The DYNASSCP start option and the ADJSSCP table are not properly tuned.
- If *runame* is **CHAR CODED**, this message group indicates that VTAM sent a USSMSG to the LU and is waiting for a response. This is usually a device problem. A frequent cause of this error is when a user powers off the terminal without logging off first. To correct the situation, enter a VARY INACT command for the resource *fornodename* and then enter a VARY ACT for the same resource.
- If *runame* is **GUNBIND** and the message is received at log off time in a cross domain environment, this message group indicates that one of the following probably occurred:
 - The application did not issue a CLSDST macro.
 - The device sent an incorrect response or no response to the UNBIND RU.

IST531I • IST533I

- If *runame* is NMVT, this message group might indicate that the device is not real-time-monitor-capable. This means that the device did not process the response and return the requested information properly to the NetView program for most devices, or to the RS/6000[®] network management program for RS/6000 devices. A microcode change is needed to permanently resolve this problem.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the wait procedure.

Routing code: 8

Descriptor code: 4

IST531I **{{FROM|TO} SUBAREA = subarea, ELEMENT = element | VIA gatewaynetid | VIA SUBAREA gwsubarea}**

Explanation: VTAM issues this message as part of a message group. See the explanation of the first message in the group for a complete description.

Routing code: 8

Descriptor code: 4

IST533I **ER er {SUCCEEDED|FAILED} IN ROUTE TEST routetest**

Explanation: This message is the first of a group of messages. A complete description of the message group follows.

```
IST533I ER er {SUCCEEDED|FAILED} IN ROUTE TEST routetest
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST644I originpu TG [adjnode] destpu
IST534I originsa [tg1] [adjsa] destsa erlength
[IST798I netid ]
[IST572I REJECTING TG ADJACENT ER MASK]
[IST816I rejsa tg2 rejadjsa ermask]
IST523I REASON = reason
```

VTAM performed a route test on an explicit route, *er*. VTAM receives the results of the route test and displays the information in this message group. A route test and its results were **unsolicited** if the route test number *routetest* (in message IST533I) is zero. Otherwise, they were **solicited** as a result of a DISPLAY ROUTE command in which the TEST=YES option was specified. For the solicited route test, *routetest* is the route test number that corresponds to the route status display number in the message IST535I group (which should have already been displayed as a result of the DISPLAY ROUTE command).

The explicit route, *er*, that succeeded or failed in the route test:

- Originated in node *originpu*, subarea number *originsa*, in network *netid*. If name of the origin physical unit is not available, *originpu* will appear as *****NA***** (not available).
 - *originpu* is the node specified by the ORIGIN operand of the DISPLAY ROUTE command or used by default.
 - *netid* is displayed. It is the network ID specified either by the NETID parameter of the DISPLAY ROUTE command or in the NETID start option (during initialization of VTAM).
- Flowed through adjacent node *adjnode*, subarea number *adjsa*. *tg1* is the transmission group number defined to the link to the adjacent subarea, *adjsa*.
 - If the route test was unsolicited, the adjacent node does not pertain to the flow and, therefore, *adjnode*, *adjsa*, and *tg1* will not be displayed. If the node name is not known, *adjnode* will be displayed as *****NA***** (not available).
- Was destined for node *destpu*, subarea number *destsa*.
 - *destsa* is the destination subarea number specified by the DESTSUB operand of the DISPLAY ROUTE command. If the node name has not been defined for it, *destpu* will be displayed as *****NA***** (not available).

erlength is the length of the explicit route in terms of the number of transmission groups traversed during the test.

An explicit route completes a route test successfully if the route test request is successfully forwarded to and returned from the other end of the route. In order for this to occur, a physical connection must exist along the entire length of the route, with proper route definitions in each intermediate node and in the end node.

If the explicit route failed in the test:

- It was rejected by the node with subarea number *rejsa*, adjacent to subarea number *rejadjsa* through transmission group number *tg2*. *rejadjsa* or *tg2* or both might be zero if they are not known to the rejecting node.
- *ermask* is a hexadecimal 4-digit mask representing operative routes in the direction opposite the direction of the explicit route *er*. The first 8 bits represent ERs 0–7. If mask is 0, the ER is not reversible.
- It was rejected for one of the following values of *reason*:

A REQUIRED TG IS INACTIVE

The explicit route requires a transmission group that is not currently active somewhere along the path of the route.

ER EXCEEDS MAXIMUM LENGTH

The explicit route had a length in excess of the maximum possible length (that is, a routing loop might exist).

ER NOT DEFINED

The explicit route was not defined in the forward direction.

ER NOT REVERSIBLE

The explicit route was not reversible because of an incompatible definition or no definition in the reverse direction.

MIGRATION ER NOT SUPPORTED

A migration node was encountered. Migration nodes do not support ER or VR protocols. ER0 cannot be used.

MIGRATION NODE DOES NOT SUPPORT THIS ER

The adjacent subarea NCP or VTAM does not support extended subarea addressing and the explicit route being activated has an origin or destination subarea greater than 255, or an explicit route number greater than seven.

MIGRATION NODE ENCOUNTERED

A migration node was encountered. Migration nodes do not support ER or VR protocols. ER0 can be used.

UNEXPECTED TYPE BYTE X'nn'

a reason code, *nn* (expressed in hexadecimal), was received from the rejecting node, and VTAM does not recognize that reason code.

The following is an illustration of a typical route failure:

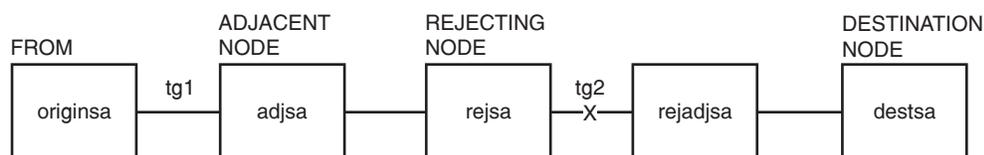


Figure 3. Typical route failure

Note: Messages IST572I and IST816I do not appear for a route test that completed successfully.

System action: Processing continues, regardless of the route-test results, with no effect on this host.

Operator response: If the explicit route completed the route test successfully, VTAM can use the route for routing session message traffic (provided the explicit route and an associated virtual route are defined to VTAM). No operator response is necessary unless route definitions are required, in which case the appropriate path definition sets can be activated.

If the explicit route failed the route test, an operator response might not always be necessary, but in order for VTAM to carry session message traffic on this explicit route, it must be properly defined to VTAM and all nodes on the route must support the explicit and virtual route protocols. The route-status display (message group IST535I corresponding to *routetest*) lists the defined or undefined status of the explicit route in this host.

If the explicit route failed the route test because of an inactive transmission group:

- You can activate the links connecting the rejecting subarea *rejsa* to its adjacent node of subarea *rejadjsa*.
- If the problem node is not in your host, you might need to call the operator of the other domain or host to activate the nodes.

IST534I • IST535I

- If the test had been unsolicited and the originating node is from another host, this might indicate a request that you activate the nodes so that this other host can attempt some session traffic activities on that route.

System programmer response: The information in this group of messages is basically that which appears in the NS_ER_TESTED request unit. See the description of the explicit route test process and its associated RUs in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures. For more information on the DISPLAY ROUTE command, see z/OS Communications Server: SNA Operation. Most problems will be the result of inconsistent route definitions among the affected network nodes.

Routing code: 8

Descriptor code: 5

IST534I *originsa [tg1] [adjsa] destsa erlength*

Explanation: This message is part of a group of messages. The first message is IST533I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST535I **ROUTE DISPLAY** *requestid* **FROM SA** *subarea1* **TO SA** *subarea2*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ROUTE command. A complete description of the message group follows.

```
IST535I  ROUTE DISPLAY requestid FROM SA subarea1 TO SA subarea2
IST808I  ORIGIN PU = originpu DEST PU = destpu NETID = netid
IST536I  VR TP      STATUS  ER      ADJSUB  TGN      STATUS    CUR   MIN   MAX
IST537I  [vr][tp]  [vrstatus] [er]    [adjsa] [tgn]   [erstatus] [cur] [min] [max]
:
IST314I  END
```

These messages contain virtual route and explicit route status for routes to the destination subarea *subarea2*. If the explicit route test option (TEST=YES) was requested, the results of actual tests of the applicable explicit routes will appear in subsequent messages.

IST535I

The route display number *requestid* in message IST535I is a request identification number, which also appears in any subsequent messages (resulting from the TEST=YES option) that are derived from the same DISPLAY ROUTE command. *subarea1* is the subarea address of the node from which the route status is being reported; *subarea2* is the subarea address of the destination node.

IST808I

- Message IST808I indicates the node names of the origin PU (*originpu*) and destination PU (*destpu*), and the network ID (*netid*).

If the destination subarea (DESTSA) has not been defined in the PATH definition statement, *destpu* will appear as ***NA*** (not available).

IST536I

Message IST536I is a header line identifying columns of data in subsequent occurrences of message IST537I.

IST537I

- For the virtual route identified by:

vr virtual route number and

tp transmission priority,

- message IST537I identifies:

vrstatus

The current status of that virtual route transmission priority pair

er The number of the explicit route onto which that virtual route is mapped

adjsa The subarea number of the adjacent node through which the explicit route leaves the origin node

tn The transmission group number

erstatus
The status of the explicit route.

The following fields will also be included if the VR STATUS *vrstatus* is ACTIV.

cur
The current window size of the virtual route

min
The current minimum window size of the virtual route

max
The current maximum window size of the virtual route.

Note: The default minimum and maximum window sizes that are coded in the PATH definition deck are not included in this display.

If the ORIGIN operand was specified on the DISPLAY ROUTE command with a name other than ISTPUS or the name specified on the HOSTPU start option in this host, the *cur*, *min*, and *max* window sizes reflecting the origin subarea VR information are not available and will not be displayed.

If the COSNAME operand was specified in the DISPLAY ROUTE command, message IST537I will appear in the same order as in the COS table entry. If a virtual route display or an explicit route display was requested, these messages will appear in numeric order by virtual route number (*vr*).

If an explicit route display was requested in the DISPLAY ROUTE command and there are no virtual routes defined to use a given explicit route, all the virtual route information (*vr*, *tp*, and *vrstatus*) for that explicit route will be blank. If a virtual route display or a COS display was requested in the DISPLAY ROUTE command and a given virtual route has not been defined to VTAM, all the explicit route information (*er*, *adjsa*, and *erstatus*) for that virtual route will be blank. *adjsa* will be blank for any explicit route with a status of UNDEF.

The *vrstatus* field in message IST537I might contain any of the following values:

ACTIV

The VR is active.

The virtual route has been defined to VTAM in a path definition set. It has been successfully activated. It is in use by one or more sessions.

BLCKD

The VR is blocked.

The virtual route has been defined to VTAM in a path definition set and it has been successfully activated. It is in use by one or more sessions, but congestion has been detected along the route.

PACT

The VR is pending active.

The virtual route has been defined to VTAM in a path definition set and is in the process of being activated by this node.

PINAC

The VR is pending inactive.

The virtual route has been defined to VTAM in a path definition set and has recently been active, but is now in the process of being deactivated by this node. Unless VTAM is halting, the VR will be automatically reactivated when it is again needed for a session.

INACT

The VR is inactive.

The virtual route has been defined to VTAM in a path definition set, but is not currently active or is pending active. It will be automatically activated when it is needed for a session.

IST535I

UNDEF

The VR is undefined.

The virtual route has not been defined to VTAM in a path definition set.

The *erstatus* field in message IST537I might contain any of the following values:

ACTIV1

The ER is active.

The explicit route has been defined to VTAM in a path definition set, is physically available to the network, and has been activated by the node at the other end of the route. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

ACTIV2

The ER is active.

The explicit route has been defined to VTAM in a path definition deck, is physically available to the network, has been activated by the node at the other end of the route, and is in the process of being activated by this node. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

ACTIV3

The ER is active.

The explicit route has been defined to VTAM in a path definition set, is physically available to the network, and has been activated by this node or by both this node and the node at the other end of the route. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

MIGR

The ER is active (but only for limited function, migration use).

The explicit route has been defined to VTAM in a path definition set and is believed to be physically available to the network. During activation processing, it was determined that one or more nodes along the route do not support the explicit route protocols. A route test (TEST=YES option) will probably fail, because one or more of its nodes does not support explicit route protocols. This does not mean that the physical connectivity of the route has failed. It only means that the route could not be completely tested because of the migration nodes.

PACT

The ER is pending active.

The explicit route has been defined to VTAM in a path definition set, is physically available to the network, has not been activated by the node at the other end of the route, and is in the process of being activated by this node. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

INACT

The ER is inactive.

The explicit route has been defined to VTAM in a path definition set and is physically available to the network, but has never been successfully activated. Activation will be attempted automatically when the ER is needed for a session. A route test (TEST=YES option) should succeed, because physical connectivity exists along the entire route in this state.

INOP

The ER is inoperative.

The explicit route has been defined to VTAM in a path definition set, but is not physically available to the network. That is, connectivity does not exist along the entire route. A route test (TEST=YES option) will fail, because the explicit route does not have physical connectivity.

PDEFA

The ER is pending definition—active.

The explicit route is physically available to the network, and activation has been attempted by the node at the other end of the route, but the route has not yet been defined to VTAM in a path definition set. The route is automatically activated by this node when an appropriate path definition set is processed. A route test (TEST=YES option) can succeed, even though the explicit route is not defined in this host. The purpose of the

test is to provide information on the physical connectivity of the explicit route so that the operator can decide whether or not to define the route. In order for VTAM to carry session message traffic, the explicit route must be defined to VTAM.

PDEFO

The ER is pending definition—operative.

The explicit route is physically available to the network, but it has not yet been defined to VTAM in a path definition set. A route test (TEST=YES option) can succeed, even though the explicit route is not defined in this host. The purpose of the test is to provide information on the physical connectivity of the explicit route so that the operator can decide whether or not to define the route. In order to be used by VTAM to carry session message traffic, the explicit route must be defined to VTAM.

UNDEF

The ER is undefined.

The explicit route has not been defined to VTAM in a path definition set and is not physically available to the network. A route test (TEST=YES option) will always fail, because the explicit route is neither defined to VTAM nor operative.

System action: Processing continues. If the DISPLAY ROUTE command specified TEST=YES, subsequent messages (with route display number *rtn* being the same as the one appearing in message IST535I) will indicate whether VTAM started any route tests and, if so, their results (as the results are received from the network).

Operator response: The status might be used for information only, or might indicate that operator action is necessary if any status does not meet expectations. In particular, a virtual route or an explicit route with a status of UNDEF might indicate that a path definition set should be activated. An explicit route with a status of INOP might indicate that a subarea node, a cross-subarea link, or a cross-subarea link station should be activated, or that there is some network problem with a node, link, or link station.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST536I VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX

Explanation: This message is part of a group of messages. The first message of the message group is IST535I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST537I [vr][tp] [vrstatus] [er] [adjsa] [erstatus] [cur] [min] [max]

Explanation: This message appears as part of a group of messages. The first message of the message group is IST535I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST538I ROUTE TEST *routetest* IN PROGRESS

Explanation: This message follows the group of messages starting with message IST535I if the DISPLAY ROUTE command indicated TEST=YES and no error occurred preventing the ER test. The display identification number *routetest* is passed in the ROUTE TEST RU and will be used to associate asynchronously received ER test results with the original DISPLAY ROUTE command.

System action: Processing continues. The ROUTE TEST RU indicated that ER testing is to be performed. Processing of the ER test is occurring asynchronously. VTAM will display the results of this testing in the messages that follow this one as the tests are completed.

Operator response: None.

System programmer response: None.

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Routing code: 8

Descriptor code: 5

IST539I DISPLAY ROUTE COMMAND FAILED, COS CANNOT BE RESOLVED

Explanation: VTAM issues this message if COSNAME was specified on a DISPLAY ROUTE command and VTAM could not find the virtual route list associated with the specified COSNAME.

System action: VTAM completes execution of the DISPLAY command.

Operator response: Ensure that you entered the COSNAME correctly. If problems persist, save the system log for problem determination.

System programmer response: If necessary, update the COS table to reflect the desired COSNAME.

Routing code: 8

Descriptor code: 5

IST540I DISPLAY ROUTE COMMAND FAILED, SENSE = *code*

Explanation: VTAM issues this message if it encountered an error during the processing of the DISPLAY ROUTE command.

code is the sense code and indicates the reason for the error. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the system log and meaning of *code* to assist you in determining the cause of the failure.

Routing code: 8

Descriptor code: 5

IST541I FOLLOWING PATH DEFINITION IS IGNORED

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

```
IST541I FOLLOWING PATH DEFINITION IS IGNORED
IST544I PATH list
IST523I REASON = reason
```

VTAM ignores the path definition indicated in message IST544I.

list can be either of the following:

VRn = *ern*, **DESTSA** = *destsubarea*

ERn = *adj, tgn* **DESTSA** = *destsubarea*

adj is the adjacent subarea number.

destsubarea is the destination subarea number.

ern is the explicit route number.

tgn is the transmission group number.

reason can be one of the following:

•

INSUFFICIENT STORAGE

There is insufficient storage to build a table entry recording the existence of the route.

ER ALREADY DEFINED

The explicit route indicated is already defined in the same way as it is now defined in the current path definition statement.

VR ALREADY DEFINED

The virtual route indicated is already defined in the same way as it is now defined in the current path definition statement.

ER MAY NOT BE REDEFINED

The path definition attempts to redefine an explicit route that is not in a redefinable state (the route is active).

VR MAY NOT BE REDEFINED

The path definition attempts to redefine a virtual route that is not in a redefinable state (the route is active).

System action: If the route described is not already defined, it will not be usable.

Operator response: Save the system log for problem determination.

System programmer response: If insufficient storage is a recurring problem, you might need to increase the size of the appropriate buffer pool as determined by the output from the DISPLAY BFRUSE command.

Have the operator cancel nonessential jobs or deactivate an unused part of the network to prevent further losses. VTAM might have to be halted and restarted with increased storage.

If the route is already defined and you meant to change that definition, check the path specification for errors.

Routing code: 8

Descriptor code: 5

IST542I INVALID DESTSA *destsubarea* FOR PATH DEFINITION — IGNORED

Explanation: VTAM issues this message when destination subarea value *destsubarea* is not valid because it is greater than the maximum subarea number supported by a network to which this VTAM host is interconnected. The maximum subarea number is the value specified on the MXSUBNUM start option.

System action: The destination subarea value *destsubarea* is ignored. The entire path definition will be ignored if *destsubarea* is the only destination subarea value coded.

Operator response: Save the system log for problem determination.

System programmer response: If a path to destination subarea *destsubarea* is desired, change the maximum subarea number by modifying the MXSUBNUM start option. You must restart VTAM to use the new value of MXSUBNUM. See the z/OS Communications Server: SNA Resource Definition Reference for a description of this start option.

See the z/OS Communications Server: SNA Resource Definition Reference for information about VTAM start options and their equivalent ISTRACON fields.

Routing code: 8

Descriptor code: 5

IST543I PATH *list* IS REDEFINED AS FOLLOWS

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

IST543I PATH *list* IS REDEFINED AS FOLLOWS

IST544I PATH *list*

A route is being redefined as a result of a VARY ACT command for a path definition. Explicit routes are redefined to go through either a different adjacent subarea or transmission group, or both. Virtual routes are redefined to map onto a different explicit route.

list can be either of the following:

VRn = *ern*, **DESTSA** = *destsubarea*

ERn = *adj*, *tgn* **DESTSA** = *destsubarea*

adj is the adjacent subarea number.

destsubarea is the destination subarea number.

ern is the explicit route number.

tgn is the transmission group number.

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System action: The route indicated has been redefined.

Operator response: None. If you want to restore the old path, you can activate a path table in which the old path is defined.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST544I PATH *list*

Explanation: This message is part of a group of messages. The first message is either IST541I or IST543I. See the explanation of the first message in the group for a complete description.

Routing code: 8

Descriptor code: 5

IST546I UNABLE TO PROCESS ER OP REPORT TO DESTINATION SA *destsubarea*

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

IST546I UNABLE TO PROCESS ER OP REPORT TO DESTINATION SA = *destsubarea*
IST547I EXPLICIT ROUTE MASK *ermask*
IST523I REASON = *reason*

A request unit attempted to report explicit routes as operative to destination subarea *destsubarea*. Processing failed because of the reason designated by message IST523I.

reason can be any of the following:

INSUFFICIENT STORAGE

There was insufficient storage for VTAM to process the request.

INVALID ADJACENT SUBAREA *destsubarea*

Subarea *destsubarea* is greater than the maximum number allowed or is equal to the host subarea.

INVALID DESTINATION SUBAREA *destsubarea*

Subarea *destsubarea* is greater than the maximum number allowed or is equal to the host subarea.

Message IST547I designates the explicit routes with a *ermask* of 4 hexadecimal digits (16 bits). The first bit of the mask indicates ER0, the second bit indicates ER1, and so on.

System action: Processing continues. Because VTAM cannot process the request to make the reported routes operative, subsequent failures of certain VTAM operations might occur.

Operator response: Save the system log for problem determination. If the reason is insufficient storage, enter the DISPLAY BFRUSE and DISPLAY STORUSE commands.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 8

Descriptor code: 4

IST547I EXPLICIT ROUTE MASK *ermask*

Explanation: This message is part of a group of messages. The first message is IST546I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 4

IST548I *command* FAILED *linkstation subarea1,nodename1 subarea2,nodename2*

Explanation: The *command* for *linkstation* failed because of a mismatch between information received in the CONTACTED (LOADED) RU and the information the SSCP already had about the contacted adjacent node. The adjacent node in the SSCP table (the subarea or name from the CONTACTED RU) is not a PU type 4, or the subarea or name in the RU does not match the subarea defined to VTAM.

subarea1 and *nodename1* are taken from the RU. *subarea2* and *nodename2* are taken from the definitions defined to VTAM. In either case, if the name of the adjacent node is not available then *****NA***** will be displayed. This can occur if the RU does not have a name field or if VTAM knows the adjacent node only by subarea and not by name.

System action: The link station is deactivated.

Operator response: If the name value is supplied and valid, use the DISPLAY ID command to display the nodes. Also enter a DISPLAY STATIONS command. Save the system log for problem determination.

System programmer response: There are two distinct nodes in the network with the same name or subarea. Identify the one in error and correct it.

Routing code: 2

Descriptor code: 4

IST549I LL2 TEST FOR ID = *name* ENDED *result*

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY command. A complete description of the message group follows.

IST549I LL2 TEST FOR ID = *name* ENDED *result*
 IST243I FRAMES SENT = *sent*, RCVD = *received*, RCVD WITHOUT ERRORS = *noerrors*

The MODIFY LL2 command requests a link level 2 test to *name* be initiated.

result can be one of the following:

DUE TO A LINK INOP

The test was terminated prematurely because of a failure in the link to which *name* is attached.

DUE TO A TEST INIT ERROR

The test initialization procedure failed because the ERP limit expired while the link station was waiting for a response to the initial test command. In this case, *sent*, *received*, and *noerrors* will be all zeroes. This might occur over a link connecting two NCPs if both NCPs attempt to initiate link level 2 tests simultaneously for that link.

SUCCESSFULLY

Valid responses were received for the requested number of TEST commands.

WITH ERRORS

The test results contain errors. See the following explanation for *noerrors*.

Message IST243I contains counts of the number of SDLC TEST commands and responses that are sent and received.

sent is the number of test commands sent.

received is the number of command responses received.

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noerrors is the number of command responses received that contained the user-supplied data intact (unchanged). If no data errors occurred, this number will equal *received*. If this number is less than *received*, a data error occurred.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST561I STORAGE UNAVAILABLE: *bp* BUFFER POOL

Explanation: A VTAM request for storage from the buffer pool *bp* could not be satisfied because there was not enough available storage in the buffer pool.

bp is the name of the buffer pool. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.

System action: The action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on VTAM.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE and MODIFY VTAMOPTS commands.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

Routing code: 2

Descriptor code: 5

IST562I STORAGE UNAVAILABLE: *type* REACHED

Explanation: A VTAM request for storage from the common service area (CSA) could not be satisfied. Doing so would exceed the CSALIMIT or CSA24 limit start option values.

type is one of the following:

- **CSALIMIT**
 - If the CSALIMIT start option was set with the MODIFY CSALIMIT command, the storage allocation request would exceed the value specified for CSALIMIT.
 - If the CSALIMIT start option was set in the VTAM start list, the storage allocation request would exceed the value specified for CSALIMIT, and CSA plus ECSA usage would exceed 75% of the total system CSA plus system ECSA specified in the system parameters in the sys1.parmlib IEASYSxx, where the system CSA and system ECSA are specified.
 - If the CSALIMIT start option was not specified, the storage allocation request would cause VTAM to use more than 90% of the total system CSA plus system ECSA storage.
- **CSA24 LIMIT**
 - If the storage allocation request explicitly specified 24-bit addressable storage, the CSA24 start option limit would be exceeded.
 - If the CSA24 start option was not specified, the VTAM allocation of 24-bit addressable CSA would exceed the maximum available 24-bit addressable storage.

System action: The action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on VTAM.

Operator response: Issue the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

Note: If you receive a large number of **CSALIMIT is reached** messages, use the MODIFY VTAMOPTS or MODIFY CSALIMIT command to increase **CSALIMIT** as soon as possible. The command might not work if the processing continues until the VTAM LPBUF is exhausted.

System programmer response: Verify that the operator entered the CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your CSA limits by using the MODIFY VTAMOPTS command. If the CSA24 or CSALIMIT start options were not specified, or if the CSALIMIT start option was set in the VTAM start list, you might need to increase your system CSA parmlib member value to increase total system CSA and ECSA.

- See the z/OS Communications Server: SNA Operation for more information about the DISPLAY BFRUSE and MODIFY VTAMOPTS commands.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

Routing code: 2

Descriptor code: 5

IST563I STORAGE UNAVAILABLE: MAXPVT REACHED FOR *jobname stepname*

Explanation: A VTAM request for storage from the private area associated with the task identified by *jobname* and *stepname* could not be satisfied. Doing so would cause that task's VTAM MAXPVT value to be exceeded.

System action: Action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on VTAM.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information.

Save the system log and request a dump for problem determination.

System programmer response: Check the specification of the MAXPVT operand on the APPL definition statements for the VTAM application programs running under the indicated task and make adjustments if necessary.

- See the z/OS Communications Server: SNA Resource Definition Reference for more information on the MAXPVT operand.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

Routing code: 2

Descriptor code: 5

IST564I STORAGE UNAVAILABLE: COMMON AREA SUBPOOL *subpool*

Explanation: VTAM issues this message when a VTAM request for storage from the common service area (CSA) could not be satisfied.

subpool identifies the storage subpool from which VTAM attempted to obtain storage (in decimal with leading zeros).

System action: The action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on VTAM.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the CSA start options as specified in the start procedures.

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Increase storage as required. For insufficient storage errors, you might want to redefine your CSA start options by using the MODIFY VTAMOPTS command.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST565I STORAGE UNAVAILABLE: VTAM PRIVATE AREA SUBPOOL *subpool*

Explanation: A VTAM request for private storage could not be satisfied.

subpool identifies the storage subpool from which VTAM attempted to allocate storage (in decimal with leading zeros)

Note: This might not represent a permanent lack of storage but a temporary problem whereby VTAM had difficulty obtaining storage quickly enough to satisfy the request at this time.

System action: Action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on VTAM.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand.

Save the system log and request a dump for problem determination.

Issue a DISPLAY SRCHINFO, FROMCP=*, FROMSSCP=* command and determine whether there is a particular control point (CP) in the network that is not responding to search requests. VTAM continues to maintain certain information about those search requests, which could cause VTAM private storage to grow. Provide the output of the DISPLAY command to the system programmer.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Using the output of the DISPLAY SRCHINFO command, determine whether CP-CP sessions should be terminated between this host and the unresponsive host identified in the DISPLAY output. Terminating the CP-CP sessions will free up storage allocated to search requests toward the unresponsive control point.

Routing code: 2

Descriptor code: 5

IST566I STORAGE UNAVAILABLE: *jobname stepname* SUBPOOL *subpool*

Explanation: A VTAM request for storage from the private area associated with the task identified by *jobname* and *stepname* could not be satisfied.

subpool identifies the storage subpool from which VTAM attempted to allocate storage (in decimal with leading zeros)

System action: The action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on VTAM.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information.

Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required.

- See z/OS Communications Server: SNA Operation for more information on the DISPLAY STORUSE command.
- See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

Routing code: 2

Descriptor code: 5

IST567I *command* OF *loadmodname* FOR *ncpname* *status*

Explanation: This message is the first in a group of messages that VTAM issues in one of the following situations:

- In response to a VARY ACT,LOAD=YES or LOAD=U command for an NCP when the disk operations associated with the VARY ACT were not performed.
- In response to a VARY ACT command for an NCP that specified LOADFROM, SAVEMOD, or DUMPLOAD for NCP *ncpname*.
- In response to a MODIFY LOAD command for an NCP when the MODIFY LOAD request was not executable.

A complete description of the message group follows.

```
IST567I  command OF loadmodname FOR ncpname status
IST523I  REASON = reason
```

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

loadmodname is the name of the load module being affected. If unknown, *loadmodname* is *****NA*****.

ncpname is the name of the NCP.

status is one of the following:

- CANCELED
- COMPLETE
- FAILED
- NOT PERFORMED

reason is one of the following:

ALREADY LOADED

The VARY ACT command continues; the communication controller was already loaded.

CANCEL IN PROGRESS

A MODIFY LOAD (any ACTION type) command was entered and VTAM was currently processing a CANCEL request for the same NCP. The CANCEL must complete before a subsequent MODIFY LOAD can be entered.

IST567I

CANCELED BY OPERATOR

A request to cancel a load that was in progress with a MODIFY LOAD, ACTION=CANCEL command has completed.

CONTROLLER DISK OPTION UNAVAILABLE

The VARY ACT command failed because the controller does not support disk functions.

DISK/HARDWARE ERROR

The VARY ACT command failed because of a disk or hardware error.

DISK FUNCTIONS NOT PERFORMED

INITEST=YES was specified on the PCCU definition statement for a non-3705 communication control unit. Although the load was performed, the VARY ACT command failed.

DISK RESOURCE TEMPORARILY UNAVAILABLE

The hardware resource is temporarily unavailable.

DUPLICATE LOAD MODULE ON DISK

A MODIFY LOAD, ACTION=ADD command was entered and there was already a load module on the disk with the same name.

ESTIMATED IPL in 5 MINS OF ANOTHER LOADMOD

The MODIFY LOAD command failed because another load module on the MOSS disk has an IPL scheduled for the same time as the IPL you requested.

FUNCTION NOT SUPPORTED

A MODIFY LOAD command was entered and it is not supported by the NCP.

INITIAL TEST INVALID FOR CCU

INITEST=YES was specified on the PCCU definition statement for a non-3705 communication control unit.

IPLTIME MORE THAN 90 DAYS FROM CURRENT DATE

A MODIFY LOAD command failed because the specified IPLTIME is more than 90 days from the current date.

keyword time EARLIER THAN SYSTEM TIME

A MODIFY LOAD command failed.

keyword is either IPLTIME or NOTIFY and indicates why the command failed.

IPLTIME

VTAM cannot schedule an IPL because the requested IPL time is earlier than the current system time.

NOTIFY

VTAM cannot schedule an IPL because the time at which notification was requested is earlier than the current system time. For example, if you attempt to schedule an IPL 30 minutes from now and ask to be notified 60 minutes before the IPL occurs, the MODIFY LOAD command fails, and VTAM issues this message.

If the values for both IPLTIME and NOTIFY are not valid, VTAM issues this message only once. The value of *keyword* is IPLTIME.

The *time* value specifies when an IPL or a notification was requested. See "DATE and TIME formats" on page 6 for information about the *time* value.

LOAD IN PROGRESS

A MODIFY LOAD, ACTION=ADD|REPLACE|PURGE command was entered and VTAM was in the process of another load for the same NCP. Only one load can be processed at a time.

LOAD NOT IN PROGRESS

A MODIFY LOAD, ACTION=CANCEL command was entered to cancel a load in progress and there was no load in progress.

NO IPL SCHEDULED FOR LOAD MODULE *load_module*

A MODIFY LOAD command failed. A scheduled IPL is not currently set for this module.

NO ROOM ON DISK

One of the following happened:

- A MODIFY LOAD, ACTION=ADD command was entered, and the disk was already full.

- A MODIFY LOAD, ACTION=REPLACE command was entered, and load module *loadmodname* was not on the disk. There is not enough room on the disk to add the additional load module.

REQUESTED FILE NOT FOUND

The command failed because one of the following occurred:

- The operator entered a VARY ACT command specifying the LOADFROM=HOST operand. VTAM could not find NCP load module *loadmodname* on the host.
- The operator entered a VARY ACT command specifying the LOADFROM=EXTERNAL operand. VTAM could not find NCP load module *loadmodname* on the hard disk of the communication controller.
- The operator entered a MODIFY LOAD command specifying the ACT=PURGE operand. VTAM could not find load module *loadmodname* on the hard disk of the communication controller.

RU LENGTH ERROR

The MODIFY LOAD operation was halted because the NCP rejected the IPLINIT RU. This indicates that the NCP is not the correct level to process MODIFY LOAD commands.

SSP NOT CORRECT LEVEL

The controller (CCU), NCP, or SSP does not support the function requested. An NCP release prior to NCP V5R2 cannot be loaded with the LOADFROM, SAVEMOD, or DUMpload operands. These operands are valid only for NCP V5R2 or a later release. The command failed.

System action: See the preceding explanation of *reason* for the system action. Other processing continues.

Operator response: If *reason* is:

CANCELED BY OPERATOR

No action is required. This is an informational message only.

DISK RESOURCE TEMPORARILY UNAVAILABLE

Try the request again.

DUPLICATE LOAD MODULE ON DISK

Try the command again, using the ACTION=REPLACE option of the MODIFY LOAD command instead of the ACTION=ADD option.

ESTIMATED IPL in 5 MINS OF ANOTHER LOADMOD

Enter a DISPLAY DISK command to determine the IPL times scheduled for all the load modules on the MOSS disk. Change the value of *ipltime* accordingly and reenter the command.

IPLTIME MORE THAN 90 DAYS FROM CURRENT DATE

Reenter the command with a date fewer than 90 days from the current date.

keyword time EARLIER THAN SYSTEM TIME

Correct the *time* parameter and reenter the command. See z/OS Communications Server: SNA Operation for more information.

LOAD IN PROGRESS

Wait until the current load operation completes, then try the command again.

LOAD NOT IN PROGRESS

No action. There was no operation in progress to cancel.

NO IPL SCHEDULED FOR LOAD MODULE *load_module*

No action is required. This is an informational message only.

NO ROOM ON DISK

Enter a MODIFY LOAD, ACTION=PURGE command to delete an unneeded load module from the disk. Enter a DISPLAY DISK command to examine the contents of the disk.

REQUESTED FILE NOT FOUND

Follow the procedures set up by the system programmer.

RU LENGTH ERROR

Save the system log for problem determination.

SSP NOT CORRECT LEVEL

Save the system log for problem determination.

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Otherwise, follow defined procedures for hardware problems.

System programmer response:

- If *reason* is **RU LENGTH ERROR**, ensure that the NCP is at the correct level.
- If *reason* is **SSP NOT CORRECT LEVEL**, ensure that the NCP, SSP, and CCU are at the correct level. To use the LOADFROM, SAVEMOD, and DUMPLOAD operands on the VARY ACT command, the NCP must be NCP V5R2 or a later release, and the SSP must be SSP V3R4 or a later release.
- For all other *reasons*, there is no additional suggested action.

Routing code: 2

Descriptor code: 5

IST571I **LOAD FAILED FOR ID = *puname* REQ: *ru*, SENSE: *code***

Explanation: After loading a PU type 2, VTAM receives an NS_LOADSTAT request unit that indicates whether or not the load was completed successfully. VTAM issues this message when it receives an NS_LOADSTAT that indicates that the load was not completed successfully.

puname is the name of the physical unit that requested the load.

- When *ru* is **IPL INIT**, **IPL TEXT**, or **IPL FINAL**, the requested load failed during the load procedure.
- When the failing network services request unit *ru* is **INITLOAD**, the load failed because the application program could not process the load request.

code is the sense code and provides additional information about the reason for the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

Note: When *ru* is *****NA*****, *code* is 08000000 (request rejected) and the failing request is not available. (The request and sense information were not included in the NS_LOADSTAT RU.)

System action: The system action depends upon the time at which the load was requested. If the load was requested during activation of the physical unit, VTAM deactivates the PU. Another message will signal completion of the deactivation processing. If the load was requested after the PU was activated, VTAM will take no action.

Operator response: Try activating the physical unit again if load failure caused the physical unit to be deactivated. Otherwise, no response is required. If the problem persists, check the PU hardware for possible problems.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST572I **REJECTING TG ADJACENT ER MASK**

Explanation: This message is part of a group of messages. The first message is IST533I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST574E **START I/O TIMEOUT OCCURRED FOR *linkname* - CUA = *cua***

Explanation: This host has initiated an I/O operation. An interrupt has not been received in the time specified for that I/O operation. *linkname* is the name of a communication link, and *cua* is the channel unit address that did not receive the interrupt.

System action: Processing continues.

Note: If the other host does not respond in roughly 3 minutes from the time that this message appears, request units (RUs) will be lost. If MIH=YES was specified on the LINE or GROUP definition statement, RUs will be lost **and** the PU will become inoperative at the end of 3 minutes. The interrupt interval can be modified using the MIHTMOUT start option. Evaluate the setting of the REPLYTO operand. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

Operator response:

- If the other host has failed, the operator might want to deactivate the link *linkname* since it cannot be used.
- If the other host has temporarily stopped, normal operation will resume when the operator starts the system again.

Otherwise, no action is required.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST576I **TSO TRACE = {ON|OFF}**

Explanation: VTAM issues this message in response to a DISPLAY TSOUSER command. It states whether the TSO trace is on or off for a particular TSO user.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST577I **TIME = time DATE = date ID = id**

Explanation: This message is the first in a group of messages that displays tuning statistics pertaining to the VTAM operation of a channel-to-channel adapter. A complete description of the message group follows.

IST577I	TIME = time	DATE = date	ID = id
IST578I	CHNRM = chnrm	CHMAX = chmax	RDBUF = rdbuf
IST579I	ATTN = attn	TIMERS = timers	QDPH = qdpth
IST580I	BUFCAP = bufcap	PRI = pri	SLODN = slodn
IST581I	IPIU = ipiu	OPIU = opiu	DLRMAX = dlrmax
IST1022I	WRBUF = wrbuf		
IST314I	END		

IST577I

time indicates the time (in hours, minutes, seconds, and hundredths of seconds) at which the record is recorded. For example, 07431380 means that the record was recorded at the 7th hour, 43rd minute, 13th second, and 80 one-hundredths of a second of the day.

The *date* value specifies when the tuning statistics report is recorded. The date is in the form *yyddd*, where *yy* is the last two digits of the numeric year and *ddd* is the numeric day of the year. For example, 87190 means the record is recorded on the 190th day of 1987.

id provides the name of the link through which the tuning statistics are taken. It corresponds to the name of the LINE definition statement in the associated channel-attachment major node.

IST578I

- *chnrm* is the number of channel programs issued that VTAM used to send data to the node on the other side of the adapter.
 - *chnrm* will be greater than or equal to the number of write triggers (TIMERS + QDPH + PRI + BUFCAP).
 - The difference between *chnrm* and the sum of the write triggers represents the following:
 - The number of channel programs with write data that are initiated by an attention from the other host when data was queued, but a channel program with write data could not be triggered.
 - As you increase the value of the DELAY operand for the channel-to-channel adapter, the difference between *chnrm* and the sum of the write triggers might be greater.
- *chmax* is 0 because all channel programs are the same size.
- *rdbuf* is the total number of input bytes transferred during the measurement period.

IST577I

IST579I

- *attn* is the number of times a channel program is initiated because the other host has data to send. This statistic cannot be correlated with any of the other statistics that are provided; it is simply a value that indicates the number of attention interrupts.

When compared over an interval of time, ATTN usually does not equal the sum of TIMERS, QDPATH, BUFCAP, and PRI at the other host. VTAM counts only the first event that initiates an I/O operation, and when both hosts try to write at once, one of the hosts receives an attention that is not counted in its tuning statistics.

- *timers* is the number of times a channel program with write data is started because the period specified for queuing channel-to-channel PIUs has expired.
 - If session traffic is heavy, the desirable value is 0.
 - If session traffic is light, a low value rather than 0 is desirable.

Increasing the DELAY operand on the LINE definition statement or using transmission priority 2 might decrease the value of *timers*.
- *qdpth* is the number of times a channel program is initiated because the queue limit has been reached. This number should be higher than *timers*.

Note: If DELAY=0 is specified for the channel-to-channel adapter, the TIMERS and QDPATH tuning statistics might be misleading.

If DELAY=0, *qdpth* indicates the number of channel programs that wrote data to the channel-to-channel adapter. VTAM determines the QDPATH limit based on usage **except** in the case of DELAY=0.

If DELAY=0, *timers* does not increment.

IST580I

- *bufcap* is the number of times a channel program with write data is initiated because there is enough data to fill the read buffers of the host on the other end of the channel.
 - *bufcap* will also be incremented if a channel program with write data is initiated due to residual PIUs left on the data queue after a channel program with write data containing a full write buffer of data has completed.
 - If *bufcap* is always 0, the other VTAM host has too many read buffers.
- *pri* is the number of times a channel program with write data is started because a high priority PIU is on the outbound channel queue; that is, the PIU is running under transmission priority 2 or is a virtual route pacing response.

If this number is high and there is very little transmission priority 2 traffic over this channel, the minimum virtual route window sizes are probably too small. The higher this number is in relation to the sum of TIMERS + QDPATH + BUFCAP, the less outbound coattailing occurs, and the more CPU time is used for each PIU.

- *slodn* indicates the number of times that this VTAM had channel programs with write data blocked by a slowdown condition in the other VTAM.

IST581I

- *ipiu* is the number of inbound PIUs. The average number of PIUs for each channel program can be calculated from the **sending side** as $OPIU / (CHNRM + CHMAX)$.
- *opiu* is the number of outbound PIUs. The average number of output PIUs for each channel program with write data can be calculated as $OPIU / (CHNRM + CHMAX)$.
- *dlrmax* is a decimal value that indicates the maximum number of dump-load-restart requests that were awaiting processing or were being processed at one time during the interval. This number refers to the entire domain, not to the SNA controller named in the report. The dump-load-restart subtask processes the following types of requests:
 - Dump, load, or restart of an NCP
 - Some VTAM messages to the operator that require a reply
 - Session establishment and termination processing for a local major node
 - Any I/O to a configuration restart or NODELST file.

This value can be used to determine the proper setting for the DLRTCB start option, which determines how many dump-load-restart requests can be processed concurrently. If DLRMAX consistently exceeds DLRTCB, it indicates that VTAM is serializing requests on the available TCBS and that performance might be affected.

IST1022I

wrbuf is the total number of output bytes transferred during the measurement period.

System action: Processing continues.

Operator response: Follow the instructions of your system programmer to tune the system. To discontinue statistics recording, enter the MODIFY NOTNSTAT command.

System programmer response: For additional information on tuning and analyzing tuning statistics, see the z/OS Communications Server: SNA Network Implementation Guide.

Routing code: 2

Descriptor code: 4

IST578I CHNRM = *chnrm* CHMAX = *chmax* RDBUF = *rdbuf*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST577I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST579I ATTN = *attn* TIMERS = *timers* QDPATH = *qdpth*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST577I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST580I BUFCAP = *bufcap* PRI = *pri* SLODN = *slodn*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST577I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST581I IPIU = *ipiu* OPIU = *opiu* DLRMAX = *dlrmax*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST577I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST582I 'EVERY' INVALID FOR TRACE OF ID = *hostpuname* — OPERAND IGNORED

Explanation: VTAM issues this message if the operator attempts to start or terminate a buffer or I/O trace with the SCOPE=ALL or EVERY option for the host PU name *hostpuname* or ISTIRN. The SCOPE=ALL or EVERY option is not supported for host PU trace.

System action: VTAM ignores the SCOPE=ALL or EVERY option. The trace is initiated or terminated only for the specified node.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST583I CONFIG *configname* NOT PROCESSED — SYSDEF TASK NOT ATTACHED

Explanation: The system definition subtask, ISTSDCLM, has not been reattached either because it has exceeded its maximum abend count or because VTAM is halting. The command for the resource identified by the *configname* field cannot be successfully completed.

System action: If the command is an activate command for a major node, path definition set, or DRDS data set, the command fails. For a VARY INACT command for a major node or path definition set, virtual storage is lost. Further activate or deactivate commands will fail in the same way, and produce this same message again until VTAM is restarted.

Operator response: Save the system log for problem determination.

System programmer response: Correct the problem that caused an unexpected number of subtask ABENDs. Then restart VTAM to regain use of the subtask.

Routing code: 2

Descriptor code: 5

IST585E VTAM UNABLE TO CLOSE *applname* — RESOURCES MAY BE LOST TO VTAM

Explanation: VTAM issues this message when the VTAM application program *applname* has issued a CLOSE ACB macro or when VTAM has attempted to close the application program's access method control block (ACB).

This message is often displayed when the application issues a CLOSE ACB macro and then the application's underlying task is abnormally terminated. This abnormal termination results in VTAM attempting to close the ACB on behalf of the application. VTAM might not succeed in closing the ACB, but the CLOSE ACB issued by the application still succeeds.

It is also possible that a system error occurred.

System action: The ACB might not be closed and system resources might be lost.

Operator response: This is probably a software error. If this message appears for several different application programs or if critical resources are tied up, halt VTAM and restart it. In addition, save the system log and problem determination.

If this message appears during a halt of VTAM, enter a HALT CANCEL command.

System programmer response: Analyze the output from the operator to determine the cause of the problem.

Verify that the failing job step includes a SYSABEND DD statement.

See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on application program problems.

Routing code: 2

Descriptor code: 3

IST587I IRN STORAGE {EXCEEDED|DEPLETED} CAUSED BY SLOWDOWN OF NODE *nodename*

Explanation: This message describes the status of the VTAM storage used for intermediate routing node (IRN) traffic that cannot be routed to an adjacent subarea node.

- If the status is **EXCEEDED**, the user-specified storage limit for intermediate routing node slowdown processing was exceeded.
- If the status is **DEPLETED**, the intermediate routing node buffer manager was unable to obtain pageable storage.

The adjacent subarea node that is in slowdown is identified by *nodename*.

System action: Intermediate routing node traffic will be kept in fixed buffers.

Operator response: Consider deactivating the node that is in slowdown. This will free all the fixed and pageable storage associated with the node. However, user sessions might be disrupted.

System programmer response: If the limit was exceeded, consider modifying the IRNSTRGE start option. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

Routing code: 8

Descriptor code: 4

IST588I **SIT TRACE STATUS = *status***

Explanation: This is one of a series of messages that appears as the result of a DISPLAY command requesting the status of a line.

The scanner interface trace (SIT) helps diagnose NCP and line problems. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for a description of *status*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST589I **ERROR FOR ID = *ncpname*, CODE = *code*, NET = *netid***

Explanation: An error has occurred during activation of gateway NCP *ncpname*. VTAM was unable to record the network address of *ncpname* as assigned in the nonlocal network *netid*. For VTAM to accept a request for an LU-LU session through the gateway NCP of another network, VTAM in the local network must be able to record that NCP's network address in the other network.

Network addresses are assigned by VTAM based on the NETID, MAXSUBA, and SUBAREA operands of the BUILD or NETWORK definition statements in the definition of that gateway NCP.

code indicates the reason for the error and can be one of the following:

- 1 There already exists in the local network a record of a gateway NCP in the nonlocal network *netid* with the same subarea number.
- 2 The subarea range in the network *netid* is not known. The MAXSUBA operand was not specified in the BUILD or NETWORK definition statement in the definition of *ncpname*. VTAM must be supplied the subarea range of *netid* in order to assign a network address.
- 3 There is insufficient storage to record the network addresses.

System action: Activation of the gateway NCP *ncpname* continues; however, VTAM will either not be able to accept a request for a LU-LU session through *ncpname* from the network *netid* or, if *code* is 1, will route a session request through a different gateway NCP. Results are unpredictable.

Operator response: Save the system log and print the major node definition for problem determination.

System programmer response: The value of *code* determines the response:

- 1 Examine the definition decks of the gateway NCPs that have been activated, or are being activated, for the network *netid*. Check the NETID and SUBAREA operands of the BUILD or NETWORK definition statements. There should be no duplicate subarea numbers for the same network.
- 2 Code MAXSUBA in the BUILD or NETWORK definition statement in which **NETID = *netid*** has been specified.
- 3 There is insufficient storage to record the gateway NCP's network address in network *netid*. Have the operator cancel nonessential jobs or deactivate an unused part of the network to prevent further losses. You might have to halt and restart VTAM if there are too many failures.

Routing code: 8

Descriptor code: 4

IST590I

IST590I *type action* **FOR PU** *puname* **ON LINE** *linename*

Explanation: VTAM issues this message when:

- A connection for a switched physical unit has been established as a result of a dial in from the switched PU.
- A connection for a switched physical unit has been established as a result of a dial out to the switched PU.
- An attempt to establish a connection to a switched physical unit was not successful.
- A connection of a switched physical unit has been terminated.

type can one of the following:

CONNECTIN

Indicates a dial in connection from a switched PU.

CONNECTOUT

Indicates a dial out connection to a switched PU.

CONNECTION

Indicates an established connection with a switched PU.

action can one of the following:

ESTABLISHED

Indicates the dial in or dial out connection from a switched PU was successful.

FAILED

Indicates a dial out connection to a switched PU was not successful.

TERMINATED

Indicates an established connection with a switched PU has been terminated.

puname is the name of the switched physical unit.

linename is the name of the logical line over which a connection is established, failed, or terminated. If multiple paths to the switched PU have been defined, and *type* and *action* are **CONNECTOUT FAILED**, then *linename* is the name of the last logical line over which the connection was attempted.

VTAM issues this message in the following situations:

- If *type* and *action* are **CONNECTIN ESTABLISHED**, a connection for the switched physical unit *puname* has been established over the logical line *linename* as a result of a dial in from a switched PU.

Note: This action can also be displayed if the dial occurs from the NCP.

- If *type* and *action* are **CONNECTOUT ESTABLISHED**, a connection for the switched physical unit *puname* has been established over the logical line *linename* as a result of a dial out from a switched PU.

The dial out was caused by one of the following:

- An application program attempting to establish a session with a switched LU associated with the PU.
- In response to a VARY DIAL command to establish a switched connection to a type 2 or 2.1 device.
- If *type* and *action* are **CONNECTOUT FAILED**, an attempt to establish a connection to switched PU *puname* over the logical line *linename* was not successful.

If multiple paths to the switched PU have been defined, *linename* is the name of the last logical line over which the connection was attempted.

This message might be followed by a message group beginning with message IST1139I. This message group provides more information about the **CONNECTOUT** failure.

- If *type* and *action* are **CONNECTION TERMINATED**, the connection of the switched PU *puname* over the logical line *linename* has been terminated.

System action: Processing continues.

Operator response: If *type* and *action* are **CONNECTOUT FAILED**, determine why the line is not available and take corrective action. Otherwise, no response is needed.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST591E VTAM COMMAND CANCELED DUE TO VTAM TASK ABEND — *code* — RETRY COMMAND

Explanation: The VTAM task has abended while processing an operator command. The command cannot be identified, but it is being canceled. Recovery of the VTAM task is being attempted. See the appropriate operating system codes manual for the meaning of the hexadecimal abend code *code*.

System action: VTAM processing continues.

Operator response: This is probably a software error. Check the system log to determine which command was not processed. Then reenter the command that caused the failure. If the failure recurs and completion of this command is required to proceed with VTAM, halt VTAM and then start it again. Save the system log and dump for problem determination.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.

Routing code: 2

Descriptor code: 3

IST592I VTAM MAIN TASK ABEND — CODE *code* — VTAM IS BEING TERMINATED

Explanation: The VTAM main task abended with the *code* specified. See the appropriate operating system codes manual for the meaning of the hexadecimal abend code *code*.

System action: The operating system terminates the VTAM main task and all of the subtasks. All VTAM processing terminates.

Operator response: Save the system log and dump for problem determination.

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure. Have the operator restart VTAM.

Routing code: 2

Descriptor code: 5

IST593I ISTDCLU {PD TRACE|SESSION AWARENESS} SESSION ENDED

Explanation: An UNBIND request has been received for one of the LU-LU sessions between the VTAM LU subtask, ISTDCLU, and the NetView program or NCCF LU, DSIAMLUT. There are two parallel LU-LU sessions. The PD TRACE session is used to transfer the contents of PIU trace buffers filled by VTAM. The session awareness session is used to transfer buffers containing session awareness data. This data is used by the NetView program or NLDM.

System action: If **PD TRACE** is specified and the VTAM PIU trace buffers become full after the PD TRACE session has ended, PIU trace buffers will be re-used beginning with the buffer containing the oldest trace data. This overwriting will continue until the PD TRACE session is re-initiated. Thus, VTAM always maintains the PIUs most recently traced in its PIU trace buffers. The VTAM subtask ISTDCLU waits for a new BIND request.

If **SESSION AWARENESS** is specified, VTAM frees the existing session awareness buffers. The NetView program or NLDM receives a refresh of all existing active sessions in the system when it requests the restart of session awareness tracing.

Operator response: Consult the NetView or NLDM terminal operator to determine the cause of the UNBIND request. If further VTAM PIU tracing is desired, reactivate the PD TRACE session.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST594I **ISTPDCLU** *macroname* **FAILED** *reason1* [*reason2*]

Explanation: The macro *macroname*, issued by VTAM on behalf of the VTAM LU subtask ISTPDCLU, failed.

If *macroname* is **OPEN ACB**, *reason1* is the ACBERFLG value, and *reason2* is not displayed. See the z/OS Communications Server: IP and SNA Codes for a description of the hex value for *reason1*.

If *macroname* is an RPL-based macro, *reason1* is the return code RPLRTNCD and *reason2* is the feedback code RPLFDB2. See the z/OS Communications Server: IP and SNA Codes for a description of *reason1* and *reason2*.

System action: If the OPEN ACB macro failed, the VTAM subtask ISTPDCLU is detached and reattached by VTAM. Up to 25 attempts will be made to re-open ISTPDCLU's ACB.

If the SEND macro failed, the contents of the buffer being sent are lost. Processing on behalf of the ISTPDCLU subtask continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the ACBERFLG value (for an OPEN ACB failure) or the return-feedback code combination (for an RPL-based macro) to help you determine the cause of failure.

Routing code: 2

Descriptor code: 5

IST595I **IRNLIMIT =** *irnlimitK*, **CURRENT =** *currentirnK*, **MAXIMUM =** *maximumirnK*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the group is IST449I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST597I **CAPABILITY-PLU** *capability*, **SLU** *capability*, **SESSION LIMIT** *limit*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application program, a cross-domain resource, or a logical unit. This message shows the capability of a node to be either a primary logical unit (PLU) or a secondary logical unit (SLU).

limit is the maximum number of sessions that can exist for that node and is expressed in decimal with leading zeros.

capability is one of the following:

ENABLED

The node can act as a PLU or an SLU or both. Local non-SNA devices will always display an enabled capability.

DISABLED

The node is temporarily unable to act as a PLU or an SLU (until it is in an enabled state). However, a session could be queued. The device might be powered off. This could possibly be cleared by powering the device on. If an application whose ACB was opened will be the SLU, and a SETLOGON START has not been issued, the application will indicate DISABLED.

INHIBITED

The node is not ready to establish a session, nor does it want any sessions to be queued. It cannot act as a PLU or an SLU. A logical unit without an SSCP-LU session indicates INHIBITED for its PLU and SLU capabilities, as would a CDRSC that had been deactivated. An application without an open ACB would indicate **INHIBITED**, as well as an application that issued SETLOGON QUIESCE.

UNSTABLE

The node is attempting some type of error recovery. This could be due to ERP, an INOP, or session termination.

limit is **NONE** if the resource is an independent LU.

System action: Processing continues.

Operator response: If *capability* is **DISABLED** for a device, ensure that the device is powered on.

If *capability* is **DISABLED** for an application, ensure that the application has issued SETLOGON OPTCD=START.

If *capability* is **INHIBITED** for an application, ensure that the ACB has been opened and that SETLOGON START has been entered.

System programmer response:

Note: When *capability* for a device LU is **INHIBITED**, it normally indicates that VTAM has been informed of that capability by the device. This information is passed to VTAM on the X'0C' control vector on a NOTIFY or ACTLU RU. To capture the RU, use a VTAM internal trace with OPT=PIU or a BUFFER trace of the LU before activating the device or before repeating the procedure that led to the inhibited state. See *VTAM Data Areas* for the format of the RUs and the X'0C' (LU capabilities) control vector.

See z/OS Communications Server: SNA Programming for details on the SETLOGON macro.

Routing code: 8

Descriptor code: 5

IST599I REAL NAME = *realname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command. *realname* is the real network-qualified name of the resource being displayed.

Notes:

1. VTAM does not issue IST599I if the name specified in the DISPLAY ID command is the real name.
2. If the name is not known, *realname* will be *****NA*****.

Routing code: 8

Descriptor code: 5

IST602I VARY FAILED ID = *nodename* — HIGHER NODE HAS BECOME INACTIVE

Explanation: A VARY command failed because a preceding VARY command deactivated a higher-level node. The previous VARY command deactivated the higher-level node and, in turn, it will deactivate *nodename*.

System action: VTAM rejects the VARY command. The higher-level node and all subordinate nodes are inactive.

Operator response: Save the system log for problem determination.

System programmer response: You can reactivate both the higher-level node and *nodename*. The higher-level node might have been deactivated during error recovery processing. Check the system log to determine whether the deactivation was caused by error recovery or by a sequence of commands.

Routing code: 2

Descriptor code: 5

IST605I ERROR FOR ID = *nodename* - *text1* : *text2*

Explanation: A request from *nodename* failed, or a response sent by *nodename* contained data that was not valid. This message might be followed by another message. The following example shows the messages that can be issued with IST605I.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
[IST1590I  PU NETID DIFFERENT THAN HOST AND CONTACTED REQUEST]
[IST1591I  NCP NOT LOADED]
[IST1592I  NETID IN XID DID NOT MATCH NETID OF PU]
[IST1593I  RESOURCE TYPE NOT VALID]
[IST1594I  CPNAME IN CONTACTED REQUEST SAME AS SSCPNAME]
[IST1595I  LINK STATION NOT ASSOCIATED WITH AN NCP]
[IST1596I  SWITCHED LINK STATION STATE PCTD2 NOT VALID FOR LOAD]
[IST1597I  SWITCHED CALL=IN NCP NOT VALID]
[IST1598I  LEASED LINK STATION STATE PCTD2 NOT VALID FOR LOAD]
[IST1599I  NCP INDICATES LOAD REQUIRED BUT LOAD=NO]
[IST1600I  LOAD MODULE MISMATCH - LOAD=NO]
[IST1602I  RU ERROR: EXTRA CV X'xx']
[IST1603I  RU ERROR: INVALID POSITIVE RESPONSE]
[IST1604I  RU ERROR: LENGTH, FORMAT, OR TYPE NOT VALID]
```

IST607I • IST608I

```
[IST1605I RU ERROR: MISSING CV X'0B']  
[IST1606I DIAL RETRY FAILED]  
[IST1607I RU ERROR: RESPONSE TOO LONG]  
[IST1608I RU ERROR: RESPONSE TOO SHORT]  
[IST1609I CV X'0B' INDICATES ADJACENT LINK STATION NOT SUPPORTED]  
[IST1610I CORRELATOR MISMATCH – LOAD=NO]  
[IST1611I CORRELATOR MISMATCH – NCP ACQUIRED BEFORE ACTIVATION]  
[IST1612I LOAD MODULE MISMATCH – EXPECTED loadmod1 FOUND loadmod2]  
IST314I END
```

text1 : *text2* specifies the RU in error and is one of the following:

REQUEST : CONTACTED

See the explanation of the second message in the group for more information.

RESPONSE : ACTPU

See the explanation of the second message in the group for more information.

RESPONSE : RNAA

An error occurred on an RNAA response received from an NCP, causing an invalid response to be returned to VTAM. This is probably an NCP error.

System action: For RESPONSE : RNAA, *nodename* is deactivated.

Operator response: For RESPONSE : RNAA, save the system log for problem determination.

System programmer response: For RESPONSE : RNAA, if the node should be activated, reactivate it. If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Enter a MODIFY TRACE, ID=*nodename* command.

Routing code: 2

Descriptor code: 5

IST607I *command* FOR *nodename* FAILED — INVALID NODE TYPE OR STATE

Explanation: The operand specified in *command* is not applicable for *nodename* because the type or state of *nodename* is invalid for the operation requested.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the command for a resource that is either the valid node type or in the valid state for the command. Use the DISPLAY ID command to determine the current resource state. See z/OS Communications Server: SNA Operation for additional information on *command*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST608I *command* FOR ID = *minornode* FAILED — HIGHER NODE: *highernode* NOT ACTIVE

Explanation: VTAM issues this message when a *command* was entered to activate the resource *minornode* (a logical unit, physical unit, physical unit type 4, or link). The command failed because its higher-level node *highernode* is not active.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

- If *minornode* is a logical unit, *highernode* is a physical unit.
- If *minornode* is a physical unit or a physical unit type 4, *highernode* is its link.
- If *minornode* is a link, *highernode* is the physical unit specified on the PHYSRSC operand on the GROUP definition statement for the line group.

If the physical unit, defined in the NCP definition, whose name is specified by the PHYSRSC keyword is a switched PU that is not currently connected, then *highernode* is the physical line.

highernode must be active before *minornode* can be activated.

System action: VTAM rejects the command.

Operator response: Enter a VARY ACT command for resource *highernode* before activating resource *minornode*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST610I **LINE** *linename* — **STATUS** *linestatus*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY command. See the explanation of message IST396I for a complete description of the group.

See the z/OS Communications Server: IP and SNA Codes for a description of *linestatus*.

Routing code: 8

Descriptor code: 5

IST611I **ADJACENT SSCP TABLE FOR** *resource* [IN *netid*]

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ADJSSCPS command. The DISPLAY ADJSSCPS command requests information about adjacent SSCPs used to reach the destination SSCP or CDRSC *resource*.

```

IST350I  DISPLAY TYPE = ADJACENT SSCP TABLE
IST611I  ADJACENT SSCP TABLE FOR resource [IN netid]
[IST1705I sc_option = sc_value FROM START OPTION]
[IST1704I sc_option = sc_value FROM ADJACENT SSCP TABLE]
IST1220I  SSCPNAME NETID    CURRENT STATE  ROUTING STATUS
IST624I   sscpname[netid]   current_state routing_stat us
:
IST314I  END

```

IST350I

This message identifies the type of information shown in the display. DISPLAY TYPE is always **ADJACENT SSCP TABLE** in this message group.

IST611I

resource is the name of the resource that was specified on the CDRSC operand of the command. If a network-qualified name was entered on the command line, VTAM issues the network ID *netid*.

IST624I

- VTAM issues this message for each SSCP *sscpname* in the adjacent SSCP table being displayed and identifies the names of the adjacent SSCPs associated with *resource*.
- *sscpname* is the name of the adjacent SSCP for which information is displayed.
- *netid* is displayed only if the network ID of *sscpname* is known to VTAM and CDRSC is specified on the DISPLAY command.
- *current_state* and *routing_status* are displayed when CDRSC is specified on the command.
 - For *current_state* information, see the z/OS Communications Server: IP and SNA Codes. ****NA**** is displayed if the SSCP is not defined to VTAM.
 - *routing_status* can be one of the following:

FAILURE

The most recent routing attempt to the SSCP failed.

SUCCESS

The most recent routing attempt to the SSCP was successful. This does not indicate that session establishment was successful.

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****NA****

Routing status is not available.

IST1220I

This message is displayed only when the CDRSC operand is specified on the command and is a header message for the list of adjacent SSCP table that follows in message IST624I.

IST1704I or IST1705I

sc_option indicates a search control option associated with the adjacent SSCP table being displayed. Possible values are: SORDER and SSCPORD. When VTAM is enabled for APPN, both search control options will be displayed with SORDER being first. When VTAM is not enabled for APPN, SSCPORD will be the only search control option displayed. Either IST1704I or IST1705I will be issued for each search control option displayed.

sc_value indicates the value of the search control option associated with the adjacent SSCP table being displayed. If *sc_value* is ADJLIST, the adjacent SSCP table being displayed is for a resource that specified an adjacent CDRM list (ADJLIST); therefore, the SORDER and SSCPORD search control options do not apply .

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST617I DEACTIVATION IN PROGRESS FOR *nodename*

Explanation: Processing of a VARY INACT command for a CDRM major or minor node resulted in the deactivation of *nodename*.

System action: The node *nodename* becomes inactive.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST619I ID = *nodename* FAILED — RECOVERY IN PROGRESS

Explanation: VTAM recognized a failure condition for node *nodename* and is attempting to recover the node. See subsequent messages for the results of that recovery attempt.

System action: Users of *nodename* or devices attached to *nodename* might be notified of the failure. VTAM attempts to recover *nodename*.

Operator response: Wait for additional messages indicating the success or failure of the recovery attempt.

System programmer response: None.

Routing code: 2,8

Descriptor code: 4

IST621I {RECOVERY SUCCESSFUL | SSCP TAKEOVER COMPLETE} FOR NETWORK RESOURCE *nodename*

Explanation: Either *nodename* was recovered successfully or a takeover for a link with active sessions completed successfully. The application programs previously connected to *nodename* or nodes subordinate to it have been notified and might use those nodes.

System action: Node *nodename* is returned to an active state. Active states of resources include the connectable (CONCT) state.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 4

IST623I *tabletype* ADJACENT SSCP TABLE [FOR *netid*]

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ADJSSCPS command when one of the following occurs:

- No specific ADJSSCP list is defined for the CDRM or NETID specified on the command
- Neither CDRM nor NETID is specified on the command
- SCOPE=ALL is specified on the command.

The DISPLAY ADJSSCPS command requests information about adjacent SSCP used to route to a destination SSCP or cross-domain resource. A complete description of the message group follows.

```

IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST623I tabletype ADJACENT SSCP TABLE [FOR netid]
[IST1705I sc_option = sc_value FROM START OPTION]
[IST1704I sc_option = sc_value FROM ADJACENT SSCP TABLE]
IST624I sscpname
:
:
IST314I END

```

If SCOPE=ALL is specified on the command, the IST623I subgroup is repeated for all defined and dynamic ADJSSCPS which match the specifications on the command operands.

IST350I

This message identifies the type of information shown in the display. DISPLAY TYPE is always **ADJACENT SSCP TABLE** in this message group.

IST623I

- *tabletype* identifies which adjacent SSCP table is being displayed.
 - If *tabletype* is **DEFAULT**, no specific list was defined for the specified CDRM or NETID. The list being displayed was defined as a default list for the specified NETID or the default table for all networks. See the z/OS Communications Server: SNA Resource Definition Reference for more information about defining adjacent SSCP tables.
 - If *tabletype* is **DYNAMIC**, no specific list was defined for the specified CDRM or NETID, and no default list was defined. The list being displayed was created dynamically for the specified NETID or the default table for all networks. See the z/OS Communications Server: SNA Network Implementation Guide for more information about dynamic adjacent SSCP tables.
- *netid* is the network ID of the resource. It is displayed when the DISPLAY ADJSSCPS command specifies a NETID and a default adjacent SSCP list is defined for the specified network.

IST624I

VTAM issues this message for each SSCP *sscpname* in the adjacent SSCP table being displayed.

IST1704I or IST1705I

sc_option indicates a search control option associated with the adjacent SSCP table being displayed. Possible values are: SORDER and SSCPORD. When VTAM is enabled for APPN, both search control options will be displayed with SORDER being first. When VTAM is not enabled for APPN, SSCPORD will be the only search control option displayed. Either IST1704I or IST1705I will be issued for each search control option displayed.

sc_value indicates value of the search control option associated with the adjacent SSCP table being displayed.

System action: Processing continues.

Operator response: None.

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System programmer response: None.

Routing code: 8

Descriptor code: 5

IST624I *sscpname* [[*netid*] *current_state routing_status*]

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ADJSSCPS command or a DISPLAY ID command for a CDRSC when SCOPE=ALL. It is preceded by IST611I, IST623I, or IST1333I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST627I *nodename* — **INSUFFICIENT STORAGE**

Explanation: VTAM issues this message when a MODIFY TRACE command, MODIFY NOTRACE command, TRACE start option, or NOTRACE start option was entered to activate or deactivate a VTAM trace for node *nodename*, but sufficient storage was not available to build a parameter list.

System action: VTAM rejects the command or start option.

Operator response:

- If VTAM issues this message in response to a command, wait a few minutes, and reenter the command. If the error persists, enter a DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.
- If VTAM issues this message during startup, wait until VTAM is initialized, and enter a DISPLAY BFRUSE command. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST632I **BUFF BUFF CURR CURR MAX MAX TIMES EXP/CONT EXP**

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY BFRUSE,BUFFER=SHORT command. A complete description of the message group follows.

```
IST350I DISPLAY TYPE = BUFFER POOL DATA
IST632I BUFF      BUFF      CURR      CURR      MAX      MAX      TIMES  EXP/CONT  EXP
IST633I ID        SIZE      TOTAL     AVAIL     TOTAL  USED     EXP    THRESHOLD INCR
IST356I bpid[Q][F] bufsize curtot curavail maxtot maxused times  exp/cont  incr
IST449I limitname = csa, CURRENT = current, MAXIMUM = maxlevel
IST790I MAXIMUM type USED = maxK
[IST449I CSA24 = csa, CURRENT = current, MAXIMUM = maxlevel]
```

```
[IST790I MAXIMUM type USED = maxK]
IST595I IRNLIMIT = irnlimitK, CURRENT=currentirnK MAXIMUM = maximumirnK
IST981I VTAM PRIVATE: CURRENT = currentK, MAXIMUM USED = maximumK
IST314I END
```

Message IST356I is repeated for each of the VTAM buffer pools.

IST350I

This message identifies the type of information shown in the display. For this message group, type is always **BUFFER POOL DATA**.

IST632I and IST633I

These messages are header messages for the information displayed in message IST356I.

IST356I

- *bpid* is the name of the buffer pool. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - Q, if present, indicates that a request is queued for this pool. This field is usually blank.
 - F, if present, indicates that dynamic buffering has failed. This field is usually blank.
- *bufsize* is a decimal value that indicates the number of bytes in each buffer.
 - For IOBUF an overhead value of 87 bytes should be added to the *bufsize* value in this message. See the z/OS Communications Server: SNA Resource Definition Reference for information on buffer pool default sizes.
- *curtot* is a decimal value that indicates the total number of buffers in the pool.
- *curavail* is a decimal value that indicates the number of available buffers that are currently not in use.
- *maxtot* is a decimal value that indicates the highest number of buffers contained in this pool at any one time since the last buffer pool trace record was written.
- *maxused* is a decimal value that indicates the highest number of buffers in use at any one time since the last buffer pool trace record was written.
- *times* is a decimal value that indicates how many times this pool has been expanded since the last buffer pool trace record was written. If the value of *times* is greater than 99999, ***** is displayed in this field.
- *exp* is a decimal value used for triggering expansion.
 - If the number of buffers not in use falls below this value, VTAM adds additional buffers. This field contains N/A if dynamic buffering has been suppressed.
- *cont* is a decimal value used for triggering contractions.
 - If the number of available buffers becomes larger than this value, VTAM checks the availability of dynamically obtained buffers. If available, VTAM releases those buffers. However, for any available buffer to be released, every buffer on the same page must also be available since buffers are released in pages.
 - This value is defined only when the buffer pool is in expansion mode. If blanks appear in the display, the buffer pool is not currently in expansion mode.
 - If dynamic buffering has been suppressed, this column contains N/A.
- *incr* is a decimal value that indicates how many buffers are to be added to the buffer pool during dynamic expansion.
 - Buffers are added in full pages. Thus, this number might be larger than the number used when defining the buffer pool. If dynamic buffering is not available, this field contains N/A.

IST449I, IST790I, IST595I, and IST981I subgroup

See "IST449I" on page 150 for a description of this message subgroup.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

IST633I • IST634I

Descriptor code: 5

IST633I ID SIZE TOTAL AVAIL TOTAL USED EXP THRESHOLD INCR

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY BFRUSE,BUFFER=SHORT command. See IST632I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST634I NAME STATUS SID SEND RECV VR TP NETID

Explanation: This message is part of group of messages that VTAM issues in response to a DISPLAY ID command for an application program, a cross-domain resource (CDRSC), the host cross-domain resource manager (CDRM), or a logical unit. Message IST634I is a column header for IST635I, which is repeated for each session partner *name*. A complete description of this part of the message group follows.

```
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST635I name status [sessid] [send] [recv] [vr] [tp] [netid]
:
:
IST314I END
```

name is the session partner name.

status is the session status and is described in the z/OS Communications Server: IP and SNA Codes.

sessid is the session identification (SID).

send is the send count in hexadecimal of the number of PIUs sent by the resource specified in the DISPLAY ID command. This count is applicable to normal data flow only.

recv is a count in hexadecimal of the number of PIUs received by the resource specified in the DISPLAY ID command. This count is applicable to normal data flow only.

Note: Blank values for *send* and *recv* mean that the send and receive counts are not available (in this host), nor is the indication whether BIND (/B) or UNBIND (/U) is in progress. A PU, for example, would not have SEND and RECV counts available.

vr is the virtual route number used by the session. This field is left blank if the session partners are in the same subarea.

tp is the transmission priority assigned to the session. This field is left blank if the session partners are in the same subarea.

Knowledge of subarea information in the host in which the DISPLAY ID=plu_or_slu,E command is entered determines whether *vr* and *tp* are blank. In an APPN network, *vr* and *tp* will be displayed if a part of the session route between the PLU and the SLU goes across a virtual route, as seen from this host's perspective.

With the following configuration, different *vr* and *tp* values will be displayed in SSCP1A and SSCP2A:

```
SSCP1A (PLU) ----- SSCP2A DLUR (SLU)
NN - DLUS AHHC NN
SA1 SA2
|
NCP(SA4)-----
```

In this case, on SSCP1A, since there is not a VR across the AHHC connection, the PLU side of the session is in SA1 and the SLU side of the session enters SA1 over the AHHC connection, so *vr* and *tp* do not apply and should not be displayed. *vr* and *tp* will be blank for the session displayed in message IST635I.

On SSCP2A, however, the PLU side of the session enters SA2 over the AHHC connection and the SLU side of the session is on SA4, so *vr* and *tp* do apply. The *vr* and *tp* that are displayed in message IST635I for this session are the *vr* and *tp* of the virtual route used between SSCP2A and the NCP.

netid identifies the network containing the session partner.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST635I *name status [sessid] [send] [recv] [vr] [tp] [netid]*

Explanation: This message is part of a message group. The first message of the group is IST634I. See explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST636I **CDRSCS OWNED BY** *cdmname* —

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ID command for an external cross-domain resource manager *cdmname*. This message is a header for message IST080I, which lists the cross-domain resources owned by *cdmname*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST637I **SUBAREA=***subarea* **ELEMENT=***element* **SSCPID =** *sscpid*

Explanation: VTAM issues this message in response to a DISPLAY ID command for an external cross-domain resource manager.

subarea and *element* specify the subarea and element addresses of the external CDRM as defined in your network. If the subarea or element address is unknown, N/A will appear in this display.

sscpid is the SSCP identifier of the CDRM. *sscpid* will be displayed for a host CDRM and for an external CDRM with an SSCP-SSCP session with this host. *sscpid* is not available for a CDRM without an SSCP-SSCP session with this host and will be displayed as N/A.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST638I **ADJNETSA =** *adjnetsa*, **ADJNETEL =** *adjnetel*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ID command for an external cross-domain resource manager. A complete description of the message group follows. This group of messages might also appear as a part of another group of messages.

IST638I ADJNETSA = adjnetsa, ADJNETEL = adjnetel

IST675I VR = vr, TP = tp

IST639I GWN = gwn, ADJNET = adjnet

IST640I hostname ADDR IN ADJNET - SA = hostsa, EL = hostel

IST638I

```
IST641I GATEWAY PATH SELECTION LIST - status
IST642I  ADJNET      GWN      SUBAREA  ELEM  ADJNETSA  ADJNETEL
IST643I [adjnet]    [gwn]    [adjsa]  [el]  [adjnetsa] [adjnetel]
```

IST638I

Message IST638I indicates the subarea address, *adjnetsa*, and the element address, *adjnetel*, of the external CDRM as defined in the adjacent network. If these addresses are unknown, this message will not appear in the display.

IST675I

Message IST675I indicates the virtual route number (*vr*) and the transmission priority (*tp*) of the CDRM session in the adjacent network. VTAM issues this message only if the route information in the adjacent network is known.

IST639I

Message IST639I indicates the gateway NCP name, *gwn*, used on the path to the CDRM in the adjacent network, *adjnet*. VTAM issues this message only if the gateway NCP name and adjacent network name are both known.

IST640I

Message IST640I indicates the name of your host, *hostname*, its subarea address, *hostsas*, and its element address, *hostel*, as defined in the external CDRM's network. If the name and address are unknown, this message will not appear in the display.

IST641I

Message IST641I is a header line identifying the gateway path selection list that follows. The gateway path selection list is a list of alternate gateway NCPs used in establishing the cross-network SSCP-SSCP session (that is, the session between your host CDRM and an external CDRM in an adjacent network). If *status* does not appear, then messages IST642I and IST643I will follow with a list of gateway NCPs. If *status* is **DOES NOT EXIST**, then no gateway NCP is defined for the CDRM and messages IST642I and IST643I will not appear.

Each entry in the list contains parameters used to select a particular gateway NCP for establishing the session. Once a session is active, other messages identify the path used to establish the SSCP-SSCP session.

IST642I and IST643I

Message IST642I is a header line for the data displayed in message IST643I. The information displayed by message IST643I is obtained from the operands defined on the GWPATH definition statement in the CDRM major node. VTAM issues message IST643I for each GWPATH definition statement. If any of the information in the display is missing, the corresponding value was omitted from the GWPATH definition statement.

The information includes:

adjnet The network identifier of the adjacent network

gwn The name of the gateway NCP used on the path to the CDRM

adjsa The subarea address of the CDRM as defined in your network

el The element address of the CDRM as defined in your network

adjnetsa

The subarea address of the CDRM as defined in the adjacent network

adjnetel

The element address of the CDRM as defined in the adjacent network

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST639I **GWN = *gwn*, ADJNET = *adjnet***

Explanation: This message is part of a group of messages. The first message in the group is IST638I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST640I ***hostname* ADDR IN ADJNET — SA = *hosts*a, EL = *hostel***

Explanation: This message is part of a group of messages. The first message in the group is IST638I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST641I **GATEWAY PATH SELECTION LIST — *status***

Explanation: This message is part of a group of messages. The first message in the group is IST638I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST642I **ADJNET GWN SUBAREA ELEM ADJNETSA ADJNETEL**

Explanation: This message is part of a group of messages. The first message in the group is IST638I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST643I [*adjnet*] [*gwn*] [*adjsuba*] [*el*] [*adjnetsa*][*adjnetel*]

Explanation: This message is issued as part of a message group. The first message in the group is IST638I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST644I ***originpu* TG [*adjnode*] *destpu***

Explanation: This message is part of a group of messages. The first message of the group is IST533I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST645I ***configname* DEFINITION FAILED — NO VALID *macrotype* MACRO**

Explanation: During activation or resource takeover, the NCP definition, *configname*, failed for one of the following reasons:

- There is no valid *macrotype* definition statement in the NCP definition.
- The NETID operand was specified in each *macrotype* definition statement of the NCP definition, but none of the NETID values match the network ID of this host.
- There is no *macrotype* definition statement in which the value of the specified or defaulted SUBAREA operand matches the subareas of this host. For HOST definition statements, if SUBAREA is not specified, the subarea value defaults to 1, but this can cause a mismatch if the HOSTSA start option value was different. For PCCU definition statements, the SUBAREA operand value defaults to the subarea of this host.

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- The HOST definition statement must be specified for locally attached pre-V4R3 NCPs.
- The BUILD definition statement was encountered before a valid PCCU definition statement (either the PCCU definition statement was not specified or none were found that specified a matching NETID and SUBAREA).

System action: Activation of the NCP definition deck fails during network definition.

Operator response: Save the system log for problem determination.

System programmer response: Correct or include a *macrotype* definition statement with the proper NETID and SUBAREA values (or defaults).

Routing code: 2

Descriptor code: 5

IST650I **POLL = *delay*, NEGPOLL = *negresponse*, SESSION(S) = *maxsessions***

Explanation: VTAM issues this message as part of a line-status display in response to a response to a DISPLAY ID command for a nonswitched polled line (non-SDLC line).

delay is the polling delay (the time delay between polling sequences) of the line expressed in a decimal number of seconds.

negresponse is the maximum number of consecutive negative polling responses accepted before polling of another terminal on the line.

maxsessions is the maximum number of consecutive line scheduling sessions allowed on the line.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST652I ***keyword* IS A DUPLICATE KEYWORD IN THE TRACE/NOTRACE OPTION**

Explanation: *keyword* is specified more than once in the TRACE or NOTRACE start option string.

System action: VTAM initialization does not process the TRACE or NOTRACE option, nor any following start options. Preceding start options have been processed.

Operator response: When prompted by message IST1311A, do one of the following:

- Enter the TRACE or NOTRACE option correctly. You must also enter all succeeding options.
- Enter a blank to accept the default value.

System programmer response: Correct your start options. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VTAM start options.

Routing code: 2

Descriptor code: 5

IST654I **I/O TRACE = {ON|OFF}, BUFFER TRACE = {ON|OFF} [- AMOUNT = *value*]**

Explanation: VTAM issues this message in response to a DISPLAY ID command for a traceable node other than a line. It indicates whether the I/O trace facility is active or inactive for that node, and whether the buffer trace facility is active or inactive for that node.

AMOUNT = *value* is displayed if **BUFFER TRACE = ON**. *value* represents the **AMOUNT** operand value specified on the TRACE start option or the MODIFY TRACE command, and indicates how much of the buffer's contents are traceable. *value* can be one of the following:

PARTIAL

The trace record has a maximum size of 256 bytes including header information.

FULL All of the buffer's contents are traceable.

Note: If **AMOUNT** is not specified when the buffer contents trace is activated, the default *value* **PARTIAL** is displayed.

For additional information on the buffer contents trace, see z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST655I *tracetype* **TRACE STATUS = status**

Explanation: VTAM issues this message in response to a **DISPLAY ID** command or a **DISPLAY TRACES,TYPE=SMS** or a **DISPLAY TRACES,TYPE=CNM** command.

tracetype can be one of the following:

CNM

Communication Network Management (CNM) trace

LINE

Line trace

SMS

Storage Management Service (SMS) trace

TG Transmission group trace

status indicates the status of the trace being displayed.

- If a **DISPLAY ID** command is entered, this message indicates the status of the **LINE** or **TG** trace for the displayed line. This message is displayed only if a **LINE** or **TG** trace is active or in a pending state when the command is entered.

For *status* information, see the z/OS Communications Server: IP and SNA Codes

- If a **DISPLAY TRACES,TYPE=CNM** command is entered, *status* indicates whether the **PDPIUBUF** and **SAWBUF** buffer traces are **ON** or **OFF**.
- If a **DISPLAY TRACES,TYPE=SMS** command is entered, *status* indicates whether the **SMS** buffer trace is **ON** or **OFF**.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST656I **ACTIVATE REJECTED FROM UNDEFINED CDRM, SA subarea EL element**

Explanation: A cross-domain resource manager (CDRM) in an external domain sent a request to establish a session with your domain, via an ACTCDRM request. The request failed because that CDRM is not known to VTAM. It is not defined in your domain.

subarea is the subarea address of the external CDRM.

element is the element address of the external CDRM.

System action: VTAM rejects the request. No session with that CDRM can be established.

Operator response: Contact the operator of the domain with the subarea *subarea* to find out which CDRM was requested. Then enter a **VARY ACT** command for the CDRM major node that contains the definition for the inactive

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CDRM. This will enable the CDRMs external to your domain to establish sessions with your domain. Save the system log and network logs for problem determination.

System programmer response: Examine the definition library to make sure that all CDRMs in external domains that might want to communicate with your domain are defined to VTAM.

Routing code: 2

Descriptor code: 5

IST658I *command* COMMAND FAILED — *uservar* NOT FOUND

Explanation: VTAM issues this message when a MODIFY USERVAR command or DISPLAY USERVAR command for USERVAR *uservar* fails because the USERVAR is not known to VTAM.

System action: VTAM rejects the command. Processing continues.

Operator response: Enter a DISPLAY USERVAR command to list all USERVARs known to VTAM. Enter the MODIFY USERVAR command with the correct USERVAR name.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST660I *command* FOR ID = *nodename* FAILED — PARM: *parameter* NOT VALID

Explanation: VTAM issues this message when the *command* failed for *nodename* because an unacceptable parameter was entered.

- If *parameter* is U=' (blank), a line in a channel attached major node or a local SNA PU was defined without a device address, and the device address was not specified with the U operand on the VARY ACT command.
- If *parameter* is U=*device_address*, a VARY ACT command specifying U=*device_address* was entered for a line in a channel attached major node or a local SNA PU that was not active. This error occurs when *device_address* does not match the device address currently in use.
- If *parameter* is LOGON=*controllu*, a controlling LU name was specified on the LOGON operand of a VARY ACT command for an application. Controlling LUs are only valid for logical units.
- If *parameter* is RNAME, this message can be issued for the following reasons:
 - If RNAME=*nodename* was specified during activation of a communication controller, *nodename* is the name of a logical unit and is therefore not valid.
 - If the value specified in the RNAME *parameter* is not a valid link station name, the *command* fails.
 - If RNAME=*backup* was specified, VTAM was not able to process backup link station *backup*.
 - If the value specified in the RNAME *parameter* does not match the NCP definition, the *command* fails.

System action: VTAM rejects the command. Other processing continues.

Operator response:

- If *parameter* is U=' (blank), reenter the VARY ACT command specifying the device address on the U operand.
- If *parameter* is U=*device_address*, and the device address is correct, deactivate the line or PU and reenter the command.
- If *parameter* is LOGON=*controllu*, see z/OS Communications Server: SNA Operation for information on the correct syntax of the VARY ACT command.
- If *parameter* is RNAME, reenter the command specifying a valid node name or value for *parameter*.

System programmer response:

- If *parameter* is U=' (blank), you might want to specify a default device address for the line or PU.
- Otherwise, no action is required.

Routing code: 2

Descriptor code: 5

IST663I *request* REQUEST [{TO|FROM} *adjnode*] *action*, SENSE= *code*

Explanation: This message is the first in a group of messages that VTAM issues when a request/response unit (RU) fails to complete successfully. A complete description of the message group follows.

```
IST663I request REQUEST [{TO|FROM} adjnode] action, SENSE=code
IST664I {REAL|ALIAS} {OLU|PLU}=luname1 {REAL|ALIAS} {DLU|SLU}=luname2
IST889I SID = sessid
```

Note: One or more messages might follow IST889I. See “Additional messages” in this message explanation for more information.

IST663I

- *request* is the name of the RU that failed. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *request*.
- *action* can be one of the following:
 - **FAILED** indicates that the *request* did not complete successfully for the reason described by *code*.
 - **PURGED** indicates that the *request* was purged because of the timeout value that was specified on the MODIFY IOPURGE command or on the IOPURGE start option. See z/OS Communications Server: SNA Operation and the z/OS Communications Server: SNA Resource Definition Reference for more information.
 - **RECEIVED** indicates that the *request* was received, but did not complete successfully for the reason described by *code*.
- **TO/FROM** is not issued if the failing RU flows in a same domain session. For example, if the **INIT OTHER RU** failed, **TO/FROM** is not issued. **FROM** is issued only if a request failed, not as a reply to a request.
- *adjnode* is the SSCP which sent or is to receive the request, or the related resource to which the request was sent. If a CDINIT failed to initiate an adjacent SSCP for any reason, this message is issued in the following format:


```
IST663I CDINIT REQUEST FROM SSCP1A FAILED, SENSE=0801000F
```
- *code* provides additional information about the cause of the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

IST664I

- This message occurs during session initiation request and response processing. The origin LU (*luname1*) might be either the primary logical unit or the secondary logical unit. The same applies for the destination LU (*luname2*). The real names of the session partners will be displayed if they are known (indicated by **REAL**); otherwise the alias names will be displayed (indicated by **ALIAS**). The DLU’s name will indicate **REAL** if it has been assumed. When the session setup direction cannot be determined, **PLU** and **SLU** will be displayed rather than **OLU** and **DLU**.

Note: *****NA***** is displayed in place of the network identifier portion of the LU name, or the whole LU name, if either is not known.

IST889I

The session ID *sessid* provides a unique identifier for the session. If the session ID is unknown, VTAM displays *****NA*****.

Additional messages

- One or more messages might follow IST889I, depending on the type of error.
 - **Processing error**

```
IST264I REQUIRED resource [luname] reason
or
IST1138I REQUIRED resource [luname] reason
```

The combination of *resource* and *reason* can be any of the following:

```
ADJSSCP TABLE
  UNDEFINED

COS NAME cosname
  UNDEFINED
```

IST663I

LOGMODE NAME *logmode*
UNDEFINED

RESOURCE *luname*
UNDEFINED

RESOURCE *luname*
NOT ACTIVE

RESOURCE *luname*
UNSTABLE (device-type LUs only)

RESOURCE *luname*
DISABLED

RESOURCE *luname*
QUIESCING

RESOURCE *luname*
BLOCKING LOGONS (for application PLUs only)

STORAGE
NOT AVAILABLE

luname appears when *resource* is **RESOURCE**. *luname* is the real name of the LU or application that was in error. If the SLU is not known, VTAM displays *****NA***** for *luname*.

- If a network-qualified name was entered on the command line and the MSGLVL option specifies V4R1 or above, VTAM displays message IST1138I and issues *luname* as a network-qualified name in the form *netid.name*
- If the default is used or the MSGLVL option specifies BASE, VTAM issues message IST264I, and *luname* is not network-qualified.

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the MSGLEVEL start option and the MSGLVL operand on the USSMSG macro.

See the explanation of IST264I or IST1138I for additional information.

- Autologon session setup failure

IST890I AUTOLOGON SESSION SETUP FAILED

This message indicates that an autologon attempt to a controlling PLU failed. The autologon could have originated from one of the following:

- VARY LOGON or VARY ACT with LOGON command
 - VARY ACT command that applied to LUs with LOGAPPL specified
 - Reallocation of the controlling PLU session
- **Dynamic dial failure**
IST1015I APPLICATION SUPPLIED parameter name = parameter value
[IST1028I parameter value]

See the explanation of IST1015I for additional information.

- Extended sense data

IST891I netid.nodename1[.nodename2] GENERATED FAILURE NOTIFICATION
[IST892I resourcename ORIGINATED FAILURE NOTIFICATION]
IST893I ORIGINAL FAILING REQUEST IS request

See the explanation of IST891I for additional information.

- Notification of available resource

IST896I AUTOLOGON WILL BE RETRIED WHEN CONTROLLING PLU IS AVAILABLE

See the explanation of IST896I for additional information.

- Adjacent SSCP table information

```
[IST1705I sc_option = sc_value FROM START OPTION]
[IST1704I sc_option = sc_value FROM ADJACENT SSCP TABLE]
IST894I  ADJSSCPS TRIED  FAILURE SENSE  ADJSSCPS TRIED  FAILURE SENSE
IST895I    sscpname      sense          sscpname      sense
```

For IST1705I or IST1704I:

sc_option indicates a search control option that was used for the session. Possible values are: SORDER and SSCPORD. When VTAM is enabled for APPN, both search control options will be displayed with SORDER being first. When VTAM is not enabled for APPN, SSCPORD will be the only search control option displayed. Either IST1704I or IST1705I will be issued for each search control option displayed.

sc_value indicates the value of the search control option that was used for the session. If *sc_value* is ADJLIST, the adjacent SSCP table used for this session was for a resource that specified an adjacent CDRM list (ADJLIST); therefore, the SORDER and SSCPORD search control options do not apply.

For IST895I, see the explanation of IST894I for additional information.

– Translation error

```
IST523I REASON = IMPROPER TRANSLATION OF {OLU|DLU} NAME
```

During an LU-LU session setup request, VTAM requested that the alias-name translation facility translate either the OLU name (*luname1*) or the DLU name (*luname2*), and the facility returned a different name with the same network identifier. If the alias and real names are in the same network, VTAM requires that the names be the same.

– TN3270 Resource information

```
[IST1727I DNS NAME: dns_name]
[IST1728I dns_name_continued]
IST1669I IPADDR..PORT ipaddr..portno
```

Messages IST1669I, IST1727I, and IST1728I will be allowed whenever the SLU of the session is known to be a TN3270-connected application, CDRSC, or LU resource.

– Border node search information

```
[IST2208I sc_option = sc_value FROM START OPTION]
[IST2209I sc_option = sc_value FROM ADJCLUST TABLE]
```

For IST2208I or IST2209I:

- The *sc_option* value indicates a border node search control option that was used for the locate. Possible values are: BNORD and BNDYN. When VTAM is enabled as a border node and performs border node searching, both border node search control options are displayed. Either IST2208I or IST2209I is issued for each search control option.
- The *sc_value* value indicates the value of the search control option that was used for the search. When the *sc_option* value is BNORD, possible *sc_value* values are PRIORITY and DEFINED. When the *sc_option* value is BNDYN, possible *sc_value* values are NONE, LIMITED, and FULL. See z/OS Communications Server: SNA Resource Definition Reference for a description of the values.

– APPN Locate Search Failure information

```
IST1942I APPN LOCATE SEARCH STEPS ATTEMPTED
[IST1943I DIRECTED SEARCH TO A SERVED END NODE]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1944I DIRECTED SEARCH TO A NETWORK NODE]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1945I DIRECTED SEARCH TO A BORDER NODE]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1946I LOCAL SUBAREA SEARCH]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1947I BROADCAST SEARCH TO SERVED END NODES]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1948I DIRECTED SEARCHES TO BORDER NODES]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1949I DIRECTED SEARCH TO A CENTRAL DIRECTORY SERVER]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1950I DIRECTED SEARCHES TO ALTERNATE CENTRAL DIRECTORY SERVERS]
```

IST664I

```
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1951I BROADCAST SEARCH TO NETWORK NODES]
[IST1953I search nodename - SENSE code FROM reply nodename]
[IST1952I DIRECTED SEARCHES TO INTERCHANGE NODES]
[IST1953I search nodename - SENSE code FROM reply nodename]
```

See IST1942I for a complete description of the message group.

- Session path information

```
[IST2102I RSCV FROM PLU]
[IST1460I TGN CPNAME          TG TYPE    HPR]
[IST1461I tgn cpname          tgtype   hpr]
[IST2103I RSCV TOWARDS SLU]
[IST1460I TGN CPNAME          TG TYPE    HPR]
[IST1461I tgn cpname          tgtype   hpr]
[IST2104I RSCV TOWARDS DLUR]
[IST1460I TGN CPNAME          TG TYPE    HPR]
[IST1461I tgn cpname          tgtype   hpr]
```

See the explanation of IST2102I, IST2103I, or IST2104I for additional information.

System action:

- If *action* is **FAILED** or **RECEIVED**, the LU-LU session setup request fails.
- If *action* is **PURGED**, the LU-LU session setup request continues its routing to other SSCPs. If there are no additional adjacent SSCPs, the LU-LU session setup fails.

Operator response: Save the system log for problem determination.

System programmer response:

- If *action* is **FAILED** or **RECEIVED**, review the definition for the facility where the LU translation is defined. Either change the name translation for the LU or change the network ID of the translated name to a different network identifier.
- If *action* is **PURGED**, verify that the timeout value specified for IOPURGE on either the MODIFY IOPURGE command or the IOPURGE start option is adequate. If this value is too small, it might result in premature routing failures.

If the IOPURGE value is adequate, verify that the adjacent SSCP *adjnode* in message IST663I is active and operational.

See z/OS Communications Server: SNA Operation for a description of the MODIFY IOPURGE command. See the z/OS Communications Server: SNA Resource Definition Reference for a description of the IOPURGE start option.

User response: Not applicable.

Problem determination: See the System programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 8

Descriptor code: 4

Example: Not applicable.

IST664I {REAL|ALIAS} {OLU|PLU}=luname1 {REAL|ALIAS} {DLU|SLU}=luname2

Explanation: This message is part of a message group. The first message in the group is either IST663I or IST1774I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST670I **VARY** *command* **PROCESSING FOR ID =** *nodename* **COMPLETE**

Explanation: The specified VARY command processing completed for the resource *nodename*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST674I *command* **FOR ID =** *nodename* **CONTINUES — PARM:** *parameter* **IGNORED**

Explanation: VTAM issues this message when a *parameter* was entered that is not valid for the resource *nodename* specified on the *command*.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

System action: Processing of *command* continues, but VTAM ignores *parameter*.

Operator response: You do not need to reenter the command. Processing of *command* continues. For the next use of the command, check the valid operands for the command in z/OS Communications Server: SNA Operation.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST675I **VR =** *vr*, **TP =** *tp*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a CDRM or a PU type 4 or 5. *vr* is the virtual route number.

tp is the transmission priority for the session of the node being displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST678I **INSUFFICIENT STORAGE TO SCHEDULE TPEND EXIT FOR** *applname*

Explanation: VTAM issues this message when storage was not available to schedule the TPEND exit of application *applname* to notify the application that VTAM was terminating.

applname is the name of a VTAM subtask or a user application.

System action: Processing continues without VTAM scheduling the TPEND exit for the indicated application. For HALT and HALT QUICK, VTAM will not be able to terminate until *applname* has closed its ACB. The scheduling of the TPEND exit for *applname* will be tried again by VTAM at some later time.

Operator response: Save the system log for problem determination.

System programmer response: Check VTAM storage allocation as specified in the start options and as modified by the MODIFY CSALIMIT command.

Make adjustments as necessary to your CSA start options by using the MODIFY VTAMOPTS command.

- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, and the MODIFY VTAMOPTS command.

IST679A • IST680I

Routing code: 2

Descriptor code: 5

IST679A PLEASE DIAL LINE = *linename*, NUMBER = *phonenum*

Explanation: Manual dial out is required. VTAM prompts the network operator to dial *phonenum* on *linename*.

System action: VTAM has caused the NCP to begin monitoring for a connection to complete on the line. The application program's request to connect to the device is kept waiting until the connection is completed.

Operator response: You must either successfully establish the requested connection or enter the VARY INOP command to terminate the dial out request.

System programmer response: None.

Routing code: 1

Descriptor code: 2

IST680I CONNECTION REQUEST DENIED – ID = *nodename text*

Explanation: VTAM issues this message when a connection request for resource *nodename* has been rejected. This message is issued as both a single line message and as part of message groups.

- If *nodename* is a local SNA physical unit, the following message group is displayed.

```
IST680I    CONNECTION REQUEST DENIED - ID = nodename text
[IST1394I  CPNAME = cpname STATION ID = stationid]
[IST352I   LOCAL SNA MAJOR NODE = majornode ]
IST314I    END
```

- If *nodename* is a DLUR served physical unit, the following message group is displayed.

```
IST680I    CONNECTION REQUEST DENIED - ID = nodename text
IST1354I   DLUR NAME = dlurname MAJNODE = majnode
IST1394I   CPNAME = cpname STATION ID = stationid
IST314I    END
```

- For all other types of nodes, the following message group is displayed.

```
IST680I    CONNECTION REQUEST DENIED - ID = nodename text
[IST1394I  CPNAME = cpname STATION ID = stationid]
[IST081I   LINE NAME = linename, LINE GROUP = groupname, MAJNOD = nodename ]
[IST1544I  DIAL OUT PURGE IN PROGRESS - ID = nodename]
IST314I    END
```

IST081I

linename is the line to which *nodename* is connected.

groupname is the line group to which the line *linename* belongs.

nodename is the major node with which the line is associated.

IST352I

majornode is the local SNA major node (local cluster controller).

IST680I

- *text* can be one of the following:

CALL SECURITY ERROR

A dial in or dial out request was rejected because the required information for call security verification was missing or not valid.

DIAL OUT IN PROGRESS

The dial out for the switched physical unit *nodename* is already in progress over another line. For a manual dial, see IST679A. For an auto dial, the dial in will fail.

INVALID NETWORK NAME

This error can occur for one of the following reasons:

- *nodename* is not a valid name. Either the CPNAME passed in the REQCONT/REQACTPU RU could not be found (matched to a switched PU definition), or the network ID or CPNAME passed in the REQCONT/REQACTPU RU is not valid. This is the most frequent reason for the error.
- *nodename* is attempting to establish a connection with itself. This can occur in response to an operator takeover request.

LINK NOT IN EAM

A dial in request was not honored for the switched physical unit *nodename* because the link was not in enable answer mode (EAM).

MAXLU INADEQUATE

The dial in request was not honored because the link cannot support the number of logical units required by the switched physical unit *nodename* that dialed in.

NETID MISMATCH

NETID found in REQCONT/REQACTPU RU does not match the NETID of the host.

NO USABLE PATH FOUND

Call ID verification was indicated on a PATH definition statement for *nodename* and a usable PATH definition could not be found.

PU ALREADY ACTIVE

A REQACTPU is received for a DLUR PU that is already active.

PU GEN NOT SUPPORTED

This error can occur for one of the following reasons:

- The host could not identify the switched PU for one of the following reasons:
 - The PU is not defined in a switched major node.
 - The switched major node in which the PU is defined is not active.
 - The PU is not able to be dynamically defined for the following reasons:
 - Non-genned terminal support is not available because ASDP=YES is not specified on the PU definition statement in the switched major node.
 - DYNPU=YES is not specified on the GROUP definition statement in a major node such as NCP or XCA.
 - The network-qualified name of the node that the PU represents, as specified in the XID3 received from the adjacent node, does not match the name defined in the switched major node on the NETID and CPNAME operands on the PU definition statement.
 - The *idblk* and *idnum*, as specified in the XID3 received from the adjacent node, do not match the *idblk* and *idnum* defined in the switched major node on the IDBLK and IDNUM operands on the PU definition statement.

PU STATE CHANGED

The PU state of a predefined PU changed while the c services (CS) exit was in control. When a REQCONT for a predefined PU is sent to the CS exit, the state of the PU is set to Pending REQCONT. If an INOP is received on that PU or its LINE before returning from the CS exit, the state of the PU changes. This indicates that the connection setup cannot continue.

PUTYPE MISMATCH

PUTYPE found in REQCONT/REQACTPU RU does not match the PUTYPE in the switched PU definition.

REQCONT RU NOT VALID

The station ID (*nodename*) passed in the REQCONT RU could not be found (that is, matched to a switched PU definition). This indicates a hardware or software problem in the switched physical unit *nodename* attempting the connection.

T2.1 NOT SUPPORTED

A connection request for a PU type 2.1 node, *nodename*, with independent LUs was received from an NCP that does not provide the required level of support.

TG NUMBER NOT USABLE

An EE model PU with predefined TG numbers was used, but the specified TGNs could not be used. The REQCONT RU fails with sense 08070000 or 10160016.

IST680I

dlurname is the network-qualified CP name (in the form *netid.name*) of the dependent LU requester (DLUR) associated with the DLUR served physical unit *nodename* in message IST680I.

majnode is the name of the switched major node for the DLUR served physical unit *nodename* in message IST680I.

IST1394I

cpname is the network-qualified name of the control point (CP) that was passed in the XID from the node attempting the connection. VTAM displays *cpname* in the form *netid.name*. *****NA***** is displayed if no CP name is provided.

stationid is the 4-byte station identifier in the following format: Byte 1 = PUtype, Byte 2 = reserved, Byte 3 and 4 = IDBLK/IDNUM . For more information on station identifier formats, see the descriptions of the IDBLK and IDNUM operands in the z/OS Communications Server: SNA Resource Definition Reference.

IST1544I

- *nodename* is the physical unit (PU) that dialed out on the associated line.

A dial in and a dial out over the same line were attempted at the same time and both requests were rejected.

There are two possible causes for the problem:

- A physical unit (PU) performed a dial out, but the request contact information (*cpname* or *stationid*) received in contact RU (REQCONT) matches a different PU that is defined in VTAM.
- Two different PUs, one performing dial out and the other performing dial in over the same line, cause a race condition.

In both cases, the PU that attempted to dial out is displayed.

System action: Processing continues. If the physical unit is offline, the session establishment remains pending. Otherwise, the connection request and any associated session establishment attempts fail.

For message IST1544I, the dial in is rejected and the dial out is purged.

Operator response: For **IST1544I**: Save the system log for problem determination.

For IST680I

CALL SECURITY ERROR

Save the system log for problem determination.

DIAL OUT IN PROGRESS

Attempt to dial in on another line.

INVALID NETWORK NAME

Save the system log for problem determination.

LINK NOT IN EAM

If dial in requests are to be honored on link *link*, enable answer mode by using the VARY ANS=ON,ID=*link* command.

MAXLU INADEQUATE

Save the system log for problem determination.

NETID MISMATCH

Save the system log for problem determination.

NO USABLE PATH FOUND

If dial in or dial out requests are to be honored for the node, enable the PATH definitions for *nodename* by using the VARY PATH=USE,ID=*nodename*, PID=*pathid* command.

PU GEN NOT SUPPORTED

Try activating the switched major node containing the PU *nodename*. If problems persist, save the system log for problem determination.

PUTYPE MISMATCH

Save the system log for problem determination.

REQCONT RU NOT VALID

Save the system log for problem determination.

T2.1 NOT SUPPORTED

Save the system log for problem determination.

System programmer response: For IST1544I, ensure that the correct CP name or station ID (IDBLK/IDNUM) is specified on the switched PU definition statement for the PU performing the dial out.

For IST680I

CALL SECURITY ERROR

Verify that all nodes involved in the dial process are of a level that supports call security verification. See the PRTCT operand on the PU definition statement in the switched major node definition.

DIAL OUT IN PROGRESS

None.

INVALID NETWORK NAME

- If *nodename* is not a valid name, check for a CPNAME mismatch between the switched major node or mocol major node and the NCP major node definitions. Verify that the network ID passed in the REQCONT/REQACTPU RU matches the network ID specified in the PU definition statement. Line information or I/O trace information or both might be necessary to determine the cause of the problem.
- If this error is due to an operator takeover request, APPN or LEN connectivity is not available until the failing host regains control or another host takes control. See the z/OS Communications Server: SNA Network Implementation Guide for more information.
- If this error is due to a name conflict, correct the duplicate names.

LINK NOT IN EAM

Put the link in enable answer mode (EAM).

MAXLU INADEQUATE

Check for a MAXLU mismatch in the switched major node and NCP major node definitions. Either update the switched major node to match the NCP major node or instruct the remote user of the PU not to dial in over that link.

NETID MISMATCH

NETID should be the same as the host. If it is not, then the NETID in the REQCONT/REQACTPU RU is incorrect. If *cpname* is not network-qualified, then NETID will default to the host NETID. See the z/OS Communications Server: SNA Resource Definition Reference for information about XNETALS.

See the product documentation for the device for information on coding *cpname* and NETID if they are not correct in the REQCONT/REQACTPU RU.

NO USABLE PATH FOUND

Check the PATH definition statements in the switched major node containing *nodename*.

PU GEN NOT SUPPORTED

Check the definition statements for the switched PU and revise as needed. Deactivate and reactivate the switched major node to use the revised definitions.

PUTYPE MISMATCH

PUTYPE as indicated in the XID received on the REQCONT/REQACTPU RU should match PUTYPE as defined on the switched PU. See z/OS Communications Server: SNA Resource Definition Reference for information about PUTYPE.

See the product documentation for the device for information on PUTYPE if it is not indicated correctly in the XID received on REQCONT/REQACTPU RU.

REQCONT RU NOT VALID

Check for an IDBLK or IDNUM mismatch between the device and the switched major node.

T2.1 NOT SUPPORTED

Check the PATH and LU definition statements in the switched major node containing *nodename*.

Routing code: 8

Descriptor code: 4

IST683I CONNECTION REQUEST DENIED, ID = *nodename*

Explanation: This message is the first in a subgroup of messages that VTAM issues when the connection for channel-attached physical unit *nodename* failed. A complete description of the message subgroup follows.

IST683I CONNECTION REQUEST DENIED, ID = *nodename*
 IST684I I/O ERR, CSW = *channel_status_word*, SENSE = *code*

channel_status_word (also called *subchannel_status_word*) provides information about the device and channel (or subchannel) status.

code is the sense code and provides information about the cause of the error. See the appropriate hardware manual for the value of *code*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in the two messages to determine appropriate error recovery action. See the appropriate hardware manual for the value of *code*.

If you cannot identify an I/O error or if **SENSE = 0200** or **8200** in message IST684I, check the following:

- Ensure that the buffer size (IOBUF) is compatible between the device and VTAM. This can be determined by referencing the device installation guidelines.

Note: Some devices require an even numbered buffer size.

- Ensure that the PU type defined to VTAM (XID=YES|NO) matches the real PU type.
- Ensure that you have specified an appropriate value for MAXBFRU on the PU definition of *nodename*.
- Ensure that the product of MAXBFRU and the buffer size (IOBUF) is equal to or greater than the hardware's maximum send size. Reference your hardware documentation for additional information about maximum send size.

Routing code: 8

Descriptor code: 4

IST684I I/O ERR, CSW = *channel_status_word*, SENSE = *code*

Explanation: This message is part of a message subgroup. The first message in the subgroup is IST683I. See the explanation of that message for a complete description of the subgroup.

Routing code: 8

Descriptor code: 4

IST688I VARY FAILED FOR ID = *cdmname* — INSUFFICIENT STORAGE

Explanation: While VTAM was processing a VARY ACT command for an external CDRM, insufficient storage was available to process a request for node *cdmname*.

System action: The VARY ACT command for *cdmname* fails.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.

- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST690I CONNECTION REQUEST DENIED — INVALID STATION ID = *stationid*

Explanation: VTAM issues this message when a switched connection between VTAM and a physical unit was unsuccessful because the station identifier *stationid* did not resolve to a node name in an active switched major node. A complete description of the message group follows.

```
IST690I CONNECTION REQUEST DENIED - INVALID STATION ID = stationid
[IST1544I DIAL OUT PURGE IN PROGRESS - ID = nodename]
IST081I LINE NAME = linename, LINE GROUP = groupname, MAJNOD = nodename
IST956I PU SAP=sapaddress MAC=macaddress
IST314I END
```

IST081I

linename is the line to which *nodename* is connected.
groupname is the line group to which the line *linename* belongs.
nodename is the major node with which the line is associated.

IST690I

stationid is the station identifier expressed in hexadecimal. For more information on station identifier formats, see the descriptions of the IDBLK and IDNUM operands in the z/OS Communications Server: SNA Resource Definition Reference.

IST956I

Provides the remote LAN address of the PU if the failure is detected during REQCONT processing and the DLC information is available.

sapaddress is the service access point (SAP) address for the LAN connection that the major node defines.

macaddress is the 12-digit hexadecimal medium access control (MAC) address for the LAN connection that the major node defines. If no *macaddress* was defined, zeroes are displayed.

IST1544I

- *nodename* is the physical unit (PU) that dialed out on the associated line.
 A dial in and a dial out to use the same line were attempted at the same time and both requests were rejected. There are two possible causes for the problem:
 - A physical unit (PU) did a dial out, but the request contact information (*cpname* or *stationid*) received in contact RU (REQCONT) matches a different PU defined in VTAM.
 - Two different PUs, one performing dial out and the other performing dial in over the same line, cause a race condition.

In both cases, the PU that attempted to dial out is displayed.

System action: The connection to the physical unit is broken.

For message IST1544I, the dial in is rejected and the dial out is purged.

Operator response: Save the system log for problem determination.

For IST1544I Save the system log for problem determination.

System programmer response: Possible reasons for this problem are:

IST693I

- The switched major node that contains the PU definitions for this physical unit is not active. The physical unit could be attached to a Token Ring.
Activate the switched major node that contains the definitions for this physical unit.
- A remote terminal operator initialized a physical unit with the wrong ID.
Have the remote operator re-initialize the physical unit with the correct station identifier.
- The VTAM definition statements are incorrect.
Correct the VTAM definition statements before your operator tries to redial by taking the following actions:
 1. Enter a VARY INACT command for the switched major node.
 2. Modify and file new VTAM definition statements.
 3. Reactivate the switched major node.
 4. Redial.
- Dynamic definition of the physical unit fails for one of the following reasons:
 - The XID exit has not been activated or the XID exit has not been defined.
Verify that the XID exit is in the VTAMLIB and that the exit has been activated. See z/OS Communications Server: SNA Customization for more information on the XID exit.
 - The XID exit is active, but the MODEL major node is not active, not valid, or contains an error.
In this case, message IST1016I precedes this message and provides more specific information about the cause of the failure.
- The switched PU is not in a valid state. This can occur during recovery processing when a PU that is being deactivated by the host through one boundary function, such as NCP, dials in through another boundary function. The PU deactivation can occur in response to an operator command or internal INOP processing. If the current resource state of the PU in VTAM is not CONCT (connectable), the dial request will fail.
Since this situation occurs as a result of internal recovery processing, no operator or programmer actions are needed. When the reactivation of a PU is complete and the state becomes CONCT, the dial request will be successfully completed.

For IST1544I Ensure that the correct CP name or station ID (IDBLK/IDNUM) is specified on the switched PU definition statement for the PU that is performing the dial out.

Routing code: 8

Descriptor code: 4

IST693I UNABLE TO DISCONNECT ID = *nodename*

Explanation: VTAM issues this message when a session termination request for channel-attached physical unit *nodename* failed because of insufficient storage or an I/O error.

System action: Processing continues.

Operator response: Message IOS000I might be issued by MVS prior to this message and can provide additional information about the reason for the error.

Enter a VARY INACT,TYPE=IMMED command for *nodename* so the system can release the resources allocated to *nodename*.

- To check for a storage problem, take the following actions:
Issue the DISPLAY BFRUSE command to display information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. If this is a storage problem, it is usually related to private storage. Issue the DISPLAY STORUSE command to display storage usage for storage pools.
Save the system log and request a dump for problem determination.
- To check for an I/O error, take the following actions:
Save the system log for problem determination.
Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP.
If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

System programmer response:

- For a storage problem, increase storage as required. See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- For an I/O error, if you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 8

Descriptor code: 4

IST700I INVALID *type* – SKIPPING TO NEXT NETWORK STMT OR EOF

Explanation: This message is the first of a group of messages. A complete description of the message group follows the example.

```
IST700I  INVALID type – SKIPPING TO NEXT NETWORK STMT OR EOF
IST701I  CONFIG configname LABEL = labelname STMT TYPE = statementname
```

VTAM encountered an error in the adjacent SSCP, ADJCLUST or COSMAP table definition *configname*. One of the following is not valid:

- A definition statement
- A label (such as a numeric first character)
- A value on the NETID operand on a NETWORK definition statement

IST700I

type is **STMT**, **LABEL**, or **NETID**, indicating the location of the error.

If the NETID is not valid, the value coded on the NETID operand on a NETWORK definition statement in an adjacent SSCP, ADJCLUST, or COSMAP table does not follow the standards for a name. The value must be 8 characters or fewer, the first character must be alphabetic, and the rest of the characters must be alphanumeric.

IST701I

configname identifies the SSCP, ADJCLUST or COSMAP table definition.

labelname is the label on the statement.

statementname is the type of definition statement and is filled in only if the label is valid.

System action: All statements in the adjacent SSCP, ADJCLUST, or COSMAP table definition following the statement in error are ignored until a NETWORK statement or end of file (EOF) is encountered. If a NETWORK statement is encountered, normal processing resumes for that NETWORK statement and subsequent definition statements.

If the table is an adjacent SSCP table, and the error occurred after one or more valid ADJCDRM definition statements for the NETWORK statement (or the set of NETWORK statements) preceding the statement with label *labelname*, those ADJCDRM statements are processed. If no valid ADJCDRM definition is encountered for the NETWORK statement (or the set of NETWORK statements) preceding the statement with label *labelname*, all definition statements related to the NETWORK statements are ignored.

If the table is an ADJCLUST table, and the error occurred after one or more valid NEXTCP definition statements for the NETWORK statement (or the set of NETWORK statements) preceding the statement with label *labelname*, those NEXTCP statements are processed. If no valid NEXTCP definition is encountered for the NETWORK statement (or the set of NETWORK statements) preceding the statement with label *labelname*, all definition statements related to the NETWORK statements are ignored.

If the table is a COSMAP table, and the error occurred after one or more valid MAPTOCOS definition statements for the NETWORK statement (or the set of NETWORK statements) preceding the statement with label *labelname*, those MAPTOCOS statements are processed. If no valid MAPTOCOS definition is encountered for the NETWORK statement (or the set of NETWORK statements) preceding the statement with label *labelname*, all definition statements related to the NETWORK statements are ignored.

Operator response: Save the system log for problem determination.

IST701I • IST702I

System programmer response: Enter a DISPLAY TABLE command to determine the error. See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM table definition statements.

After you correct the error, reactivate the major node in order to use the revised table definition.

Routing code: 2

Descriptor code: 5

IST701I CONFIG *configname* LABEL = *labelname* STMT TYPE = *statementname*

Explanation: VTAM issues this message as part of several different message groups. See the explanation of the first message in the group for a complete description.

Routing code: 2

Descriptor code: 5

IST702I CONFIG *configname* – UNEXPECTED *stmt_type*

Explanation: VTAM encountered an unexpected statement or EOF while processing the adjacent SSCP table definition or dynamic path update set.

configname identifies the adjacent SSCP table definition or dynamic path update set.

stmt_type identifies the unexpected statement. The values can be one of the following:

- CDRM STMT
- NETWORK STMT[*labelname*], where *labelname* is the name of the label for a NETWORK statement.
- EOF

One of the following conditions occurred:

- After a valid CDRM definition statement was processed, a NETWORK statement with label *labelname* or end of file (EOF) was encountered before a valid ADJCDRM statement.
- After a valid NETWORK statement was processed, end of file (EOF) occurred before a valid ADJCDRM statement.
- After a valid ADJLIST statement was processed, a CDRM or NETWORK statement or EOF occurred before a valid ADJCDRM statement.

In the first two conditions, an ADJCDRM definition statement was expected—not necessarily as the next statement, but before EOF or a NETWORK statement. Instead, either EOF or a NETWORK statement defining a destination network for a new set of adjacent SSCP tables was encountered. After a valid VPATH or NCPPATH statement was processed, EOF occurred before a valid PATH statement.

In the third condition, an ADJCDRM definition statement was expected immediately following an ADJLIST statement. Instead, a CDRM or NETWORK statement or EOF was encountered.

System action: For adjacent SSCP table definition, further processing of the NETWORK definition statements and CDRM definition statements not accompanied by an ADJCDRM statement is halted, since the definition statements do not define a valid adjacent SSCP table.

For dynamic path update, the last VPATH or NCPPATH statement is not processed, since the definition statements do not define a valid dynamic path update set.

Operator response: Save the system log and network logs for problem determination.

System programmer response: Review the definition library to make sure all requirements for VTAM are correct for your system.

For adjacent SSCP table definition, either insert one or more valid ADJCDRM definition statements before (not necessarily immediately preceding) the unexpected NETWORK statement or EOF, or delete the extra NETWORK and CDRM statements that do not define the destination networks or destination SSCPs in the adjacent SSCP table definitions.

For dynamic path update, insert one or more valid PATH definition statements before EOF or delete the extra VPATH or NCPPATH statement that does not define a complete dynamic path update set.

For ADJLIST definition, do one of the following:

- Insert one or more valid ADJCDRM definition statements immediately preceding the unexpected CDRM or NETWORK statement, or EOF.
- Delete the extra CDRM and NETWORK statements.
- If they are out of order, move the unexpected statements to the proper position.

Routing code: 2

Descriptor code: 5

IST703I CONFIG *configname* ADJSSCP DEFINITIONS IGNORED – NO ADJCDRM STMT

Explanation: No valid CDRM, ADJCDRM, or ADJLIST definition statements were found in the adjacent SSCP table definitions *configname*.

System action: Processing of the adjacent SSCP table definitions is halted.

Operator response: Save the system log for problem determination.

System programmer response: Include one or more valid ADJCDRM definition statements in the adjacent SSCP table definitions.

Routing code: 2

Descriptor code: 5

IST706I ADJSSCP TABLE FOR *configname* IGNORED — INSUFFICIENT STORAGE

Explanation: This message is the first in two message subgroups. A full description of the two message groups follows.

- If an adjacent SSCP table is activated with entries identified with CDRM or NETID definition statements, the following message group is displayed.


```
IST706I ADJSSCP TABLE FOR configname IGNORED – INSUFFICIENT STORAGE
IST708I {[NETID = netid] [NETWORK = macroname] [CDRM = sscpname|DEFAULT TABLE]}
        DEFAULT TABLE FOR ALL NETWORKS
```
- If an adjacent SSCP table is activated with entries identified with an ADJLIST definition statement, the following message group is displayed.


```
IST706I ADJSSCP TABLE FOR configname IGNORED – INSUFFICIENT STORAGE
IST1333I ADJLIST = listname
```

The adjacent SSCP table for the indicated network and the indicated CDRM could not be built during the processing of the ADJSSCP definition, *configname*, because of a lack of storage.

IST706I

configname is the ADJSSCP definition.

IST708I

netid is the name of the network of the ADJSSCP table that is being defined. This is specified in the NETID operand on the relevant NETWORK definition statement. If the NETID operand or the NETWORK statement was not coded, the NETID defaults to this host's network.

macroname is the label coded on the NETWORK definition statement. If it does not appear, either a label was not provided on the NETWORK definition statement, or a NETWORK definition statement was not coded at all. In this case, the adjacent SSCP table defaults to the network of this host.

sscpname is the label coded on the CDRM definition statement. The intended adjacent SSCP table was for the adjacent SSCP's that are used to get to CDRM *sscpname* in network *netid*. If *sscpname* does not appear, the ADJSSCP table being defined is the default table for the entire network identified by NETID, and **DEFAULT TABLE** appears instead of the **CDRM=sscpname**.

If **CDRM=******* appears, there was not enough storage to build adjacent SSCP tables for any of the CDRMs listed following the indicated NETWORK statement.

VTAM issues **DEFAULT TABLE FOR ALL NETWORKS** when the table being activated has a default adjacent SSCP list for all networks.

IST707I

IST1333I

listname is the name of an adjacent SSCP table as defined by an ADJLIST definition statement.

If an adjacent SSCP table was not specified for the CDRSC, then *****NA***** is displayed.

See the descriptions of the ADJLIST definition statement in the z/OS Communications Server: SNA Resource Definition Reference for more information on adjacent SSCP tables.

System action: No further attempt is made to build adjacent SSCP tables for the indicated network.

Operator response: When VTAM activity has decreased, try the operation again. If problems persist, enter the DISPLAY STORUSE command. Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required.

- See z/OS Communications Server: SNA Operation for more information on the DISPLAY STORUSE command.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST707I ADJSSCP TABLE BEING MODIFIED BY ACTIVATION OF *configname*

Explanation: This message is the first in two message subgroups. A full description of the two message groups follows.

- If an adjacent SSCP table is activated with entries identified with CDRM or NETID definition statements, the following message group is displayed.

```
IST707I ADJSSCP TABLE BEING MODIFIED BY ACTIVATION OF configname
IST708I {[NETID = netid] [NETWORK = macrolabel] [CDRM = sscpname]
        DEFAULT TABLE]}|DEFAULT TABLE FOR ALL NETWORKS
```

- If an adjacent SSCP table is activated with entries identified with an ADJLIST definition statement, the following message group is displayed.

```
IST707I ADJSSCP TABLE BEING MODIFIED BY ACTIVATION OF configname
IST1333I ADJLIST = listname
```

IST707I

An adjacent SSCP table has been modified.

configname is the ADJSSCP definition that contains an adjacent SSCP table entry defining the same CDRM or NETID or both that were modified. This entry is added to the table, modifying the old table.

IST708I

netid is the name of the network of the ADJSSCP table that is being defined. This is specified in the NETID operand on the relevant NETWORK definition statement. If NETID or the NETWORK statement was not coded, NETID defaults to this host's network.

macrolabel is the label coded on the NETWORK definition statement. If it does not appear, either a label was not provided on the NETWORK definition statement, or a NETWORK definition statement was not coded at all. In this case, the adjacent SSCP table defaults to the network of this host.

sscpname is the label coded on the CDRM statement. If it does not appear, the ADJSSCP table being defined is the default table for the entire network identified by NETID, and **DEFAULT TABLE** appears instead of the **CDRM=sscpname**.

DEFAULT TABLE FOR ALL NETWORKS is issued when the table being activated has a default adjacent SSCP list for all networks.

IST1333I

listname is the name of an adjacent SSCP table as defined by an ADJLIST definition statement.

If an adjacent SSCP table was not specified for the CDRSC, then *****NA***** is displayed.

See the descriptions of the ADJLIST definition statement in the z/OS Communications Server: SNA Resource Definition Reference for more information on adjacent SSCP tables.

System action: The new adjacent SSCP table replaces the old adjacent SSCP table.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST708I **{[NETID = *netid*] [NETWORK = *macrolabel*] [CDRM = *sscpname* | DEFAULT TABLE]} | DEFAULT TABLE FOR ALL NETWORKS**

Explanation: This message is part of a message group. The first message is IST706I, IST707I, or IST831I. See the explanations of those messages for a full description.

Routing code: 2

Descriptor code: 5

IST709I **CONFIG *configname* FAILED — *reason***

Explanation: The activation of NCP major node *configname* failed during network definition. *reason* will be one of the following:

NO VALID BUILD OR NETWORK MACRO

The NCP major node definition *configname* does not contain either a BUILD or a NETWORK definition statement with the appropriate SUBAREA or NETID values or both specified for this host.

CONFLICTING NEWNAME SPECIFIED ON BUILD

The LOADMOD=*load module name* specified on the VARY ACT command does not match the value coded for the NEWNAME keyword on the BUILD definition statement.

CONFLICTING PUNAME SPECIFIED ON BUILD

The ID=*puname* specified on the VARY ACT command must match the value coded for the PUNAME keyword on the BUILD definition statement.

System action: Activation of the NCP major node fails.

Operator response: When *reason* is **NO VALID BUILD OR NETWORK MACRO**, save the system log for problem determination.

When *reason* is **CONFLICTING NEWNAME SPECIFIED ON BUILD**, reenter the VARY ACT command with the LOADMOD operand specifying the value coded for NEWNAME on the BUILD definition statement.

When *reason* is **CONFLICTING PUNAME SPECIFIED ON BUILD**, reenter the VARY ACT command with the ID operand specifying the value coded for PUNAME on the BUILD definition statement.

System programmer response: When *reason* is **NO VALID BUILD OR NETWORK MACRO**, include a valid BUILD or NETWORK definition statement with the appropriate SUBAREA and NETID values specified for this host.

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the VTAM definition statements.

Routing code: 2

Descriptor code: 5

IST710I **CONFIG = *configname* NETWORK = *netid text***

Explanation: Either the COS table name (defined by the COSTAB operand) or the maximum subarea value (defined by the MAXSUBA operand) on the BUILD or NETWORK definition statement could not be defined to VTAM.

configname specifies the name of the NCP definition; *netid* specifies the network identifier coded on the NETID operand on the BUILD or NETWORK definition statement that has encountered an error.

text indicates the specific reason for the failure of either operand, as described as follows:

COSTAB CONFLICT

The COS table for the *netid* and for this NCP has already been defined by another BUILD or NETWORK definition statement in this or another NCP definition.

IST710I

COSTAB NOT LOADED

A table-load error occurred or the COS table could not be found.

COSTAB OVERFLOW

VTAM has exceeded the ability to record NCP sharing of the COS table identified by the COSTAB operand.

MAXSUBA CONFLICT

The maximum subarea value (MAXSUBA) for the *netid* has already been defined by another BUILD or NETWORK definition statement in this or another NCP definition.

NO STORAGE FOR COSTAB

The COS table name cannot be saved because of the lack of available storage.

NO STORAGE FOR MAXSUBA

The maximum subarea value (MAXSUBA) cannot be saved because of the lack of available storage.

System action:

COSTAB CONFLICT

The COS table name is ignored and processing of the NCP definition continues. The original COS table name for the NETID defined in this NCP definition is used.

COSTAB NOT LOADED

The COS table name is ignored and processing of the NCP definition continues. Following this activation, all cross-network sessions destined to the network identified by the NETID will fail except for SSCP-SSCP sessions and for LU-LU sessions that use the default blank COS entry.

COSTAB OVERFLOW

The COS table name is ignored and processing of the NCP definition continues. Following this activation, all cross-network sessions destined to the network identified by the NETID will fail except for SSCP-SSCP sessions and for LU-LU sessions which use the default blank COS entry. Even though the Class of Service table is defined for other active NCPs, it still cannot be used for this NCP definition, since its usage cannot be recorded to VTAM.

MAXSUBA CONFLICT

The maximum subarea value is ignored and processing of the NCP definition continues. A different value has already been defined successfully to this host, and cannot be changed or redefined for the network identified by the coded NETID unless all sessions which depend on this maximum subarea are terminated.

NO STORAGE FOR COSTAB

The COS table name is ignored and processing of the NCP definition continues. Following this activation, all cross-network sessions destined to the network identified by the NETID will fail except for SSCP-SSCP sessions and for LU-LU sessions which use the default blank COS entry.

NO STORAGE FOR MAXSUBA

The maximum subarea value is ignored and processing of the NCP definition continues. If this host resides in the gateway NCP's native network, and will own links or link stations in the network identified by the NETID operand, it will be impossible to activate those links or link stations without knowledge of that network's maximum subarea value. However, if the definition of another NCP has successfully defined the maximum subarea for the network, such link and link station activations will be possible, as long as that other NCP remains defined (that is, not deactivated).

Operator response: Save the system log for problem determination.

If *text* is **NO STORAGE FOR COSTAB** or **NO STORAGE FOR MAXSUBA**, try this activation at a later time when storage becomes available. If problems persist, enter a DISPLAY BFRUSE command or a DISPLAY STORUSE command. Save the system log and request a dump for problem determination.

If *text* is **COSTAB NOT LOADED**, **COSTAB CONFLICT**, or **COSTAB OVERFLOW**, enter a DISPLAY COS,ORIGIN=*configname*,NETID=* command, and save the system log for problem determination.

System programmer response:

COSTAB CONFLICT

Review the output from the DISPLAY COS command. Inspect all the BUILD and NETWORK definition statements preceding the definition statement specified for the indicated network to identify the COSTAB name coded for the same NETID. Code only a single COSTAB name for any one network in this NCP definition. Use the MODIFY TABLE command to correct problems.

COSTAB NOT LOADED

Review the output from the DISPLAY COS command. Check to determine whether the Class of Service table identified by the COSTAB operand on the BUILD or NETWORK definition statement for the indicated network exists in the NCP definition. Use the MODIFY TABLE command to correct problems.

COSTAB OVERFLOW

Review the output from the DISPLAY COS command. Restrict the usage of the COSTAB name for each network and NCP to less than 256. If many NCPs need to be active simultaneously, use different COSTAB names, each defining COSTABs for many other networks. Use the MODIFY TABLE command to correct problems.

MAXSUBA CONFLICT

Check to determine whether the maximum subarea value specified on the MAXSUBA keyword for the BUILD or NETWORK definition statement for the indicated NETID start option is valid. This value must also be identical to the maximum subarea values on all other BUILD or NETWORK definition statements in this or another NCP definition that have ever been activated.

NO STORAGE FOR COSTAB

Increase storage as required. Also, have the operator cancel nonessential jobs or deactivate an unused part of the network.

NO STORAGE FOR MAXSUBA

Increase storage as required. Also, have the operator cancel nonessential jobs or deactivate an unused part of the network.

Routing code: 2

Descriptor code: 4

IST712I CONFIG *configname* GWPATH *statement* IGNORED — MISSING OPERANDS

Explanation: VTAM ignores the GWPATH definition statement *statement* in the CDRM major node definition *configname* because one or more required operands are missing.

System action: VTAM ignores the GWPATH definition statement *statement* in the CDRM major node *configname*.

Operator response: Save the system log for problem determination.

System programmer response: Examine the GWPATH definition statement. Verify that the correct combination of operands is coded.

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the GWPATH definition statement.

Routing code: 2

Descriptor code: 5

IST713I CONFIG *configname* GWPATH *statement* — *opname* OPERAND IGNORED

Explanation: VTAM ignores the operand *opname* on the GWPATH definition statement *statement* in the CDRM major node *configname* because its associated operand is missing.

If the ELEMENT operand was coded, but the SUBAREA operand was not, then VTAM ignores ELEMENT.

If the ADJNETEL operand was coded, but the ADJNETSA operand was not, then VTAM ignores ADJNETEL.

System action: VTAM ignores the operand *opname* on the GWPATH definition statement.

Operator response: Save the system log for problem determination.

System programmer response: Either remove the operand that is being ignored (that is, the ELEMENT or ADJNETEL operand), or add the operand that is missing (that is, the SUBAREA or ADJNETSA operand).

Routing code: 2

Descriptor code: 5

IST714I CONFIG *configname* GWPATH *statement* IGNORED — INVALID STMT

Explanation: VTAM ignores the GWPATH definition statement *statement* in the CDRM major node definition *configname*.

VTAM issues this message when a GWPATH definition statement follows a CDRM statement, and the CDRM statement defines a resource in this network. This condition can occur in one of the following ways:

- No NETWORK definition statement preceded the CDRM statement; this implies that the CDRM statement is defined for a resource in the host's network.
- The NETID operand on the preceding NETWORK definition statement indicated that the NETWORK statement was for this host's network.
- The GWPATH statement cannot be coded in a CDRM major node if the host is not gateway capable, that is, is not started with GWSSCP=YES.
- The class of service (CoS) name as known in the adjacent network is invalid. The keyword value might be too large, the value might contain invalid characters, or the value might not start with an alphabetic character (A-Z). This implies that an invalid COS name might be used for the SSCP-SSCP session.

System action: VTAM ignores the GWPATH definition statement *statement*.

Operator response: Save the system log for problem determination.

System programmer response: Examine the CDRM major node to determine whether one of the following conditions apply:

- A GWPATH statement could be coded (that is, the preceding CDRM statement is intended to define a CDRM in another network).
- A GWPATH statement should not have been coded (that is, the preceding CDRM statement is intended to define a CDRM in this network).
- If the host needs to be gateway capable, specify GWSSCP=YES when VTAM is started.
- If the host does not need to be gateway capable, remove the GWPATH statement from the CDRM definition.

Routing code: 2

Descriptor code: 5

IST715I CONFIG *configname* CDRM *statementname* IGNORED — GWPATH STMT MISSING

Explanation: A GWPATH definition statement is required for all cross-network CDRMs, unless you allow the gateway path to default by specifying the SUBAREA operand on the CDRM statement, *statementname*. This message is issued if the following conditions exist:

1. A NETWORK or CDRM definition statement in CDRM major node *configname* precedes at least one valid GWPATH statement for CDRM *statementname*.
2. The SUBAREA operand is not specified on statement *statementname* or on a GWPATH statement.

System action: The CDRM statement *statementname* is ignored; therefore, the CDRM cannot be activated from this host's network.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that a GWPATH definition statement is defined for every CDRM except for those in this host's network. Or, if you want to use the default gateway paths, ensure that the CDRM statement has a valid SUBAREA operand specified.

Routing code: 2

Descriptor code: 5

IST716I *command* FOR *linkstation* FAILED

Explanation: This message is the first of a group of messages. A complete description of the message group follows.

IST716I *command* FOR *linkstation* FAILED

IST717I NETID *netid* ID *nodename* SA *subarea* {CANNOT BE DEFINED|NNODE TYPE INVALID}

The *command* for link station *linkstation* failed when the adjacent node *nodename* was contacted during the activation of the link station.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

The indicated adjacent node is in network *netid* and has a subarea address of *subarea*.

One of the following conditions caused the failure:

CANNOT BE DEFINED

VTAM could not define the indicated adjacent node because of either insufficient storage or an inability to interpret the adjacent network’s addresses.

NODE TYPE INVALID

The indicated adjacent node, as identified by its network address, is not a PU type 4 or PU type 5.

System action: The link station is deactivated and command processing is halted.

Operator response:

CANNOT BE DEFINED

Try to activate the link station again. If the activation is unsuccessful, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

NODE TYPE INVALID

Save the system log for problem determination.

System programmer response:

CANNOT BE DEFINED

Check storage availability and code a BUILD or NETWORK definition statement with the MAXSUBA operand for the adjacent network *netid* in the NCP major node definition that is activated by this host.

NODE TYPE INVALID

The indicated adjacent node is known to VTAM as a node other than a PU type 4 or PU type 5. It might be known as a cross-network resource. Check address assignments in the network *netid*.

Routing code: 8

Descriptor code: 4

IST717I NETID *netid* ID *nodename* SA *subarea* {CANNOT BE DEFINED | NODE TYPE INVALID}

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST716I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 4

IST718I ADDRESS INVALID FOR NETID=*cdmnetid* CDRM=*cdmname* CODE=*X'code'*

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

```
IST718I ADDRESS INVALID FOR NETID=cdmnetid CDRM=cdmname CODE=X'code'
IST719I {SUBAREA subarea ELEMENT el|ADJNET netid ADJNETSA adjnetsa ADJNETEL el} [GWN gwn]
[IST1421I nodetype resourcename HAS DUPLICATE ADDRESS]
IST314I END
```

IST718I

- This message is issued during activation of the CDRM major node when the specified address (adjacent network *netid*, subarea *subarea*, element *el*) of *cdmname* could not be defined.
- *cdmnetid* is the network identifier for *cdmname*.
- *cdmname* is the name of the cross-network CDRM minor node.
- *code* is the return code resulting from the attempt to define the network address. Possible return codes (expressed in hexadecimal) are:

IST718I

- 04 Invalid address
- 10 Duplicate address
- 20 Insufficient storage
- 28 Address management error

IST719I

- The operands and their values displayed are the same as those specified in a GWPATH definition statement for CDRM *cdmname*. The name of the gateway NCP, *gwn*, will be displayed if it is specified in the definition statement.
If other GWPATH definition statements have been defined for *cdmname*, they can be used to establish the SSCP-SSCP session.

IST1421I

This message is issued when VTAM detects a duplicate address for the CDRM minor node.

nodetype is the node type of *resourcename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

resourcename is the name of the cross-network CDRM minor node that is currently defined to the address in question. The form of *resourcename* is *netid.name*.

System action: Processing continues.

Operator response: Action depends on value for *code*:

04 Save the system log for problem determination.

10 Save the system log for problem determination.

20

Issue the DISPLAY BFRUSE command to display information about the common service area (CSA). Issue the DISPLAY STORUSE command to display storage usage for storage pools. Total VTAM private storage information is displayed in message IST981I. If message IST981I does not appear in the display, you might need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. Save the system log for problem determination.

28 Save the system log for problem determination.

System programmer response: The indicated address could not be added to VTAM's address structure because of the reasons specified.

04 Check your network address assignments.

10 Check your network address assignments.

20 Examine your storage allocation and increase storage as required.

28 This code indicates that a VTAM error has occurred in managing the address directory.

Take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

See the section on non-VTAM problems, in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional problem determination actions.

Routing code: 8

Descriptor code: 5

IST719I {SUBAREA *subarea* ELEMENT *el* | ADJNET *netid* ADJNETSA *adjnetsa* ADJNETEL *el*} [GWN *gwn*]

Explanation: This message is part of a message group. The first message in the group is IST718I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST720I *linkstation* HAS CONTACTED *nodename* IN *netid*, SA *subarea*

Explanation: The link station *linkstation* has successfully contacted the PU type 4 or PU type 5 identified by network *netid*, node *nodename*, and subarea *subarea*. If node *nodename* is not available, *****NA***** will be displayed in its place.

System action: The link station is activated.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST721I SESSION SETUP FOR CDRM *cdmname* USING GWN *gatewayncp* FAILED

Explanation: VTAM issues this message as part of several message groups in response to a VARY ACT,ID=*cdmname* command. If this message is preceded by message IST732I, see the explanation of that message for a complete description; otherwise, it is the first in a group of messages. A complete description of the message group follows.

```
IST721I SESSION SETUP FOR CDRM cdmname USING GWN gatewayncp FAILED
IST723I SSCPID sscpid ALREADY IN USE BY CDRM oldcdm
```

The cross-network SSCP-SSCP session with CDRM *cdmname* could not be established using gateway NCP *gatewayncp*.

sscpid is the network identifier of the SSCP that was specified on the SSCPID start option, and is displayed in hexadecimal.

The session failed because more than one SSCP in another network (one of them being CDRM *oldcdm*) was started with the same value for the SSCPID start option as *sscpid*.

System action: The session activation request failed. Other processing continues.

Operator response: Save the system log and network logs for problem determination.

System programmer response:

- Restart one or more of the other network hosts with a different SSCPID start option value. SSCPID values must be unique across networks if two SSCPs are to communicate.
- Ensure that only one of the host CDRMs with duplicate SSCPIDs is active at a time.

Routing code: 8

Descriptor code: 4

IST723I SSCPID *sscpid* ALREADY IN USE BY CDRM *oldcdm*

Explanation: This message is part of a message group. The first message in the group is IST721I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST725I GWN *gatewayncp*, SUBAREA *subarea*, CDRM ALIAS ELEMENT *element*

Explanation: This message is part of a message group. The first message in the group is IST732I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST726I ADJNET *adjnetid*, ADJNETSA *adjnetsubarea*, ADJNETEL *adjnetel*

Explanation: This message is part of a message group. The first message in the group is IST732I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST727I COMMUNICATION WITH CDRM *cdmname* LOST — REASON = X'*code*'

Explanation: The session with CDRM *cdmname* has been disrupted by the session outage notification (SON). The reason for the disruption is shown by the reason code *code* (expressed in hexadecimal). *code* is part of the DACTCDRM request and can be any of the following:

<i>code</i>	Meaning
07	Virtual route inoperative: The virtual route carrying the SSCP-PU session has become inoperative, forcing deactivation of the SSCP-PU session.
0B	Virtual route deactivation: The identified SSCP-PU session had to be deactivated because of a forced deactivation of the virtual route being used by the SSCP-PU session.
0C	SSCP failure—unrecoverable: The identified SSCP-SSCP session had to be deactivated because one of the session's SSCPs abnormally terminated; recovery from the failure was not possible.
0D	Session override: The SSCP-PU session had to be deactivated because of a more recent session activation request for the same session over a different virtual route.
0E	SSCP failure—recoverable: The identified SSCP-SSCP session had to be deactivated because of an abnormal termination of one of the SSCPs of the session; recovery from the failure might be possible.
0F	Cleanup: The SSCP is resetting its half-session before receiving the response from the partner SSCP receiving the DACTCDRM.
10	SSCP contention: Two SSCPs have sent each other an ACTCDRM request over different virtual routes; the SSCP receiving the ACTCDRM from the SSCP with the greater SSCP ID (SSCPID start option) sends DACTCDRM, with code X'10', to the other SSCP over the same virtual route on which the contention-losing ACTCDRM was sent.
11	Gateway node cleanup: A gateway node is cleaning up the session because the gateway SSCP session partner has forced deactivation of the session (via NOTIFY).

System action: The session with CDRM *cdmname* is deactivated without disrupting active LU-LU sessions.

Operator response: Save the system log and network logs and print the CDRM definition for problem determination. Issue a VARY ACT command for CDRM *cdmname* so that the session can be re-established.

System programmer response: Consult *SNA Formats* for the RU formats, especially DACTCDRM and its reason codes. The meaning of the reason code, *cause* is found under the explanation of DACTCDRM.

Routing code: 8

Descriptor code: 4

IST728I GWPATHS FOR GWN *gatewayncp* ARE NOW *status* FOR THESE CDRMS

Explanation: This message is the first of a group of messages. A complete description of the message group follows.

```
IST728I GWPATHS FOR GWN gatewayncp ARE NOW status FOR THESE CDRMS
IST778I cdrmname1 [cdrmname2] [cdrmname3] [cdrmname4] [cdrmname5] [cdrmname6]
:
:
IST314I END
```

An SSCP-PU session with gateway node *gatewayncp* has just been established (*status* = **ENABLED**) or broken (*status* = **DISABLED**). Paths to the displayed CDRMs, as defined by the GWPATH statement, have been enabled or disabled. This change in session state affects the capabilities of any cross-network SSCP-SSCP session supported by that gateway node. Message IST778I lists the names of all CDRMs affected by the change. Message IST314I ends the list of IST778I messages.

System action: Processing continues. Any pending session activation requests to any of the displayed CDRMs will be tried again.

Operator response: None.

System programmer response: If the SSCP-PU session is DISABLED and the gateway functions are necessary for cross-network sessions supported by any of the listed CDRMs, and the gateway node *gatewayncp* cannot be reactivated, it might be necessary to deactivate that CDRM and reactivate it with a different gateway NCP specified so that the new gateway NCP can support this SSCP-SSCP session.

Note: Deactivating the SSCP-SSCP session might disrupt active LU-LU sessions.

Routing code: 8

Descriptor code: 4

IST732I *request* REJECTED DUE TO *reason*

Explanation: VTAM issues this message as a single message or as part of several message groups. If this message is preceded by message IST734I (cross-network session), see the explanation of that message for additional information.

Possible message groups follow.

- **ACTCDRM**

This host received an **ACTCDRM** *request* from an external CDRM.

- If IST732I is issued as a single message, the request cannot be processed for the following *reason*:

HOST CDRM INACTIVE

No CDRM major node containing a definition for the host CDRM was active or the host CDRM is inactive.

- Otherwise, IST732I is issued as the first message in the following group:

```
IST732I request REJECTED DUE TO reason
IST725I GWN gatewayncp, SUBAREA subarea, CDRM ALIAS ELEMENT element
IST726I ADJNET adjnetid, ADJNETSA adjnetsubarea, ADJNETEL adjnetel
```

The request cannot be processed for the following *reason*:

SENDING CDRM UNKNOWN

The sender of the **ACTCDRM** request is not defined in this host.

gatewayncp is the name of a gateway NCP.

subarea and *element* are the subarea and element portions of the alias address of the external CDRM in this network.

The address of the CDRM, as defined in the adjacent network *adjnetid*, is subarea *adjnetsubarea* and element *adjnetel*.

- **REQACTCDRM**

This host received a **REQACTCDRM** *request* from external CDRM *cdrmname* over a gateway NCP path.

IST732I

```
IST732I request REJECTED DUE TO reason
[IST1421I nodetype resourcename HAS DUPLICATE ADDRESS]
IST721I SESSION SETUP FOR CDRM cdrmname USING GWN gatewayncp FAILED
IST726I  ADJNET adjnetid, ADJNETSA adjnetsubarea, ADJNETEL adjnetel
[IST830I  ORIGINATING SSCP NAME = sscpname, NETID = netid]
```

The request cannot be processed for one of the following *reasons*:

ACTIVATE IN PROGRESS

Either the origin CDRM or the destination CDRM is pending active.

ADDRESS NOT A CDRM

The adjacent network address in message IST726I is in use by a resource that is not a CDRM. For the REQACTCDRM to succeed, the adjacent network address **MUST** be a CDRM resource. *resourcename* in message IST1421I contains the name of the resource using the address (if the name is available).

HOST CDRM INACTIVE

No CDRM major node containing a definition for the host CDRM was active or the host CDRM is inactive.

INACT IN PROGRESS

The origin CDRM, the destination CDRM, or the CDRM major node is pending inactive.

INSUFFICIENT STORAGE

No storage could be allocated to proceed with session setup.

SENDING CDRM UNKNOWN

The sender of the ACTCDRM is not defined in this host.

SENDING GWN INACTIVE

There is no active definition for the gateway NCP *gatewayncp* that sent the REQACTCDRM.

SENDING GWN INVALID

No GWPATH definition exists for the gateway NCP *gatewayncp* that sent the REQACTCDRM.

gatewayncp is the name of the gateway NCP.

The address of CDRM *cdrmname*, as defined in the adjacent network *adjnetid*, is subarea *adjnetsubarea* and element *adjnetel*.

The **REQACTCDRM** originated with SSCP *sscpname* in network *netid*. If *sscpname* or *netid* are not known to VTAM, they will be displayed as *****NA*****.

System action: The session could not be established.

Operator response: Do one of the following, depending upon *reason*:

ACTIVATE IN PROGRESS

No action is required.

ADDRESS NOT A CDRM

Enter a DISPLAY ID=resourcename using *cdrmname* from message IST1421I. Enter a DISPLAY VTAMSTOR,NETID=adjnetid,NETADDR=(adjnetsubarea,adjnetel) command using the values from message IST726I. Save the console log for problem determination.

HOST CDRM INACTIVE

Activate a CDRM major node containing the host CDRM definition, if the major node is active, or activate the host CDRM.

INACT IN PROGRESS

Allow the deactivation to complete and then try the activation again.

INSUFFICIENT STORAGE

Enter a DISPLAY BFRUSE or DISPLAY STORUSE command to evaluate your storage requirements. Save the system log and dump for problem determination.

SENDING CDRM UNKNOWN

If the CDRM major node contains the definition of the external CDRM then activate it. Otherwise, save the system log and network logs and print the CDRM definition statement for problem determination.

SENDING GWN INACTIVE

Activate the gateway NCP.

SENDING GWN INVALID

Save the system log and network logs and print the CDRM definition statement for problem determination.

System programmer response:**ADDRESS NOT A CDRM**

Check your network address assignments to determine which resource should be using the adjacent network address.

INSUFFICIENT STORAGE

Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures. Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool.

SENDING GWN INVALID

You need to add a gateway path definition for the gateway NCP that sent the REQACTCDRM. To use the new definition, you must deactivate and reactivate the CDRM major node that contains the new GWPATH definition.

SENDING CDRM UNKNOWN

You need to add a CDRM definition statement for *cdrmname*. To use the new definition, you must deactivate and reactivate the CDRM major node.

Routing code: 8

Descriptor code: 4

IST734I ACTIVATION OF CDRM *cdrmname* USING GWN *gatewayncp* FAILED

Explanation: VTAM issues this message when an ACTCDRM is sent by host CDRM *cdrmname* via gateway NCP *gatewayncp* in an attempt to establish an SSCP-SSCP session.

gatewayncp is the name of a gateway NCP. If unknown to VTAM, *gatewayncp* will be displayed as *****NA*****.

System action:

- If this message is displayed as a single message or is followed by IST735I, session establishment is still in progress through other gateway nodes.
- If followed by message IST732I, the session could not be established.

Operator response:

- If this message is displayed as a single message or is followed by message IST735I, additional messages will describe the status of the session as processing continues.
- If followed by message IST732I, see the operator response of that message for recommended action.

System programmer response:

- If this message is displayed as a single message or is followed by message IST735I, session establishment is still in progress, and no response is needed.
- If followed by message IST732I, see the programmer response of that message for recommended action.

Routing code: 8

Descriptor code: 4

IST735I NO ADDRESS TRANSFORMS — REQACTCDRM SENT

Explanation: An ACTCDRM was sent during an attempt to establish an SSCP-SSCP session. There were no active alias address transforms in a gateway NCP along the path to the external CDRM. This can happen in one of the following situations:

- In a back-to-back gateway configuration, the second gateway NCP might not yet have received an RNAA request from the external CDRM.
- The external CDRM is responsible for sending an RNAA request to a gateway NCP in a network adjacent to this host, but it has not yet sent the request.
- This host SSCP does not have a session with one or more gateway NCPs supporting the desired SSCP-SSCP session.

If preceded by message IST734I, this message is for a cross-network session.

System action: The activation of the desired SSCP-SSCP session will be attempted from the CDRM indicated by *cdrmname* in message IST734I.

Operator response: Wait for message IST324I to be displayed indicating that the external CDRM has sent a session activation request (ACTCDRM). If VTAM issues message IST324I promptly, no response is required. If this message does not appear in a reasonable amount of time, save the system log and network logs for problem determination.

Check with the operator of the external host CDRM to see that all session activation procedures at that host have been completed.

System programmer response: Verify that the CDRM and gateway NCP definitions are correct and that those definitions contain sufficient data for routing an ACTCDRM request from the external CDRM to this host SSCP.

Routing code: 8

Descriptor code: 4

IST737I DEFAULT VR LIST USED FOR CDRM *cdrmname* USING GWN *gatewayncp*

Explanation: This message indicates one of the following:

- Gateway NCP *gatewayncp* does not have a COS table defined for the network in which *cdrmname* resides.
- Gateway NCP *gatewayncp* has a COS table defined for the network in which *cdrmname* resides, but VTAM could not find an entry in the table that matches the name specified in the logon mode table.

If an alias application is active in this host, VTAM attempts to translate the SSCP Class of Service entry ISTVTCOS into a name recognized in the adjacent network. This message indicates that no COS table entry with the translated name or with the default name (ISTVTCOS) exists in the adjacent network. As a result, the default (blank) COS table entry is used to activate a virtual route to external CDRM *cdrmname*, originating at gateway NCP *gatewayncp*.

System action: Session activation proceeds using the virtual route (VR) list from the default COS entry.

Operator response: Save the system log and network logs for problem determination.

System programmer response: If the session could not be established and is necessary, take one of the following two sequences of steps:

- If the appropriate COS table is not defined:
 - then
 - Use the MODIFY TABLE,OPTION=LOAD,ORIGIN=*gatewayncp* command to load the appropriate COS table for the network in which *cdrmname* resides.
 - or
 - Deactivate gateway NCP *gatewayncp*.
 - Add the appropriate COSTAB keyword to the NETWORK definition statement for the network in which *cdrmname* resides for the gateway NCP *gatewayncp*'s generation deck.
 - Reactivate gateway NCP *gatewayncp*.
 - or, if the problem involves an alias application:

- Activate the alias application.
- Update the alias-name translation tables (see the *NetView Installation and Administration Guide* for more information).
- If no matching entry can be found in the COS table:
 - then
 - Deactivate gateway NCP *gatewayncp*.
 - Add the required entry to the COS table identified by the COSTAB keyword of the NETWORK definition statement in the gateway NCP *gatewayncp*'s definition deck.
 - Reactivate gateway NCP *gatewayncp*.
 - or use the MODIFY TABLE,OPTION=ASSOCIATE,TYPE=COSTAB,ORIGIN=*gatewayncp* command to associate a COS table that has the required entry to gateway NCP *gatewayncp*.

Routing code: 8

Descriptor code: 4

IST740I UNABLE TO FREE ALIAS ADDRESSES FOR CDRM *cdmname* GWN *gatewayncp*

Explanation: This message is the first of a group of messages. A complete description of the message group follows.

```
IST740I UNABLE TO FREE ALIAS ADDRESSES FOR CDRM cdmname GWN gatewayncp
IST523I REASON = reason
```

Because of an error indicated by *reason*, VTAM was unable to free a pair of alias-network addresses, causing the failures of subsequent activation of the external CDRM *cdmname* using gateway NCP *gatewayncp*. This condition might be temporary if caused by heavy activity in the network. It might be an indication that VTAM does not have sufficient storage to manage a network of this size.

The *reason* for the failure is one of the following:

INSUFFICIENT STORAGE

VTAM was unable to allocate sufficient storage. A NOTIFY RU was sent to the gateway NCP *gatewayncp* to free alias-network addresses for an SSCP-SSCP session.

NOTIFY REQUEST FAILED

A NOTIFY RU was sent to gateway NCP *gatewayncp* to free alias-network addresses for an SSCP-SSCP session. Gateway NCP *gatewayncp* was unable to free the alias-network addresses.

System action: The deactivation process continues.

Operator response: If the major node containing CDRM *cdmname* is still active, reissue the VARY INACT command for that CDRM.

You might have to deactivate the NCP major node for *gatewayncp* to free alias-network addresses if:

- Additional messages are displayed indicating that session-establishment attempts are failing because the gateway NCP has no alias-network addresses available.
- The major node containing the external CDRM definition is inactive.

If *reason* is **INSUFFICIENT STORAGE**, enter the DISPLAY BFRUSE command. Save the system log and dump for problem determination.

System programmer response: If *reason* is **INSUFFICIENT STORAGE**, ensure that the amount of available storage is adequate for your network and increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.

IST742I • IST744I

- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 8

Descriptor code: 4

IST742I ACTIVATION OF CDRM *cdmname* {FAILED|QUEUED} — GWN PATH NOT AVAILABLE

Explanation: During the activation of a cross-network CDRM, no gateway NCP could be selected to support the SSCP-SSCP session with external CDRM *cdmname*.

If VTAM could find no active gateway NCPs, only this message will be issued. If VTAM was able to select an active gateway NCP, messages issued prior to this one indicate the failures that occurred.

System action: If activation is:

QUEUED

The activation of external CDRM *cdmname* is queued pending the availability of a suitable gateway NCP as defined by the GWPATH statements for CDRM *cdmname*.

FAILED

The activation of external CDRM *cdmname* failed because of insufficient storage, or all paths as defined by the GWPATH statements for CDRM *cdmname* have been tried and have failed.

Operator response: If you do not want the activation to remain pending, issue a VARY INACT command for the CDRM *cdmname*.

Otherwise, save the system log and network logs for problem determination.

System programmer response: This message is normal if:

- During activation, paths failed but were expected to fail.
- An existing SSCP-SSCP session was disrupted because of the failure of the session from the host SSCP to the gateway NCP.

No action is necessary if, upon recovery of the gateway NCP or an alternate gateway path, the SSCP-SSCP session re-established itself.

You will probably need to add to or change the GWPATH definitions associated with the external CDRM or change the GWNAU definition in the gateway NCP if:

- This message occurs upon initial activation of the external CDRM.
- The activation of the external CDRM or appropriate gateway NCP does not result in recovery of the session.

See the z/OS Communications Server: SNA Network Implementation Guide for more information on how the GWPATH and GWNAU definition statements relate to CDRM activation.

Routing code: 8

Descriptor code: 4

IST744I CROSS-NETWORK SESSION SETUP FAILED, NETWORK = *netid*

Explanation: This message is the first in two message groups. A full description of the two message groups follows.

The message group displayed depends on the type of session, as follows:

- If the session-establishment attempt was for an SSCP-SSCP session, the failed request is ACTCDRM and the following group of messages is issued:

```
IST744I  CROSS-NETWORK SESSION SETUP FAILED, NETWORK = netid
IST745I  ACTCDRM TO CDRM = cdmname FAILED, SENSE = code
IST531I  FROM SUBAREA = subarea, ELEMENT = element
IST531I  TO SUBAREA = subarea, ELEMENT = element
[IST528I  VIRTUAL ROUTE NUMBER vrlist]
IST523I  REASON = {SESSION SETUP REJECTED|VR ACTIVATION FAILED}
```

An ACTCDRM request was sent to CDRM *cdmname*.

code is the sense data from the negative response to an ACTCDRM request. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

- If the session-establishment attempt was for an LU-LU session, the failed request is a BIND RU and the following group of messages is issued:

```
IST744I CROSS-NETWORK SESSION SETUP FAILED, NETWORK = netid
IST746I BIND FAILED FROM pluname TO sluname, SENSE = code
IST531I FROM SUBAREA = subarea, ELEMENT = element
IST531I TO SUBAREA = subarea, ELEMENT = element
[IST528I VIRTUAL ROUTE NUMBER vrlist]
IST523I REASON = {SESSION SETUP REJECTED|VR ACTIVATION FAILED}
```

The real name of the primary logical unit (PLU) is *pluname*, and the real name of the secondary logical unit (SLU) is *sluname*. *code* is the sense data from the negative response to the BIND request. See the z/OS Communications Server: IP and SNA Codes for complete sense code information.

The first display of message IST531I indicates the PLU's address, as known in network *netid* (subarea *subarea* and element *element*). If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

The second display of message IST531I indicates the SLU's address as known in network *netid* (subarea *subarea* and element *element*). If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

The reason for the session activation failure is indicated by message IST523I:

SESSION SETUP REJECTED

The gateway NCP has received a negative response to the session activation request.

VR ACTIVATION FAILED

A virtual route in network *netid* could not be activated. Message IST528I might also be displayed with *vrlist* providing a list of virtual routes that the gateway NCP tried to activate in network *netid*.

System action: Session activation fails.

Operator response: Issue the DISPLAY ROUTE command for all networks involved in this session setup to display the status of explicit routes and virtual routes. Save the system log for problem determination.

System programmer response:

SESSION SETUP REJECTED

Review the logon mode table entry used with the session.

VR ACTIVATION FAILED

Ensure that all COS table definitions and PATH definition statements are correct and that all required links and nodes are active.

If all definitions are correct, and all required links and nodes are active, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Routing code: 8

Descriptor code: 4

IST745I ACTCDRM TO CDRM = *cdmname* FAILED, SENSE = *code*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST744I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST746I • IST752I

IST746I BIND FAILED FROM *pluname* TO *sluname*, SENSE = *code*

Explanation: VTAM can issue this message as the first message in a group or as part of a group of messages that begins with message IST744I. See the explanation of that message for a complete description.

When IST746I appears as the first message in a group, VTAM displays the following:

```
IST746I BIND FAILED FROM pluname TO sluname, SENSE = code
IST531I FROM SUBAREA = subarea, ELEMENT = element
IST531I TO SUBAREA = subarea, ELEMENT = element
[IST528I VIRTUAL ROUTE NUMBER vrlist]
IST523I REASON = VR ACTIVATION FAILED
```

The NCP could not activate a virtual route from an independent PLU *pluname* to a SLU *sluname* in VTAM's network.

The first display of message IST531I indicates the PLU's address, as known in network *netid* (subarea *subarea* and element *element*). If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

The second display of message IST531I indicates the SLU's address as known in network *netid* (subarea *subarea* and element *element*). If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

System action: Session activation fails.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that all COS table definitions and PATH definition statements are correct. Ensure that all required links and nodes are active.

Routing code: 8

Descriptor code: 4

IST751I SIO = *sio*, ERROR CT = *count*, CUA = *device_address*

Explanation: VTAM issues this message in response to a DISPLAY ID command requesting the status of a channel-attachment major node for a communication-adapter line.

sio is the number of start-I/O operations counted for the node. This number is cumulative (from the time that the node was last activated). The value of *sio* is never larger than 65535. If *sio* is 65535, its value is reset to 0 when the next start I/O operation takes place. If the value of *sio* is unavailable, VTAM issues ***NA***.

count is the number of I/O errors counted for the node. This number is cumulative (from the time that the node was last activated). VTAM issues ***NA*** if *count* is not available.

device_address is the hexadecimal channel address of the line to which this node is attached. VTAM issues *NA if *device_address* is not available.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST752I GPT TRACE STATUS = *status*[ALSNAME = *alsname*]

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command requesting the status of a node.

The message indicates the current state of the generalized PIU trace (GPT) for that node.

See the z/OS Communications Server: IP and SNA Codes for more information on trace status code *status*.

For a DISPLAY command for an independent LU, VTAM indicates the name of all adjacent link stations (ALS) that

the independent LU is using. VTAM issues message IST752I once for each adjacent link station. VTAM issues this message only for adjacent link stations that exist in an NCP major node (or, for a switched connection, link stations that are connected through a link in an NCP major node).

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST755I ALERT FROM PU *puname* FOLLOWS

Explanation: VTAM has received an unsolicited Record Formatted Maintenance Statistics (RECFMS) request of type 0 from a communication controller *puname*. VTAM always issues a second message, which describes the specific information depending on the user action code received from *puname*. See the description of the second message for additional information.

This message and the message following it will not be received if there is a communication network management (CNM) application program defined and active to receive the RECFMS RU.

Routing code: 8

Descriptor code: 4

IST756E ALERT FROM PU *puname* FOLLOWS

Explanation: VTAM has received an unsolicited Record Formatted Maintenance Statistics (RECFMS) request of type 0 from a communication controller *puname*. VTAM always issues a second message, which describes the specific information depending on the user action code received from *puname*. See the description of the second message for additional information.

This message and the message following it will not be received if there is a communication network management (CNM) application program defined and active to receive the RECFMS RU.

Note: This message indicates that you must eventually take some action to correct this problem, but the system continues processing without waiting for your response.

Routing code: 8

Descriptor code: 3

IST757E MOSS UNAVAILABLE — HARDWARE ERROR

Explanation: The maintenance and operator subsystem (MOSS) of the IBM 3725 or 3745 Communication Controller is unavailable either because the program control switch is in the wrong position or because a hardware error has occurred. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 1 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: Processing continues.

Operator response: Do not attempt to IPL the communication controller. Save the system log for problem determination.

System programmer response: Verify that the program control switch is in the correct position. If it is, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST758E MOSS RELOADED — HARDWARE ERROR

Explanation: The maintenance and operator subsystem (MOSS) of the IBM 3725 or 3745 Communication Controller has been automatically reloaded after a hardware error. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 2 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: The error has been successfully recovered. Processing continues.

Operator response: Issue a MODIFY DUMP,TYPE=MOSS command to transfer the MOSS dump to a host data set to allow another dump on the MOSS diskette. Save the system log for problem determination.

System programmer response: No action is required unless the problem occurs repeatedly. If it does, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST759E MOSS DISKETTE UNUSABLE

Explanation: The maintenance and operator subsystem (MOSS) diskette drive or diskette adapter in the IBM 3725 or 3745 Communication Controller is rendered unusable because of a hardware error. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 3 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: Processing continues.

Operator response: Do not attempt to IPL the communication controller. Save the system log for problem determination.

System programmer response: Contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST760E MOSS DISKETTE HARDWARE ERROR

Explanation: A portion of the maintenance and operator subsystem (MOSS) diskette in the IBM 3725 or 3745 Communication Controller is unusable because of a hardware error. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 4 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST761E MOSS CONSOLE UNAVAILABLE

Explanation: A portion of the maintenance and operator subsystem (MOSS) diskette in the IBM 3725 or 3745 Communication Controller is unavailable. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 5 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: All sessions using routes over the failing adapter have been terminated, and appropriate recovery actions have been initiated. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Check the physical installation and run operator console tests, if desired (as described in the *Operator Console Reference and Problem Analysis Guide* for your communication controller).

If you cannot determine the cause of the problem or need assistance, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST762I MOSS IN MAINTENANCE MODE

Explanation: The maintenance and operator subsystem (MOSS) of the IBM 3725 or 3745 Communication Controller has been placed in the offline mode by explicit action. This message is always preceded by IST755I, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 6 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Check for maintenance mode. If incorrect, place MOSS in ONLINE MODE.

Routing code: 8

Descriptor code: 4

IST763I PHYSICAL UNIT RELOADED — HARDWARE ERROR

Explanation: The IBM 3725 or 3745 Communication Controller has been reloaded to recover from a hardware error. This message is always preceded by IST755I, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 7 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: The error has been successfully recovered. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: No action is required unless the problem occurs repeatedly. If it does, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 4

IST764I PHYSICAL UNIT RELOADED — PRIOR ABEND CODE WAS *code*

Explanation: The IBM 3725 or 3745 Communication Controller has been reloaded to recover from a software error that caused an abend.

code is the abend code.

This message is always preceded by IST755I, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 8 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: The error has been successfully recovered. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: No action is required unless the problem occurs repeatedly. If it does, check to ensure that the NCP generation matches the hardware configuration, and dump the NCP.

If you cannot determine the cause of the problem or need additional assistance, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 4

IST765E CHANNEL ADAPTER *channelname* UNAVAILABLE — HARDWARE ERROR

Explanation: The channel adapter *channelname* in the IBM 3725 or 3745 Communication Controller is unavailable because of a hardware error. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 9 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: VTAM terminated all sessions using routes over the failing adapter and initiated appropriate recovery actions.

Operator response: Save the system log for problem determination.

System programmer response: Contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST766I DUMP FAILED — NO {MOSS|CSP|NCP} DUMP ON *ncpname* DISK(ETTE)

Explanation: VTAM attempted to transfer a dump from the MOSS, CSP, or NCP diskette to the host 3745, 3725 (for MOSS or CSP) or 3720 (for MOSS, CSP, or NCP) Communication Controller for NCP *ncpname*. The attempt terminated because the diskette was empty or VTAM could not find the requested file.

System action: Dump processing ends.

Operator response: Issue a dump to the diskette, then reissue the MOSS, CSP, or NCP dump. Despite the empty diskette in the 3725, 3720, or 3745 Communication Controller, some data files might have been transmitted to the host from the NCP. They can be formatted and printed using the NCP utility program.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST767E SCANNER *scannernum* (*line1-line2*) UNAVAILABLE — HARDWARE ERROR

Explanation: The scanner *scannernum* in the IBM 3725 or 3745 Communication Controller is unavailable because of a hardware error on a possible range of line numbers between *line1* and *line2*. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 11 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: All affected lines are inoperative.

Operator response: Follow the predefined recovery or backup actions, or both, for your network. Save the system log for problem determination.

System programmer response: Reload the affected scanner. No other action is required unless the problem occurs repeatedly. If it does, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST768E SCANNER *scannernum* (*line1-line2*) UNAVAILABLE — HARDWARE ERROR

Explanation: The scanner *scannernum* in the IBM 3725 or 3745 Communication Controller is unavailable because of a hardware error on a possible range of line numbers between *line1* and *line2*. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 12 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: All affected lines are inoperative.

Operator response: Follow the predefined recovery or backup actions, or both, for your network. Transfer the dump of the communication-scanner processor to a data set in the host using the MODIFY DUMP command. This will allow another dump on the MOSS diskette. Save the system log for problem determination.

System programmer response: Reload the affected scanner. No other action is required unless the problem occurs repeatedly. If it does, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST769E SCANNER *scannernum* (*line1-line2*) UNAVAILABLE — SOFTWARE ERROR

Explanation: The scanner *scannernum* in the IBM 3725 or 3745 Communication Controller is unavailable because of a software error on a possible range of line numbers between *line1* and *line2*. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 13 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: All affected lines are inoperative.

Operator response: Follow the predefined recovery or backup actions, or both, for your network, and save the system log for problem determination.

System programmer response: Reload the scanner *scannernum*. No other action is required unless the problem occurs repeatedly. If it does, dump the NCP and contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST770E SCANNER *scannernum* (*line1-line2*) UNAVAILABLE — SOFTWARE ERROR

Explanation: The scanner *scannernum* in the IBM 3725 or 3745 Communication Controller is unavailable because of a software error on a possible range of line numbers between *line1* and *line2*. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 14 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: All affected lines are inoperative.

Operator response: Follow the predefined recovery or backup actions or both. Save the system log for problem determination.

System programmer response: No action is required unless the problem occurs repeatedly. If it does, dump the NCP and contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST771E SCANNER *scannernum* LINE *linename* UNAVAILABLE — HARDWARE ERROR

Explanation: The scanner *scannernum* on line *linename* in the IBM 3725 or 3745 Communication Controller is unavailable because of a hardware error. This message is always preceded by IST756E, which identifies the name of the communication controller. The RECFMS request received by VTAM had the user action code of 15 in it. Additional information is provided in the *Operating Guide* for your communication controller.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Reactivate the affected line. No other action is required unless the problem occurs repeatedly. If it does, contact the IBM hardware support center.

Routing code: 8

Descriptor code: 3

IST772I

IST772I UAC = *uac* [Q1 = *qualifier1* Q2 = *qualifier2* [Q3 = *qualifier3*]]

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST755I. An alert has been received with a user action code (UAC) of *uac*. Any qualifiers that were contained in the alert will also be displayed (from 0–3 qualifiers).

Notes:

1. The qualifier text is printed if qualifiers are received with the alert. For example:
 - If two qualifiers are attached to the alert, VTAM will not display the Q3 = *qualifier3* text.
 - If no qualifiers are attached to the alert, VTAM will display only *uac*.
2. If VTAM displays a UAC that is not listed below, VTAM does not recognize the UAC. See *IBM 3720/3721 Communication Controller Daily Task and Problem Determination* for information regarding UACs not listed in this manual.

A full description of the message based on the UAC follows:

UAC=01

Explanation: The maintenance and operator subsystem (MOSS) has a hardware error or there is a control program to MOSS communication error.

System Action: Processing continues.

Operator Response:

- Do not attempt to IPL the 3720.
- Perform a MOSS IML, set the Function Select switch of the 3720 operator panel to "NORMAL," and set the MOSS online.
See the *IBM 3720/3721 Communication Controller Operator's Guide*.
- Use a MODIFY DUMP,TYPE=MOSS command to transfer the MOSS dump to the host for later printing.
- If the problem persists, do not transfer the last MOSS dump. Save the system log for problem determination.

Programmer Response: Note the control program to MOSS interface status (Q1) and contact the IBM hardware support center.

UAC=02

Explanation: The maintenance and operator subsystem (MOSS) has a recoverable error. The MOSS has been automatically reloaded.

System Action: Processing continues.

Operator Response:

- Use a MODIFY DUMP,TYPE=MOSS command to transfer the MOSS dump to the host for later printing.
- If the problem persists, do not transfer the last MOSS dump. Save the system log for problem determination.

Programmer Response: Note the reference code (Q1). Contact the IBM hardware support center.

UAC=03

Explanation: The maintenance and operator subsystem (MOSS) has a diskette drive or diskette adapter error.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response: Contact the IBM hardware support center.

UAC=04

Explanation: The maintenance and operator subsystem (MOSS) has a diskette media error.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response: Contact the IBM hardware support center.

UAC=05

Explanation: The maintenance and operator subsystem (MOSS) has a local console error.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response:

- Verify that the local console operates in IBM 3101 mode. See the *IBM 3720/3721 Communication Controller Problem Determination Guide*.
- Run a console test. See the console documentation.
- Check the cable.
- Run a console link test from the 3720 operator panel. See *IBM 3720/3721 Communication Controller Daily Task and Problem Determination*.
- If no problem appears, note the reference code (Q2), and contact the IBM hardware support center.

UAC=06

Explanation: The maintenance and operator subsystem (MOSS) is offline because of maintenance mode.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response: Check for maintenance mode. If it is correct, set MOSS online. See the *IBM 3720/3721 Communication Controller Operator's Guide*.

UAC=07

Explanation: The communication controller has a hardware error. A communication controller IPL was re-executed.

System Action: Processing continues.

Operator Response:

- Reactivate lines from host.
- If the problem persists, save the system log for problem determination.

Programmer Response: Note the abend code (Q1) and the reference code (Q2). If you cannot determine the cause of the problem or need additional assistance, contact the IBM hardware support center.

UAC=08

Explanation: The communication controller has a software error. A communication controller IPL was re-executed.

System Action: Processing continues.

Operator Response:

- Reactivate lines from host.
- If the problem persists, save the system log for problem determination.

Programmer Response:

- Ensure no mismatch exists between the hardware configuration and the control program generation (NCPCA, CA, HICHAN, LOCHAN). Valid for abend codes 912 and 915. Correct the generation problem, if any.
- Dump the NCP and analyze the dump according to abend code (Q1).
- If the problem does not appear to be a software problem, note the reference code (Q2) and contact the IBM hardware support center.

UAC=09

Explanation: A channel adapter error has occurred for channel adapter (Q1).

System Action: All sessions using routes over the failing adapter have been terminated, and appropriate recovery actions have been initiated.

IST772I

Operator Response: Save the system log for problem determination.

Programmer Response:

- Ensure the compatibility of communication controller channel-adapter parameters with the system (NSC address, ESC addresses, select out priority, burst length).
- Note the reference code (Q2) and contact the IBM hardware support center.

UAC=11

Explanation: A scanner hardware error has occurred for scanner number Q1. Lines whose addresses are in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response:

- Reissue the IML command for the affected scanner from the MOSS console and reactivate the lines from the host.
See the *IBM 3720/3721 Communication Controller Operator's Guide*.
- If the problem persists, save the system log for problem determination.

Programmer Response: Note the reference code (Q3) and contact the IBM hardware support center.

UAC=12

Explanation: A scanner hardware error has occurred for scanner number Q1. Lines whose addresses are in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response:

- Reissue the IML command for the affected scanner from the MOSS console and reactivate the lines from the host.
See the *IBM 3720/3721 Communication Controller Operator's Guide*.
- Use the MODIFY DUMP,TYPE=CSP command to transfer the scanner dump to the host for later printing.
- If the problem persists, do not transfer the last scanner dump. Save the system log for problem determination.

Programmer Response: Note the reference code (Q3) and contact the IBM hardware support center.

UAC=13

Explanation: A control program error or scanner error has occurred for scanner number Q1. Lines whose addresses are in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response:

- Reissue the IML command for the affected scanner from the MOSS console and reactivate the lines from the host.
See the *IBM 3720/3721 Communication Controller Operator's Guide*.
- If the problem persists, save the system log for problem determination.

Programmer Response:

- Check the addresses in control program generation. Correct generation in case of error.
- Dump the NCP and analyze the dump.
- If there does not appear to be a software problem, note the reference code (Q3) and contact the IBM hardware support center.

UAC=14

Explanation: A control program error or scanner error has occurred for scanner number Q1. Lines whose addresses are in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response:

- Reissue the IML command for the affected scanner from the MOSS console and reactivate the lines from the host.
See the *IBM 3720/3721 Communication Controller Operator's Guide*.
- Use the MODIFY DUMP,TYPE=CSP command to transfer the scanner dump to the host for later printing.
- If the problem persists, do not transfer the last scanner dump. Save the system log for problem determination.

Programmer Response:

- Dump the NCP and analyze the dump.
- If the problem does not appear to be a software problem, note the reference code (Q3) and contact the IBM hardware support center.

UAC=15

Explanation: A line error has occurred for line address Q2 on scanner number Q1.

System Action: The line is inoperative.

Operator Response:

- Reactivate the line from the host.
- If the problem persists, save the system log for problem determination.

Programmer Response:

- According to the reference code (Q3), perform line problem determination with 3720 maintenance and operator subsystem (MOSS) facilities.
See the *IBM 3720/3721 Communication Controller Problem Determination Guide*.
- If the problem does not appear to be a software problem, note the reference code (Q3) and contact the IBM hardware support center.

UAC=16

Explanation: Re-execution of an automatic-scanner IML is in progress following a hardware error on scanner Q1. Lines whose addresses are in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Wait for the re-execution of the automatic-scanner IML to complete. Another alert will indicate the IML completion. No action is required.

UAC=17

Explanation: Reexecution of an automatic-scanner IML is in progress following a control program error on scanner Q1. Lines in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Wait for the re-execution of the automatic-scanner IML to complete. Another alert will indicate the IML completion. No action is required.

UAC=18

Explanation: Re-execution of an automatic-scanner IML is complete following a scanner hardware error on scanner Q1. Lines whose addresses are in the range Q2 are inoperative.

System Action: All affected lines are inoperative.

Operator Response:

- Reactivate the lines from the host.
- If the problem persists, save the system log for problem determination.

Programmer Response: Note the reference code (Q3) and contact the IBM hardware support center.

UAC=19

IST772I

Explanation: Reexecution of an automatic-scanner IML is complete following a control program error or scanner error on scanner **Q1**. Lines whose addresses are in the range **Q2** are inoperative.

System Action: All affected lines are inoperative.

Operator Response:

- Use the MODIFY DUMP,TYPE=CSP command to transfer the scanner dump to the host for later printing.
- Reactivate the lines from the host.
- If the problem persists, do not transfer the last scanner dump. Save the system log for problem determination.

Programmer Response:

- Take an NCP dump (MODIFY DUMP,TYPE=NCP command) at the time of the re-execution of the scanner IML and analyze the dump.
- If the problem does not appear to be a software problem, note the reference code (**Q3**) and contact the IBM hardware support center.

UAC=20

Explanation: A permanent hardware error has occurred for scanner **Q1**. Scanner re-execution of the IML has stopped. Lines whose addresses are in the range **Q2** are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Save the system log for problem determination.

Programmer Response: Note the reference code (**Q3**) and contact the IBM hardware support center.

UAC=21

Explanation: A permanent control program error or scanner error has occurred for scanner **Q1**. Reexecution of the scanner IML stopped. Lines whose addresses are in the range **Q2** are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Save the system log for problem determination.

Programmer Response:

- Dump the NCP and analyze the dump.
- If the problem does not appear to be a software problem, note the reference code (**Q3**) and contact the IBM hardware support center.

UAC=22

Explanation: Reexecution of the automatic-scanner IML failed because of a hardware error on scanner **Q1**. Lines whose addresses are in the range **Q2** are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Save the system log for problem determination.

Programmer Response: Note the reference code (**Q3**) and contact the IBM hardware support center.

UAC=23

Explanation: Re-execution of the automatic-scanner IML failed because of a control program or scanner hardware error on scanner **Q1**. Lines whose addresses are in the range **Q2** are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Save the system log for problem determination.

Programmer Response:

- Dump the NCP and analyze the dump.
- If the problem does not appear to be a software problem, note the reference code (**Q3**) and contact the IBM hardware support center.

UAC=24

Explanation: Re-execution of the automatic-scanner IML failed because of a hardware error or maintenance and operator subsystem (MOSS) error for scanner **Q1**. Lines whose addresses are in the range **Q2** are inoperative.

System Action: All affected lines are inoperative.

Operator Response: Save the system log for problem determination.

Programmer Response: Note the reference code (**Q3**) and contact the IBM hardware support center.

UAC=25

Explanation: A maintenance and operator subsystem (MOSS) remote-console error occurred because of the line, modems, console or MOSS.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response:

- Verify that the remote console, remote modem or local modem is powered on.
- Verify the physical installation for the remote console, remote modem, local modem and cables.
See the *IBM 3720/3721 Communication Controller Problem Determination Guide*.
- Run modem tests. See the modem documentation.
- Run a console test. See the console documentation.
- Run a console link test from the 3720 operator panel.
See *IBM 3720/3721 Communication Controller Daily Task and Problem Determination*.
- If no problem appears, note the reference code (**Q1**) and contact the IBM hardware support center.

UAC=26

Explanation: A maintenance and operator subsystem (MOSS) remote-console error has occurred.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response:

- Verify that the remote console operates in IBM 3101 mode.
See *IBM 3720/3721 Communication Controller System Integration*.
- Run a console test. See the console documentation.
- If no problem appears, note the reference code (**Q1**) and contact the IBM hardware support center.

UAC=27

Explanation: An error occurred on the maintenance and operator subsystem (MOSS) disk or MOSS disk adapter.

System Action: Processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response:

- An IPL can be executed for the communication controller with the primary diskette on which the disk has been saved.
See the *IBM 3720/3721 Communication Controller Problem Determination Guide*.
- Note the reference code (**Q1**) and contact the IBM hardware support center.

UAC=30

Explanation: An error occurred on the maintenance and operator subsystem (MOSS) disk or MOSS disk adapter.

System Action: Processing continues.

Operator Response:

- Do not IPL from the 3720 disk, or dump to the disk, until the disk is repaired.
- The IPL can only be done by switching to diskette mode on the control panel and using the primary backup diskette on which the customized disk contents have been saved.

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See the 3720/3721 *Communication Controller Operator's Guide*.

- Save the system log for problem determination.

Programmer Response: Note the reference code (Q1) and contact the IBM hardware support center.

UAC=31

Explanation: A communication controller hardware error occurred. A communication controller IPL was re-executed.

System Action: Processing continues.

Operator Response:

- Reactivate the lines from the host.
- Use the MODIFY DUMP,TYPE=NCP,OPTION=TRANS command to transfer the communication controller dump to the host, then purge it from the 3720 disk.
- If the problem persists, save the system log for problem determination.

Programmer Response: Note the abend code (Q1) and the reference code (Q2) and contact the IBM hardware support center.

UAC=32

Explanation: A communication controller software error occurred. An IPL has been re-executed for the communication controller.

System Action: Processing continues.

Operator Response:

- Reactivate the lines from the host.
- Transfer the communication controller dump to the host, then purge it from the 3720 disk.
The dump does not have to be transferred to the host, but it should be purged from the 3720 disk. If the dump is not purged, the AUTODUMP/IPL sequence for a subsequent error will not occur.
- If the problem persists, save the system log for problem determination.

Programmer Response:

- Ensure there is no mismatch between the hardware configuration and the control program generation (NCP, CA, HICHAN, LOCHAN). Valid for abend codes 912 and 915. Correct the generation problem, if any.
- Analyze the dump according to the abend code (Q1).
- If there does not appear to be a software problem, note the reference code (Q2) and contact the IBM hardware support center.

Routing code: 8

Descriptor code: 5

IST773I SESSION WITH *luname* IN PROCESS OF BEING TERMINATED

Explanation: VTAM was deactivating a PU in response to a VARY INACT,GIVEBACK command. Sessions could not be transferred from a real resource to a CDRSC during the nondisruptive giveback of *luname*.

System action: VTAM terminates the session for *luname*.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST778I *cdrmname1 [cdrmname2] [cdrmname3] [cdrmname4] [cdrmname5] [cdrmname6]*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST728I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST784I **SESSION(S) EXIST(S) WITH UNKNOWN PARTNER(S)**

Explanation: VTAM issues this message in response to a DISPLAY ID command for a logical unit. It indicates that one or more sessions exist for which the SSCP has no session partner information (for example, partner name or session ID). This information was lost when the SSCP-LU session ended. When the SSCP-LU session is re-established, the SSCP becomes aware of any LU-LU sessions that remained active.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST786I *command* **COMMAND REJECTED** — *reason*

Explanation: VTAM rejects the *command* for one of the following *reasons*:

EXCEEDS *limit* CHARACTER LIMIT

The *command* exceeded the maximum allowable length *limit*. The command length should be less than or equal to the limit *limit*. The permissible command length will be smaller if PPOLOG=YES is in effect.

NO COMMAND OPERANDS

The *command's* input command length (after removing the command prefix) was 0.

CMIP SERVICES ALREADY ACTIVE

The MODIFY VTAMOPTS command for CMIP services has been issued and CMIP services has already been started.

System action: VTAM rejects the command.

Operator response:

- If *reason* is **EXCEEDS *limit* CHARACTER LIMIT**, shorten the command to be less than or equal to *limit* and reenter it.
- If *reason* is **NO COMMAND OPERANDS**, reenter *command* with the required operands.
- If *reason* is **CMIP SERVICES ALREADY ACTIVE**, and CMIP services is deactivating, wait until one of the following messages is displayed indicating that deactivation is complete.
 - IST1396I
 - IST1397I
 - IST1398I
 - IST1331I

Reissue the MODIFY VTAMOPTS,OSIMGMT=YES command.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST787I SSCP TAKEOVER FOR NODE *linkname* IN PROGRESS

Explanation: Switched link *linkname* has been activated in the taking-over SSCP during nondisruptive takeover.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST789I *command* FAILED FOR ID = *ncpname*, CA / NCP CONFLICT

Explanation: The *command* (VARY ACT or VARY ACQ) failed because an NCP was contacted over a communication adapter SDLC link station. (VTAM can contact an NCP over a communication adapter SDLC link or activate of NCP over a channel or noncommunication adapter SDLC link, but not both at the same time.)

System action: VTAM stops processing *command*.

Operator response: Issue the DISPLAY ID=*ncpname* command to determine which communication adapter link stations are in contact with the NCP *ncpname*.

System programmer response: If you want NCP *ncpname* activated or acquired by this host, ask the operator to deactivate the communication adapter SDLC link stations in contact with this NCP. Then the operator can reenter the VARY ACT or VARY ACQ command for NCP *ncpname*.

Routing code: 8

Descriptor code: 5

IST790I MAXIMUM *type* USED = *maxK*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the group is IST449I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST792I NO SUCH SESSION EXISTS

Explanation: The operator issued a VARY TERM command for a session or search that does not exist. For example, if the command is entered for a logical unit that has only a pending active session, no session is found (or terminated) since the default scope of this command is active sessions. Note that no sessions exist for the specified LU or session partners from the VARY TERM command.

System action: None.

Operator response: Issue the DISPLAY NET,SESSIONS,SCOPE=ALL command if SCOPE=APPN is not specified to verify that sessions exist and check session states. If SCOPE=APPN is specified, issue DISPLAY NET,SRCHINFO,LIST=ALL to verify that a search exists and check the session ID.

Reissue the VARY TERM command with the correct SID.

System programmer response: None.

Note: If you modify this message, you must specify MSG=(IST792I,6) on the USSMSG macro. This will define IST792I and USS message 6 to be identical in the operation-level USS table. See the z/OS Communications Server: SNA Resource Definition Reference for information on the USSMSG macro for VTAM operator messages.

Routing code: 2

Descriptor code: 5

IST793E SESSION MANAGEMENT ERROR, CODE *code* [—*response*]

Explanation: The session management exit routine, ISTECAA, returned data that was not valid or a return code in register 15 that was not valid. The following *codes* describe the error conditions which might occur.

***code* (in Hex)**

- | Error | |
|--------------|---|
| 01 | <p>For the gateway path selection function (primary function code X'04'), a gateway path entry in the original list did not match any entry in the list.</p> <p>For the SSCP selection function (primary function code X'06'), an SSCP entry in the returned list did not match any in the default list.</p> <p><i>code</i> is undefined for the adjacent link station (ALS) selection function (primary function code X'08').</p> |
| 03 | <p>For the gateway path selection function (primary function code X'04'), there were no valid gateway path entries in the returned list.</p> <p>For the SSCP selection function (primary function code X'06'), there were no valid SSCP selection entries in the returned list.</p> <p>For the adjacent link station (ALS) selection function (primary function code X'08'), the name returned in the ALS name vector is not the name of a valid PU.</p> |
| 04 | <p>For the gateway path selection function (primary function code X'04'), the network of the adjacent SSCP was incorrect in the returned list.</p> <p><i>code</i> is undefined for the SSCP selection function (primary function code X'06').</p> <p><i>code</i> is undefined for the adjacent link station (ALS) selection function (primary function code X'08').</p> |
| 05 | <p>For the gateway path selection function (primary function code X'04'), there were more gateway path entries in the returned list than in the original list.</p> <p>For the SSCP selection function (primary function code X'06'), there were more SSCP selection entries in the returned list than in the passed list.</p> <p><i>code</i> is undefined for the adjacent link station (ALS) selection function (primary function code X'08').</p> |
| 06 | <p>For the gateway path selection function (primary function code X'04'), the exit routine generated a return code that is not valid.</p> <p><i>code</i> is undefined for the SSCP selection function (primary function code X'06').</p> <p>For the adjacent link station (ALS) selection function (primary function code X'08'), the exit routine generated a return code that is not 0, 4, 8, 12, 16, or 20.</p> |
| 07 | <p>For the gateway path selection function (primary function code X'04'), the exit routine changed the pointer to the gateway path list.</p> <p>For the SSCP selection function (primary function code X'06'), the exit routine changed the pointer to the SSCP selection list.</p> <p>For the adjacent link station (ALS) selection function (primary function code X'08'), the exit routine changed the pointer to the ALS name information vector.</p> |
| 08 | <p>For the initial authorization function (primary function code X'00'), the exit routine returned a return code that is not valid. Note that a return code of 4 is not valid if the exit does not support the secondary authorization function.</p> |
| 09 | <p>For the secondary authorization function (primary function code X'01'), the exit routine returned a return code that is not valid.</p> |
| 10 | <p>For the initial or final accounting function (primary function codes X'02' or X'03'), the exit routine returned a return code that is not valid.</p> |
| 11 | <p>For the end function (primary function code X'FF'), the exit routine returned a return code that is not valid.</p> |
| 12 | <p>For the begin function (primary function code X'FE'), the exit routine returned a return code that is not valid.</p> |

IST793E

- 14 For any function, the session management exit routine abended.
- 15 The following installation exit routines could not be invoked because insufficient storage existed for the parameter lists passed to the exit routines when VTAM was initialized:
- Session management exit routine
 - Session accounting exit routine
 - Session authorization exit routine.
- 16 The session management exit routine will never be requested because insufficient below-the-line storage existed during VTAM initialization.
- VTAM was unable to obtain 24-bit addressable storage for the gateway path list.
- 17 For the alias selection function (primary function code X'07'), the exit routine returned a return code that is not valid.
- 18 The alias selection function (primary function code X'07') will not be enabled because there is not enough storage available to pass the alias parameter list, which is needed to pass information to the session management exit routine.
- 19 For the alias selection function (primary function code X'07'), the network ID had to be determined. The required network ID has been omitted in the return parameter list.
- 20 For the alias selection function (primary function code X'07'), a network ID was returned that was not the same as the network ID sent.
- 21 For the alias selection function (primary function code X'07'), the original data sent for translation has been altered in the input parameter list. This is not allowed.
- 22 The information for the alias selection function (primary function code X'07') contains a syntax error.
- 23 The information for the virtual route selection function (primary function code X'0B') contains a syntax error.

response is one of the following:

DEFAULT ALS LIST USED

This is issued for the adjacent link station selection function.

STANDARD GW PATHLIST USED

This is issued for a gateway node.

STANDARD SSCP ROUTING USED

This is issued for the SSCP selection function.

STANDARD VR/TP LIST USED

This is issued for the virtual route selection function.

System action: The system action depends on *code*. See the following list.

code (in Hex)

Action

01–07 *response* is **STANDARD GW PATHLIST USED** for a gateway node (primary function code X'04'); processing continues. VTAM uses the default gateway node path list as determined by the gateway path operand on the CDRM macro.

response is **STANDARD SSCP ROUTING USED** for the SSCP selection function (primary function code X'06'); VTAM uses standard SSCP routing.

response is **DEFAULT ALS ROUTING USED** for the adjacent link station (ALS) selection function (primary function code X'08'). The first available PU in the ALS list is used. If no PUs in the ALS list are available, cross-domain routing is used.

08–09 The session is not authorized by VTAM.

10–11 VTAM ignores the return code.

12 Processing continues as though no exit routine existed. The exit routine will not be invoked again. All

sessions are authorized, accounting data is discarded, the default gateway path list is used for gateway path selection, the default SSCP selection list is used for SSCP routing, and the alias application is invoked for translation.

- 14-16 The session management exit routine is functionally disabled and the function for which it was called is rejected.
- 17 The session continues as if the alias selection function did not exist. Reevaluate the alias selection function to determine the error and provide the correct return code.
- 18 VTAM initialization continues and the alias selection function is disabled. (The alias selection function will not be performed.)
- 19 The information from the alias selection function is not used because the translation that was given is not valid. The session setup fails. Ensure that a network ID is returned if it was not known before the alias selection function is invoked.
- 20 The data returned from the alias selection function is not used. A network ID was returned that is not valid. The session setup fails. Correct the bad translation.
- 21 The data returned from the alias selection function will not be used. The session setup fails. Storage that was reserved for input only is being accessed. See the z/OS Communications Server: SNA Customization for more information.
- 22 The data returned from the alias selection function will not be used because it was syntactically incorrect. The session will fail to set up. Check the returned data to ensure that all names have the correct syntax, determine if blank names are valid for each value, and make sure all values are padded with blanks.
- 23 The data returned from the virtual route selection function will not be used because it was syntactically incorrect. The session will be set up with the VR/TP list defined in the COS table. Valid VR and TP numbers must be used, and the maximum number of VR/TP pairs cannot be exceeded. See the z/OS Communications Server: SNA Resource Definition Reference for more information about coding the COS table.

Operator response: Save the system log for problem determination.

System programmer response: The session management exit routine contains an error. Use the error code in the message to determine the cause of the error and correct it. You can replace the exit routine with the corrected version by using the MODIFY EXIT command. See z/OS Communications Server: SNA Operation for additional information.

Routing code: 8

Descriptor code: 3

IST796I HOSTSA VALUE EXCEEDS *option*

Explanation: VTAM issues this message when the value specified for the HOSTSA start option exceeds the value of *option*.

option is the start option name and is either **MAXSUBA** or **MXSUBNUM**.

- **MAXSUBA** is the highest subarea value that can be assigned to any node in this network that communicates with pre-ENA nodes.

This message requires no action if your network supports extended network architecture (ENA). ENA was implemented in VTAM Version 3 and NCP Version 4.

- **MXSUBNUM** is the maximum subarea number supported by another network to which this host is connected. Therefore, if your host subarea number is greater than **MXSUBNUM**, you cannot communicate with the other network.

System action:

- If *option* is **MAXSUBA**, processing continues.
- If *option* is **MXSUBNUM**, VTAM issues message IST1311A to prompt for valid values of HOSTSA and MXSUBNUM, and waits for a response.

Operator response:

- If *option* is **MAXSUBA**, this message requires no action if your network supports extended network architecture (ENA). If your network contains pre-ENA nodes, save the system log for problem determination.

IST797I • IST799I

- If *option* is **MXSUBNUM**, enter valid values for **HOSTSA** and **MXSUBNUM** when prompted by **IST1311A**.
You do not have to enter both values. VTAM does not ignore the value of **HOSTSA**. However, you can enter a new value of **HOSTSA** that is smaller than the initial value of **MXSUBNUM**.
Message **IST1311A** is repeated until **HOSTSA**'s value does not exceed **MXSUBNUM**.

System programmer response: If *option* is **MAXSUBA**, review the VTAM start options and their relationships. To communicate with pre-ENA nodes, the maximum **HOSTSA** value cannot exceed the **MAXSUBA** value.

See the z/OS Communications Server: SNA Resource Definition Reference for more information on the **MAXSUBA** and **MXSUBNUM** start options.

Routing code: 2

Descriptor code: 5

IST797I FROM VIA ADJACENT DEST ER LENGTH

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is **IST533I**. See the explanation of that message for a full description.

Routing code: 2

Descriptor code: 5

IST798I *netid*

Explanation: VTAM issues this message as part of a group of messages. The first message is **IST533I**. See explanation of that message for a full description.

Routing code: 2

Descriptor code: 5

IST799I *type procedure* IN PROGRESS

Explanation: VTAM issues this message in response to a **DISPLAY ID** command requesting the status of an NCP. *procedure* is either **LOAD** or **DUMP**.

If *procedure* is **LOAD**, the value of *type* will be **NONDISRUPTIVE**. A nondisruptive load is in progress because a **MODIFY LOAD,ACTION=ADD** or **MODIFY LOAD,ACTION=REPLACE** command was entered for an NCP and the operation is not yet complete.

If *procedure* is **DUMP**, *type* can be one of the following:

<i>type</i>	Description
-------------	-------------

DYNA	A dynamic dump of NCP storage is in progress. The NCP remains active.
-------------	---

MOSS	The maintenance operator subsystem dump contained on the MOSS disk in the 3725 or 3745 Communication Controller is being transferred to the host and stored in a host data set.
-------------	---

CSP	The communication-scanner processor (CSP) dump contained on the MOSS disk is being transferred to the host and stored in a host data set.
------------	---

TRANSFER OF NCP

The NCP is being dumped to its external disk storage and then transferred to a host data set.

PURGE OF MOSS

The maintenance operator subsystem dump is being purged from the MOSS disk in the 3725 or 3745 Communication Controller.

PURGE OF CSP

The communication-scanner processor dump is being purged from the MOSS disk in the 3725 or 3745 Communication Controller.

PURGE OF NCP

The NCP is being purged from the NCP's external disk storage.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

Chapter 7. IST messages for VTAM network operators IST800I – IST1199I

This chapter lists the VTAM messages beginning with IST in the range of IST800I through IST1199I. These messages can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

Note: Messages that begin with the prefix **ISTF** are issued by the VTAM dump analysis tool and the VTAM internal trace (VIT) analysis tool. Help information is available as a part of each tool by pressing F1. Therefore, **ISTF** messages ist973 are not documented in z/OS Communications Server: SNA Messages. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

IST803I VTAM TERMINATION TASK TERMINATED-OPEN FAILED

Explanation: Because the ACB for the VTAM termination subtask ISTATM00 could not be opened successfully, the VTAM termination subtask could not be initialized.

System action: If the user's application program abnormally terminates or terminates without issuing a CLOSE ACB, VTAM cannot close that application's ACB. Since VTAM cannot terminate until all application programs have closed their ACB, VTAM could probably never terminate when a HALT command is entered. Other VTAM processing continues.

Operator response: Halt VTAM immediately. If a dump was taken as indicated by message IST413I, print the dump. Save the system log and network logs for problem determination.

System programmer response: See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on termination problems.

Routing code: 2

Descriptor code: 5

IST804I CLOSE IN PROGRESS FOR *applname* OPENED BY *jobname*

Explanation: VTAM is closing the ACB of VTAM application program *applname* that has terminated normally or abnormally and that was opened by *jobname*.

jobname is the name of a related program commonly executed by a series of steps in a job. If *jobname* is not known, ***NA*** is displayed.

System action: VTAM closes the ACB of the VTAM application program. The application program might terminate before its resources are freed in VTAM.

Operator response: Since the ACB for the application program cannot be successfully opened again before it is successfully closed, the job must not be restarted before message IST805I is issued to indicate that the close has been completed. If you do not see IST805I, save the system log for problem determination.

System programmer response: Determine why the close did not complete and correct the problem. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on diagnosing application program problems.

Routing code: 2

Descriptor code: 5

IST805I VTAM CLOSE COMPLETE FOR *applname*

Explanation: VTAM has successfully completed processing to close the ACB of VTAM application program *applname*.

System action: Processing continues. VTAM resources can no longer start a session with application program *applname*.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST807I *command* FOR ID = *puname* FAILED — NODE IS IN TEST MODE

Explanation: The *command* failed because a MODIFY LL2 command is being processed for PU *puname*, which is being added or moved by dynamic reconfiguration.

System action: VTAM stops processing the command.

Operator response:

- If MODIFY LL2,OPTION=CONT was specified, enter MODIFY LL2,OPTION=CANCEL and reenter *command*.
- Otherwise, wait for the MODIFY LL2 command to complete, and reenter *command*.

System programmer response: If a MODIFY LL2,OPTION=CONT command caused VTAM to issue this message terminate the command by issuing MODIFY LL2,OPTION=CANCEL.

Routing code: 2

Descriptor code: 5

IST808I ORIGIN PU = *originpu* DEST PU = *destpu* NETID = *netid*

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST535I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST809I XRF SESSIONS — PRIMARY = *primarycount* BACKUP = *backupcount*

Explanation: VTAM issues this message in response to a DISPLAY ID command. *primarycount* is the current count of primary extended recovery facility (XRF) sessions, and *backupcount* is the current count of backup XRF sessions established with this node. This message appears only if the logical unit displayed has at least one primary or backup XRF session. The *primarycount* and *backupcount* values both include sessions with unknown partners.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST812I *command* COMMAND NOT ACCEPTED

Explanation: VTAM did not accept the *command* because of one of the following:

- VTAM is abending
- VTAM is not active
- VTAM is not accepting commands, for example, during processing of HALT
- *command* exceeds the maximum command length.

System action: VTAM ignores the command and processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST813I USERVAR *uservar* CHANGED FROM *value1* TO *value2*

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY USERVAR command is used to change the value of a USERVAR. The first message in the group is IST1283I. See that message for a complete description of the group.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information.

Routing code: 8

Descriptor code: 5

IST814I USERVAR *uservar* DELETED

Explanation: The USERVAR *uservar* was deleted by a MODIFY USERVAR command. Any attempt to start a session by specifying *uservar* will fail.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST815I AUTOMATIC RECOVERY IS SUPPORTED

Explanation: VTAM issues this message in response to a DISPLAY ID command for a cross-domain resource manager (CDRM) when automatic recovery (RECOVERY=YES) is specified on the CDRM definition statement. The CDRM will automatically attempt a recovery of the SSCP-SSCP session if an outage occurs.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 4,5,9

Descriptor code: 5

IST816I *rejsubarea tg2 rejadjsubarea ermask*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST533I. See the explanation of that message for a full description.

Routing code: 2

Descriptor code: 5

IST819I CDRM *cdrmname* COMMUNICATION LOST — RECOVERY IN PROGRESS

Explanation: The SSCP-SSCP session with CDRM *cdrmname* has been disrupted.

System action: Because the CDRM definition statement for this host, *cdrmname*, or both CDRMs specified RECOVERY=YES, VTAM will try to re-establish the SSCP-SSCP session.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST820I {ACTLU|ACTPU} RSP DATA DISCARDED FOR ID = *nodename* — INSUFF STORAGE

Explanation: VTAM did not have sufficient storage to receive the response data included on ACTLU or ACTPU sent by node *nodename*. The data was discarded.

System action: Node *nodename* is deactivated.

Operator response: Enter a DISPLAY BFRUSE or DISPLAY STORUSE command to check the availability of storage. Wait and try the activation of *nodename* again when storage is available.

If the problem persists, save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 8

Descriptor code: 4

IST822I CDRM *cdrmname* RECOVERY FAILED – INSUFFICIENT STORAGE

Explanation: VTAM issues this message when an attempt to re-establish the SSCP-SSCP session with *cdrmname* failed because of a lack of available storage.

System action: VTAM tries to re-establish the SSCP-SSCP session because the CDRM definition statement for this host, *cdrmname*, or both CDRMs specified RECOVERY=YES. However, VTAM could not re-establish the SSCP-SSCP session because there was not enough storage to process the request.

Operator response: Enter a DISPLAY BFRUSE command to check the availability of storage. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.

- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 8

Descriptor code: 4

IST825I USERVAR DEFINED — NAME = *uservar*, VALUE = *value*

Explanation: This message is the first in a group of messages that VTAM issues when a MODIFY USERVAR command is used to define a USERVAR. A complete description of the message group follows.

```
IST825I  USERVAR DEFINED - NAME = uservar, VALUE = value
[IST1030I USERVAR EXIT IS exitname]
IST314I  END
```

Note: This message group is percolated. See “Message rerouting and percolation” on page 1146 for additional information.

IST825I

uservar is the name of the USERVAR, and the value of *uservar* has been initialized to *value*. Any subsequent session requests to *uservar* are routed to the application named in *value*.

IST1030I

exitname is the name of the USERVAR exit. If no USERVAR exit is defined, VTAM does not issue this message.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST826I VTAM START REJECTED– START COMMAND NOT USED FOR VTAM INITIALIZATION

Explanation: Something other than a START command was entered to initialize VTAM. For example, a batch JCL or TSO submit might have been used.

System action: VTAM initialization is rejected.

Operator response: Enter a START command to start VTAM successfully.

System programmer response: Use only the START command to start VTAM successfully.

Routing code: 2

Descriptor code: 5

IST830I ORIGINATING SSCP NAME = *sscpname*, NETID = *netid*

Explanation: This message is part of a message group. The first message in the group is IST732I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST831I DUPLICATE ADJCDRM NAME *adjcdrmname* IN *configname*

Explanation: This message is the first in a group of messages. A full description of possible message groups follows. A duplicate label *adjcdrmname* was found on two ADJCDRM statements in a series of consecutive ADJCDRM

IST832I

statements in adjacent SSCP table definition *configname*. Messages IST708I and IST1333I identify the affected adjacent SSCP table in *configname*.

- If an adjacent SSCP table is activated with entries identified with CDRM or NETID definition statements, the following message group is displayed.

```
IST831I  DUPLICATE ADJCDRM NAME adjcdrmname IN configname
IST708I  {[NETID = netid][NETWORK = macrolabel][CDRM = sscpname|DEFAULT TABLE]} |
        DEFAULT TABLE FOR ALL NETWORKS
```

- If an adjacent SSCP table is activated with entries identified with an ADJLIST definition statement, the following message group is displayed.

```
IST831I  DUPLICATE ADJCDRM NAME adjcdrmname IN configname
IST1333I ADJLIST = listname
```

IST708I

netid comes from the NETID value specified on the NETWORK statement preceding the series of ADJCDRM statements. If a NETID value is not specified on the NETWORK statement or if there is no NETWORK statement preceding the series of ADJCDRM statements, NETID=*netid* will not appear in message IST708I.

macrolabel is the label of the NETWORK definition statement preceding the series of ADJCDRM statements. If the NETWORK statement does not have a label or if no NETWORK statement precedes the series of ADJCDRM statements, NETWORK = *macrolabel* will not appear in message IST708I.

sscpname is the label of the CDRM statement immediately preceding the series of ADJCDRM statements. (Note that a CDRM statement must have a label.) If no CDRM statement immediately precedes the series of ADJCDRM statements, CDRM = *sscpname* will not appear in the message. Instead, DEFAULT TABLE will appear, indicating that the series of ADJCDRM statements is the default ADJSSCP table for the *netid* specified (or the default ADJSSCP table for all networks if NETID = *netid* does not appear).

VTAM issues DEFAULT TABLE FOR ALL NETWORKS when the table being activated has a default adjacent SSCP list for all networks.

IST831I

adjcdrmname is the duplicate label which was found on two ADJCDRM statements.

configname identifies the adjacent SSCP table definition.

IST1333I

listname is the name of an adjacent SSCP table as defined by an ADJLIST definition statement.

See the descriptions of the ADJLIST definition statement in the z/OS Communications Server: SNA Resource Definition Reference for more information on adjacent SSCP tables.

System action: VTAM ignores the duplicate ADJCDRM statement. Processing of the ADJSSCP definition continues.

Operator response: Save the system log for problem determination.

System programmer response: Remove the duplicate ADJCDRM statement.

Routing code: 2

Descriptor code: 4

IST832I UNLABELED *statement_type* STMT IN *configname*

Explanation: This message is the first of a group of messages. A complete description of the message group follows.

```
IST832I UNLABELED statement_type STMT IN configname
IST833I SKIPPING TO NEXT text
```

statement_type identifies the unlabeled statement that was found in *configname*. Values for *statement_type* can be ADJCDRM, CDRM, or ADJLIST.

text can be:

STMT

CDRM, NETWORK, OR ADJLIST STMT OR EOF

System action: If an unlabeled CDRM statement was found, that statement and all statements in the ADJSSCP

definition following the unlabeled CDRM statement are ignored until a NETWORK statement or CDRM statement or end of file (EOF) is encountered. If a NETWORK statement or CDRM statement is encountered, normal ADJSSCP definition processing resumes with that statement.

If an unlabeled ADJLIST statement was found, that statement is ignored. If this statement was not preceded by a valid ADJLIST statement, then all ADJCDRMs immediately following the unlabeled ADJLIST are also ignored.

If an unlabeled ADJCDRM statement was found, only that statement is ignored. Processing resumes with the following statement, if one exists.

Operator response: Save the system log for problem determination.

System programmer response: Put labels on all CDRM, ADJCDRM, and ADJLIST statements in adjacent SSCP table definitions.

Routing code: 2

Descriptor code: 4

IST833I {NCPPATH STMT, VPATH STMT, OR EOF| SKIPPING TO NEXT *text*}

Explanation: VTAM issues this message when it detects a syntax error during the processing of a dynamic path update deck. Dynamic path update processing will resume with the next NCPPATH or VPATH statement.

VTAM displays **NCPPATH STMT, VPATH STMT, OR EOF** for one of the following reasons:

- A NCPPATH or VPATH is unlabeled
- NETID is missing in an NCPPATH or VPATH statement.

VTAM displays **SKIPPING TO NEXT** *text* when IST833I is preceded by message IST832I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: Correct the dynamic path update deck.

Routing code: 2

Descriptor code: 4

IST834I *num* **BACKUP SESSION(S) EXIST(S) WITH UNKNOWN PARTNERS**

Explanation: VTAM issues this message in response to a DISPLAY ID command. *num* is the number of backup extended recovery facility (XRF) sessions whose session partner is unknown.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST838I **TRACE STATUS DISPLAY FOR ID =** *nodename*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY TRACES command for *nodename*. A complete description of the message group follows.

```
IST838I TRACE STATUS DISPLAY FOR ID = nodename
IST839I PU NAME    LINE NAME
IST840I puname    linename
:
:
IST314I END
```

This message group displays a list of resources that are being traced by the 3710 physical unit *node*. IST840I displays the name of the resource, *puname*, and its line, *linename*, and is repeated for each resource being traced.

IST839I • IST844I

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 7

IST839I PU NAME LINE NAME

Explanation: VTAM issues this message as part of a group of messages and it is a header for message IST840I. See the explanation of message IST838I for a full description.

Routing code: 2

Descriptor code: 7

IST840I *puname linename*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST838I. See the explanation of that message for a full description.

Routing code: 2

Descriptor code: 7

IST841I NO RESOURCES ARE BEING TRACED FOR *nodename*

Explanation: A DISPLAY TRACES command has been entered for a 3710 physical unit *nodename* and there are no resources being traced for that physical unit.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST842I UNABLE TO FIND BUFFERS IN *poolid* POOL — DUMP IN PROGRESS

Explanation: While attempting to allocate storage from buffer pool *poolid*, VTAM found that storage perceived to be free is actually in use.

System action: A dump is being taken to help identify the source of this problem.

If VTAM can continue, it will discard some existing free buffers in pool *poolid* and schedule the pool for eventual expansion. Otherwise, VTAM must be restarted.

Operator response: Save the system log and dump for problem determination.

System programmer response: Use the dump to determine the cause of the problem.

Routing code: 2

Descriptor code: 5

IST844I VTAM START REJECTED — *name* IS DUPLICATE NAME

Explanation: VTAM attempted to define a resource during initialization but encountered a duplicate entry, *name*.

System action: VTAM is terminated.

Operator response: Verify that the start options were entered correctly, particularly the HOSTPU, NETID, and SSCPNAME options. If not, restart VTAM with the correct options; otherwise, save the system log for problem determination.

System programmer response: Check for invalid start option values (such as HOSTPU=VTAM) that could lead to duplicate entries, especially with VTAM-reserved resource names. See the z/OS Communications Server: SNA Resource Definition Reference for a description of the VTAM start options.

Routing code: 2

Descriptor code: 5

IST849I *operation1* INCONSISTENT WITH USE OF *operation2* IN *statementname*

Explanation: This message is the first of a group of messages. The message group follows.

IST849I *operation1* INCONSISTENT WITH USE OF *operation2* IN *statementname*

IST701I CONFIG *configname* LABEL = *labelname* STMT TYPE = *statementname*

An inconsistent connection has been made between *operation1* and *operation2*. VTAM issues message IST849I for the following combinations of *operation1* and *operation2*:

AUTODL and SHOLD

AUTODL=NO is coded in the GROUP or LINE definition statement.

DIALNO and SHOLD

DIALNO is not coded in the GROUP definition statement.

CPNAME and PUTYPE

CPNAME is coded for a PU type other than PU type 2.

LOADFROM and SAVEMOD

LOADFROM=EXT was specified on the VARY ACT command, and SAVEMOD=YES was specified on the PCCU definition statement. This combination is not valid.

RESSCB and LOCADDR

RESSCB is specified for a dependent LU.

SAVEMOD and DUMPLD

SAVEMOD=NO was specified on the VARY ACT command, and DUMPLD=YES was specified on the PCCU definition statement. This combination is not valid.

SAVEMOD and LOADFROM

SAVEMOD=YES was specified on the VARY ACT command, and LOADFROM=EXT was specified on the PCCU definition statement. This combination is not valid.

The definition statement *statementname* is in the node *configname* and has the label *labelname*.

System action: The system action depends on the value of *operation1* and *operation2*:

AUTODL and SHOLD

VTAM does one of the following:

- If AUTODL=NO is coded on the GROUP definition statement, VTAM ignores the entire GROUP definition statement and all definition statements under it.
- If AUTODL=NO is coded on the LINE definition statement, VTAM treats all lines in that group as ordinary X.21 switched lines, and the group is no longer a short hold mode/multiple port sharing (SHM/MPS) group.

DIALNO and SHOLD

VTAM ignores the entire GROUP definition statement and all definition statements under it.

CPNAME and PUTYPE

PU and subnodes are unavailable.

LOCADDR and EAS

VTAM ignores EAS.

LOADFROM and SAVEMOD

VTAM does not use SAVEMOD=YES, coded on the PCCU definition statement, during the initial load, but it is saved for future reloads. The automatic dump and load switches are not changed in the NCP.

RESSCB and LOCADDR

VTAM ignores RESSCB.

SAVEMOD and DUMPLD

VTAM does not use DUMPLD=YES, coded on the PCCU definition statement, during the initial load, but it is saved for future reloads. The automatic dump and load switches are not changed in the NCP.

IST860I • IST861I

SAVEMOD and LOADFROM

VTAM does not use the LOADFROM=EXT, coded on the PCCU definition statement, during the initial load, but it is saved for future reloads.

Operator response: Save the system log for problem determination.

System programmer response: Check and correct the definition statement *statementname*.

Routing code: 2

Descriptor code: 5

IST860I DEACTIVATION OF *nodename* INCOMPLETE — INSUFFICIENT STORAGE

Explanation: VTAM issues this message in response to either a VARY INACT command to deactivate a major or minor node or a termination request that was received. The command cannot be completed because VTAM could not obtain sufficient storage to process the command.

nodename is the name of the resource and is always a CDRM.

System action: VARY deactivate processing for *nodename* is not completed, and the node is not available to VTAM. LU-LU sessions are not disrupted.

Operator response: Reenter the VARY INACT command when more storage is available. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usages for storage pools. Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTR*x*) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST861I MODETAB=*modetab* USSTAB=*usstab* LOGTAB=*logtab*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application minor node or an LU. The tables that will be displayed are:

modetab Logon mode table

usstab Unformatted system services (USS)

logtab Interpret table

If no table of the particular type was defined for the resource, or the table type does not apply, for example, interpret tables for applications, *****NA***** is displayed.

If no alternative value was specified when the resource was defined, the following IBM-supplied tables will be used if they are loaded:

Logon mode table
ISTINCLM

USS table, operators
ISTINCNO

USS table, terminals
ISTINCDT

Interpret table
No default

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST862I **NETID = *netid* COSTABLE = *costable1* [, *costable2*]**

Explanation: VTAM issues this message in response to a DISPLAY COS command. It displays the name of the class of service (CoS) table associated with a specific network and PU type 4. To determine which COS table will be used in subsequent session initiation requests involving this PU type 4, see the z/OS Communications Server: SNA Network Implementation Guide.

netid, obtained from the NETID operand, is the name of the network whose Class of Service information is being displayed.

- If NETID is omitted, *netid* is the host network identifier.
- If NETID is not * (NETID=*netid* or NETID=*NETWORK), message IST862I is displayed only if the COSTAB keyword is coded on the BUILD or NETWORK definition statement. If COSTAB is not coded, VTAM issues message IST887I.
- If DISPLAY COS,NETID=* is entered, message IST862I is displayed for each network identified in a BUILD or NETWORK definition statement, and for any dynamic networks that have been created.
- If DISPLAY COS,NETID=*NETWORK is entered, message IST862I displays information for a model network.

costable1 identifies which COS tables might be used during Class of Service resolution. *costable1* will be one of the following:

name The name of the COS table identified using the COSTAB keyword in the BUILD or NETWORK definition statement for network *netid*.

ISTSDCOS

The name of the default COS table. ISTSDCOS is displayed only when it has been loaded and when no COS name was specified on a BUILD or NETWORK definition statement.

ALGORITHM

The default routing algorithm used during COS resolution. ALGORITHM is displayed when a COS name was not specified in a BUILD or NETWORK definition statement, and the default COS table, ISTSDCOS, has not been loaded.

costable2 is present only when *netid* is the same as the host network and the value of *costable* came from the BUILD or NETWORK definition statements. Either *costable1* or *costable2* will be used during session initiation involving the PU type 4, based on the COS resolution algorithm explained in the z/OS Communications Server: SNA Network Implementation Guide.

costable2 will be one of the following:

ISTSDCOS

The name of the default COS table.

ALGORITHM

The default routing algorithm. Note that ISTSDCOS cannot be used since it has not been loaded.

System action: Processing continues.

IST863I

Operator response: None.

System programmer response: None. If there is a need to change the COS table associated with a particular resource, the MODIFY TABLE command should be used. MODIFY TABLE can also be used to load ISTSDCOS.

Routing code: 2

Descriptor code: 5

IST863I MODIFY TABLE COMMAND FAILED-*reason*

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY TABLE command. A complete description of the message group follows.

```
IST863I MODIFY TABLE COMMAND FAILED-reason
IST864I NEWTAB=newtable, OLDTAB=oldtable, OPT=option,
        TYPE=tabletype
[IST935I ORIGIN=ncpname, NETID=netid, ID=resourcename]
```

The value of *newtable*, *oldtable*, *ncpname*, *netid*, and *resourcename* will be *****NA***** when the following operands are not specified on the command:

```
newtable          NEWTAB operand
oldtable         OLDTAB operand
ncpname         ORIGIN operand
netid           NETID operand
resourcename    ID operand
```

IST863I

reason indicates the cause of the failure and can be one of the following:

ABEND DURING TABLE PROCESSING

An abend occurred and the MODIFY TABLE command was not processed.

BOTH FILTER TABLES IN USE

A MODIFY TABLE,TYPE=FILTER,OPTION=LOAD command has been entered, but a previous MODIFY TABLE,TYPE=FILTER has not completed its processing. VTAM cannot execute the MODIFY TABLE,TYPE=FILTER command until the previous command is completed.

CMIP SERVICES IS INACTIVE

CMIP services must be active to issue the MODIFY TABLE,OPTION=LOAD,TYPE=CMIPDDF command.

CURRENT TABLE WILL BE USED

An error was detected when attempting to load the directory definition file using the MODIFY TABLE command. A prior message will indicate the specific failure detected. The current version of the directory definition file will continue to be used by CMIP services security.

ERROR BUILDING TABLE

The table specified by *tabletype* was not successfully built.

INSUFFICIENT STORAGE

Not enough storage was available to process the MODIFY TABLE command.

I/O ERROR LOADING *newtable*

An error was detected with table *newtable* during a load operation.

This message might be received if the table being loaded from VTAMLIB starts in an extent that was known when VTAMLIB was opened, but ends in a new extent that was not known when VTAMLIB was opened. Since VTAMLIB is opened only once during VTAM initialization, the new extents cannot be accessed until VTAM is halted, restarted, and VTAMLIB is opened again. For information on allocating space in the data set or information on extents, see your operating system documentation.

I/O TIMEOUT LOADING *newtable*

An attempt was made to load table *newtable*, but a system or hardware problem has caused the table load facility to time out while waiting for I/O to complete.

LOADER INOPERATIVE

This can occur for one of the following reasons:

- A previous table load never completed
- The VTAM-directed load subtask, ISTINMLS, abnormally ended during a load request
- The VTAM-directed load subtask, ISTINMLS, has not completed its initialization.

name NOT FOUND

The resource identified by *name* does not exist. *name* might be the new table name *newtable*, or a node name identified by either the ID (*resourcenam*e) or ORIGIN (*ncpname*) operands of the MODIFY TABLE command.

If *name* is *newtable*, this message indicates that the table could not be loaded from storage.

This message might be received if the table being loaded from VTAMLIB is entirely contained in extents that were not known when VTAMLIB was first opened. Since VTAMLIB is opened only once during VTAM initialization, the new extents cannot be accessed until VTAM is halted, restarted, and VTAMLIB is opened again. For information on allocating space in the data set or information on extents, see your operating system documentation.

ncpname HAS NO COS FOR netid

The *ncpname* NETWORK definition statement for network *netid* did not have a COSTAB keyword. As such, there was no Class of Service table association to delete for this network.

netid NOT DEFINED FOR ncpname

There was no NETWORK definition statement defining *netid* in the major node definition for PU type 4 *ncpname* or the host is a non-gateway SSCP and the network definition statements are ignored. Therefore, the COS association could not be deleted or changed.

NEW TABLE ALREADY IN USE

For OPTION=LOAD, the table indicated by *newtable* is already in use by another resource. A new version of *newtable* cannot be loaded (to replace the existing version) until all existing references to the old *newtable* table have been deleted.

NO APPL/LU/CDRSC BELOW RESOURCE

The major node identified by *resourcenam*e had no minor nodes. Therefore, there were no associations to change or delete.

OLD TABLE WAS NOT IN USE

An attempt was made to delete or change the association between *oldtable* and the resources identified by *resourcenam*e in the MODIFY TABLE command or to replace *oldtable* with *newtable*. However, no matches were found with *oldtable* for the specified table type.

OLD & NEW TABLE NAMES IDENTICAL

For the resource specified by *resourcenam*e and all of its subordinate nodes, the old table name, *oldtable*, and the new table name, *newtable*, were identical. Use MODIFY TABLE,OPTION=LOAD if you want to load a new copy of *oldtable*.

OPERATION INVALID FOR resourcename

This can occur for the following reasons:

For TYPE=[USSTAB|LOGTAB|MODETAB|MDLTAB| ASLTAB|FLDTAB]

An attempt was made to modify or delete a table associated with a resource. *resourcenam*e was specified on the ID parameter. The specified resource was either an invalid resource against which to perform a MODIFY TABLE command or was not eligible for the type of operation requested, for example, TYPE=LOGTAB for an application.

For OPTION=LOAD

An attempt was made to reload old table ISTCFCMM. This table might not be reloaded.

For OPTION=DELETE,TYPE=COSTAB

An attempt was made to delete a COS table association for a resource that was not a PU type 4 or PU type 5, or an attempt was made to delete the association between ISTSDCOS and the host PU.

IST863I

For **OPTION=ASSOCIATE,TYPE=COSTAB**

An attempt was made to change a COS table association for a resource that was not a PU type 4 or PU type 5.

TABLE name IS FORMAT=OLD

Table *name* is a USS table that was assembled using **FORMAT=OLD** or the table is back-level. A back-level table can be either a USS table or an interpret table that was assembled using pre-VTAM V3R2 macros.

TABLE TYPE CONFLICT

New table *newtable* has a table type that differs from that specified using the **TYPE** keyword (*tabletype*). For example, *newtable* is a USS table but **TYPE=LOGTAB** was specified on the **MODIFY TABLE** command.

IST864I

option is one of the following values:

ASSOCIATE

Change table association with resources

DELETE

Delete table association with resources

LOAD Load or refresh a table, change associations

tabletype is one of the following values. When *tabletype* is not applicable, for example, specifying **OPT=LOAD**, *****NA***** will be displayed.

ASLTAB

Associated LU table

COSTAB

Class-of-service table

CMIPDDF

CMIP directory definition file

FILTER

Session awareness data filter

FLDTAB

Message flooding table

LOGTAB

Interpret table

MDLTAB

Model name table

MODETAB

Logon mode table

USSTAB

USS table

IST935I

This message contains additional identification information for certain types of tables.

ncpname is the name of the PU type 4 or PU type 5 specified on the **ORIGIN** operand.

netid identifies the network specified on the **NETID** operand.

resourcename is the name of the resource specified on the **ID** operand.

System action: No table associations were changed except for the following *reasons*:

- If *reason* is **BOTH FILTER TABLES IN USE**, the previous command will complete eventually.
- If *reason* is **LOADER INOPERATIVE**, all subsequent **MODIFY TABLE** commands that require the loader will fail. If the I/O load operation eventually succeeds, load operations will again be enabled.

Operator response:

- When *reason* is **ABEND DURING TABLE PROCESSING**, save the system log and dump for problem determination.
- When *reason* is **BOTH FILTER TABLES IN USE**, try the command again when the previous command has completed.
- When *reason* is **CMIP SERVICES IS INACTIVE**, restart CMIP services. The new definitions will be loaded.
- When *reason* is **INSUFFICIENT STORAGE**, reenter the MODIFY TABLE command when more storage is available. If problems persist, enter a DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.
- For the following values of *reason*, save the system log for problem determination:
 - **CURRENT TABLE WILL BE USED**
 - **ERROR BUILDING TABLE**
 - **I/O ERROR LOADING** *newtable*
 - **I/O TIMEOUT LOADING** *newtable*
 - **LOADER INOPERATIVE**
 - **TABLE** *name* **IS FORMAT=OLD**
- For the following values of *reason*, verify that the MODIFY TABLE operands were entered correctly:
 - *name* **NOT FOUND**
 - *ncpname* **HAS NO COS FOR** *netid*
 - *netid* **NOT DEFINED FOR** *ncpname*
 - **NEW TABLE ALREADY IN USE**
 - **NO APPL/LU/CDRSC BELOW RESOURCE**
 - **OLD TABLE WAS NOT IN USE**
 - **OLD & NEW TABLE NAMES IDENTICAL**
 - **OPERATION INVALID FOR** *resourcename*
 - **TABLE TYPE CONFLICT**

See z/OS Communications Server: SNA Operation for a description of command operands. The DISPLAY COS, DISPLAY ID, and DISPLAY TABLE commands can be used to obtain the current table associations for the specified resources.

System programmer response:

- When *reason* is **ABEND DURING TABLE PROCESSING** review the contents of the system dump to determine the correct problem determination action. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.
- When *reason* is **CURRENT TABLE WILL BE USED**, correct the error indicated by message IST1444I.
- When *reason* is **ERROR LOADING TABLE**, this message is preceded by message IST979I. See the explanation of that message for additional information.
- When *reason* is **INSUFFICIENT STORAGE**, review the output from the operator to determine the cause of the problem.
If the MODIFY TABLE operation is critical, have the operator cancel other jobs or deactivate some major nodes in order to free up storage for the command, and then reenter the MODIFY TABLE command.
 - See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, and the DISPLAY STORUSE command.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- When *reason* is **I/O ERROR LOADING** *newtable* or **I/O TIMEOUT LOADING** *newtable*, examine the definition library to make sure the requirements for the VTAM system are correct for your system. Enter a DISPLAY BFRUSE command to determine storage utilization.
- When *reason* is **LOADER INOPERATIVE**, review the contents of the system dump to determine the correct problem determination action. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.
- When *reason* is **TABLE** *name* **IS FORMAT=OLD**, you need to code FORMAT=DYNAMIC on the USSTAB macro and reassemble the table using the current VTAM macro libraries.

IST864I • IST865I

- For all other values of *reason*, no response is required.

Routing code: 2

Descriptor code: 5

IST864I **NEWTAB=newtable, OLDTAB=oldtable, OPT=option, TYPE=tabletype**

Explanation: VTAM issues this message as part of a message group. The first message in the group is either IST863I or IST865I. See the explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST865I **MODIFY TABLE COMMAND COMPLETE-text**

Explanation: This message is the first in a message group. A complete description of the message group follows.

IST865I MODIFY TABLE COMMAND COMPLETE-text
[IST864I NEWTAB=newtable, OLDTAB=oldtable, OPT=option, TYPE=tabletype]
[IST935I ORIGIN=ncpname, NETID=netid, ID=resourceName]

A MODIFY TABLE command was processed successfully.

IST864I

- *option* is one of the following values:

ASSOCIATE

Change table association with resources

DELETE

Delete table association with resources

LOAD

Load or refresh a table, change associations.

- *tabletype* is one of the following values. When *tabletype* is not applicable, for example, specifying OPT=LOAD, ****NA**** will be displayed.

ASLTAB

Associated LU table

CMIPDDF

CMIP directory definition file

COSTAB

Class-of-service table

FILTER

Session awareness data filter

FLDTAB

Message flooding table

LOGTAB

Interpret table

MDLTAB

Model name table

MODETAB

Logon mode table

USSTAB

USS table.

IST865I

- *text* is one of the following:

num ASSOCIATION(S) CHANGED

This is displayed when the value of *option* is ASSOCIATE. *num* is determined as follows:

- If the value of *tabletype* is USSTAB, LOGTAB, MODETAB, MDLTAB, FLDTAB, or ASLTAB, *num* table associations were changed from *oldtable* to *newtable* for the resource and all of its subordinate nodes specified by the ID parameter (*resourcename*).
- If the value of *tabletype* is COSTAB, *num* table associations were changed for the PU type 4 or PU type 5 identified by the ORIGIN parameter (*ncpname*), to use *newtable* for the network specified by the NETID parameter (*netid*). Because ORIGIN and NETID are required in MODIFY TABLE, *num* will always be 1.

num FILTER TABLE(S) DELETED

The current session awareness data filter has been deleted. Trace data for all sessions will be passed over the CNM interface.

NEW TABLE ALREADY ASSOCIATED

New table *newtable* was already associated with the specified resources. For TYPE=COSTAB, the resource is a PU type 4 or PU type 5 and was identified by *ncpname* and *netid* ORIGIN parameters. Otherwise, the resource was identified by *resourcename*, and includes all of its subordinate nodes. To cause a new version of *newtable* to be loaded, MODIFY TABLE,OPTION=LOAD must be entered.

TABLE *newtable* LOADED

This is displayed when the value of *option* is LOAD. The text indicates that the new table *newtable* was successfully loaded. All associations with *oldtable* were changed to *newtable*. No count is provided for the number of associations changed.

If the OLDTAB parameter is omitted, *oldtable* will be the same as *newtable*. *tabletype* will always be ****NA****.

num ASSOCIATION(S) DELETED

This is displayed when the value of *option* is DELETE. *num* is determined as follows:

- If the value of *tabletype* is USSTAB, LOGTAB, MODETAB, MDLTAB, or ASLTAB, *num* references to *oldtable* have been deleted for the resource and all of its subordinate nodes specified by the ID parameter. The IBM-supplied default table might be used for future session-initiation requests.
- If the value of *tabletype* is COSTAB, the association between the PU type 4 or PU type 5 COS table, identified by the ORIGIN parameter, and the network specified by the NETID parameter has been terminated. The value of *num* will always be 1 and *oldtable* will always be ****NA****.

newtable will always be ****NA**** because NEWTAB is not allowed in the MODIFY TABLE command for OPTION=DELETE.

IST935I

- This message contains additional identification information for certain types of tables.
 - ncpname* is the name of the PU type 4 or PU type 5 specified on the ORIGIN operand.
 - netid* identifies the network specified on the NETID operand.
 - resourcename* is the name of the resource specified on the ID operand.

System action: Processing continues.

Operator response: No action is required. DISPLAY ID or DISPLAY COS might be entered to determine which table associations have changed.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST866I *command* **HAD NO EFFECT** — *reason*

Explanation: VTAM issues this message in response to the following commands:

- MODIFY ALSLIST
- MODIFY CDRM
- MODIFY DIRECTRY
- MODIFY TRACE
- VARY LOGON.

IST866I

Possible values are:

- **MODIFY ALSLIST command**

alsname* NOT VALID FOR *cdrscname

alsname is not valid. If *alsname* was specified in the NEWALS field in a MODIFY ALSLIST, ACTION=ADD or ACTION=REPLACE command, ensure that the ALS name specified in the NEWALS field is valid. If *alsname* was specified in the OLDALS field in a MODIFY ALSLIST, ACTION=DELETE or ACTION=REPLACE command, ensure that the ALS name specified in the OLDALS field is valid.

ISTAPNPU VALID ONLY FOR APPN NODE

ISTAPNPU was specified on the NEWALS operand of the command, but ISTAPNPU is valid only for an APPN node.

NO CDRSCS EXIST

The explanation is determined by the value of ID in the MODIFY ALSLIST command:

ID=*

No CDRSC major nodes have been activated.

ID=*cdrsc major node*

No cross-domain resources are defined in the major node.

STORAGE NOT AVAILABLE

There was not enough storage to add an entry to the adjacent link station table.

- **MODIFY CDRM command**

***cdrmname* NOT FOUND**

The CDRM is not currently assigned to any cross-domain resource.

cdrmname* NOT FOUND FOR *cdrscname

One of the following is true:

- *cdrscname* is a CDRSC major node. The CDRM is not currently assigned to any cross-domain resource in *cdrmname*.
- *cdrscname* is a single cross-domain resource. The CDRM currently associated with the *cdrscname* does not match *cdrmname*.

NO CDRSCS EXIST

The explanation is determined by the value of ID in the MODIFY CDRM command:

ID=*

No CDRSC major nodes have been activated.

ID=*cdrsc major node*

No cross-domain resources are defined in the major node.

- **MODIFY DIRECTRY command**

***oldcpname* NOT FOUND**

The MODIFY DIRECTRY, UPDATE, ID=*resourcename*, CPNAME=(*newcpname,oldcpname*) command was entered and one of the following is true:

- The resource named on the ID operand, *resourcename*, is a CDRSC major node. *oldcpname* is not currently the owning control point (CP) of any APPN resource subordinate to *resourcename*.
- The resource named on the ID operand, *resourcename* is a single APPN resource. The owning CP currently associated with *resourcename* does not match *oldcpname*.

NO APPN CDRSC EXISTS

The MODIFY DIRECTRY command was issued for a CDRSC major node, but no subordinate APPN resources were found. Note that an APPN CDRSC is identified by the presence of the CPNAME operand on the CDRSC macro definition.

- **MODIFY TRACE command**

reason is **VIT TABLE CHANGE IS IN PROGRESS**. The VTAM internal trace (VIT) table change is in progress. Wait a short time, and try the command again.

- **VARY LOGON command**

reason is **NO LOGICAL UNITS EXIST**. The logon mode could not be updated because no LUs exist.

System action: Processing continues. If this message is issued in response to a MODIFY DIRECTORY command, the APPN directory is not modified.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST867I SIT TRACE FOR *linename* FAILED TO ACTIVATE

Explanation: A MODIFY TRACE,TYPE=SIT command failed for *linename* because of a problem in the scanner. The problem could possibly be caused by unavailable scanner resources or a scanner hardware error.

System action: Processing continues.

Operator response: Reenter the command when scanner resources become available. If the command fails, save the system log for problem determination.

System programmer response: If you cannot determine the cause of the hardware problem, contact the IBM hardware support center.

Routing code: 2

Descriptor code: 5

IST869I USERID = *userid*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application program. The *userid* listed represents the job controlling the application program at the time of the request. If the *userid* is *****NA*****, the name was not available to VTAM or the application ACB was not opened.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST870I NETWORK ADDRESS RECEIVED FOR *nodename* IN USE BY *resourcename*

Explanation: During SSCP takeover processing, an address mismatch was detected. This mismatch occurs when the operator in the takeover host does not issue the DR deletes for these system generated resources.

System action: VTAM will do one of the following:

- Request another address for *nodename*.
- Delete system generated resource *resourcename*. See IST871I for more information.

Operator response: Verify that all required DR deletes are completed.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST871I RESOURCE *resourcename* {DELETED|NOT DELETED}

Explanation: VTAM detected an address mismatch error, and attempted to delete resource *resourcename*. Message IST871I indicates whether the attempted deletion was successful. For Dynamic created PUs such as HPR and Connection Network, VTAM deletes the resource (PU) as normal disconnect processing, so the delete portion of this message is for information only.

IST872I • IST873I

System action: The system-generated resource *resourcename* is deleted. If the system-generated resource *resourcename* is a PU, the attached LUs are deleted.

Operator response: If the deletion failed, delete *resourcename* using MODIFY DR.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST872I DR MOVE MISMATCH DETECTED FOR *puname*

Explanation: This message is the first in a group of messages that VTAM issues in response to one of the following:

- VARY DRDS command
- MODIFY DR,TYPE=MOVE command
- When a CONTACT has failed with a sense code indicating a DR mismatch. In this case, an internal MODIFY DR,TYPE=MOVE was sent to move the PU from the generated line to the line that last attached the NCP to the PU.

Possible message groups follow:

```
IST872I DR MOVE MISMATCH DETECTED FOR puname
IST523I REASON = RESOURCE WAS MOVED FROM line1, NOT line2
IST314I END
```

```
IST872I DR MOVE MISMATCH DETECTED FOR puname
IST523I REASON = puname IS ON line1 IN NCP
IST401I F DR,TYPE=MOVE INITIATED FOR puname
IST314I END
```

IST401I

puname is the name of the physical unit that has been moved.

IST523I

puname is the name of the physical unit that has been moved.

line1 is the name of the line from which the NCP actually moved *puname*.

line2 is the name of the line from which VTAM thought *puname* was to be moved.

IST872I

puname is the name of the physical unit that has been moved.

System action: Processing continues with activation if a MODIFY DR,TYPE=MOVE or VARY DRDS command was issued by the operator.

If the group with the IST401I is issued, an internal MODIFY DR,TYPE=MOVE has been initiated to move the PU to the line that last attached the NCP to the PU. The PU and LUs will be reactivated.

Operator response: If the message group with message IST401I is issued, save the system log for problem determination. Otherwise, activate the resource immediately, if possible.

System programmer response: Determine whether the PU is on the correct line in VTAMLST or whether a MODIFY DR,TYPE=MOVE or ADD needs to be issued to put the PU on the correct line.

Routing code: 2

Descriptor code: 5

IST873I PLU SLU SID STATUS

Explanation: This message is part of a group of messages that VTAM issues in the following situations:

- When duplicate session information is received during SSCP takeover processing

The first message in this message group is IST1419I. See the explanation of that message for a complete description.

- In response to a DISPLAY SESSIONS command when LIST=ALL,SCOPE=ALL is specified.

A complete description of the message group follows.

```

IST350I DISPLAY TYPE = SESSIONS
IST873I     PLU           SLU           SID           STATUS
IST874I     netid.pluname netid.sluname sessionid     status
[IST875I {ADJSSCP|ALSNAME} TOWARDS adjacent_resource_type = resource_name [text]]
:
IST878I NUMBER OF PENDING SESSIONS = count
[IST1237I state = number [state = number]]
IST878I NUMBER OF ACTIVE SESSIONS = count
[IST1162I LU-LU           = count
IST1162I CP-CP CONWINNER = count
IST1162I CP-CP CONLOSER = count]
IST878I NUMBER OF QUEUED SESSIONS = count
[IST1237I state = number [state = number]]
IST878I NUMBER OF TOTAL SESSIONS = count
[IST1161I SSCP SESSIONS
IST1162I SSCP-LU           = count
IST1162I SSCP-PU           = count
IST1162I SSCP-SSCP        = count]
IST314I END

```

Notes:

- Information about sessions with unknown partners is not provided by the DISPLAY SESSIONS command. If this information is needed, enter a DISPLAY ID command for the known session partners.
- Messages IST1161I and IST1162I are only displayed when information about all active sessions is requested. If specific sessions are requested using the PLU, SLU, LU1, LU2, or SID operand on the command, messages IST1161I and IST1162I are not displayed.
- See z/OS Communications Server: SNA Operation for a description of the DISPLAY SESSIONS command.

IST350I

This message identifies the type of information shown in the display. For this message group, the display type is always **SESSIONS**.

IST873I

This message is a header message for the information displayed in message IST874I.

IST874I

pluname is the network-qualified primary session partner name.

sluname is the network-qualified secondary session partner name.

sessionid is the session identifier. For additional information on the session, enter a DISPLAY SESSIONS,SID=*sessionid* command.

status is the session status. See the z/OS Communications Server: IP and SNA Codes for a description of possible session initiation and termination states.

Note: If the display shows the same session twice with two different values of *status*, both LOCATE and BIND processing for the session might be occurring simultaneously. This situation should last for only a short time. Try the DISPLAY SESSIONS command again. If the session still appears twice, there might be a hung session.

IST875I

This message displays information about an adjacent SSCP (**ADJSSCP**) or adjacent link station (**ALSNAME**).

VTAM might issue this message twice if the issuing SSCP is an intermediate host.

adjacent_resource_type is one of the following:

DLU

The adjacent SSCP is in the direction of the destination logical unit (DLU), and a CDINIT or DSRLST is pending for the session. **DLU** applies only to adjacent SSCPs.

IST873I

PLU

The adjacent SSCP or adjacent link station is in the direction of the primary logical unit (PLU).

RTP

The ALSNAME or APPNCOS is used in the direction of other endpoint of the RTP pipe.

SLU

The adjacent SSCP or adjacent link station is in the direction of the secondary logical unit (SLU).

resource_name is the name of the adjacent SSCP toward the indicated *adjacent_resource_type*.

text is not displayed when:

- The resource described in this message is an adjacent link station.
- The SSCP is not gateway capable.
- The SSCP-SSCP session is a cross-domain session.

Possible values are:

GWNCNCP NAME NOT AVAILABLE

The gateway NCP name is not known to VTAM(r).

GWNCNCP TOWARDS *gateway_type* = *gwncncp*

The gateway NCP name is known to VTAM(r).

Possible values are:

DLU

The gateway NCP is toward the DLU. VTAM(r) issues **DLU** only if *adjacent_resource_type* is **DLU**.

PLU

The gateway NCP is toward the PLU.

SLU

The gateway NCP is toward the SLU.

gwncncp is the gateway NCP toward the *pluname* or *sluname* in message IST874I.

IST878I

This message displays the number of **PENDING**, **ACTIVE**, **QUEUED**, and **TOTAL** sessions.

count is the number of sessions of a specified type.

Notes:

1. If the value of the MAX operand is exceeded, *count* displays *****.
2. If LOCATE and BIND processing for a session is occurring simultaneously, *count* includes both sessions.

IST1154I

This message is displayed when *name* in message IST1364I is a generic resource name.

resourcename is a logical unit or an application in the form *netid.name*.

IST1161I

This message is a header message for IST1162I. The IST1161I and IST1162I subgroup is displayed when active SSCP-LU and SSCP-PU sessions and active and pending active SSCP-SSCP sessions exist.

IST1162I

- This message is issued when active or pending active sessions exist.
 - If all active sessions are requested, this message follows message IST878I and displays the number of active LU-LU and CP-CP sessions (CONWINNER and CONLOSER).

Note: If the value of the MAX operand is exceeded, *count* for the LU-LU sessions displays *****. *count* for CP-CP CONWINNER and CP-CP CONLOSER is usually the same. If these numbers are different, VTAM(r) is in the process of bringing up the session or taking it down. No user action is needed.

- If all active sessions are requested, this message follows header message IST1161I and displays active SSCP-LU and SSCP-PU sessions and active and pending active SSCP-SSCP sessions. *count* for SSCP-SSCP sessions also includes pending sessions. *count* in message IST878I for ACTIVE and TOTAL sessions does not include these sessions.
 - The value of *count* for active SSCP-LU sessions includes two VTAM-initiated sessions with the ISTNOP and ISTDCLU applications.
 - The value of *count* for SSCP-SSCP sessions includes both pending and active sessions.
- If specific sessions are requested using the PLU, SLU, LU1, LU2, or SID operand on the command, this message is not displayed.

IST1237I

This message is issued for PENDING and QUEUED sessions only, and displays status information. If *count* is 0, message IST1237I is not displayed.

state is the state of the session. See the z/OS Communications Server: IP and SNA Codes for a description of possible session initiation and termination states.

number is the number of sessions in the specified *state*.

IST1364I

This message is displayed when *name* is a generic resource name. It serves as the header message for message IST1154I.

name is the generic resource name for the group of resources displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST874I *netid.pluname netid.sluname sessionid status*

Explanation: VTAM issues this message as part of a group of messages.

- If the message group is headed by IST1419I, see the explanation of that message for a complete description of the message group.
- Otherwise, see the explanation of IST873I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST875I {ADJSSCP|ALSNAME|APPNCOS} TOWARDS *adjacent_resource_type = resource_name [text]*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY SESSIONS, DISPLAY APING, or DISPLAY ID=*rtip_pu* command. See the explanations of IST873I, IST878I, IST879I, IST1476I, and IST1489I for a complete description of possible message groups.

This message displays information about an adjacent SSCP (ADJSSCP), adjacent link station (ALSNAME), or APPN Class of Service (APPNCOS).

VTAM(r) might issue this message twice if the issuing SSCP is an intermediate host.

adjacent_resource_type is one of the following:

DLU

The adjacent SSCP is in the direction of the destination logical unit (DLU), and a CDINIT or DSRLST is pending for the session. DLU applies only to adjacent SSCPs.

IST876I

PLU

The adjacent SSCP or adjacent link station is in the direction of the primary logical unit (PLU).

RTP

The ALSNAME or APPNCOS is used in the direction of other endpoint of the RTP pipe.

SLU

The adjacent SSCP or adjacent link station is in the direction of the secondary logical unit (SLU).

resource_name is one of the following:

- If **ADJSSCP** or **ALSNAME** display in this message, *resource_name* is the name of the adjacent SSCP toward the indicated *adjacent_resource_type*.
- If **APPNCOS** displays in this message, *resource_name* is the APPN class of service (CoS) name.

text is not displayed when:

- The resource described in this message is an adjacent link station.
- The SSCP is not gateway capable.
- The SSCP-SSCP session is a cross-domain session.
- An APPN Class of Service name is displayed.

Possible values are:

GWNCNCP NAME NOT AVAILABLE

The gateway NCP name is not known to VTAM(r).

GWNCNCP TOWARDS *gateway_type* = *gwncncp*

The gateway NCP name is known to VTAM(r).

Possible values are:

DLU

The gateway NCP is toward the DLU. VTAM(r) issues **DLU** only if *adjacent_resource_type* is **DLU**.

PLU

The gateway NCP is toward the PLU.

SLU

The gateway NCP is toward the SLU.

gwncncp is the gateway NCP toward the *pluname* or *sluname* in message IST874I.

System action: Processing continues.

Operator response:

- If this message is preceded by message IST873I and IST874I, see the explanation of IST873I for a description of the group.
- If this message is preceded by message IST879I, see the explanation of that message for a description of the group.
- If this message is preceded by message IST1476I, see the explanation of that message for a description of the group.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST876I SIGNALS NEEDED TO COMPLETE SESSION {SETUP|TAKEDOWN}

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST879I. See the explanation of that message for a complete description. IST876I is the header for message IST877I, and is issued only if the session state is pending session start or pending session end.

Routing code: 2

Descriptor code: 5

IST877I *signal1 [signal2] [signal3] [signal4]*

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST879I. See the explanation of that message for a complete description. IST877I is issued only if the session state is pending session start or pending session end.

Routing code: 2

Descriptor code: 5

IST878I **NUMBER OF *type* SESSIONS = *count***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS command.

Possible message groups follow.

- LIST=COUNT (default)

```

IST350I  DISPLAY TYPE = SESSIONS
[IST875I  {ADJSSCP|ALSNAME} TOWARDS adjacent_resource_type = resource_name [text]]
:
:
IST878I  NUMBER OF PENDING  SESSIONS = count
IST878I  NUMBER OF ACTIVE   SESSIONS = count
IST878I  NUMBER OF QUEUED   SESSIONS = count
IST878I  NUMBER OF TOTAL    SESSIONS = count
[IST1161I SSCP SESSIONS
IST1162I   SSCP-LU           = count
IST1162I   SSCP-PU           = count
IST1162I   SSCP-SSCP         = count]
IST314I  END

```

- LIST=SUMMARY

```

IST350I  DISPLAY TYPE = SESSIONS
[IST875I  {ADJSSCP|ALSNAME} TOWARDS adjacent_resource_type = resource_name [text]]
:
:
IST878I  NUMBER OF PENDING  SESSIONS = count
[IST1237I  state = number [state = number]]
IST878I  NUMBER OF ACTIVE   SESSIONS = count
[IST1162I  LU-LU             = count
IST1162I  CP-CP CONWINNER   = count
IST1162I  CP-CP CONLOSER   = count]
IST878I  NUMBER OF QUEUED   SESSIONS = count
[IST1237I  state = number [state = number]]
IST878I  NUMBER OF TOTAL    SESSIONS = count
[IST1161I SSCP SESSIONS
IST1162I   SSCP-LU           = count
IST1162I   SSCP-PU           = count
IST1162I   SSCP-SSCP         = count]
IST314I  END

```

- LIST=ALL

See the explanation of message IST873I for a complete description of this group.

Notes:

1. Information about sessions with unknown partners is not provided by the DISPLAY SESSIONS command. If this information is needed, enter a DISPLAY ID command for the known session partners.
2. Messages IST1161I and IST1162I are only displayed when information about all active sessions is requested. If specific sessions are requested using the PLU, SLU, LU1, LU2, or SID operand on the command, messages IST1161I and IST1162I are not displayed.
3. See z/OS Communications Server: SNA Operation for a description of the DISPLAY SESSIONS command.

IST350I

This message identifies the type of information shown in the display. For this message group, the display type is always **SESSIONS**.

IST878I

IST875I

This message displays information about an adjacent SSCP (**ADJSSCP**) or adjacent link station (**ALSNAME**). VTAM(r) might issue this message twice if the issuing SSCP is an intermediate host.

adjacent_resource_type is one of the following:

DLU

The adjacent SSCP is in the direction of the destination logical unit (DLU), and a CDINIT or DSRLST is pending for the session. **DLU** applies only to adjacent SSCPs.

PLU

The adjacent SSCP or adjacent link station is in the direction of the primary logical unit (PLU).

RTP

The ALSNAME or APPNCOS is used in the direction of other endpoint of the RTP pipe.

SLU

The adjacent SSCP or adjacent link station is in the direction of the secondary logical unit (SLU).

resource_name is the name of the adjacent SSCP toward the indicated *adjacent_resource_type*.

text is not displayed when:

- The resource described in this message is an adjacent link station.
- The SSCP is not gateway capable.
- The SSCP-SSCP session is a cross-domain session.

Possible values are:

GWNCPC NAME NOT AVAILABLE

The gateway NCP name is not known to VTAM(r).

GWNCPC TOWARDS *gateway_type* = *gwncpc*

The gateway NCP name is known to VTAM(r).

Possible values are:

DLU

The gateway NCP is toward the DLU. VTAM(r) issues **DLU** only if *adjacent_resource_type* is **DLU**.

PLU

The gateway NCP is toward the PLU.

SLU

The gateway NCP is toward the SLU.

gwncpc is the gateway NCP toward the *pluname* or *sluname* in message IST874I.

IST878I

This message displays the number of **PENDING**, **ACTIVE**, **QUEUED**, and **TOTAL** sessions.

count is the number of sessions of a specified type.

Notes:

1. If the value of the MAX operand is exceeded, *count* displays *****.
2. If LOCATE and BIND processing for a session is occurring simultaneously, *count* includes both sessions.

IST1161I

This message is a header message for IST1162I. The IST1161I and IST1162I subgroup is displayed when active SSCP-LU and SSCP-PU sessions and active and pending active SSCP-SSCP sessions exist.

IST1162I

- This message is issued when active or pending active sessions exist.
 - If all active sessions are requested, this message follows message IST878I and displays the number of active LU-LU and CP-CP sessions (CONWINNER and CONLOSER).

Note: If the value of the MAX operand is exceeded, *count* for the LU-LU sessions displays *****. *count* for **CP-CP CONWINNER** and **CP-CP CONLOSER** is usually the same. If these numbers are different, VTAM(r) is in the process of bringing up the session or taking it down. No user action is needed.
 - If all active sessions are requested, this message follows header message IST1161I and displays active SSCP-LU and SSCP-PU sessions and active and pending active SSCP-SSCP sessions. *count* for SSCP-SSCP sessions also includes pending sessions. *count* in message IST878I for **ACTIVE** and **TOTAL** sessions does not include these sessions.
 - The value of *count* for active SSCP-LU sessions includes two VTAM-initiated sessions with the ISTNOP and ISTPDCLU applications.
 - The value of *count* for SSCP-SSCP sessions includes both pending and active sessions.
- If specific sessions are requested using the PLU, SLU, LU1, LU2, or SID operand on the command, this message is not displayed.

IST1237I

This message is issued for **PENDING** and **QUEUED** sessions only, and displays status information. If *count* is 0, message IST1237I is not displayed.

state is the state of the session. See the z/OS Communications Server: IP and SNA Codes for a description of possible session initiation and termination states.

number is the number of sessions in the specified *state*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST879I {PLU{lutype}|SLU{lutype}} REAL = realname ALIAS = aliasname

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. A complete description of the message group follows the example.

```

| IST350I DISPLAY TYPE = SESSIONS
| IST879I PLU{lutype} REAL = realname ALIAS = aliasname
| IST879I SLU{lutype} REAL = realname ALIAS = aliasname
| IST880I SETUP STATUS = status [TAKEDOWN STATUS = takedownstatus ]
| [IST875I {ADJSSCP|ALSNAME} TOWARDS adjacent_resource_type = resource_name [text]] ...
| [IST876I SIGNALS NEEDED TO COMPLETE SESSION {SETUP|TAKEDOWN}]
| [IST877I signal1 [signal2] [signal3] [signal4]]
| IST933I LOGMODE=logmode, COS=cosentry [(FROM OLU)]
| [IST1438I LOGMODE logmode UNKNOWN IN THIS DOMAIN, DEFAULT IS ISTCOSDF]
| [IST875I APPNCOS TOWARDS adjacent_resource_type = resource_name [text]] ...
| [IST1048I COMPRESSION LEVEL INPUT = input_level, OUTPUT = output_level]
| [IST1049I PERCENT REDUCTION INPUT = input_percent, OUTPUT = output_percent]
| IST1635I {PLU|SLU} HSCB TYPE: hscbtype LOCATED AT ADDRESS X'hscbaddr'
| [IST1635I {PLU|SLU} HSCB TYPE: hscbtype LOCATED AT ADDRESS X'hscbaddr']
| [IST2064I PLU TO SLU RU SIZE = plu_to_slu_rusize SLU TO PLU RU SIZE = slu_to_plu_rusize ]
| [IST2436I DSMONITR = NO]
| [IST2437I DSMONITR = {NO|YES}, ERRORS DETECTED = errors]
| IST1636I PACING STAGE(S) AND VALUES:
| [IST1637I PLU--STAGE 1--SLU]
| [IST1644I PLU--STAGE 1-----|-----STAGE 2--SLU]
| [IST1645I PLU--STAGE 1-----|-----STAGE 2-----|-----STAGE 3--SLU]
| IST1638I stage: PRIMARY TO SECONDARY DIRECTION - pacingtype
| [IST1639I PRIMARY SEND: CURRENT = pscur NEXT = psnext]
| [IST1640I SECONDARY RECEIVE = srcvnt]
| IST1641I stage: SECONDARY TO PRIMARY DIRECTION - pacingtype

```

IST879I

```
| [IST1642I SECONDARY SEND: CURRENT = sscur NEXT = ssnext]
| [IST1643I PRIMARY RECEIVE = prcvcnt] ...
| [IST1710I RSCV FROM PLU SAVED AT SESSION ACTIVATION]
| [IST1460I TGN CPNAME TG TYPE HPR]
| [IST1461I tgn cpname tgtype hpr]
| [IST1713I RTP RSCV IN THE DIRECTION OF THE session_partner]
| [IST1460I TGN CPNAME TG TYPE HPR]
| [IST1461I tgn cpname tgtype hpr]
| [IST1711I RSCV FROM SLU SAVED AT SESSION ACTIVATION]
| [IST1460I TGN CPNAME TG TYPE HPR]
| [IST1461I tgn cpname tgtype hpr]
| [IST1713I RTP RSCV IN THE DIRECTION OF THE session_partner]
| [IST1460I TGN CPNAME TG TYPE HPR]
| [IST1461I tgn cpname tgtype hpr]
| [IST1758I RSCV TOWARDS DLUR SAVED AT SESSION ACTIVATION]
| [IST1460I TGN CPNAME TG TYPE HPR]
| [IST1461I tgn cpname tgtype hpr]
| [IST1759I RTP RSCV FROM THE DIRECTION OF THE DLUR]
| [IST1460I TGN CPNAME TG TYPE HPR]
| [IST1461I tgn cpname tgtype hpr]
| [IST1714I NO PATH INFORMATION EXISTS]
| IST314I END
```

IST350I

This message identifies the type of information shown in the display. For this message group, the display type is always **SESSIONS**.

IST875I

This message displays information about an adjacent SSCP (**ADJSSCP**), adjacent link station (**ALSNAME**), or APPN Class of Service (**APPNCOS**).

VTAM(r) might issue this message twice if the issuing SSCP is an intermediate host.

adjacent_resource_type is one of the following:

DLU

The adjacent SSCP is in the direction of the destination logical unit (DLU), and a CDINIT or DSRLST is pending for the session. **DLU** applies only to adjacent SSCPs.

PLU

The adjacent SSCP or adjacent link station is in the direction of the primary logical unit (PLU).

RTP

The ALSNAME or APPNCOS is used in the direction of other endpoint of the RTP pipe.

SLU

The adjacent SSCP or adjacent link station is in the direction of the secondary logical unit (SLU).

resource_name is one of the following:

- If **ADJSSCP** or **ALSNAME** display in this message, *resource_name* is the name of the adjacent SSCP toward the indicated *adjacent_resource_type*.
- If **APPNCOS** displays in this message, *resource_name* is the APPN class of service (CoS) name.

text is not displayed when:

- The resource described in this message is an adjacent link station.
- The SSCP is not gateway capable.
- The SSCP-SSCP session is a cross-domain session.
- An APPN Class of Service name is displayed.

Possible values are:

GWNCNCP NAME NOT AVAILABLE

The gateway NCP name is not known to VTAM(r).

GWNCNCP TOWARDS *gateway_type = gwncp*

The gateway NCP name is known to VTAM(r).

Possible values are:

DLU

The gateway NCP is toward the DLU. VTAM(r) issues **DLU** only if *adjacent_resource_type* is **DLU**.

PLU

The gateway NCP is toward the PLU.

SLU

The gateway NCP is toward the SLU.

gwncp is the gateway NCP toward the *pluname* or *sluname* in message IST874I.

IST876I

This message is a header message for IST877I.

IST877I

- *signal1–signal4* are signals. They are displayed only if the session is pending session start or session end. The meaning of the signals is described below:

BFSESSST-SLU

A BFSESSST is expected from the NCP of the SLU.

CDSESSST-PLU

A cross-domain session start request is expected from the direction of the PLU.

CDSESSST-SLU

A cross-domain session start request is expected from the direction of the SLU.

SESSST-PLU

A session start request is expected from the boundary function of the PLU.

SESSST-SLU

A session start request is expected from the boundary function of the SLU.

NTFYST-GWN-PLU

Notification of a session start is expected from the gateway node in the PLU direction.

NTFYST-GWN-SLU

Notification of a session start is expected from the gateway node in the SLU direction.

The following signals are displayed only if the session is pending session end (PSESEND):

BFSESEND-SLU

A BFSESEND is expected from the NCP of the SLU.

CDSESEND-PLU

A cross-domain session end request is expected from the direction of the PLU.

CDSESEND-SLU

A cross-domain session end request is expected from the direction of the SLU.

SESEND-PLU

A session end request is expected from the boundary function of the PLU.

SESEND-SLU

A session end request is expected from the boundary function of the SLU.

NTFYSE-GWN-PLU

Notification of a session end is expected from the gateway node in the PLU direction.

NTFYSE-GWN-SLU

Notification of a session end is expected from the gateway node in the SLU direction.

IST879I

IST879I

- *lutype* is **OLU**, **DLU**, or blank.
 - **OLU** is displayed if the LU is the origin session partner.
 - **DLU** is displayed if the LU is the destination session partner.
 - A blank is displayed in this field if OLU and DLU are not known because SSCP takeover has occurred. For information on takeover of resources, see the z/OS Communications Server: SNA Network Implementation Guide
- *realname* is the network-qualified real name of the primary or secondary session partner.
- *aliasname* is the network-qualified alias name of the primary or secondary session partner. If *aliasname* is not used to locate the primary or secondary session partner, VTAM displays *****NA*****.

IST880I

status is the session status. See the z/OS Communications Server: IP and SNA Codes for a description of possible session initiation and termination statuses.

takedownstatus is the session status during session termination. If session termination is not in progress, *takedownstatus* is blank. See the z/OS Communications Server: IP and SNA Codes for a description of *takedownstatus*.

IST933I

- *logmode* is the name of the entry in the logon mode table used to set up certain session parameters. These entries are rules governing how a session is to be conducted. The name specified is that known in this domain.

LOGMODE=*NA*****

LOGMODE is unknown in this domain and cannot be determined.

LOGMODE=logmode

LOGMODE can be determined in this domain.

LOGMODE=*BLANK*

LOGMODE can be determined in this domain and is blank. This is a valid LOGMODE entry.

- *cosentry* is the name of an entry in the subarea Class of Service table containing a list of routes allowed for a session. The COS name can be displayed in the following formats:

COS=*NA*****

- The subarea COS name is unknown in this domain and cannot be determined.
- There is no subarea COS name to display because **APPNCOS** is displayed in message IST875I. If APPN session setup is not completed, the APPN COS name might not display in message IST875I. This is a temporary situation.

COS=cosname

The subarea COS name can be determined in this domain.

COS=*BLANK*

The subarea COS name can be determined in this domain and is blank. This is a valid COS name entry.

COS=cosname (FROM OLU)

The subarea COS name can be determined but is known as in the OLU domain.

IST1048I

This message is issued only if data compression is being used for this session.

input_level is the compression level used for input session traffic.

output_level is the compression level used for output session traffic.

IST1049I

This message is issued only if data compression is being used for this session.

input_percent is the percent by which input session traffic is compressed.

output_percent is the percent by which output session traffic is compressed.

If no new data has flowed since the last time you did a display, VTAM issues ***NA*** for *input_percent* and *output_percent*.

IST1438I

- This message is issued only if *logmode* is unknown in this domain and ISTCOSDF can be used as a default. See the z/OS Communications Server: SNA Resource Definition Reference and z/OS Communications Server: SNA Network Implementation Guide for more information on ISTCOSDF.
 - *logmode* is the LOGMODE displayed in message IST933I.

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- The route selection control vector (RSCV) is displayed for the route to the destination node of the partner transaction program. Multiple IST1461I messages might be needed to display the full route.
- *tgn* is the transmission group number.
- *cpname* is the destination CP name for the transmission group.

Note: The *cpname* for a composite network node might not be correct. When an SSCP takeover occurs for an NCP in a composite network node and the *cpname* was changed, the new *cpname* is not reflected in the display of the RTP end-to-end route.

- *tgtype* is the transmission group type. The values for *tgtype* can be:

APPN Indicates that this TG is an APPN-based TG.

INTERCHANGE

Indicates that this TG represents a TG from an interchange node to a subarea node.

VRTG Indicates that this TG is a virtual-route-based TG.

ISL Indicates that this TG is an intersubnet TG.

- *hpr* is the level of HPR support provided by this node for this TG. The value displayed here depends on the HPR start option and the HPR operand on the corresponding PU definition (which can be used to override the HPR start option). The values for *hpr* can be:
 - **RTP** indicates that this node provides RTP-level HPR support.
 - **ANR** indicates that this node provides ANR-level HPR support.
 - ***NA*** indicates that this node provides no HPR support.

IST1635I

- *hscbtype* is the half-session control block type and can be one of the following:

FMCB Function management control block. The PLU or SLU is an application on this host.

BSB Boundary session block. The PLU or SLU is connected through an SNA channel-attached device.

LUST Logical unit status table. The PLU is in session with a local non-SNA device on this host.

IST1635I might be displayed multiple times, depending on the configuration. IST1635I is not displayed if the PLU or SLU is a cross-domain resource (CDRSC).

- *hscbaddr* is the hexadecimal address of the half session control block (HSCB).

IST1636I

IST1636I is a header message for the pacing messages that follow. Messages IST1638I through IST1643I might be repeated for multiple stages.

IST1637I

This message is the header message for pacing messages between the session partners when there is only one stage.

IST1638I

- This message describes the pacing stages and types that exist when transmitting data from the PLU to the SLU. The host can display up to three pacing stages. More stages might exist if the session traverses many hosts.

IST879I

- *stage* indicates the pacing stage being described. For more information on pacing stages, see the z/OS Communications Server: SNA Network Implementation Guide.
- *pacingtype* can be one of the following:

ADAPTIVE

Adaptive pacing allows the pacing windows to expand and contract, depending on storage availability at the pacing stage boundaries.

FIXED Fixed pacing allows a pre-negotiated number of PIUs to flow on this pacing stage before an isolated pacing response (IPR) is required to reset the window. The fixed window does not expand or contract. This pacing always uses the fixed value.

NO PACING

VTAM does no pacing for this stage between the SLU and the PLU. This value is only displayed for local non-SNA devices.

IST1639I

pscur represents the current pacing window between the PLU and the SLU.

psnext represents the next pacing window VTAM will use when transmitting data between the PLU and the SLU.

IST1640I

srcvcnt represents the number of PIUs the SLU can receive from the PLU.

IST1641I

- This message describes the pacing stages and types that exist when transmitting data from the SLU to the PLU. The host can display up to three pacing stages. More stages might exist if the session traverses many hosts.
- *stage* indicates the pacing stage being described. For more information on pacing stages, see the z/OS Communications Server: SNA Network Implementation Guide.
- *pacingtype* can be one of the following:

ADAPTIVE

Adaptive pacing allows the pacing windows to expand and contract, depending on storage availability at the pacing stage boundaries.

FIXED Fixed pacing allows a pre-negotiated number of PIUs to flow on this pacing stage before an isolated pacing response (IPR) is required to reset the window. The fixed window does not expand or contract. This pacing always uses the fixed value.

NO PACING

VTAM does no pacing for this stage between the PLU and the SLU. This value is only displayed for local non-SNA devices.

IST1642I

sscur represents the current pacing window between the SLU and the PLU.

ssnext represents the next pacing window VTAM will use when transmitting data between the SLU and the PLU.

IST1643I

prvcnt represents the number of PIUs the PLU can receive from the SLU.

IST1644I

This message is the header message for pacing messages between the session partners when there are two stages.

IST1645I

This message is the header message for pacing messages between the session partners when there are three stages.

IST1710I

This message informs users that the messages that follow describe part or all of the session path for this session as it was calculated during session activation. The session path information describes the portion of the route originating at the CP(PLU) and extending toward this node. This message group will be displayed only if session data was saved during session activation.

IST1711I

This message informs users that the messages that follow describe part or all of the session path for this session as it was calculated during session activation. The session path information describes the portion of the route originating at this node and extending toward the CP(SLU). This message group will be displayed only if session data was saved during session activation.

IST1713I

- This message informs users that the messages that follow describe the current end-to-end path of an RTP route. The route represents the portion of the total session route that uses an RTP pipe with this node as one endpoint and extending in the direction of *session_partner*. The RTP route may be different from any session route displayed in the IST1710I or IST1711I message group if RTP pathswitching has occurred since session activation; in that case, the information in message IST1713I is the more accurate information. This message group is displayed only if the session uses an RTP pipe in the direction of *session_partner*.
- *session_partner* can be one of the following:
 - PLU** Displays when the RTP path extends in the direction of the primary logical unit for the session.
 - SLU** Displays when the RTP path extends in the direction of the secondary logical unit for the session.

IST1714I

This message informs users that no session or RTP path information is available to display for this session.

IST1758I

- This message informs users that the messages that follow describe part or all of the session path for this session as it was calculated during session activation. The session path information represents a view of the session from the dependent LU requester (DLUR) node which is acting as CP(SLU). This message group will be displayed only if the following conditions are true:
 - The session involves a DLUR-owned dependent SLU.
 - The DLUR node reports the session path information for the section.
 - Session data is being saved during session activation or dependent LU activation.

IST1759I

- This message informs users that the messages that follow describe the current end-to-end path of an RTP route. The route represents the portion of the total session route that uses an RTP pipe with the Dependent LU Requester (DLUR) serving as one endpoint and extending in the direction of the CP(PLU). The RTP route may be different from the session route displayed in the IST1758I message group if RTP pathswitching has occurred since session activation; in that case, the information in message IST1759I is the more accurate information. This message group is displayed only if the following conditions are true:
 - The session involves a DLUR-owned dependent LU.
 - The session uses an RTP pipe ending at the DLUR node.
 - The DLUR node reports RTP route information for the session.
 - RTP data is being saved during session activation or dependent LU activation.

IST2064I

This message is issued only on the application owning host. Message IST1635I will display a HSCB TYPE of FMCB for the PLU, the SLU, or both, when this display is issued at the application owning host.

plu_to_slru_size is the RU size being used for this session from the primary logical unit (PLU) to the secondary logical unit (SLU).

slu_to_plu_size is the RU size being used for this session from the secondary logical unit (SLU) to the primary logical unit (PLU).

If either RU size is defaulted to or coded as 0, this indicates that there is no limit to the RU size. For this case, the message will actually display a value of 65535 because this is the largest supported RU size.

IST880I • IST881I

| IST2436I

| This message is issued only on an application owning host. Message IST2436I indicates that the 3270 Intrusion Detection Services is not monitoring this session.

| IST2437I

| This message is issued only on an application owning host. Message IST2437I indicates the status of the 3270 Intrusion Detection Services for this session.

| In the message text:

| **NO** Indicates that the 3270 Intrusion Detection Services is no longer monitoring this session.

| **YES** Indicates that the 3270 Intrusion Detection Services is currently monitoring this session.

| *errors* The number of errors in the 3270 data stream that has been detected for this session.

System action: Processing continues.

Operator response: If message IST1438I is displayed and the default logmode is not desired, collect the system log for problem determination.

System programmer response:

If message IST1438I is not displayed, no action is necessary.

If message IST1438I is displayed, and *logmode* (instead of *ISTCOSDF*) should have been known in this domain, verify that *logmode* is in the LOGMODE table associated with the SLU or in the default LOGMODE table *ISTINCLM*.

IST880I **SETUP STATUS = status [TAKEDOWN STATUS = takedownstatus]**

Explanation: This message is part of a message group. The first message of the group is IST879I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST881I *text* **LINK STATION linkstation**

Explanation: This message is part of a group of messages that VTAM issues when CONTACT is unexpectedly lost with a channel-attached controller. VTAM may issue this message group in response to a VARY ACT,LOAD=YES or LOAD=U command from another host. The complete message group follows:

```
IST881I text LINK STATION linkstation
IST882I WAITING FOR DEVICE END FROM DEVICE
```

If the controller is online and was activated with DUMPLOAD=YES, SAVEMOD=YES, and LOADFROM=EXT, there is a high probability that it is dumping or loading.

VTAM might issue IST881I twice; message IST259I might appear between the two.

text can be one of the following:

- **LOST CONTACT TO**
- **UNABLE TO CONTACT**

linkstation is the ID of the affected link station.

System action: If *text* is **LOST CONTACT TO**, VTAM suspends CONTACT processing until Device End is received, indicating that the controller is now available.

If *text* is **UNABLE TO CONTACT**, a channel program ended indicating an error condition that should not occur. VTAM will attempt error recovery and will issue messages to report the results.

Operator response: Normally, no operator action is necessary. When the controller becomes available (signaled by Device End), VTAM resumes CONTACT processing. VTAM issues messages to indicate that the controller has been able.

To terminate CONTACT processing before the device becomes available, enter a VARY INACT,FORCE command to deactivate the controller.

Note: If the controller does not respond with Device End, some other action has terminated the load, dump, or recovery action. Ensure that the device is online.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST882I **WAITING FOR DEVICE END FROM DEVICE**

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST881I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST883I *percentage* **OF SAW BUFFERS USED [— SAW AND PIU TRACE HALTED]**

Explanation: *percentage* indicates the percentage of session awareness (SAW) buffers used relative to the specified limit.

System action: The following amounts indicate the action:

ABOVE *percent*

percent of the user-specified limit for SAW buffers has been used. (*percent* will be issued for 80 or 90 percent.) Processing continues.

BELOW 80%

Indicates the percentage of use has dropped from 80% or more to below 80%. Processing continues.

OVER 100%

Over 100% of the user-specified limit has been reached. SAW and PIU trace processing is terminated.

Operator response: If the user-specified limit is reached and SAW processing and PIU trace processing are terminated, the network management application (for example, the NetView program) must be canceled and should be recycled.

System programmer response: If VTAM issues this message frequently, re-evaluate the buffer-use limit specified when SAW or PIU trace processing was initiated.

Routing code: 2

Descriptor code: 5

IST886I *commandinfo* [*statementname*] *action resource* [TO *toname*] [FROM *fromname*] **FAILED**

Explanation: This message is the first in a group of messages that VTAM issues to indicate that a dynamic reconfiguration or dynamic change failed. The failure resulted from a MODIFY DR, a VARY DRDS, or a VARY ACT command.

Possible message groups follow:

- **MODIFY DR command**

```
IST886I MODIFY DR action resource [TO toname] FROM fromname FAILED
IST523I REASON = reason
```

– **IST886I**

IST886I

- *commandinfo* is always **MODIFY DR** for this message group.
- *action* is the command type:
 - **DELETE** to delete a physical or logical unit
 - **MOVE** to move a physical unit and its associated LUs.
- *resource* is the name of the physical unit or logical unit affected by the command.
- *toname* is the name of the line to which the PU is being moved, and is only displayed when *action* is **MOVE**.
- *fromname* is the name of the line from which the PU is being moved or deleted, or the name of the PU from which the LU is being deleted.

- IST523I

This message explains the reason for the failure. Possible values of *reason* are explained later in this message explanation.

• VARY DRDS command

```
IST886I DR drname [statementname] action resource [TO toname] [FROM fromname] FAILED
IST523I REASON = reason
IST368I FUNCTION GROUP functiongroup FAILED
```

- IST886I

- *commandinfo* is always **DR drname** for this message group.
- *drname* is the name of the dynamic reconfiguration data set containing the reconfiguration definition statements.
- *statementname*, if specified, is the name of the specific definition statement that failed.
- *action* is the definition statement:
 - **ADD** to add a physical or logical unit
 - **DELETE** to delete a physical or logical unit
 - **MOVE** to move a physical unit and its associated LUs.
- *resource* is the name of the physical unit or logical unit affected by the definition statement.
- *toname* is the name of the line to which the PU is being moved or added, or the name of the PU to which the LU is to be added. *toname* is only displayed when *action* is **MOVE** or **ADD**.
- *fromname* is the name of the line from which the PU is being moved or deleted, or the name of the PU from which the LU is being deleted. *fromname* is only displayed when *action* is **MOVE** or **DELETE**.

- IST523I

This message explains the reason for the failure. Possible values of *reason* are explained later in this message explanation.

- IST368I

This message names the specific definition statement in the dynamic reconfiguration data set that failed.

functiongroup is the name on the **ADD**, **DELETE**, or **MOVE** definition statement in the **VARY DRDS** deck of the specific definition statement that failed.

• VARY ACT command

```
IST886I VARY ACT [statementname] action resource [TO toname] [FROM fromname] FAILED
IST523I REASON = reason
```

- IST886I

- *commandinfo* is always **VARY ACT** for this message group.
- *statementname* is the major node name which was specified on the ID operand of the **VARY ACT** command.
- *action* is the action being performed when the failure occurred:
 - **ADD** to add a resource
 - **CHANGE** to change an operand value
 - **DELETE** to delete a resource
 - **MOVE** to move a physical unit and its associated LUs or to move a logical unit
- *resource* is the name of the resource affected by the command.
- *toname* is the name of the higher level resource to which the resource is being moved or added. *toname* is only displayed when *action* is **MOVE** or **ADD**.

- *fromname* is the name of the higher level resource from which the resource is being moved or deleted. *fromname* is only displayed when *action* is **MOVE** or **DELETE**.
- **IST523I**

This message explains the reason for the failure. Possible values are:

The second message in each message group is IST523I, and this message explains the reason for the failure. *reason* can be one of the following:

DUPLICATE STATION ID

An attempt was made to perform a DR CHANGE of IDBLK or IDNUM for a switched PU, but the resulting station ID was not unique in the network.

DR DELETE INVALID FOR INDEPENDENT LU

An attempt was made to perform a DR DELETE on an independent LU which is not associated to the adjacent link station specified on the FROM operand. This is not a valid request.

DR NOT SUPPORTED

An attempt was made to perform a DR function for a resource that does not support DR or this function of DR.

INSUFFICIENT STORAGE

VTAM was unable to allocate storage during a DR operation.

INVALID MACRO

A definition statement was read that is not a valid member in this type of definition deck. For example, a GROUP definition statement is not a valid member in a DR deck.

INVALID NAME

functiongroup is invalid for the PU or LU definition statement.

INVALID PARAMETER

An operand was found in a definition statement that is not valid or allowed.

INVALID RESOURCE CURRENT STATE

An attempt was made to move, delete, or change a resource whose current state will not allow it. This error occurs because the resource is not in an inactive, reset, release, or defined state. Also, a model CDRSC must not have clone CDRSCs associated with it.

Note: This reason can be issued for an active minor node when a VARY ACT,UPDATE=ALL command is entered for that resource's major node. This is probably not a definition error and usually requires no action. The most frequent cause is that an operand on a definition statement for the minor node *resource* in message IST886I was changed using a VTAM command such as VARY LOGON, VARY NOLOGON, or MODIFY DEFAULTS before the VARY ACT,UPDATE=ALL command was entered for the major node. This occurs only when *action* in message IST886I is CHANGE. See z/OS Communications Server: SNA Operation for additional information about these commands.

INVALID RESOURCE TYPE

An attempt was made to move or delete a resource for which dynamic reconfiguration is not allowed. DR ADD, DELETE and MOVE may be performed for SNA type 1, 2, or 2.1 PUs and their subordinate LUs, as well as for dependent LUs and some independent LUs.

INVALID TO/FROM RESOURCE TYPE

An attempt was made to add, delete, or move a resource to or from a target resource that does not allow dynamic reconfiguration. DR ADD is allowed to lines and PUs. DR DELETE is allowed from lines and PUs. DR MOVE is allowed both to and from lines and PUs.

INVALID VALUE

An operand on a definition statement was found to have a coded value that is invalid for this operand.

INVALID VALUE FOR ADDR

The value coded in a PU definition statement for the ADDR operand was found to be a duplicate of a PU ADDR already under the target line.

LUGROUP CANNOT BE ADDED DYNAMICALLY

An attempt was made to dynamically add the LUGROUP operand to a PU definition statement. However, VTAM cannot add this operand using dynamic change. If you need to add this operand, use dynamic reconfiguration to delete the PU and then add it back with LUGROUP in the definition.

IST886I

MACRO SEQUENCE ERROR

A DR definition deck contained definition statements that were out of sequence. Line targets must be followed by PUs; PU definition statements must be followed by LUs. PU definition statements must follow additions to lines, moves to lines, moves from lines, and deletions from lines. LU definition statements must follow additions to PUs, moves to PUs, and deletions from PUs.

MISSING MACRO

A DR definition deck was missing a definition statement. VBUILD definition statements are required. Null definition decks are invalid (a VBUILD definition statement with nothing following). Null function groups are invalid (a function group with no PU or LU definition statements).

MISSING NAME ON PU OR LU MACRO

A PU or LU definition statement in a DR definition deck did not have a name coded. The name is required on all PU and LU resources being added, deleted, or moved.

MISSING PARAMETER

A definition statement in a DR definition deck did not contain a required operand.

NO RESOURCES FOUND UNDER FROM LINE/PU

The line or PU resource for which a DR DELETE or DR MOVE function was requested had no resources under it.

OPERANDS COULD NOT BE ADDED DYNAMICALLY

An attempt was made to dynamically add APPN operands to a PU, but these APPN operands cannot be added dynamically to this PU. Instead, use dynamic reconfiguration to delete the PU and then add it back with the desired APPN operands in the definition.

PUDR=NO OR LUDR=NO CODED ON RESOURCE DEFINITION

An attempt was made to dynamically delete or move a resource that had either PUDR=NO or LUDR=NO coded on its definition statement. PUDR=NO or LUDR=NO indicates that no dynamic reconfiguration can be performed on the resource.

PUTYPE CANNOT BE CHANGED DYNAMICALLY

An attempt was made to change the value of PUTYPE on the specified resource.

RESOURCE NOT FOUND WHERE SPECIFIED

An attempt was made to delete or move a resource that does not exist under the specified target *fromname*.

SYNTAX ERROR

There is a syntax error in the DR definition deck.

TO/FROM RESOURCE NOT IN SAME NCP

An attempt was made to DR move a PU or LU from a line in an NCP to a line in a different NCP.

TO/FROM RESOURCE UNKNOWN

An attempt was made to add or move a resource to a target that does not exist or to delete or move a resource from a target that does not exist.

UPDATE=ALL REQUIRED - UPDATE=ADD VIOLATES HIERARCHY

An attempt was made to update an Enterprise Extender XCA major node with a VARY ACT,UPDATE=ADD command after one of the following changes was made to the definitions:

- A second PU was added under a LINE
- A PU name was changed
- The PU prefix was added or changed on the AUTOGEN keyword on a GROUP definition statement.

System action:

- For MODIFY DR, processing of that command is terminated.
- For VARY DRDS, the *functiongroup* specified in message IST368I is not processed. Any other function groups in the DR data set *drname* are processed.
- For VARY ACT, this resource and its subordinate resources are skipped, but the remaining definition statements are processed.

Operator response: Enter a DISPLAY command for *resource* in message IST886I. Save the system log for problem determination.

If *reason* is **INSUFFICIENT STORAGE**, enter the DISPLAY BFRUSE or DISPLAY STORUSE command. Save the

system log and request a dump for problem determination.

If reason is UPDATE=ALL REQUIRED - UPDATE=ADD VIOLATES HIERARCHY, do the following:

- If a second PU was added under a LINE, remove the second PU from the definitions. There can only be one PU defined per LINE.
- If a PU name was changed, re-enter the VARY ACT command with UPDATE=ALL instead of UPDATE=ADD.
- If the PU prefix was added or changed on the AUTOGEN keyword on a GROUP definition statement, re-enter the VARY ACT command with UPDATE=ALL instead of UPDATE=ADD.

System programmer response: Use the output from the operator to correct the command issued and the definition statements (if appropriate).

If reason is **INSUFFICIENT STORAGE**, increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST887I NO COS TABLE FOR *netid* — *text* MAY BE USED

Explanation: In response to a DISPLAY COS command for a PU type 4 or PU type 5 (identified in a previous message), VTAM attempted to display the class of service (CoS) table for network *netid*. For a PU type 4, the COS table for *netid* was never defined on either a BUILD or NETWORK definition statement for the PU.

IF DISPLAY COS,NETID=*NETWORK is entered, this message is issued for the model network if no COSTAB keyword was coded on the model network statement. If COSTAB was coded on the model network statement, VTAM issues message IST862I.

text can be one of the following:

ISTSDCOS

ISTSDCOS, the default Class of Service table, may be used to identify the virtual routes to be used in network *netid*.

DEFAULT ALGORITHM

The default Class of Service table, ISTSDCOS, was not loaded either during VTAM initialization or by a subsequent MODIFY TABLE command. The default algorithm may be used to identify the virtual routes for use in network *netid*.

See the z/OS Communications Server: SNA Network Implementation Guide for information about the default routing algorithm, defining Class of Service tables, and Class of Service resolution. See the z/OS Communications Server: SNA Resource Definition Reference for an explanation of the COSTAB operand on the BUILD and NETWORK definition statements.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST888I ADDR + LENGTH VALUES EXCEED STORAGE — LENGTH SET TO *n*

Explanation: VTAM issues this message in response to a DISPLAY NCPSTOR,TYPE=DUMPVEC command. The requested area of NCP storage is greater than can be displayed. The length of the display has been modified to *n*.

System action: The command will be executed with the modified length.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST889I SID = *sessionid*

Explanation: This message is part of a message group. The first message in the group is either IST663I or IST1774I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST890I AUTOLOGON SESSION SETUP FAILED

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST663I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST891I *netid.nodename1[.nodename2]* GENERATED FAILURE NOTIFICATION

Explanation: VTAM issues this message as part of a subgroup of messages to provide extended sense data when a session initiation or session termination failure occurs. This message subgroup is displayed in a message group headed by IST663I.

A complete description of the message subgroup follows.

```
IST891I netid.nodename1[.nodename2] GENERATED FAILURE NOTIFICATION
[IST892I resourcename ORIGINATED FAILURE NOTIFICATION]
[IST893I ORIGINAL FAILING REQUEST IS request]
```

IST891I

- *netid.nodename1* is the network-qualified name of the NCP, CP, or SSCP that detected the error.
- *nodename2*, if displayed, is the name of the NCP or physical unit that generated extended-sense data in one of the following situations:
 - When a failure request/response was received from an adjacent migration SSCP.
 - After collecting failure notification from one or more adjacent SSCPs during trial and error routing.

IST892I

If displayed, this message identifies a related resource (*resourcename*) used to identify the source of the error.

For example, if a gateway NCP rejected an RNAA or SETCV request, the gateway NCP name originated the failure notification. The SSCP that received the negative response is the one that generated the failure notification; therefore, it originated the termination procedure.

IST893I

If displayed, this message identifies the request that was failed by the source of the error.

request identifies the original request that failed. For example, if a gateway NCP rejected an RNAA or SETCV request as part of CDINIT processing, *request* would be RNAA.

System action: Session setup processing fails.

Operator response: Save the system log for problem determination.

System programmer response: Coordinate the debugging of the problem with the system programmer responsible for the originating termination procedure.

See IST663I for additional information. See *SNA Network Product Formats* for a description of the extended sense data (X'35') control vector.

Routing code: 8

Descriptor code: 4

IST892I *resourcename* **ORIGINATED FAILURE NOTIFICATION**

Explanation: This message is part of a message subgroup. The first message of the subgroup is IST891I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST893I **ORIGINAL FAILING REQUEST IS** *request*

Explanation: This message is part of the message subgroup. The first message of the subgroup is IST891I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST894I **ADJSSCPs TRIED FAILURE SENSE ADJSSCPs TRIED FAILURE SENSE**

Explanation: VTAM issues this message as part of a subgroup of messages to provide adjacent SSCP table information in response to a DISPLAY SRCHINFO,SID command or when a session initiation fails for either of the following reasons:

- Trial and error routing using an adjacent SSCP table has failed. The destination LU was found by an SSCP, but that *sscpname* rejected the session initiation with *sense*.
- Trial and error routing using an adjacent SSCP table has exhausted the table. All adjacent SSCPs were tried, but the destination LU was not known to any of the SSCPs.

This message subgroup is displayed in a message group headed by IST663I or IST1531I. A complete description of the message subgroup follows.

```
IST894I  ADJSSCPs TRIED  FAILURE SENSE  ADJSSCPs TRIED  FAILURE SENSE
IST895I   sscpname      sense           [sscpname      sense]
:
```

IST894I

This message is a header message for information displayed in message IST895I.

IST895I

- This message lists the names of the adjacent SSCPs through which trial and error routing was attempted. The SSCP names appear in the order in which they were tried.

sscpname is the name of the adjacent SSCP.

If *sscpname* is **ISTAPNCP**, this is an entry specified in the ADJSSCP table and represents a search of the APPN network. See the *z/OS Communications Server: SNA Network Implementation Guide* for more information.

sense is the sense code and indicates the cause of the failure. See the *z/OS Communications Server: IP and SNA Codes* for a description of *sense*.

System action: The session setup failed.

Operator response: Save the system log for problem determination and provide the files used for system definition.

System programmer response: Use the output and system definition files provided to assist in determining the

IST895I • IST898I

cause of the problem. (You may need to work with system programmers in other networks to determine the adjacent SSCP tables used in another network to define the system.)

Routing code: 8

Descriptor code: 4

IST895I *sscpname sense* [*sscpname sense*]

Explanation: This message is part of a message subgroup. The first message of the subgroup is IST894I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST896I **AUTOLOGON WILL BE RETRIED WHEN CONTROLLING PLU IS AVAILABLE**

Explanation: VTAM issues this message when an automatic logon (autologon) session initiation fails because the controlling PLU is not available. The initiate request generated by an autologon has requested notification when the specified resource becomes available. When the resource becomes available, notification will occur (see message IST899I), and the autologons will be re-attempted.

System action: The session setup fails.

Operator response: If the problem is with the SSCP-controlling PLU session, start the controlling PLU (SETLOGON START). You may need to work with a network operator in another domain or network when the controlling PLU does not reside in your domain.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST897I **[NONDISRUPTIVE] LOAD OF *ncpname* [WITH *loadmodname*] STARTED**

Explanation: VTAM is initiating a load or nondisruptive load of communications controller *ncpname* with NCP load module *loadmodname*. *loadmodname* is included in the message when the load module name differs from *ncpname*.

System action: The communication controller is being loaded.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST898I **GWSELECT = {YES|NO}**

Explanation: VTAM issues this message in response to a DISPLAY ID command for a cross network CDRM. This message indicates whether the host CDRM will perform gateway NCP selection when processing an LU-LU session request to or from the displayed CDRM.

A value of **YES** indicates that gateway NCP selection will be performed by the host CDRM.

A value of **NO** indicates that gateway NCP selection will not be performed by the host CDRM.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST899I **RETRY OF AUTOLOGON(S) TO** *pluname* {*action*}

Explanation: VTAM issues this message when a previous automatic logon (autologon) attempt failed because a resource required for an autologon session setup was not available. IST896I is issued prior to this message and indicates that the autologon will be tried again when the resource becomes available.

pluname is the network-qualified name of the resource.

action indicates how the system will handle the autologon attempt.

IN PROGRESS

Indicates that the retry of autologons to *pluname* is in progress. Either a controlling PLU was started or an SSCP-SSCP or CP-CP session has become available. Autologons that previously failed because a resource was not available are being tried again.

WILL NOT OCCUR

Indicates that the retry of autologons will not occur if notification was received for the deactivation of the CDRM.

FOR AUTOTI

A retry will be attempted for a controlling PLU whose timer, set by START option AUTOTI, has expired.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST919I **NODE** *nodename* **NO LONGER HAS CONTROLLING LU** [*luname*]

Explanation: Processing of the VARY NOLOGON command has been completed. Node *nodename* will no longer be automatically logged on to *luname* when *nodename* is not in session with or queued for a session with another PLU. *luname* may or may not be included depending on how the LU is specified in the NOLOGON command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST920I *bpid* [Q] [F] **BUFF SIZE** *bufsize* **EXP INCREMENT** *increment*

Explanation: This message is the first in a subgroup of messages that VTAM issues in response to a DISPLAY BFRUSE command. A complete description of the message subgroup follows.

```

IST350I  DISPLAY TYPE = BUFFER POOL DATA
IST920I  bpid [Q] [F] BUFF SIZE bufsize      EXP INCREMENT  increment
IST921I                TIMES EXP times      EXP/CONT THRESH exp/contthresh
IST922I                CURR TOTAL curtot      CURR AVAILABLE  curavail
IST923I                MAX TOTAL maxtot      MAX USED        maxused
[IST989I                EXP LIMIT explimit    BUFFS REQUESTED buffers]
[IST924I  -----]

```

This message subgroup is repeated for each of the VTAM buffer pools specified with the BUFFER option.

IST920I

- *bpid* is the name of the buffer pool. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.

Q, if present, indicates a request is queued for the pool. This field is usually blank.

IST920I

F, if present, indicates dynamic buffering has failed. This field is usually blank.

- *bufsize* is a decimal value that indicates the number of bytes in each buffer.
For IOBUF an overhead value has been added to the *bufsize* value in this message. See the z/OS Communications Server: SNA Resource Definition Reference for more information about buffer pool sizes.
- *increment* indicates the number of buffers to be added to the pool during dynamic expansion.
Buffers are added in full pages; therefore, the number may be larger than the number (*xpanno*) used to define the buffer pool in the buffer pool's start option. This field will contain *NA* if dynamic buffering is suppressed.

IST921I

- *times* indicates the number of times the pool has been expanded since the last buffer pool trace record was written.
- *exp* indicates when to trigger expansion, and is derived from the buffer pool start option's *xpanlim* parameter.
If the number of buffers available falls below *xpnpt*, VTAM adds buffers. This field will contain *NA* if dynamic buffering is suppressed. Note that this may have happened because the pool expansion limit (*xpanlim*) is less than or equal to the base number of buffers (the *baseno* specified in the buffer pool's start option).
- *contthresh* is a value that indicates when to trigger contractions.
If the number of available buffers in the pool (*curavl*) becomes larger than *contthresh* and some of the buffers have been dynamically obtained via pool expansion, VTAM will return available dynamically obtained buffers to the operating system. For an available buffer to be released, all buffers on the page must be available, since buffers are released by page. If there are no dynamically obtained buffers, this field will contain *NA*.

IST922I

curtot indicates the total number of buffers in the pool.

curavail indicates the available buffers in the pool that are not in use.

IST923I

maxtot indicates the maximum number of buffers contained in the pool at any one time since the last buffer pool trace record was written.

maxused indicates the maximum number of buffers that have been in use at one time since the last buffer pool trace record was written.

IST989I

- This message is issued if the expansion failed or requests are queued. Message IST989I is always issued for the IO00 pool. It is only issued for the other pools if Q is present.
- *explimit* indicates the maximum number of buffers allowed for this buffer pool.
It is derived from the *xpanlim* value specified on the buffer pool's start option when VTAM was started. If the *xpanlim* value is not specified, VTAM will use the maximum number of buffers in available storage. The value displayed is the maximum addressable storage of 2147483647. This field will contain *NA* if dynamic buffering is suppressed.
- *buffers* indicates the total number of buffers requested for all outstanding queued requests. This field will be zero if no queued requests exist.

Note: VTAM may issue an additional message subgroup with this group of messages. See the explanation of message IST449I for a complete description of this subgroup.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST921I **TIMES EXP** *times* **EXP/CONT THRESH** *exp/contthresh*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST920I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST922I **CURR TOTAL** *curtot* **CURR AVAILABLE** *curavail*

Explanation: This message is part of a message group. The first message in the group is IST920I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST923I **MAX TOTAL** *maxtot* **MAX USED** *maxused*

Explanation: This message is part of a message group. The first message in the group is IST920I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST924I -----

Explanation: This message is a line separator and is part of several different message groups. It is used to improve readability or to separate types of information. See the explanation of the first message in the group for an example of how this message is used in each group.

Routing code: 2

Descriptor code: 5

IST925I **DYNAMIC PATH DEFINITION** *pathname* **STATUS =** *status*

Explanation: VTAM issues this message in response to a DISPLAY ID command for an NCP, for which a dynamic path definition exists, or for a host PU, for which a normal PATH deck or a dynamic path definition exists. Message IST925I is issued once for each path name in the dynamic path definition showing the path name *pathname* and its status.

status can be any of the following:

RESET The initial state

DEFND

The path information has been processed by the system

PLOAD

The dynamic path update member (NCPPATH) is being loaded

ACTIV The path table or dynamic path update member is active, that is, loaded.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST926I PATH FOR *pathname* IGNORED — NODE *nodename* NOT FOUND/INVALID

Explanation: VTAM issues this message in response to an error during the processing of one of the following commands:

- VARY ACT,ID=*ncpname* where a NEWPATH operand is found during processing of the PCCU definition statement
- VARY ACT,ID=*ncpname*,NEWPATH=*pathname*
- VARY ACT,ID=*pathname*

During activation of the dynamic path update set that includes *pathname*, the resource *nodename* either could not be found or was not valid.

System action: The dynamic path update of *pathname* is ignored. Processing of the dynamic path update set that includes *pathname* continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST927I ERROR FOR *ncpname.pathname* DSA *destsubarea* text CODE *code*

Explanation: VTAM issues this message in response to an error during the processing of one of the following commands:

- VARY ACT,ID=*ncpname* where a NEWPATH operand is found during processing of the PCCU definition statement
- VARY ACT,ID=*ncpname*,NEWPATH=*pathname*
- VARY ACT,ID=*pathname*

During activation of the dynamic path update set that includes *pathname*, a negative response was received from the SETCV RU request to NCP *ncpname*.

The destination subarea (DSA) is indicated by *destsubarea*.

The combination of *text* and *code* indicates the cause of the error.

- If *text* is ERN *ern*, possible codes include:

CODE 2

Control block allocation failed for explicit route number *ern*.

You probably need to increase one of the following:

- TGBXTRA, PATHEXT, or VRPOOL rows value in the NCP BUILD.
- TGBXTRA or PATHEXT or both on the NETWORK definition statement.

See *NCP, SSP, and EP Resource Definition Reference* SC31-6224 for guidelines on coding TGBXTRA, PATHEXT, and VRPOOL in the BUILD definition statement, or TGBXTRA and PATHEXT in the NETWORK definition statement.

CODE 3

Explicit route number *ern* is currently operative.

CODE 10

Adjacent subarea specified for explicit route number *ern* is larger than SALIMIT.

CODE 11

Explicit route number *ern* conflicts with ERLIMIT.

- If *text* is NETID *netid*, possible codes include:

CODE 1

Network ID *netid* is invalid.

CODE 2

Control block allocation failed for network ID *netid*.

You probably need to increase one of the following:

- TGBXTRA, PATHEXT, or VRPOOL rows value in the NCP BUILD.
- TGBXTRA or PATHEXT, or both, on the NETWORK definition statement.

See *NCP, SSP, and EP Resource Definition Reference* SC31-6224 for guidelines on coding TGBXTRA, PATHEXT, and VRPOOL in the BUILD definition statement, or TGBXTRA and PATHEXT in the NETWORK definition statement.

CODE 8

Messages for the rejected ER, VR or VRPWS subfields in network ID *netid* follow.

CODE 9

Destination subarea is larger than SALIMIT specified for the network ID *netid*.

- If *text* is **VRN/ERN** *vrn/ern*, possible codes include:

CODE 4

Virtual route number *vrn* is mapped to an undefined explicit route number *ern*.

CODE 5

Virtual route number *vrn* is mapped to a different explicit route (not *ern*).

CODE 11

Virtual route number *vrn* is mapped to an explicit route number *ern* that conflicts with ERLIMIT.

- If *text* is **VRN/TPF** *vrn/tpf*, possible codes include:

CODE 2

Control block allocation failed for virtual route number/transmission priority field *vrn/tpf*.

You probably need to increase one of the following:

- TGBXTRA, PATHEXT, or VRPOOL rows value in the NCP BUILD.
- TGBXTRA or PATHEXT or both on the NETWORK definition statement.

See *NCP, SSP, and EP Resource Definition Reference* SC31-6224 for guidelines on coding TGBXTRA, PATHEXT, and VRPOOL in the BUILD definition statement, or TGBXTRA and PATHEXT in the NETWORK definition statement.

CODE 6

No corresponding virtual route (VR) exists in that path definition for virtual route number/transmission priority field *vrn/tpf*.

CODE 7

Virtual route number/transmission priority field *vrn/tpf* is already active.

See the z/OS Communications Server: SNA Resource Definition Reference for the correct use of VTAM operands on NCP definition statements. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation of dynamic path update.

System action: The dynamic path update of *pathname* is ignored. Processing of the dynamic path update set that includes *pathname* continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the dynamic path update set and try the failed command again.

Routing code: 2

Descriptor code: 5

IST928I DELETER KEYWORD FOR *pathname* IGNORED

Explanation: This message is the first in a group of messages that VTAM issues in response to the following commands:

- VARY ACT,ID=*ncpname* where a NEWPATH operand is found during processing of the PCCU definition statement
- VARY ACT,ID=*ncpname*,NEWPATH=*pathname*
- VARY ACT,ID=*pathname*

IST929I • IST930I

A complete description of the group follows.

IST928I DELETER KEYWORD FOR *pathname* IGNORED
IST523I REASON = *reason*

During processing of the VARY command, a DELETER=*ern* operand was encountered in the dynamic path update set that includes *pathname*.

pathname refers to the label that is in error in the PATH definition statement (**NA** if no label exists).

reason is one of the following:

DEST SUBAREA *destsa* INVALID

The dynamic path update set that includes *pathname* is ignored because the *destsa* name is not valid.

ER *ern* IS OPERATIVE

Explicit route *ern* is currently operative and cannot be deleted.

ER *ern* NOT FOUND

The explicit route *ern* is not found and cannot be deleted.

System action: The dynamic path update of *pathname* is ignored. Processing of the dynamic path update set that includes *pathname* continues.

Operator response:

ER IS OPERATIVE

The ER route definition in VTAM/NCP can be replaced or deleted only if the explicit route is inoperative (a status of INOP).

Deactivate the physical elements and links in the route.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST929I LOAD OF DYNAMIC PATH DEFINITION *ncpname.pathname* COMPLETE

Explanation: VTAM issues this message in response to one of the following commands:

- VARY ACT,ID=*ncpname* where a NEWPATH operand is found during processing of the PCCU definition statement
- VARY ACT,ID=*ncpname*,NEWPATH=*pathname*
- VARY ACT,ID=*pathname*,

The load of NCP *ncpname* with the dynamic path update set that includes *pathname* is complete.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST930I *nodename1* — *nodename2* SESSION USING *percentage* OF *bpBUF*

Explanation: VTAM detected that the session indicated is using 10 percent or greater of the *bpBUF* buffer pool.

Note: This message is percolated. See "Message rerouting and percolation" on page 1146 for additional information. *nodename1* and *nodename2* are the session partners for the session using the indicated percentage of the pool. If VTAM does not know a node name, the node ID is presented in the form *subareaelement*, where *subarea* is the subarea portion of the network address and *element* is the element portion of the network address. Both *subarea* and *element* addresses are given in decimal form.

*bp*BUF is the name of the buffer pool.

percentage is the percentage of this buffer pool used by this session.

If the session between *nodename1* and *nodename2* is using a large percentage of the buffer pool, one of the following conditions probably exists:

- Either *nodename1* or *nodename2* is malfunctioning. This could be a hardware, microcode, or application program error that causes VTAM to be flooded with data.
- Neither *nodename1* nor *nodename2* is malfunctioning, but a large amount of data is being transmitted on this session with no pacing in effect.
- A resource with many sub-resources is being activated or deactivated. This requires a large concurrent number of I/O buffers.
- The maximum size of the I/O buffer pool has been defined too small or the maximum amount of CSA that VTAM is allowed to obtain is too small. These are the expansion limit parameters on the IOBUF start option and the CSALIMIT start option.

System action: Message IST154I, IST1098I, or IST1099I is displayed with this message.

- If message IST154I is displayed, the buffer pool is not expanded at this time. When more storage becomes available, VTAM may try again to expand the buffer pool. VTAM may be adversely affected by this failure to obtain more buffers.
- If message IST1098I or IST1099I is displayed, processing continues.
 - If the session is an SSCP-LU session, then the LU is deactivated, and message IST1098I is displayed.
 - If the session is an SSCP-PU session and the PU is a PU other than an NCP, then the PU is deactivated and message IST1098I is displayed. Since activation or deactivation of large NCPs can cause situations where large number of I/O buffers are properly in use and NCPs are not known to cause HOT I/O situations, NCP PUs will not be automatically activated.
 - If the session is an LU-LU session (including CP-CP) then the session is terminated, and message IST1099I is displayed.

Once VTAM has determined that a session is using greater than 10 percent of the buffer pool, a determination is made whether to automatically terminate the session or deactivate the LU. If the percentage is greater than or equal to the HOTIOTRM start option value, and the session type is LU-LU, VTAM initiates termination of all the sessions between *nodename1* and *nodename2*. VTAM issues message IST1099I when sessions are automatically terminated. If the percentage is greater than or equal to the HOTIOTRM start option value, and the session type is SSCP-LU or SSCP-PU (and the PU is not an NCP), VTAM initiates inactivation of the LU or PU. VTAM issues message IST1098I when automatic inactivation has been initiated.

Operator response:

- If it appears that the problem is caused by a malfunctioning device LU, try to deactivate the device using the VARY INACT command. In extreme cases, you might have to physically disconnect or power off the device.
- If it appears that the problem is caused by a malfunctioning PU and that PU was not automatically deactivated (HOTIOTRM was not specified), try to deactivate the device using the VARY INACT command. In extreme cases, you might have to physically disconnect or power off the device.
- If it appears that the problem is caused by an activation or deactivation of an NCP or other PU, an attempt can be made to reactivate the PU SCOPE=ONLY. Once the PU is active, each line can then be VARYed ACTive. Activating resources in this order, will lesson the peak demand for I/O buffers.
- If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

System programmer response:

- Ensure that session pacing is in effect for the session using the largest percentage of the buffer pool. The BIND request unit contains the values used for each session. See the z/OS Communications Server: SNA Network Implementation Guide for more information about session pacing.
- If message IST154I is displayed before this message, and the session between *nodename1* and *nodename2* is not using a large percentage of the buffer pool, the size of the buffer pool was probably underestimated.
- If message IST154I was issued, use the explanation of *code* in that message to determine which buffer pool you need to modify.

IST931I • IST932E

- You might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
- If you want VTAM to automatically terminate these sessions, specify the HOTIOTRM start option with a value that is less than or equal to *percentage*. This start option can be modified using the MODIFY VTAMOPTS command.
- For additional information, see:
 - The z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - The z/OS Communications Server: SNA Resource Definition Reference for more information on the HOTIOTRM start option and other VTAM start options.
 - The z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
 - The z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST931I SYMPTOM STRING = *symptomstring*

Explanation: VTAM issues this message to display a symptom string when VTAM recovers from an ABEND. VTAM repeats this message until the entire *symptomstring* is displayed and then issues message IST314I to end the message group.

symptomstring is the result of a VTAM ABEND and describes the ABEND in question. *symptomstring* contains AB/xxxxx and RIDS/xxxxxxxx#R or #L.

- If the RIDS element contains a #R, this is the name of the recovery module.
- #L identifies the failing load module.

System action: Processing continues.

Operator response: Message IST413I may also be displayed and can provide additional information. Save the system log for problem determination. For more information on interpreting symptom strings, see the ABEND Procedure in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

System programmer response: Use the information in the system string and message IST413I, if displayed, to assist you in determining the cause of the problem.

Routing code: 8

Descriptor code: 4

IST932E FAILURE OCCURRED DURING TAKEOVER OF *luname*, SENSE= *sense*

Explanation: While processing a BFSESSINFO RU during SSCP takeover of LU *luname*, VTAM was unable to record the addresses associated with a session.

See the z/OS Communications Server: IP and SNA Codes for a description of *sense*.

System action: Sessions associated with LU *luname* are terminated.

Operator response:

- Deactivate and reactivate the PU.
- If insufficient storage is a frequent problem, enter a DISPLAY BFRUSE or DISPLAY STORUSE command. Save the system log and request a dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 3

IST933I LOGMODE=*logmode*, COS=*cosentry* [(FROM OLU)]

Explanation: This message is part of a message group. See the explanation of message IST879I or IST1489I for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST934I DLOGMOD=*dlogmode* USS LANGTAB=*langtab*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application minor node or LU.

dlogmode is the default logon mode to be used by the resource if a logon mode name is not provided for a session initiation request. If no default logon mode was specified, VTAM issues ***NA*** for *dlogmode*.

langtab is the name of the language table defined for this LU. If no value was specified for *langtab* or if the DISPLAY ID command was not entered for an LU, VTAM issues ***NA*** for *langtab*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST935I ORIGIN=*ncpname*, NETID=*netid*, ID=*resourcename*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST863I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST936I ANSWER MODE = *answermode*

Explanation: This message displays the direction (or state) of a line.

answermode can be one of the following:

RESET

Initial state (for example, the line is not active).

ENABLED

The specified line is accepting incoming calls.

IST937A • IST938I

DISABLED

The specified line is not accepting incoming calls.

PENDING DACTCONNIN RESPONSE

A response for a DACTCONNIN RU to disable the specified line from accepting incoming calls is pending.

NEGATIVE DACTCONNIN RESPONSE

A negative response for a DACTCONNIN RU to disable the specified line from accepting incoming calls was received.

PENDING ACTCONNIN RESPONSE

A response for an ACTCONNIN RU to enable the specified line to accept incoming calls is pending.

NEGATIVE ACTCONNIN RESPONSE

A negative response for an ACTCONNIN RU to enable the specified line to accept incoming calls was received.

System action: Processing continues.

Operator response: If *answermode* is **NEGATIVE ACTCONNIN RESPONSE**, save the system log for problem determination.

For all other values of *answermode*, no response is necessary.

System programmer response: If *answermode* is **NEGATIVE ACTCONNIN RESPONSE**, verify that the configuration is valid and that the NCP responded correctly. This can be determined by referring to the NCP generation and matching the line name with what was generated.

Routing code: 2

Descriptor code: 5

IST937A *loadmodname* **CORRELATOR MISMATCH** *correlator1* — *correlator2* **REPLY 'RELOAD', 'INACT', OR 'IGNORE'**

Explanation: During the activation of NCP load module *loadmodname*, the generated correlator *correlator1* did not match the correlator *correlator2* loaded in the communication controller.

VFYC=YES was specified in the NCP's PCCU definition statement. The operator may, therefore, reload the communication controller, terminate the activation, or ignore the mismatch.

System action: Processing continues. Message IST937A is reissued until a correct response is entered.

Operator response: Reply 'RELOAD' to reload the communication controller. Other VTAMs sharing the communication controller will be affected when it is reloaded.

Reply 'INACT' to terminate the activation of the communication controller. This will result in a load module mismatch between the load module that is active for this VTAM and the load module that is active for another VTAM that is sharing the same communication controller.

Reply 'IGNORE' to ignore the mismatch and continue activation. However, the mismatch may be a user error and ignoring it could lead to potential problems.

System programmer response: None.

Note: For additional information on how to respond to this message, see "Responding to a VTAM message" on page 2.

Routing code: 2

Descriptor code: 2

IST938I **OPEN ACB REJECTED, CANNOT LOAD** *phasename*

Explanation: During an OPEN ACB procedure, the ALOAD routine could not dynamically load phase *phasename*.

System action: The OPEN ACB procedure fails. This message will follow IST025I.

Operator response: See IST025I for additional information and recommended actions.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST939I VARY NOLOGON HAD NO EFFECT — *applname* NOT FOUND FOR *nodename*

Explanation: VTAM issues this message in response to a VARY NOLOGON command. The command failed because a controlling relationship existed for *nodename* with a different application than the specified *applname*.

System action: Processing continues.

Operator response: Enter a DISPLAY ID command for *nodename* to verify that a controlling relationship exists. Reenter the VARY NOLOGON command with the indicated *applname*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST940I *verid*

Explanation: This message is part of a message group. The first message in the group is IST680I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST946I BASENO *n* GREATER OR EQUAL TO XPANLIM *limit* BUFFERS

Explanation: This message is the first in a group of messages. A complete description of the message group follows.

IST946I BASENO *n* GREATER OR EQUAL TO XPANLIM *limit* BUFFERS

IST947I STATIC BUFFERING ASSUMED FOR *bp*BUF

While processing the start option for buffer pool *bp* and converting the input expansion limit to buffers, VTAM determined that the expansion limit was less than the base number of buffers in the pool. Although the initial number of buffers will be allocated to the pool, the pool will not be able to expand because any expansion would force the pool above its expansion limit. As a result, the values for *xpanpt* and *xpanno* entered for buffer pool *bp* will be ignored and the buffer pool will operate without dynamic expansion.

n is the base number of buffers allocated to the buffer pool. This is the value of the *baseno* operand in the start option for the buffer pool.

limit is the maximum number of buffers that will fit in the storage specified by the *xpanlim* operand in the start option for the buffer pool. See the z/OS Communications Server: SNA Resource Definition Reference for a description of the buffer pool start options.

bp is the name of the buffer pool. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.

System action: Processing continues. The buffer pool will operate with no dynamic buffering. *****NA***** will be displayed for the expansion threshold if DISPLAY BFRUSE commands are entered for the buffer pool.

Operator response: Save the system log for problem determination. You might have to restart VTAM.

System programmer response: Determine whether dynamic buffering is desired for buffer pool *bp*. If so, restart VTAM with appropriate values for *baseno* and *xpanlim* for the *bp* buffer pool. Otherwise, no action is necessary.

Routing code: 2

Descriptor code: 5

IST947I • IST951I

IST947I STATIC BUFFERING ASSUMED FOR *bp*BUF

Explanation: This message is part of a group of messages. The first message in the group is IST946I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST949I ISTMGC10 IN VTAMLIB *reason* - VTAM PROCESSING CONTINUES

Explanation: VTAM could not load the default filter table because of *reason*.

reason can be one of the following:

NOT FOUND

The table could not be located in the VTAMLIB.

NOT LOADED

There was not enough storage available to load the table.

NOT VALID

ISTMGC10 did not have a valid type ID.

System action: VTAM ignores the load request and continues the initialization.

Operator response: Save the system log for problem determination.

System programmer response: Verify if the table was intentionally left empty or was intentionally not loaded into the system library. If it was not, follow the procedure outlined below for *reason*.

If *reason* is **NOT FOUND**, halt VTAM, load the table into the system library, and restart VTAM.

If *reason* is **NOT LOADED**, increase storage as required and reload the table.

If *reason* is **NOT VALID**, verify that ISTMGC10 was created with the correct macros and that the table type is correct. If not, halt VTAM and then restart it with a valid version of the table in the system library.

Routing code: 2

Descriptor code: 5

IST950I VCNS=YES

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an application program. This message identifies that this application is a VTAM Common Network Services (VCNS) user.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST951I DISPLAY DISK INFORMATION FOR *ncpname*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY DISK command. A complete description of the message group follows.

```
IST951I  DISPLAY DISK INFORMATION FOR ncpname
[IST957I  NO NCP LOAD MODULE OR DUMP ON DISK]
[IST952I  DUMP NAME      DATE      TIME
IST953I  dumpname      date      time]
:
[IST954I  LOAD MODULE    DATE      TIME  STORE STATUS  [ACTIVE]
IST955I  loadmodname    date      time    status    [YES|NO]]
```

```

:
:
[IST924I -----]
[IST1065I LOAD MODULE REQUESTED IPL ESTIMATED IPL
:IST1066I load_module requested_time estimated_time]
:
:
IST965I AUTO DUMP/LOAD: {YES|NO}
IST314I END

```

IST951I

This message serves as a header line for the display and identifies the NCP *ncpname* for which the information is displayed.

IST957I

If there is no information on the disk to display, this message follows IST951I.

IST952I and IST953I subgroup

If there is information on the disk to display, VTAM issues this subgroup if dump information is available. IST953I is repeated for each dump on the disk. See the explanation of message IST952I for additional information on this subgroup.

IST954I and IST955I subgroup

If there is information on the disk to display, VTAM issues this subgroup if load module information is available. IST955I is repeated for each load module on the disk. See the explanation of message IST954I for additional information on this subgroup.

IST924I

VTAM issues this message to improve the readability of the display.

IST1065I and IST1066I

If there is information on the disk to display, VTAM issues this subgroup if an IPL has been scheduled for at least one load module on the disk. IST1066I is repeated for each load module on the disk. See the explanation of IST1065I for additional information on this subgroup.

IST965I

This message is issued to indicate whether the 3720 or 3745 Communication Controller will accept an automatic re-IPL if the NCP abends. If IST965I indicates that an automatic dump and load will occur, the load module that is active in the communication controller will be reloaded.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST952I DUMP NAME DATE TIME

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY DISK command.

This message subgroup is displayed in a message group headed by IST951I. See the explanation of that message for additional information.

If there is information on the disk to display, VTAM issues this subgroup if dump information is available. A complete description of the message subgroup follows.

```

IST952I DUMP NAME DATE TIME
IST953I dumpname date time

```

VTAM issues message IST953I for each NCP dump on disk. This message contains the following information:

IST953I • IST954I

dumpname

The name of the NCP dump on the disk.

date

The date the dump was loaded onto the disk.

time

The time the dump was dumped onto the disk.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST953I *dumpname date time*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST952I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST954I **LOAD MODULE DATE TIME STORE STATUS [ACTIVE]**

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY DISK command.

This message subgroup is displayed in a message group headed by IST951I. See the explanation of that message for additional information.

If there is information on the disk to display, VTAM issues this subgroup if load module information is available. A complete description of the message subgroup follows.

```
IST954I  LOAD MODULE DATE   TIME  STORE STATUS  [ACTIVE]
IST955I  loadmodname date   time   status   [YES|NO]
```

VTAM issues message IST955I for each load module that is displayed. It contains the following information:

loadmodname

The name of the load module on the disk.

date

The date the load module was stored on the disk.

time

The time the load module was stored on the disk.

status

The store status of the load module. *status* will be one of the following:

STORED

The load module is completely stored.

STORING

The load module is currently in the process of being stored.

SUSPENDED

The load module is currently in the process of being stored; however, no information has been received by MOSS in the last five minutes.

[YES|NO]

ACTIVE is **YES** when *loadmodname* is the load module currently active on the disk. This means the load module is next to load on the disk.

ACTIVE is **NO** when *loadmodname* is not the load module currently active in the disk.

[YES|NO] is displayed only when at least one load module on the disk is active.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST955I *loadmodname date time status [YES|NO]*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST954I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST956I {*PORT SAP=sapaddress MAC=macaddress MAXDATA=n MAXSTN=maxstations | PU SAP=sapaddress MAC=macaddress [MAXDATA=n]*}

Explanation: VTAM issues this message in response to a DISPLAY ID command for a LAN major node, a switched PU (station) connected to the LAN, or a dynamic switched PU defined in an XCA major node.

VTAM will also issue this message when IST690I is issued for a connection failure during Request Contact (REQCONT) RU processing. The message will provide the PU LAN address information of the PU with which the connection is refused.

PORT is indicated when a LAN major node is being displayed. The information provided is derived from similarly named keywords on the PORT definition statement in the major node.

sapaddress is the service access point (SAP) address for the LAN connection that the major node defines.

macaddress is the 12-digit hexadecimal medium access control (MAC) address for the LAN connection that the major node defines. If no *macaddress* was defined, zeroes are displayed.

n is the maximum number of bytes in the information field of an LPDU that can be transmitted on the LAN.

maxstations is the maximum number of stations that can be connected on the LAN. *maxstations* is listed only when this message results from a DISPLAY ID command specifying the name of a LAN major node.

PU is issued when a switched PU (station) attached to the LAN is being displayed. The information provided is derived from similarly named operands on the PU definition statement in either a LAN, a switched major node, the service access point (SAP) that is in use, or the medium access control (MAC) that is in use.

sapaddress is the service access point (SAP) address of the physical unit that is on the LAN.

macaddress is the 12-digit hexadecimal medium access control (MAC) address for the station on the LAN represented by the PU.

n is the maximum amount of data in bytes, including the transmission header (TH) and request/response header (RH), that the physical unit can receive in one segment of a path information unit (PIU).

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST957I **NO NCP LOAD MODULE OR DUMP ON DISK**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY DISK command. The first message in the group is IST951I. Message IST957I is issued when there is no information on the disk to display.

System action: Processing continues.

Operator response: None.

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System programmer response: None.

Routing code: 2

Descriptor code: 5

IST958I INBND=*inbound* OUTBND=*outbound* PENDING=*pending* ATTN=*attntot* CUA=*device_address*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a LAN major node.

inbound is the total number of inbound messages.

outbound is the total number of outbound messages.

pending is the current number of pending output messages.

attntot is the total number of attention interrupts counted.

device_address is the hexadecimal channel address of the interrupt port.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST959I INVALID PIU RECEIVED FROM *nodename*—VARY INACT SCHEDULED

Explanation: VTAM issues this message when the resource *nodename* issued a path information unit (PIU) with a request/response header that violates SNA architecture rules.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information.

System action: VTAM generates a VARY INACT,TYPE=FORCE command and issues it internally to resource *nodename*.

Operator response: This is probably a hardware error. Save the system log and request a buffer trace on the device for problem determination.

System programmer response: Use the buffer trace to identify the PIUs that are not valid.

Routing code: 2

Descriptor code: 5

IST960I DISPLAY TABLE FAILED—*tablename* NOT FOUND

Explanation: VTAM issues this command in response to a DISPLAY TABLE command when VTAM did not find *tablename*. The table is not currently in use by any resource as a COS, logon mode, interpret, USS, model name, or associated LU table, or the table does not exist.

System action: VTAM rejects the command.

Operator response: Ensure that you entered *tablename* correctly.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST961I [NONDISRUPTIVE] LOAD OF *ncpname* [WITH *loadmodname*] FAILED

Explanation: This message is the first in a group of messages that VTAM issues when a load fails for NCP *ncpname*.

IST961I [NONDISRUPTIVE] LOAD OF *ncpname* [WITH *loadmodname*] FAILED

IST523I REASON = *reason*

loadmodname is included in the message when the load module name differs from *ncpname*.

reason in message IST523I indicates why the load failed and is one of the following:

PERMANENT I/O ERROR [-REQ: *runame* SENSE: *sense*]

Explanation: During an attempt to load the communication controller, VTAM detected a permanent I/O error. This may have been caused by one of the following:

- Hardware error
- VTAM detected channel contention in a multiple-channel attached communication controller that was being loaded from another domain.
- If a MODIFY LOAD command was issued for a local or remote NCP, the size of MAXDATA on the PCCU macro must be at least 2,048 plus the size of the TH and RH.

runame is the name of the request unit that failed. See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*.

sense is the SNA sense code for the failed request unit. See the z/OS Communications Server: IP and SNA Codes for a description of *sense*. If *sense* is set by NCP, see *NCP, SSP, and EP Messages and Codes* for a complete description.

The values of *runame* and *sense* are issued only for remote NCP loads.

System Action: VTAM rejects the command. The communication controller remains inactive and unavailable to VTAM.

Operator Response: Save the system log and obtain an NCP dump with the NCP dump utilities for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

Programmer Response: Verify that the CUA operand (on the PCCU definition statement of the NCP source statements) matches the actual channel address that is connected to the controller. If the controller is multiple-channel attached and the failure was caused by a load from another domain, wait for the completion of that load operation.

Make the necessary changes to the NCP generation. If problems persist, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

INITIAL TEST HARDSTOP

Explanation: VTAM detected an error condition that caused the initial test program of the load utility for the NCP to hardstop the communication controller.

System Action: VTAM rejects the command. The communication controller remains inactive.

Operator Response: Save the system log for problem determination.

Programmer Response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM software support center.

LOADER FAILURE

Explanation: An error occurred during an attempt to load an NCP into a communication controller.

IST961I

System Action: VTAM deactivates the communication controller.

Operator Response: Save the system log for problem determination. Message IST155I or other system messages may provide additional information about the cause of the loader failure.

Programmer Response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM software support center.

ddname BLDL ERROR

Explanation: VTAM tried to load a communication controller.

The operation failed because a BLDL (the load of a core resident table with track addresses of frequently used modules on a link library) issued for that library defined by DD statement *ddname* failed.

System Action: The communication controller is not activated. Other VTAM processing continues.

Operator Response: VTAM operations can be continued with other nodes in the network. Save the system log for problem determination.

Programmer Response: Inspect the directory of the partitioned data set defined by the DD statement *ddname*.

- If it is the NCP module library, ensure that the NCP being loaded into the communication controller is a member of that library (the NCP name is defined by the NEWNAME operand on the NCP BUILD definition statement).
- If *ddname* defines the initial test library, make sure modules IFL3705D and IFL3705B are members of the library.

INVALID DEVICE TYPE DEFINITION

Explanation: VTAM tried to load a communication controller, but failed after checking the communication controller unit control block (UCB) and determining that the operating system generation did not specify a valid channel adapter type for this NCP.

System Action: The communication controller is deactivated.

Operator Response: Save the system log for problem determination.

Programmer Response: Check the channel unit address of the specified communication controller to make sure that it is the correct address. If it is, the communication controller might have been incorrectly specified during the operating system generation.

UNEXPECTED END OF FILE ON DATA SET

Explanation: While trying to load an NCP into a communication controller, the load program encountered an unexpected end-of-file condition either on the NCP load module data set or on the initial test data set.

System Action: The communication controller is deactivated. Other processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response: Ensure that the DD statements for the NCP load module and initial test data sets specify the correct data sets. Make sure these data sets contain the correct NCP load module and test routines for the communication controller hardware.

UNEXPECTED CODE *code* FROM *loadmod*

Explanation: VTAM tried to load an NCP into a communication controller. The load failed when VTAM received an unrecognizable return code *code*, in decimal, from the NCP load utility program *loadmod*.

loadmod is IFLOADRN.

System Action: The communication controller is deactivated.

Operator Response: Attempt to load the communication controller offline to VTAM using the NCP utility program. See the *NCP, SSP, and EP Generation and Loading Guide* for information on using the utility program.

Save the system log and obtain an NCP dump with the NCP dump utilities for problem determination.

Programmer Response: Make the necessary changes to the NCP generation. See the *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* for more information on NCP problems.

LOAD MODULE TOO LARGE

Explanation: An attempt to load an NCP into a communication controller failed because the NCP load module was too large for the particular communication controller.

System Action: VTAM deactivates the communication controller. Other VTAM processing continues.

Operator Response: Save the system log for problem determination.

Programmer Response: Check the NCP generation for errors or unnecessary use of storage. The NCP needs to be regenerated.

PERMANENT I/O ERROR ON *libname*

Explanation: VTAM tried to load a communication controller with an NCP. It failed because a permanent I/O error occurred on the data set defined by the DD statement *libname* (the NCP library).

System Action: VTAM deactivates the communication controller.

Operator Response: If the error persists, save the system log for problem determination.

Message IOS000I or other related messages may be issued and can provide additional information.

This is probably a hardware error. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

Programmer Response: Create the NCP library on a different disk pack if possible.

If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

ddname COULD NOT BE OPENED

Explanation: VTAM tried to load a communication controller. It failed because the data set defined by the DD statement *ddname* (the NCP load library) could not be opened.

System Action: VTAM deactivates the communication controller.

Operator Response: Save the system log for problem determination.

Programmer Response: Make sure the specified DD statement in the VTAM procedure is included and correctly specified.

Check the definition library to ensure that all requirements for VTAM are correct for your system.

Routing code: 2

Descriptor code: 3

IST962I INOP X'*code*' RECEIVED FOR PU UNDER SWITCHED LINE *linename*

Explanation: An inoperative RU has been received that contains the SNA network address of a PUX, a skeleton PU defined under a line that represents a switched connection. This situation occurs when the switched line is active, but the switched connection has not yet been established. The switched line has been conditioned to accept incoming calls (ACTCONNIN sent). A call has been accepted on the line and an attempt was made to contact the calling station. An error is detected during the contact process at the line protocol level. The switched connection fails. The INOP RU is the method of notifying the SSCP of the error.

A RECMS or NMVT RU should always accompany this error. VTAM passes this data to NETVIEW/NPDA or records it on the system error recording data set.

linename is the name of the switched line.

code (expressed in hexadecimal) provides the INOP reason code, and can be one of the following:

- 01** Station INOP: There was a loss of contact, unexpected loss of connection, or a connection establishment failure.
- 03** Station INOP: SDLC Disconnect request received.

IST963I • IST967I

04 Station INOP: SDLC Request Disconnect response received.

05 Station INOP: SDLC Disconnect Mode received.

06 Station INOP: IPL or dump is in progress.

07 Station INOP: Remote Power Off (RPO) in progress.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST963I **LOAD MODULE =** *loadmodname*

Explanation: This message is issued as a result of the DISPLAY ID command for an NCP. It is displayed only when the name of the load module currently loaded is different than that of the NCP PU.

loadmodname is the name of the load module currently loaded.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST965I **AUTO DUMP/LOAD: {YES|NO}**

Explanation: This message is part of a message group. IST951I is the first message in the group. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST966I **USER=VCNS**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a line. This message identifies this line as the anchor for all virtual calls used by VTAM Common Network Services (VCNS) application programs for an XCA major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST967I *operation* **FAILED FOR** *dataspace*; **RC** *return_code* **RS** *reason_code*

Explanation: A macro (*operation*) was issued by VTAM for the data space *dataspace*, and an error return code was returned without successful completion of the request.

dspname is the name of a data space created by VTAM. The data space name is generated automatically when the

data space is created by VTAM and is in one of the following formats:

ISTNMSDS

Session awareness

ISTNMPDS

Problem determination trace

ACYcccc

CMIP services applications

ISTxxxxx

TSO or VTAM applications

ccccIST

CMIP, TSO, or VTAM applications

where *cccc* is in the range of 1–99999 and *xxxxx* is in the range of 0–FFFFC.

System action: If the *dataspace* is ISTNMSDS or ISTNMPDS, and *operation* is DSPSERV CREATE or ALESERV ADD, only the LU0 interface is available for communication between VTAM and the NetView program's session monitor.

If *dataspace* is ISTxxxxx or cccccIST, *operation* is DSPSERV CREATE, *return_code* is 08 and *reason_code* is 6B000911, there was a conflict with the *dataspace* name supplied by VTAM. Since VTAM tries four times to create a unique data space name, the occurrence of IST967I may only be informational. VTAM may have succeeded in creating the *dataspace* with another name. The DISPLAY STORUSE,DSPNAME=* can be used to confirm whether the ACB was opened with another name.

If *operation* is DSPSERV RELEASE, the data space interface will continue to function without releasing unused storage to virtual storage management.

Operator response: Save the system log for problem determination.

System programmer response: See the z/OS MVS Programming: Authorized Assembler Services Reference ALE-DYN for a description of *return_code* and *reason_code*.

Routing code: 2

Descriptor code: 4

IST968I INTERFACE INITIALIZATION FAILED – REASON *reasoncode*

Explanation: Data space interface initialization failed, and the LU0 interface will be used.

reason_code

Meaning

- 04** The data space could not be created.
- 08** Request for CSA storage has failed during VTAM initialization.

System action:

- For reason code **04**, VTAM will only use the LU0 interface for the session awareness (SAW) and path information unit (PIU) data interfaces.
- For reason code **08**, VTAM initialization fails.

Operator response: Save the system log for problem determination.

System programmer response: See the z/OS MVS Programming: Authorized Assembler Services Reference ALE-DYN for definitions of *reasoncode* for data space services.

Routing code: 2

Descriptor code: 4

IST970I

IST970I LU-LU VERIFICATION ERROR *code* FOR *profilename*

Explanation: This message is issued when an LU 6.2 application program requests that a session be established, but a session level LU-LU verification violation or error occurred.

profilename is the name of the security manager profile defined for the LU pair. The format of *profilename* is *local_netid.local_name.partner_name* where:

local_netid is the local network ID

local_name is the ACB name of the local application program

partner_name is the LU name of the session partner.

code is the type of security violation that occurred.

- 03** The security manager locked the profile.
- 04** The profile contains an invalid session key.
- 05** *partner_name* rejected the session due to a security related error.
- 06** *local_name* was defined with REQUIRED session level LU-LU verification, but one of the following occurred:
 - *local_name* is the PLU, but no password was defined for *profilename*.
 - *partner_name* is the PLU requesting a session without using session level LU-LU verification.
- 07** Session level LU-LU verification data for the session between *local_name* and *partner_name* matched the data for an outstanding session activation request.
- 08** *local_name* was defined with optional verification, and a password was defined for *profilename*, indicating that session level LU-LU verification is necessary. *partner_name* requested a session without verification.
- 09** *local_name* was defined with optional verification, and no password was defined for *profilename*, indicating that session level LU-LU verification should not be used. *partner_name* requested a session with verification.
- 0B** The profile was changed during session activation.
- 0C** The password for the profile has expired.
- 0D** *local_name* was defined to use only the enhanced protocol (SECLVL=LEVEL2 is specified on the APPL definition statement). *partner_name* does not support the enhanced protocol.
- 20** The security manager component is either not available or overloaded (received a large number of requests in a short period of time).
- 3C** The security manager component failed.

System action: Session activation failed.

Operator response: For codes **03**, **04**, **0B**, and **0C**, enter the MODIFY PROFILES command for the local LU. If VTAM issues this message repeatedly, notify the security administrator of *code* and *profilename*.

For code **05**, consult message IST970I issued to the partner LU for specific actions.

For codes **06**, **08**, and **09**, enter the MODIFY PROFILES command for the local LU. If VTAM issues this message repeatedly, save the system log for problem determination.

For codes **07** and **0D**, notify the security administrator of *code* and *profilename*.

For codes **20** and **3C**, save the system log for problem determination.

System programmer response: For code **05**, consult message IST970I issued to the partner LU for specific actions.

For codes **06**, **08**, and **09**, check the VERIFY operand specified on the APPL statements to identify the correct level for the two LUs.

For code **20**, verify that the security manager is installed and resource class APPCLU is active.

If the security manager is installed and resource class APPCLU is active, the problem may be that the security manager is overloaded. Lowering the value of AUTOSES on the LU definition statements may solve the problem.

For code **3C**, verify that the security manager is installed and resource class APPCLU is active.

Routing code: 2

Descriptor code: 4

IST971I ADJ LINK STATION *linkstation* USING *linkname* IN *netid*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command entered for an NCP major node. This message indicates that the adjacent link station has contacted a cross-network NCP major node.

linkstation is the adjacent link station.

linkname is the connecting link station.

netid is the network ID of the cross-network NCP major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST972I SIT TRACE FOR *linename* TERMINATED – *reason*

Explanation: A scanner interface trace (SIT) for *linename* has terminated.

reason may be one of the following:

HARDWARE ERROR

Either an adapter I/O error occurred, or the SIT backup timer expired.

RESOURCES UNAVAILABLE

Either VTAM needed NCP buffers but could not obtain them, or a problem other than an adapter I/O error occurred.

System action: Processing continues.

Operator response:

- If *reason* is **HARDWARE ERROR**, save the system log for problem determination.
- If *reason* is **RESOURCES UNAVAILABLE**, try the command again when scanner resources become available. If the command continues to fail, save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the EREP User's Guide and the EREP Reference for more information on using EREP.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST973I USERVAR *uservar* {CLASS HAS BEEN CHANGED FROM AUTO TO USER | TYPE HAS BEEN CHANGED FROM *type* TO *type*}

Explanation: VTAM issues this message as part of a message group in response to a MODIFY USERVAR command. The first message in the group is IST1283I. See that message for a complete description of the group.

uservar is the name of the USERVAR.

This message is issued when one or both of the following has occurred:

IST976I • IST977I

- **CLASS HAS BEEN CHANGED FROM AUTO TO USER**

The MODIFY command was entered for a USERVAR that was being managed automatically by VTAM, thereby changing the class to user-managed.

Note: VTAM no longer manages the updating or deletion of this USERVAR.

- **TYPE HAS BEEN CHANGED FROM *type* TO *type***

The type of a user-managed USERVAR has been changed.

type can be **STATIC**, **DYNAMIC**, or **VOLATILE**.

Note: This message is percolated. See "Message rerouting and percolation" on page 1146 for additional information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST976I ENTRY *entryname* DEFINED BUT NO *tabletype* DEFINED FOR *resourcename*

Explanation: VTAM issues this message during major node activation or during session initiation. A *tabletype* table entry *entryname* was specified on the *resourcename* definition statement, but no *tabletype* table is defined.

entryname is the entry that was specified on the LU, LOCAL, TERMINAL, or APPL definition statement.

tabletype is **MDLTAB** (model name table) or **ASLTAB** (associated LU table).

resourcename is the 1-8 character name of the LU, LOCAL, TERMINAL, or APPL for which the *entryname* is defined.

System action: Processing continues during major node activation.

If *tabletype* is **MDLTAB**, session establishment continues during session initiation with no model name provided to the PLU.

If *tabletype* is **ASLTAB**, session establishment continues during session initiation with no associated LU names provided to the PLU.

Operator response: Save the system log for problem determination.

System programmer response: You need to associate a table with the LU. You can do this by either specifying a table in the LU definition, or issuing a MODIFY TABLE command to associate a table with the LU.

If you have specified a table in the LU definition, verify that the table is specified correctly. If it is not, correct the *tablename* and reactivate the LU. If the table specified in the LU definition is correct, the operator may have deleted the association with a MODIFY TABLE command. Enter another MODIFY TABLE command to reestablish the association.

Routing code: 2

Descriptor code: 5

IST977I MDLTAB=*mdlname* ASLTAB=*aslname*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY ID command for an application minor node or LU. A description of the message subgroup follows the example.

```
IST977I MDLTAB=mdlname ASLTAB=aslname
[IST1395I FLDTAB = fldname FILTER = filtername]
[IST1333I ADJLIST = listname]
```

IST977I

mdlname is the name of the model name table.

aslname is the name of the associated LU table.

If a model name table or associated LU table was not defined for the resource, *****NA***** is displayed.

IST1333I

This message is displayed only when the DISPLAY ID=CDRSC command is issued.

listname is the name of an adjacent SSCP table as defined by an ADJLIST definition statement.

If an adjacent SSCP table was not specified for the CDRSC, then *****NA***** is displayed.

See the descriptions of the ADJLIST definition statement in the z/OS Communications Server: SNA Resource Definition Reference for more information on adjacent SSCP tables.

IST1395I

This message is displayed only when the DISPLAY ID=ISTNOP command is issued.

fldname is the name of the user-defined message flooding prevention table. If there is currently no message flooding table active for ISTNOP, then *fldname* is *****NA*****.

filtername is the name of the SAW Filter table. If there is currently no session awareness (SAW) filter table, *filtername* is *****NA*****.

See the z/OS Communications Server: SNA Resource Definition Reference for more information on these tables.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST979I BUILD FAILED FOR TABLE *tablename*

Explanation: This message is the first in a group of messages that VTAM issues in response to a major node activation or a MODIFY TABLE command when the activation of table *tablename* failed.

```
IST979I BUILD FAILED FOR TABLE tablename
IST523I REASON = reason
[IST323I LABEL = labelname - MACRO = macrotype - KEYWORD = keyword]
```

IST979I

tablename is the name of the table that failed and is a model name table, an associated LU table, or a message flooding table.

IST523I

- *reason* indicates the cause of the failure.
 - Most of the reasons involve macro coding errors, which may show up at this time because the tables are not pre-assembled.
 - Other errors such as insufficient storage and open failures cause activation to fail even though there are no errors in the table definition.

reason can be one of the following:

DUPLICATE ENTRY LABEL

The same label appears on more than one table entry macro (MDLENT or ASLENT) in the table.

DUPLICATE PARAMETER

A valid keyword has been coded multiple times on a single macro.

DUPLICATE PLU VALUE

The same PLU name appears on more than one PLU subentry macro (MDLPLU or ASLPLU) following a single entry macro (MDLENT or ASLENT).

EXTRA VALUE

Multiple values were coded on a keyword that does not allow multiple values.

INSUFFICIENT STORAGE

VTAM was unable to allocate storage for the table.

IST979I

INVALID LABEL

The label on the macro is invalid or a MDLENT or ASLENT macro was coded without a label.

INVALID MACRO

The resource definition contains an invalid macro or multiple MDLTAB or ASLTAB macros.

INVALID PARAMETER

The macro has an invalid keyword.

INVALID VALUE

The keyword has an invalid value coded.

LIST VALUE **** IS IN CIRCULAR LIST OR MULTIPLE LISTS

The LIST keyword on a FLDENT macro in the message flooding table referred to a message that was in more than one list.

LIST VALUE **** WAS NOT FOUND

The LIST keyword on a FLDENT macro in the message flooding table referenced a message that was not also in the table.

MACRO SEQUENCE ERROR

The second macro in the resource definition is either MDLPLU or ASLPLU. These macros must be preceded by a table entry macro (MDLENT or ASLENT).

MISSING PLU PARAMETER

A MDLPLU or ASLPLU macro has been coded without the PLU keyword.

OPEN FOR VTAM DATA SET SYS1.VTAMLST FAILED

VTAM could not open the member of the data set containing the table.

SYNTAX ERROR

A keyword on a macro has a syntax error.

TABLE CONTAINS NO USEFUL INFORMATION

The table is logically empty.

- For a model name table, VTAM could not find a MDLENT or MDLPLU macro with a valid MODEL keyword value.
- For an associated LU table, VTAM could not find an ASLENT or ASLPLU macro with a valid PRINTER1 or PRINTER2 keyword value.
- For a message flooding table, VTAM could not find a FLDENT macro with a valid MESSAGE keyword value.

TABLE SIZE OF X'XXXXXXXX' IS INVALID

The table has exceeded the limitation of 16 megabytes (hexadecimal 00FFFFFF).

IST323I

If this message is displayed, it identifies the location of the error in *tablename*.

System action: Processing continues, but *tablename* cannot be used to supply model terminal support information.

Operator response: Issue the DISPLAY BFRUSE command to display information about the common service area (CSA). Save the system log for problem determination.

System programmer response:

- If *reason* is **INSUFFICIENT STORAGE**, increase storage as required. You might want to redefine your CSA start options using the MODIFY VTAMOPTS command.
See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE and DISPLAY VTAMOPTS commands. The z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures provides additional information.
- If *reason* is **OPEN FOR VTAM DATA SET SYS1.VTAMLST FAILED**, review system definition and VTAM data set and allocation. When the error condition has been corrected, reactivate the table.
- For all other *reasons*, correct the resource definition error indicated by message IST523I.

Routing code: 2

Descriptor code: 5

IST981I **VTAM PRIVATE: CURRENT = *currentk*, MAXIMUM USED = *maximumk***

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY BFRUSE or a DISPLAY STORUSE command. For a DISPLAY BFRUSE command, the first message in the subgroup is IST449I. For a DISPLAY STORUSE command, the first message in the group is IST1242I. See the explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST982I *n* {*runame* | OTHER} REQUEST(S) PENDING TO SUBAREA *subarea*

Explanation: If *runame* is indicated, the number *n* of request units (RU) have been pending to subarea *subarea* for a period of time without receipt of a corresponding response unit. If the request units remain outstanding for subsequent intervals, this message will be repeated at such intervals until the request units are received or purged.

VTAM displays **OTHER** when the request unit type is not known.

Message IST982I indicates that a problem **may** exist; the longer a request unit remains outstanding (that is, the more often this message reappears for the same request unit), the more probable it is that a problem exists.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a list of request units and their descriptions.

System action: Processing continues, awaiting the corresponding response unit.

Operator response: If a particular request unit remains outstanding for an extended period of time, save the system log for problem determination.

System programmer response: For a discussion of pending I/O problems, see the wait procedures in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

Routing code: 8

Descriptor code: 4

IST983E *poaname* MESSAGE QUEUE EXCEEDED—FURTHER MESSAGES WILL BE DISCARDED

Explanation: The POA *poaname* message queue would reach the limit (POAQLIM) specified on the APPL definition statement with the message or message group destined for the POA. This can occur when the POA is not issuing RCVCMD macros quickly enough to clear the VTAM message queue for this application. It can also occur when POAQLIM is too small to allow for very large message groups, such as output from a VTAM DISPLAY command.

poaname is the name of the POA that has reached the specified message queue limit.

System action: All further messages destined for *poaname* are discarded until the message queue is cleared.

Operator response:

1. Issue DISPLAY ID=*poaname* and save the system log. Message IST271I will provide the *jobname* related to the *poaname*.
2. Save the system log and request a dump of the application program (*jobname*) and VTAM for problem determination.

System programmer response:

- If the POA is not issuing RCVCMD macros quickly enough, you can clear the message queue for *poaname* by issuing RCVCMD macros with OPTCD=NQ until the queue is empty.
- If RCVCMD macros are being issued quickly enough, examine the dump and the VTAM internal trace (if available) to determine why the messages are not being received quickly enough. Check to ensure that the RCVCMD macros are being received by VTAM.
- You might need to change the POA RCVCMD processing so that RCVCMDs are issued more frequently.
- You can also change the dispatching priority of the POA. See your operating system documentation for information on dispatching priority.
- You can cancel the job related to *poaname*. This will clear the VTAM message queue for *poaname*.

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- If you determine that the POAQLIM value is too low, you can increase POAQLIM on the APPL statement for *poaname*, enter a VARY NET,ACT,UPDATE=ALL command for the application major node, and recycle the application.

See the z/OS Communications Server: SNA Programming for information on program operator coding requirements in program operator applications and the RCVCMD macro.

Routing code: 2

Descriptor code: 11

IST984I USER EXIT *exitname* IS *status*

Explanation: VTAM issues this message when an installation-wide exit is successfully activated, deactivated, or replaced.

- *exitname* is displayed in the form *routine_name.instance_name* where:
 - routine_name* is the name of the installation-wide exit routine.
 - instance_name* is the instance name of the exit routine. When issued for the base exit, *.instance_name* is blank.
- *status* is one of the following:

ACTIVE

The exit *exitname* was successfully loaded, either during initialization or by a MODIFY EXIT,OPTION=ACT command. The exit will now be invoked when requested by VTAM code.

INACTIVE

The exit *exitname* was deactivated by a MODIFY EXIT,OPTION=INACT command or when a MODIFY EXIT,OPTION=REPL command failed. The exit will not be invoked when requested by VTAM code.

REPLACED

The exit *exitname* was replaced by a MODIFY EXIT,OPTION=REPL command. The new version of the exit will now be invoked when requested by VTAM code.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST985I USER EXIT *exitname* action FAILED-CODE *code*

Explanation: VTAM issues this message when an unsuccessful operation was performed on an installation-wide exit.

If message IST1183I is issued with message IST985I and a failure code is received that is not documented in this message, see the appropriate exit's documentation.

exitname is displayed in the form *routine_name.instance_name* where:

routine_name is the name of the installation-wide exit routine.

instance_name is the instance name of the exit routine. When issued for the base exit, *.instance_name* is blank.

action indicates the operation that failed for exit *exitname* and is one of the following:

ACTIVATION

The activation of user exit *exitname* failed during initialization or during processing of a MODIFY EXIT,OPTION=ACT command.

FORCE

The forced inactivation of the exit *exitname* failed during processing of a MODIFY EXIT,OPTION=FORCE command.

INACTIVATION

The deactivation of user exit *exitname* failed during processing of a MODIFY EXIT,OPTION=INACT command.

INITIALIZATION

The initialization of the VTAM exit facility failed. The exit function of VTAM is not available. The *exitname* will not be present in this case.

INVOCATION

The invocation of user exit *exitname* failed. The invocation was performed internally in VTAM code and cannot be affected by the operator.

REPLACEMENT

The replacement of user exit *exitname* failed during processing of a MODIFY EXIT,OPTION=REPL command. The exit *exitname* is now inactive. Message IST984I follows this message and provides additional information.

RETRY

The retry of exit activation for user exit *exitname* failed during initialization. The exit *exitname* is now inactive.

code, in hexadecimal format, indicates the type of failure:

04

The exit function of VTAM could not be initialized.

06

An error occurred during the retry of exit activation for user exit *exitname* during initialization because the exit status was not valid for retry.

08

The exit *exitname* is not known to VTAM.

0A

An error occurred during the loading of ISTIECDF. The exit function of VTAM is not available.

0C

An error occurred during the loading of ISTIECRT. The exit function of VTAM is not available.

0E

An error occurred during the loading of ISTIECVR. The exit function of VTAM is not available.

10

The exit *exitname* is already in the desired state.

14

There is not enough storage to perform this action on the user defined exit *exitname*.

18

You are not authorized to modify the exit *exitname*. OPTION=FORCE is not valid for a program operator application (POA) program.

1C

An abend occurred during the activation, deactivation, invocation, or replacement of the exit *exitname*.

1E

The exit *exitname* is being deactivated.

20

An error occurred while loading the exit *exitname* module.

24

An error occurred while loading the initialization module for exit *exitname*.

26

The exit *exitname* module or the initialization module for exit *exitname* cannot be loaded because the asynchronous load subtask is not available.

28

Activation of the exit *exitname* is already in progress.

2A

The exit *exitname* is not supported for a subarea node.

2C

The exit *exitname* is being deactivated in response to a request to replace this exit with one that has less function.

2E

The exit activation has failed because the subtask is detached after abending five times.

30

The exit function of VTAM is not available.

40

The exit function of VTAM has terminated.

F0

The exit *exitname* is not active.

F1

Deactivation of the exit *exitname* is already in progress.

F2

An abend occurred during processing in the exit *exitname*.

F3

Replacement of the exit *exitname* is already in progress.

IST985I

System action: For codes **04** and **06** processing continues; user exit *exitname* will not be available.

For codes **08**, **10**, and **40** processing continues.

For codes **0A**, **0C**, **0E**, and **30** VTAM initialization fails.

For codes **14**, **18**, **1C**, **1E**, **2A**, **2E**, and **F0** the command is not executed.

For codes **20** and **24** the exit *exitname* cannot be found and will not be invoked.

For code **26** the exit *exitname* cannot be loaded and will not be invoked.

For code **28** activation of exit *exitname* will continue.

For code **2C** and **F1** deactivation of exit *exitname* will continue.

For code **F2** the exit *exitname* will be disabled and will not be invoked during further requests.

For code **F3** replacement of the exit *exitname* will continue.

Operator response: For codes **04**, **08**, **0A**, **0C**, **0E**, **1C**, **30**, **40**, and **F2** save the system log for problem determination.

For code **06** after VTAM has been initialized, save the system log and request a dump for problem determination. After the dump is complete, wait a short time and attempt to activate exit *exitname* with the MODIFY EXIT command.

For codes **10** and **2A** no further action is required.

For code **14** if VTAM has been initialized, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

If VTAM initialization failed, save the system log for problem determination.

For code **18** verify that exit *exitname* is correct and reenter the command. Save the system log for problem determination if the failure reoccurs. If *action* is FORCE, you must issue the MODIFY,EXIT,OPTION=FORCE from a system console.

For codes **20**, **24**, and **F0** verify that exit *exitname* is correct and reenter the command. Save the system log for problem determination if the failure reoccurs.

For code **26**, if the code is received at VTAM initialization, enter the MODIFY EXIT command to activate the exit. Save the system log and request a dump for problem determination if the failure occurs when the command is entered.

For code **1E** and **F1** wait for deactivation of exit *exitname* to complete and reenter the command.

For code **28** wait for the activation of exit *exitname* to complete and reenter the command.

For code **2C** verify that you want to activate a new exit with less function than the old exit. Reenter the MODIFY EXIT command specifying OPT=ACT to activate the correct exit.

In the future to replace an exit with one that has less function, enter a MODIFY EXIT command specifying OPT=INACT to deactivate the old exit. Then enter a MODIFY EXIT command specifying OPT=ACT to activate the new exit.

For code **F3** wait for the replacement of exit *exitname* to complete and reenter the command.

For code **2E** save the console log for problem determination. Notify the system programmer to restart VTAM to reattach the subtask.

System programmer response: For codes **04**, **08**, **0A**, **0C**, and **0E** determine whether modules are loaded correctly by VTAM.

If you cannot determine the cause of the problem from the output provided, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM Support Center.

For codes **06**, **1C**, **26**, **30**, and **40**, if you cannot determine the cause of the problem from the output provided, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM Support Center.

For codes **10**, **1E**, **28**, **2A**, **2C**, **F1**, and **F3** no further action is required.

For code **14** you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE and MODIFY VTAMOPTS commands. The z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures provides additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

For code **18**, verify that the correct exit name was used and that the exit resides in the correct load library.

For codes **20**, **24**, and **F0**, verify that the correct exit name was used and that the exit resides in the correct load library. See z/OS Communications Server: SNA Customization for more information about these exit routines.

For code **F2**, the abend was caused by a failure in the exit code. Verify that the exit *exitname* is functioning properly.

For code **2E**, restart VTAM to reattach the subtask.

Routing code: 8

Descriptor code: 4

IST986I TABLE=*tablename* TYPE=*tabletype* USE COUNT=*usecount*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TABLE command. Possible message groups follow.

- If MSGLVL=V4R1 or above is specified, the following message group is displayed:

```
IST986I  TABLE=tablename TYPE=tabletype USE COUNT=usecount
[IST987I  THE RESOURCES THAT USE THE TABLE ARE:]
[IST1154I  resourcename_1 ... resourcename_n]
:
:
IST1454I  count RESOURCE(S) DISPLAYED
IST314I  END
```

- If MSGLVL=BASE is specified or taken as the default, the following message group is displayed:

```
IST986I  TABLE=tablename TYPE=tabletype USE COUNT=usecount
[IST987I  THE RESOURCES THAT USE THE TABLE ARE:]
[IST988I  resourcename_1 ... resourcename_n]
:
:
IST1454I  count RESOURCE(S) DISPLAYED
IST314I  END
```

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the MSGLEVEL start option and the MSGLVL operand on the USSMSG macro.

IST986I

- *tablename* is the name of the table entered on the DISPLAY command.
- *tabletype* is the type of table that *tablename* represents and can be one of the following:

ASLTAB

Associated LU table

COSTAB

Class-of-service table

IST987I

FLDTAB

Message flooding table

LOGTAB

Interpret table

MDLTAB

Model name table

MODETAB

Logon mode table

USSTAB

Unformatted system services table

NA

Name not available. The USS or interpret table was either assembled with pre-V3R2 macros or did not have FORMAT=DYNAMIC coded on the USSTAB macro.

usecount is the number of resources that use the table.

Note: If *tabletype* is COSTAB, *usecount* can be higher than the number of user resource names displayed. This will occur if PU type 4 or PU type 5 uses the *tablename* for multiple network IDs. Enter a DISPLAY COS,ID=*resourcename*,NETID=*netid* command to determine which network IDs use the specified table for the PU type 4 or PU type 5 resource.

IST987I

This message is a header message for the information displayed in message IST988I and IST1154I.

If *tabletype* is not COSTAB, you might not be able to display all of the resources listed in message IST988I or message IST1154I. Examples of resources that cannot be displayed are model logical units and reset logical units defined under a shared NCP.

IST988I

If network-qualified names are not displayed, VTAM issues this message.

resourcename is a PU type 4 or PU type 5 if *tabletype* is COSTAB. For other table types, *resourcename* is a logical unit or an application.

IST1154I

If network-qualified names are displayed, VTAM issues this message.

resourcename is a PU type 4 or PU type 5 if *tabletype* is COSTAB. For other table types, *resourcename* is a logical unit or an application in the form *netid.name*.

IST1454I

count is the total number of resources using this table.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST987I THE RESOURCES THAT USE THE TABLE ARE:

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TABLE command. See IST986I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST988I *resourcename_1 ... resourcename_n*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TABLE command. See IST986I for a complete description of the message group.

This message is also part of a group of messages that VTAM issues in response to a DISPLAY LMTBL,TYPE=LUNAME or DISPLAY LMTBL,TYPE=LOGMODE command. See IST1006I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST989I **EXP LIMIT** *explimit* **BUFFS REQUESTED** *buffers*

Explanation: This message is part of a message group. The first message in the group is IST920I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST990E **CORRELATOR MISMATCH FOR** *loadmodname* **IGNORED — ACTIVATION CONTINUES**

Explanation: During the activation of NCP load module *loadmodname*, VTAM detected a correlator mismatch between the generated correlator and the correlator loaded in the communication controller. VTAM ignores the mismatch because VFYC=IGNORE was specified on the NCP's PCCU definition statement, or 'IGNORE' was the reply to message IST937A. However, the mismatch might be a user error and ignoring it could lead to potential problems.

System action: Activation continues.

Operator response: If the correlator mismatch was unintentional, deactivate and reload the NCP.

If the correlator mismatch was intentional, none.

System programmer response: If the correlator mismatch was unintentional, either generate the NCP again or change the value of VFYC on the PCCU definition statement.

If the correlator mismatch was intentional, none.

Routing code: 2

Descriptor code: 3

IST991I **CORRELATOR MISMATCH FOR** *loadmodname* **FOUND-RELOAD SCHEDULED**

Explanation: During the activation of NCP load module *loadmodname*, VTAM detected a correlator mismatch between the generated correlator and the correlator loaded in the communication controller.

This message indicates that a reload of the NCP has been scheduled and will occur for one of the following reasons:

- VFYC=NO is specified or defaulted on the NCP's PCCU definition statement.

When there is a mismatch between the NCP load module and the resource resolution table (RRT), a repeated reload of the NCP occurs until an operator deactivates the NCP.

- 'RELOAD' was the reply to message IST937A.

System action: The NCP is reloaded.

Operator response:

- If the correlator mismatch was not intentional, save the system log for problem determination.
If the NCP is in a continuous loop, enter a VARY INACT command to deactivate the NCP.
- If the correlator mismatch was intentional, no action is required.

System programmer response:

- If the correlator mismatch was not intentional, either generate the NCP again or change the value of VFYC on the PCCU definition statement.

IST998E • IST1001I

- If the correlator mismatch was intentional, no action is required.

Routing code: 2

Descriptor code: 5

IST998E VTAM MESSAGE *messageid* ISSUED BUT DOES NOT EXIST

Explanation: VTAM could not locate *messageid* in any of the VTAM message tables associated with the destination of the message (a VTAM operator or a program operator application).

System action: Processing for message *messageid* is complete.

Operator response: Save the system log for problem determination.

System programmer response: Determine whether a valid VTAM message ID is missing from one of the following message modules:

- ISTINCNO, the IBM-supplied default operation-level USS table
- ISTCFCMM, the IBM-supplied default message table
- The USS table specified by the USSTAB start option
- The USS table specified by the USSTAB operand on the APPL definition statement for a program operator application
- The USS table specified for an application program using the MODIFY TABLE command.

If *messageid* is a valid VTAM message ID, it should always be found in ISTINCNO, the IBM-supplied default operation-level USS table. This message is evidence that the USS tables have been improperly modified or installed.

If *messageid* is not a valid VTAM message ID, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM Software Support Center.

Routing code: 2

Descriptor code: 3

IST999E VTAM MESSAGE LOST — INSUFFICIENT STORAGE

Explanation: VTAM tried to issue a message, but sufficient storage was not available. Any text issued by VTAM after **INSUFFICIENT STORAGE** should be ignored.

System action: Processing continues.

Operator response: If the message can be related to a command, and it is necessary that you see the full message, release storage by deactivating unused major nodes or canceling the job, and reenter the command that caused the message.

If the storage problem persists, enter a DISPLAY BFRUSE command. Save the system log and dump for problem determination.

System programmer response: You might have underestimated storage requirements for the common service area (CSA). Increase storage as required. See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE command. The z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures provides additional information.

Routing code: 2

Descriptor code: 3

IST1001I ID= *applname* [LUNAME= *luname*] [LOGMODE= *logmode*]

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY CNOS, MODIFY DEFINE, or DISPLAY CNOS command. A complete description of the message group follows the example.

```

IST1001I ID= applname [LUNAME= luname ] [LOGMODE= logmode]
IST1002I RCPRI=rcpri RCSEC=rcsec
[IST1005I fieldname=value [fieldname=value] [fieldname=value]]
.
.
[IST1003I varname CNOS=cnosvalue DEFINE=definedvalue]
.
.
IST314I END

```

If *rcpri* and *rcsec* in message IST1002I indicate that the command did not execute successfully, VTAM issues only messages IST1001I and IST1002I. If the command executed successfully, VTAM issues the complete message group.

IST1001I

applname is the name of the LU 6.2 application program specified in the operator command.

luname is the name of the partner LU for this application program.

logmode is the name of the logon mode for this application program.

IST1002I

rcpri is the value of the primary return code issued by VTAM.

rcsec is the value of the secondary return code issued by VTAM. See the z/OS Communications Server: IP and SNA Codes for a detailed explanation of *rcpri* and *rcsec*.

IST1003I

- This message is issued only if the command executed successfully.
- *varname* can be one of the following:

MINWINL

The minimum number of parallel sessions for which the application program is guaranteed to be the contention winner for the mode name specified in the LOGMODE operand.

MINWINR

The minimum number of parallel sessions for which the partner LU is guaranteed to be the contention winner for the mode name specified in the LOGMODE operand.

SESSLIM

The maximum number of LU-LU sessions allowed between the application program and the partner LU for the mode name specified in the LOGMODE operand.

- *cnosvalue* is the value of *varname* for CNOS. This is the value accepted by both partner LUs.
- *definedvalue* is the value of *varname* for DEFINE. VTAM uses this value internally when negotiating CNOS origination from the partner LU.

IST1005I

- This message is issued only if the command executed successfully.
- The following describes the Field names and their values:

AUTOSES

The number of contention winner sessions that will be automatically started following a successful CNOS command.

CONVCAP

CONVCAP indicates whether sessions with the partner logical unit (LU) can support half-duplex conversations or both full-duplex and half-duplex conversations.

Value Meaning

FDX The partner LU can support both full-duplex and half-duplex conversations.

HDX The partner LU can support only half-duplex conversations.

VTAM cannot display the value of CONVCAP until the first session with the partner LU has been established. If the first session has not been established, VTAM displays *****NA*****.

IST1001I

CONVSECL

CONVSECL indicates the security level supported by the application program.

Value Meaning

NONE The application program does not accept FMH-5s that include security subfields.

CONV The application program accepts FMH-5s that include security subfields.

ALREADYV

The application program accepts FMH-5s that include security subfields and accepts the already verified indicator in place of the password subfield.

PERSISTV

The application program supports conversation-level security and accepts the persistent verification indicator in the conversation requests it receives.

AVPV The application program supports conversation-level security and accepts both the persistent verification indicator and the already verified indicator in the conversation requests it receives.

VTAM cannot display the value of CONVSECL until the first session has been established with the partner LU. If the first session with the partner LU has not been established, VTAM displays *****NA*****.

CONVSECP

CONVSECP indicates the security level supported by the partner LU.

Value Meaning

NONE The partner LU does not accept FMH-5s that include security subfields.

CONV The partner LU accepts FMH-5s that include security subfields.

ALREADYV

The partner LU accepts FMH-5s that include security subfields and accepts the already verified indicator in place of the password subfield.

PERSISTV

The partner LU supports conversation-level security and accepts the persistent verification indicator in the conversation requests it receives.

AVPV The partner LU supports conversation-level security and accepts both the persistent verification indicator and the already verified indicator in the conversation requests it receives.

VTAM cannot display the value of CONVSECP until the first session has been established with the partner LU. If the first session with the partner LU has not been established, VTAM displays *****NA*****.

DDRAINL

DDRAINL indicates whether VTAM accepts a CNOS request that allows an application program to drain its allocation requests.

Value Meaning

ALLOW

VTAM accepts a CNOS request that allows an application program to drain its allocation requests.

NALLOW

VTAM does not accept a CNOS request that allows an application program to drain its allocation requests.

DELETE

DELETE specifies whether the mode name can be deleted from the LU-mode table.

Value Meaning

ALLOW

The mode name can be deleted from the LU-mode table.

NALLOW

The mode name cannot be deleted from the LU-mode table.

DRAINL

DRAINL indicates whether the application program can drain its allocation requests.

Value Meaning

YES The application program can drain its allocation requests.

NO The application program cannot drain its allocation requests.

DRAINR

DRAINR indicates whether the partner LU can drain its allocation requests.

Value Meaning

YES The partner LU can drain its allocation requests.

NO The partner LU cannot drain its allocation requests.

DRESPL

DRESPL specifies whether VTAM accepts a CNOS request specifying that the application program is responsible for deactivating sessions.

Value Meaning**ALLOW**

VTAM accepts a CNOS request specifying that the application program is responsible for deactivating sessions.

NALLOW

VTAM does not accept a CNOS request specifying that the application program is responsible for deactivating sessions.

ETYPE ETYPE indicates the type of LU entry that contains the specified LUNAME.

Value Meaning**DISASSOC**

LUNAME was found in a DISASSOC_NAME entry. The LU entry was previously a VARIANT_NAME entry, but is no longer associated with any other entry.

RCVD LUNAME was found in a RCVD_NAME entry. This LU entry is created due to a session initiation request from the partner LU.

SUPPLIED

LUNAME was found in a SUPPLIED_NAME entry. This LU entry is created using the LU name specified on the APPCCMD macro or an OPERATOR command.

UNUSABLE

LUNAME was found in an UNUSABLE_NAME entry. The LU entry was marked unusable due to inappropriate name translations.

VARIANT

LUNAME was found in a VARIANT_NAME entry. This LU entry is created when the LUNAME, found in the Network-Qualified SLU Network Name Structured User Data subfield in the BIND response, is different than the LUNAME specified in the BIND request.

FREECNT

The number of active sessions with the partner LU that are free for use by a conversation.

QALLOC

The number of allocation requests waiting for a session to become free.

RESP RESP specifies whether the application program is responsible for deactivating sessions.

Value Meaning**LOCAL**

The application program is responsible for deactivating sessions.

REMOTE

The partner LU is responsible for deactivating sessions.

IST1002I

VTAM displays a value for RESP only in response to a MODIFY CNOS command. VTAM displays ***NA*** instead of a value when the MODIFY DEFINE or DISPLAY CNOS commands are entered.

SESSCAP

SESSCAP indicates the session capability of the partner LU.

Value Meaning

PSINGLE

The session capability of the partner LU has not been determined; the preliminary indication is that the partner LU cannot support parallel sessions.

SINGLE

The partner LU cannot support parallel sessions.

PPARALLE

The session capability of the partner LU has not been determined; the preliminary indication is that the partner LU can support parallel sessions.

PARALLEL

The partner LU can support parallel sessions.

SESSCNT

The number of active sessions with the partner LU that have the specified mode name.

SYNCLVL

SYNCLVL specifies the synchronization level supported by the conversation.

Value Meaning

NONE No synchronization level is supported.

CONFIRM

The CONFIRM synchronization level is supported.

SYNCPT

The SYNCPT and CONFIRM synchronization levels are supported.

WINLCNT

The number of active sessions for which the application program is the contention winner.

WINRCNT

The number of active sessions for which the partner LU is the contention winner.

See the z/OS Communications Server: SNA Programmer's LU 6.2 Guide for a more detailed explanation of these field names and their values.

System action: Processing continues.

Operator response: If messages IST1005I and IST1003I are not in this group, save the system log for problem determination.

Otherwise, no action is required.

System programmer response: Use the system log and return code values in message IST1002I to assist you in solving the problem.

Routing code: 8

Descriptor code: 5

IST1002I RCPRI= *rcpri* RCSEC= *rcsec*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is either IST1001I, IST1110I or IST1472I. See the explanation of the first message in the group for a complete description.

rcpri is the value of the primary return code issued by VTAM.

rcsec is the value of the secondary return code issued by VTAM.

See the z/OS Communications Server: IP and SNA Codes for a detailed explanation of *rcpri* and *rcsec*.

Routing code: 8

Descriptor code: 5

IST1003I *varname* **CNOS**=*cnosvalue* **DEFINE**=*definedvalue*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1001I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1004I *command* **FOR** *nodename* **FAILED** – *reason*

Explanation: VTAM issues this message when one of the following commands fails:

- DISPLAY CNOS
- DISPLAY CONVID
- DISPLAY LMTBL,TYPE=LUNAME
- DISPLAY LMTBL,TYPE=LOGMODE
- DISPLAY STORUSE
- MODIFY CNOS
- MODIFY DEFINE

nodename is the name of the local application program that was specified on the *command*. The network ID of *nodename* is the same as the host network ID.

reason can be one of the following:

APPLICATION JOB NOT FOUND

The requested job name is not found.

APPLICATION NOT ACTIVE

The application has not opened its ACB.

APPLICATION NOT FOUND

The requested application is not found.

DATA SPACE NOT FOUND

The requested data space is not found.

DEACTIVATION IN PROGRESS

The application program issued a CLOSE that has not yet completed, a VARY INACT command has been issued for the application program, or VTAM has become inactive.

INSUFFICIENT STORAGE

There is not enough storage available to complete the request.

NO APPLICATION ACTIVE

No VTAM application has opened its ACB.

NO APPLICATION DATA SPACE

The application does not have a VTAM data space.

NODE ACB IS CLOSED

The application program closed its application control block (ACB).

NODE NOT ACTIVE

The application program has not opened its ACB.

NODE NOT APPC CAPABLE

Either *nodename* is not the name of an application program, or *nodename* is the name of an application program but APPC=YES was not specified on the APPL definition statement.

IST1004I

OPERATOR COMMAND NOT ALLOWED

The application program is APPC capable, but OPERCNOS=ALLOW was not specified on the APPL definition statement.

POOL NOT FOUND

The requested pool is not found.

VTAM ERROR

VTAM abended while processing the command.

System action: VTAM rejects the command. Processing continues.

Operator response: The value of *reason* determines the response:

APPLICATION JOB NOT FOUND

Try the command again with the correct job name.

APPLICATION NOT ACTIVE

Activate the application program with a VARY ACT command. If this does not solve the problem, save the system log for problem determination.

APPLICATION NOT FOUND

Try the command again with the correct application name.

DATA SPACE NOT FOUND

Try the command again with the correct data space name.

DEACTIVATION IN PROGRESS

Take the appropriate action:

- If a CLOSE ACB or VARY INACT command has been issued, enter a VARY ACT command to restart the application program.
- If VTAM has become inactive, save the system log for problem determination.

INSUFFICIENT STORAGE

Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE or DISPLAY STORUSE command. Save the system log and dump for problem determination.

NO APPLICATION ACTIVE

Try the command again when an application has opened its ACB.

NO APPLICATION DATA SPACE

If *nodename* is ISTDCLU, no action is necessary. If any other application is specified, save the system log for problem determination.

NODE ACB IS CLOSED

Activate the application program with a VARY ACT command. If this does not solve the problem, save the system log for problem determination.

NODE NOT ACTIVE

Activate the application program with a VARY ACT command. If this does not solve the problem, save the system log for problem determination.

NODE NOT APPC CAPABLE

Determine if the specified *nodename* is correct.

- If *nodename* is not correct, try the command again by specifying the correct *nodename*.
- If *nodename* is correct, save the system log for problem determination.

OPERATOR COMMAND NOT ALLOWED

Save the system log for problem determination.

POOL NOT FOUND

Try the command again with the correct pool name.

VTAM ERROR

Save the system log and dump for problem determination.

System programmer response: The value of *reason* determines the response:

APPLICATION JOB NOT FOUND

None.

APPLICATION NOT FOUND

None.

APPLICATION NOT ACTIVE

If the operator entered a VARY ACT command to activate the application program and the problem persists, the application program must open its ACB.

DATA SPACE NOT FOUND

None.

DEACTIVATION IN PROGRESS

If VTAM has become inactive, reactivate VTAM.

INSUFFICIENT STORAGE

You might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

NO APPLICATION ACTIVE

None.

NO APPLICATION DATA SPACE

If an application other than ISTDCLU is specified, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

NODE ACB IS CLOSED

If the operator entered a VARY ACT command to activate the application program and the problem persists, the application program must open its ACB.

NODE NOT ACTIVE

If the operator entered a VARY ACT command to activate the application program and the problem persists, the application program must open its ACB.

NODE NOT APPC CAPABLE

Enter a VARY INACT command to deactivate the major node. Enter a DISPLAY ID command for the associated minor node to ensure that the major node is an application program. Examine the APPL definition statement to ensure that APPC=YES was specified. You may need to modify the APPL definition statement, specifying APPC=YES, restart the application program, and try the command again.

OPERATOR COMMAND NOT ALLOWED

Enter a VARY INACT command to deactivate the application program. Modify the APPL definition statement, specifying OPERCNOS=ALLOW, restart the application program, and try the command again.

POOL NOT FOUND

None.

VTAM ERROR

VTAM has abended while processing a DISPLAY CNOS; DISPLAY LMTBL,TYPE=LUNAME; DISPLAY

IST1005I • IST1006I

LMTBL,TYPE=LOGMODE; DISPLAY CONVID; MODIFY CNOS; or MODIFY DEFINE command. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.

If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM Software Support Center.

Routing code: 8

Descriptor code: 5

IST1005I *fieldname=value [fieldname=value] [fieldname=value]*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1001I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1006I *nametype NAMES DEFINED [IN LU luname] FOR applname*

Explanation: This message is the first of a group of messages that VTAM issues in response to a DISPLAY LMTBL command. Possible message groups follow.

If MSGLVL=BASE is specified:

- For a DISPLAY LMTBL,TYPE=LUNAME command, the message group is as follows:

```
IST1006I nametype NAMES DEFINED FOR applname
IST988I resourcename_1...resourcename_n
:
:
IST314I END
```

For a DISPLAY LMTBL,TYPE=LOGMODE command, the message group is as follows:

```
IST1006I nametype NAMES DEFINED IN LU luname FOR applname
IST988I resourcename_1...resourcename_n
:
:
IST314I END
```

If MSGLVL=V4R1 or above is specified:

- For a DISPLAY LMTBL,TYPE=LUNAME command, the message group is as follows:

```
IST1006I nametype NAMES DEFINED FOR applname
IST1154I resourcename_1...resourcename_n
:
:
IST314I END
```

For a DISPLAY LMTBL,TYPE=LOGMODE command, the message group is as follows:

```
IST1006I nametype NAMES DEFINED IN LU luname FOR applname
IST988I resourcename_1...resourcename_n
:
:
IST314I END
```

For a DISPLAY LMTBL,TYPE=LUNAME,SCOPE=ALL command, the message group is as follows:

```
IST1006I nametype NAMES DEFINED FOR applname
IST1409I luname ASSOC = associatedlu ETYPE = entrytype
:
:
IST314I END
```

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the MSGLEVEL start option and the MSGLVL operand on the USSMSG macro.

IST1006I

Message IST1006I is a header for messages IST988I, IST1154I, and IST1409I, which lists all LU or logon mode names defined for the partner LU in the LU-mode table.

nametype is either **LU** or **LOGMODE**, depending on the value of the TYPE operand in the DISPLAY LMTBL command.

luname is the name of the partner LU for this application program.

aplname is the name of the LU 6.2 application program for which DISPLAY information was requested.

IST988I

If network-qualified names are not displayed, VTAM issues this message.

resourcename is the LU or logon mode name.

IST1154I

If network-qualified names are displayed, VTAM issues this message.

resourcename is the LU name.

IST1409I

- *luname* is the LU name.

associatedlu is the associated LU name. If the *associatedlu* differs from *luname* then *associatedlu* is used to associate this LU entry to another LU entry created for the same partner LU.

entrytype is the type of LU entry that contains the LUNAME specified by *luname*, and can be one of the following.

Value Meaning

SUPPLIED

LUNAME was found in a SUPPLIED_NAME entry. This LU entry is created using the LU name specified on the APPCCMD macro or an OPERATOR command.

VARIANT

LUNAME was found in a VARIANT_NAME entry. This LU entry is created when the LUNAME, found in the Network-Qualified SLU Network Name Structured User Data subfield in the BIND response, is different than the LUNAME specified in the BIND request.

RCVD LUNAME was found in a RCVD_NAME entry. This LU entry is created due to a session initiation request from the partner LU.

UNUSABLE

LUNAME was found in an UNUSABLE_NAME entry. The LU entry was marked unusable due to inappropriate name translations.

DISASSOC

LUNAME was found in a DISASSOC_NAME entry. The LU entry contains a name that is not being used as a generic or uservar name for the partner LU.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1007I PARTNER = *luname*, LOGMODE = *logmode*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1040I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1008I CONVID = *convid*, STATUS = *status*, ETIME = *etime*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1040I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1009I SID = *sid*, HPDT = *hpdtvalue*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1040I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1010I NO CONVERSATION(S) FOUND FOR *applname*

Explanation: VTAM issues this message in response to a DISPLAY CONVID command when no conversations for application program *applname* are found based on the specified operands.

applname is the name of the LU 6.2 application program for which DISPLAY information was requested.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1011I ENTRY *entryname* NOT FOUND IN *tabletype* *tablename* FOR *resourcename*

Explanation: VTAM issues this message during session initiation if it cannot find a table entry for a resource. No *entryname* entry exists in the *tabletype* table *tablename* that is defined for the resource *resourcename*.

entryname is the entry that was specified on the LU, LOCAL, TERMINAL, or APPL definition statement.

tabletype is **MDLTAB** (model name table) or **ASLTAB** (associated LU table).

tablename is the name of the table.

resourcename is the 1–8 character resource name specified on the LU, LOCAL, TERMINAL, or APPL definition statement. *entryname* is defined for this resource.

System action: If *tabletype* is **MDLTAB**, session establishment continues with no model name provided to the PLU.

If *tabletype* is **ASLTAB**, session establishment continues with no associated LU names provided to the PLU.

Operator response: Save the system log for problem determination. Provide the *entryname* and *tablename*.

System programmer response: Verify that *tablename* is the correct table for *resourcename*. If it is not, do one of the following:

- Change the *tablename* in the logical unit definition and reactivate the logical unit.
- Enter a MODIFY TABLE command to associate the correct table with the logical unit.

If *tablename* is correct, verify that the *entryname* specified in the logical unit definition matches the *entryname* in the table. If the *entrynames* do not match, do one of the following:

- Change the *entryname* in the logical unit definition and reactivate the logical unit.
- Add, replace, or correct the *entryname* in the table and enter MODIFY TABLE to use the updated table.

Routing code: 2

Descriptor code: 5

IST1012I NO PARTNER LU(S) DEFINED FOR *applname*

Explanation: VTAM issues this message in response to a DISPLAY LMTBL, TYPE=LUNAME command when there are no LU entries defined in the LU-mode table of application program *applname*.

applname is the name of the LU 6.2 application program for which DISPLAY information was requested.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1013I NO LOGMODE(S) DEFINED IN LU *luname* FOR *applname*

Explanation: VTAM issues this message in response to a DISPLAY LMTBL, TYPE=LOGMODE command when there are no logon mode entries defined for *luname* in the LU-mode table of application program *applname*.

luname is the name of the specified LU.

applname is the name of the LU 6.2 application program for which DISPLAY information was requested.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1015I APPLICATION SUPPLIED *parameter_name* = *parameter_value*

Explanation: This message is part of a message group. The first message in the group is IST663I. See the explanation of that message for a description of the entire message group.

This message is the first of a subgroup of messages in the IST663I group of messages. A complete description of the message subgroup follows.

IST1015I APPLICATION SUPPLIED *parameter_name* = *parameter_value*
[IST1028I *parameter_value*]

This message subgroup is issued only to the operator of the host of the secondary logical unit.

parameter_name is the name of the parameter displayed in the message subgroup, and is one of the following:

CPNAME

parameter_value displays the control point (CP) name of the type 2.1 peripheral node supplied by the application program for the switched connection.

GROUP NAME

parameter_value displays the name of a GROUP definition statement in the NCP or channel attachment major node that defines a group of SDLC switched links.

DIAL NUMBER

parameter_value displays the line number supplied by the application program for the switched connection. If *parameter_value* contains unprintable characters, the message will appear as follows:

IST1015I APPLICATION SUPPLIED DIAL NUMBER=X'*parameter_value*'

If the message contains any unprintable characters, the dial number is preceded by an "X". If the message contains only printable characters, the dial number is not preceded by an "X".

IST1016I

DLCADDR SUBFIELD

parameter_value displays the DLCADDR subfield supplied by the application program for the switched connection. If *parameter_value* contains unprintable characters, the message will appear as follows:

```
IST1015I APPLICATION SUPPLIED DLCADDR SUBFIELD=yy,X'parameter_value'
```

If the message contains any unprintable characters, the DLCADDR subfield is preceded by an "X". If the message contains only printable characters, the DLCADDR subfield is not preceded by an "X".

yy is the subfield ID.

DIRECT CALL LINE

parameter_value displays the name of the line supplied by the application program for the switched connection.

IDBLK/IDNUM

parameter_value displays the identification block (IDBLK) and identification number (IDNUM) supplied by the application program for the switched connection. IDBLK identifies the device type and IDNUM identifies the specific device or connection for the switched connection.

For IDBLK/IDNUM, *parameter_value* is 64 characters long; there are no spaces between the values of IDBLK and IDNUM. This field is always displayed in hex. VTAM displays the first portion of *parameter_value* in message IST1015I and the remainder in message IST1028I. The message subgroup will appear as follows:

```
IST1015I APPLICATION SUPPLIED IDBLK/IDNUM=X'parameter_value  
IST1028I parameter_value'
```

See the z/OS Communications Server: SNA Resource Definition Reference for more information on the IDBLK, IDNUM, and CPNAME operands for switched major nodes.

System action: The session initiation attempt fails.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in messages IST663I, IST664I, and IST889I to determine the cause of the error. Possibilities include dial numbers not in the correct form or an XID failure. This is not necessarily a system programmer error. If it is not, notify the application programmer.

Routing code: 8

Descriptor code: 4

IST1016I DYNAMIC DEFINITION OF *nodename* FAILED

Explanation: This message is the first in a group of messages that VTAM issues when an error is detected while building a dynamic switched physical unit, logical unit, or transport resource list entry (TRLE). A complete description of the message group follows.

```
IST1016I DYNAMIC DEFINITION OF nodename FAILED  
[IST1061I FAILURE OCCURRED ON puname AT locaddr]  
IST523I REASON = reason  
IST314I END
```

IST1016I

nodename is the name of the PU, LU, or TRLE that cannot be built. *nodename* can be *NA* if the name contains non-printable characters.

IST1061I

VTAM issues message IST1061I when the SDDL dynamic definition of an LU fails.

puname is the name of the PU for which a dynamic LU could not be built.

locaddr is the address of the LU that could not be built.

IST523I

- *reason* indicates the reason for the failure and is one of the following:

ERROR IN SDDLU EXIT OR EXIT NOT AVAILABLE

Either the selection of definitions for dependent LUs (SDDLU) exit routine has not been activated, or there was an error in SDDLU exit processing. Errors that the SDDLU exit routine can detect include:

- The SDDLU exit routine could not generate an LU name.
- The SDDLU exit routine could not determine which model LU name to use.

INSUFFICIENT DEVICE ADDRESSES

There were not enough device addresses to create the TRLE identified by *nodename*.

INSUFFICIENT STORAGE

Storage could not be obtained for the dynamic resource.

INVALID NAME

Either the node name or the model name returned by the configuration services XID exit routine or the SDDLU exit routine is not valid. Resource definition fails for the node with the name that is not valid.

INVALID RESOURCE TYPE

The definition for the independent LU was attempted. This is not a valid resource type.

MODEL LU GROUP *lgroup* NOT FOUND

The model LU group specified on the PU definition statement of *puname* is not active, or the LU group name entered on the VARY ACT command is not a valid VTAM name.

MODEL *modelname* NOT FOUND

The model PU or LU could not be found.

MODEL *modelname* TYPE DOES NOT MATCH NODE TYPE

The type of the model is incorrect. A PU model was specified when describing an LU node, or an LU model was specified when describing a PU node. *modelname* is the name of a model PU or LU.

NO MODEL MATCHES *modelname*

The model name of the powering on device does not match any of the model LUs in the LUGROUP specified on the PU. *modelname* is the machine type and model number.

***puname* DOES NOT SUPPORT DEPENDENT LOGICAL UNITS**

Switched PU *puname* does not support dependent LUs because the link from the remote PU is not configured to support dependent LUs (ACTPU is suppressed).

VALUE FOR LOCADDR NOT VALID

An address override of LOCADDR was requested but the new value was not valid.

System action:**INSUFFICIENT DEVICE ADDRESSES**

The definition of the TRLE cannot be completed. The TRLE cannot be used by any TCP/IP stack. If *nodename* is IUTIQXxx or IUTIQ6xx, the OSX interface for CHPID xx and its associated TRLE remain active, but will have no associated IQDX interface or IQDX TRLE. Other active dynamic IQDX interfaces and TRLEs are not affected. Without taking an action to make more device addresses available, all subsequent dynamic definitions of IQDX TRLEs will fail.

All other reasons

The definition of this resource cannot be completed. If resource definition fails for an LU, VTAM attempts to define any remaining LUs. If resource definition fails for a PU, VTAM does not attempt to define any LUs associated with the failed PU.

Operator response:**INSUFFICIENT STORAGE**

Enter a DISPLAY BFRUSE or DISPLAY STORUSE command. Save the system log and request a dump for problem determination.

MODEL LU GROUP *lgroup* NOT FOUND

Enter a VARY ACT command to activate the LUGROUP definition that contains the *lgroup* model LU group. Save the system log for problem determination.

MODEL *modelname* NOT FOUND

Enter a DISPLAY MODELS command to list all defined models. Either the model major node has not been activated or the name requested by the exit is incorrect.

IST1016I

- Activate the model major node if it has not been activated. After the model major node has been activated, dial in can be attempted again.

Note: The dial in must be done by the remote device; the operator generally cannot perform the dial in.

- If the model major node name is incorrect, save the system log for problem determination.

***puname* DOES NOT SUPPORT DEPENDENT LOGICAL UNITS**

No action is necessary unless this host should be identified as the owner of dependent LUs off of the remote PU. If this is the case, the remote PU must be reconfigured so it will indicate to this host that ACTPU should not be suppressed.

All other reasons

Save the system log for problem determination.

System programmer response:

ERROR IN SDDL U EXIT OR EXIT NOT AVAILABLE

Verify that the exit is in the VTAMLIB and that the exit has been activated. If the exit is active, there is an error in the exit that must be corrected. See *z/OS Communications Server: SNA Customization* for more information on the SDDL U exit routine.

INSUFFICIENT DEVICE ADDRESSES

Increase the number of subchannel addresses for the channel path ID (CHPID) associated with the TRLE identified by *nodename*. If *nodename* is IUTIQXxx or IUTIQ6xx, see Steps for enabling HiperSockets access to the intraensemble data network in *z/OS Communications Server: IP Configuration Guide* to determine the number of subchannel addresses required and how to define them.

INSUFFICIENT STORAGE

Increase storage as required.

- See the *z/OS Communications Server: New Function Summary* to determine the storage requirements for VTAM.
- See the *z/OS Communications Server: SNA Resource Definition Reference* for a description of VTAM start options.
- See *z/OS Communications Server: SNA Operation* for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the *z/OS Communications Server: SNA Network Implementation Guide* for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the *z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps* and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

INVALID NAME

Correct the name returned by the exit routine. After the exit routine has been corrected, dial in can be attempted again.

INVALID RESOURCE TYPE

Ensure that the exit routine does not specify an LU model with a LOCADDR of 0 or an address override of 0.

MODEL LU GROUP *lugroup* NOT FOUND

Activate the LUGROUP definition that contains the model LU group *lugroup*. Specify an active LU group on the LUGROUP keyword in the PU definition statement for *puname*.

MODEL *modelname* NOT FOUND

The switched connection installation exit routine, ISTECCS, incorrectly specified the model name. Ensure that the exit routine specifies a valid model name. After the exit routine has been corrected, dial in can be attempted again.

MODEL *modelname* RESOURCE TYPE DOES NOT MATCH NODE TYPE

Ensure that the exit routine specifies a PU model when defining a PU, and an LU model when defining an LU. After the exit routine has been corrected, dial in can be attempted again.

NO MODEL MATCHES *modelname*

Add a model LU definition statement under the appropriate LUGROUP that will match the model acronym in question.

VALUE FOR LOCADDR NOT VALID

Correct the exit routine. After the exit routine has been corrected, dial in can be attempted again.

Routing code: 2

Descriptor code: 5

IST1017I MODELS:

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a model major node. Following this message, VTAM issues message IST089I once for each resource defined in the model major node. See the explanations of the other messages in this group for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1018I MODEL MAJOR NODE = *major_node_name*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY MODELS command. See the explanations of the other messages in this group for more information.

major node name is the name of the model major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1019I USERVAR VALUE CLASS TYPE EXIT APPC

Explanation: This message is the first of a group of messages that VTAM issues in response to a DISPLAY USERVAR command. A complete description of the message group follows.

```

IST1019I USERVAR  VALUE          CLASS TYPE      EXIT APPC
IST1029I uservar  value          class type      exit {YES|NO}
:
:
[IST1315I DISPLAY TRUNCATED AT MAX = number]
IST1454I count USERVAR(S) DISPLAYED
IST314I END

```

IST1019I

This message is a header message for information displayed in message IST1029I.

IST1029I

- VTAM issues message IST1029I once for each USERVAR being displayed.
- *uservar* is the name of the USERVAR.
- *value* is the value of the USERVAR. *value* is a network qualified name in the form of *netid.name*.
- *exit* can be **YES** or **NO**, indicating whether the USERVAR exit is used for this USERVAR.
- *class* can be either **USER** or **AUTO**. If *class* is **AUTO**, VTAM maintains this USERVAR. If *class* is **USER**, the user maintains this USERVAR.
- The values of *type* are as follows:

STATIC

The USERVAR needs to be queried by other SSCPs only once.

IST1020I • IST1021I

DYNAMIC

The USERVAR needs to be queried by other SSCPs after an abnormal termination of a session using the USERVAR.

VOLATILE

The USERVAR needs to be queried by other SSCPs when a session is initiated using the USERVAR.

- APPC is either **YES** or **NO**, and indicates whether this USERVAR supports advanced program-to-program communications (APPC).

IST1315I

number is the value specified for the MAX operand.

IST1454I

count is the total number of USERVARs displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1020I INSUFFICIENT STORAGE–DATA SPACE *dspname* FULL

Explanation: VTAM issues this message when data space *dspname* is full.

dspname is the name of the data space created by VTAM. The data space name is generated automatically when the data space is created by VTAM and is in one of the following formats:

ISTcccc

cccc is 0-FFFFC

ccccIST

cccc is 1-99999

System action: Processing continues. The action depends on why the requested storage was needed. Other messages may follow identifying the effect this storage condition has on VTAM.

Operator response: Enter a DISPLAY STORUSE command for *dspname*. Save the system log for problem determination.

System programmer response: Usually this problem occurs when data is either coming in faster than the application can receive it or the application is not issuing RECEIVES.

- Ensure that sessions with this application have proper pacing counts.
- Verify that the application is not having a problem that is preventing it from issuing RECEIVES.
- If you cannot determine the cause of the problem from the output provided, take the following actions:
 - If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
 - If you do not have access to IBMLink, report the problem to the IBM software support center. Provide the information in the output from the DISPLAY STORUSE command.

Routing code: 2

Descriptor code: 5

IST1021I MEDIUM = *medium*, ADAPNO = *adapno*, CUA = *device_address*, SNA SAP = *snasap*

Explanation: VTAM issues this message when a DISPLAY ID command is entered for an external communication adapter (XCA) major node.

medium is the type of LAN represented by this XCA major node. The type is specified on the MEDIUM operand of the PORT definition statement. *medium* can be one of the following:

BOXMGR

3172 Problem Management

CSMA/CD

802.3 LAN

FDDI

Fiber distributed data interface

RING

Token-ring LAN

adapno is the decimal adapter slot number specified on the ADAPNO operand on the PORT definition statement. If *medium* is **BOXMGR**, VTAM displays *NA*.

device_address is the hexadecimal channel device address specified on the CUADDR operand on the PORT definition statement.

snasap is the decimal SNA service access point address specified on the SAPADDR operand on the PORT definition statement. The SNA service access point address is displayed if an SNA line is defined in the XCA major node. If an SNA line is not defined, VTAM displays *NA*. The default value (4) is shown if a value was not specified on the PORT definition statement and an SNA line is defined in the XCA major node. If *medium* is **BOXMGR**, VTAM displays *NA*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 5

Descriptor code: 8

IST1022I **WRBUF = wrbuf**

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST577I. See the explanation of the first message in the group for a complete description.

Routing code: 2

Descriptor code: 4

IST1023E **START I/O TIMEOUT OCCURRED FOR CUA=*device_address***

Explanation: VTAM initiated an I/O operation with a LAN channel station, and start I/O timeout occurred for one of the following reasons:

- An interrupt was not received in the time specified for that I/O operation.
- Certain asynchronous events did not occur in the time specified for that I/O operation.
- The LAN channel station did not respond to a channel request from VTAM.

device_address is the hexadecimal address of the subchannel used to communicate with the LAN channel station.

System action: Processing continues.

If the LAN channel station does not respond in the defined interrupt interval, data will be lost and all lines using this subchannel will become inoperative. The default interrupt interval is 3 minutes. For more information, see the description of the MIHTMOUT start option in the z/OS Communications Server: SNA Resource Definition Reference.

Operator response:

- If the LAN channel station was stopped, normal operation will resume when you restart the LAN channel station.
- If the LAN channel station has failed, take the following actions:
 1. Deactivate all lines using this subchannel because the lines cannot be used.
 2. Check for a hardware problem:

IST1024I • IST1029I

- Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as the NetView program, check to see whether an alert was recorded for this problem.
- If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM hardware support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Otherwise, no action is required.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST1024I I/O ERROR ON READ FOR CUA = *device_address*–BYTE COUNT MISMATCH

Explanation: VTAM detected an input buffer error during a READ operation for a LAN channel station at *device_address*. The length of the buffer containing data units does not match the total length of all data units.

device_address is the hexadecimal address of the channel used to communicate with the hardware adapter.

System action: The device is deactivated. Data will be lost and all lines using this device will become inoperative.

Operator response: This is probably a hardware error. Save the system log for problem determination. Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP.

If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

If the failure continues, run a CCW trace to trace data from this device.

System programmer response: If the output does not indicate a hardware problem, and you cannot determine the cause of the problem, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 4

Descriptor code: 2

IST1028I *parameter_value*

Explanation: VTAM issues this message as part of a group of messages. See the explanation of message IST1015I for a full description.

Routing code: 8

Descriptor code: 4

IST1029I *userovar value class type exit* {YES|NO}

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1019I. See the explanation of that message for a full description.

Routing code: 8

Descriptor code: 5

IST1030I USERVAR EXIT IS *exitname*

Explanation: VTAM issues this message as part of a group of messages in response to a MODIFY USERVAR command. The first message in the group is either IST825I or IST1283I. See the explanation of the first message for a complete description of the group.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information.

Routing code: 8

Descriptor code: 5

IST1031I MODIFY COMMAND FAILED — *uservar*: EXIT FAILURE, CODE *code*

Explanation: VTAM issues this message when a MODIFY USERVAR command invokes a USERVAR exit and a failure occurs.

Possible values are:

X'0008'

The exit is not defined.

X'0010'

VTAM is already in the desired state.

X'0014'

There is not enough storage to activate the USERVAR exit.

X'0018'

Activation is not permitted by the requester.

X'001C'

An error occurred during activation or deactivation.

X'001E'

The exit is being deactivated.

X'0020'

A storage failure occurred. This is the code issued by the default USERVAR exit for this situation. If another code is issued, save the system log for problem determination.

X'0028'

Activation of the exit is already in progress.

X'003A'

The invocation flag is not valid. This is the code issued by the default USERVAR exit for this situation. If another code is issued, save the system log for problem determination.

X'003C'

The entry code is not valid. This is the code issued by the default USERVAR exit for this situation. If another code is issued, save the system log for problem determination.

X'00F0'

The exit is not active.

X'00F1'

The exit is pending deactivation.

X'00F2'

The exit abended.

System action: VTAM rejects the command. If *uservar* was previously defined, it retains its previous value. Otherwise, it will remain undefined until the reason for the failure is corrected. Other processing continues.

Operator response:

X'0008'

Ensure that you entered the name of the exit correctly. If problems persist, save the system log for problem determination.

IST1031I

X'0010'

None.

X'0014'

Ensure that you entered the name of the exit correctly. If problems persist, enter a DISPLAY BFRUSE or DISPLAY STORUSE command to verify that there is sufficient storage to activate the USERVAR exit. Save the system log and request a dump for problem determination.

X'0018'

Ensure that you entered the name of the exit correctly.

X'001C'

Ensure that you entered the name of the exit correctly. If problems persist, save the system log for problem determination.

X'001E'

Reactivate the exit if desired.

X'0020'

Ensure that you entered the name of the exit correctly. If problems persist, save the system log for problem determination.

X'0028'

None.

X'003A'

Ensure that you entered the name of the exit correctly. If problems persist, save the system log for problem determination.

X'003C'

Ensure that you entered the name of the exit correctly. If problems persist, save the system log for problem determination.

X'00F0'

Activate the exit if desired.

X'00F1'

None.

X'00F2'

Save the system log for problem determination.

System programmer response:

X'0008'

Ensure that the exit is correctly defined. Messages issued at VTAM initialization may provide additional information about the cause of the problem.

X'0010'

None.

X'0014'

Ensure that the operator entered the buffer pool or CSA start options as specified in the start procedures. You might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

X'0018'

None.

X'001C'

Check the exit for possible errors. See z/OS Communications Server: SNA Customization for more information.

X'001E'

None.

X'0020'

Check the exit for possible errors. See z/OS Communications Server: SNA Customization for more information.

X'0028'

None.

X'003A'

Check the exit for possible errors. See z/OS Communications Server: SNA Customization for more information.

X'003C'

Check the exit for possible errors. See z/OS Communications Server: SNA Customization for more information.

X'00F0'

None.

X'00F1'

None.

X'00F2'

Check the exit for possible errors. See z/OS Communications Server: SNA Customization for more information.

Routing code: 8**Descriptor code:** 5**IST1032I** *poolname* **BUFFER SIZE TOO SMALL-SIZE MUST BE AT LEAST** *minsize***Explanation:** VTAM issues this message in response to a VARY ACT command when the buffers are too small. The buffer size of buffer pool *poolname* must be at least *minsize* for VTAM to activate a line.*poolname* is the name of the buffer pool. See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.*minsize* is the minimum buffer size for the type of line you tried to activate.**System action:** Line activation fails. Processing continues.**Operator response:** Save the system log for problem determination.**System programmer response:** Change the buffer size for *poolname* in the VTAM start list ATCSTRxx. After the VTAM start list is corrected, restart VTAM and enter a VARY ACT command for the line.**Routing code:** 8**Descriptor code:** 5**IST1033I** *uservar* **ALREADY DEFINED FOR APPC SESSIONS OF** *applname***Explanation:** VTAM issues this message in response to a MODIFY USERVAR command when APPC=YES is specified and *uservar* has already been defined for *applname*. Another USERVAR with APPC=YES cannot be defined for this application program.*uservar* is the name of the USERVAR which is currently defined for this application program.*applname* is the name of the application program specified in the MODIFY USERVAR command.**System action:** VTAM rejects the command and no changes are made to the USERVAR table. Processing continues.**Operator response:** Determine which USERVAR should be defined for the application program.

IST1034I • IST1035I

- If the currently defined USERVAR is incorrect, you must delete the currently defined USERVAR with a MODIFY USERVAR,OPTION=DELETE command. After deleting the incorrect USERVAR, issue a MODIFY USERVAR command to define the correct USERVAR for the application program.

If *applname*'s ACB was open while the incorrect USERVAR was defined, then the incorrect information was copied to the application program's control blocks. In this situation, VTAM issues message IST1034I when the MODIFY USERVAR command is entered for the correct USERVAR.

- If the currently defined USERVAR is correct, no action is required.

System programmer response: If the MODIFY USERVAR command was issued through the program operator interface, determine which USERVAR should be defined for the application program and correct the mechanism that established the incorrect USERVAR definition.

Routing code: 2

Descriptor code: 5

IST1034I *applname* ALREADY USING *uservar* FOR APPC SESSIONS

Explanation: VTAM issues this message in response to a MODIFY USERVAR command when APPC=YES is specified and *applname* is already using *uservar*. Another USERVAR cannot be defined with APPC=YES for this application program.

applname is the name of the application program specified in the MODIFY USERVAR command.

uservar is the name of the USERVAR the application program is already using.

System action: VTAM rejects the command and no changes are made to the USERVAR table. Processing continues.

Operator response: Determine which USERVAR the application program should be using.

- If the application program is currently using an incorrect USERVAR, then the application program will need to terminate (CLOSE ACB) its connection to VTAM, which will remove all knowledge of the incorrect USERVAR. Once the application program's connection to VTAM has terminated, then the MODIFY USERVAR command can be issued to define the correct USERVAR and the application program can re-establish (OPEN ACB) its connection to VTAM.
- If the application program is currently using the correct USERVAR and is :
 - The active supplier of the services represented by the USERVAR, redefine the USERVAR with the MODIFY USERVAR,APPC=YES command.
 - Not the active supplier of the services represented by the USERVAR, no action is required.

System programmer response: If the MODIFY USERVAR command was issued through the program operator interface, determine which USERVAR should be defined for the application program and correct the mechanism that established the incorrect USERVAR definition.

Routing code: 2

Descriptor code: 5

IST1035I ERROR WHILE {ADDING|DELETING} NETWORK *netid* {TO|FROM} GWN *gatewaynode*

Explanation: This message is the first in a group of messages that VTAM issues when the COS table name (defined by the COSTAB operand) or the maximum subarea value (defined by the MAXSUBA operand) on the BUILD or NETWORK definition statement could not be defined to VTAM. A complete description of the message group follows.

```
IST1035I ERROR WHILE {ADDING|DELETING} NETWORK netid {TO|FROM} GWN gatewaynode
IST523I REASON = reason
```

IST1035I

- *netid* is the dynamic network to which a connection was attempted. When *gatewaynode* is activated, this statement is processed. For gateway nodes, this is a model network statement.
- *gatewaynode* is the gateway node for which network *netid* could not be added or deleted.

IST523I

- *reason* indicates the reason for the failure, and is one of the following:

COSTAB NOT FOUND

The COS table name associated with a model network could not be found when VTAM attempted to add network *netid*.

COSTAB USE COUNT OVERFLOW

VTAM has exceeded its ability to record *gatewaynode*'s sharing of the COS table coded on the COSTAB operand.

DUPLICATE COSTAB

The COS table for *netid* and for *gatewaynode* has already been defined on a BUILD or NETWORK definition statement for *gatewaynode*.

DUPLICATE MAXSUBA

The maximum subarea value (MAXSUBA) has already been defined on a BUILD or NETWORK definition statement for *gatewaynode* or another gateway node.

DUPLICATE SUBAREA

The subarea value has already been defined on a BUILD or NETWORK definition statement for another gateway node.

INSUFFICIENT STORAGE

Network *netid* cannot be added or deleted because of insufficient storage.

INSUFFICIENT STORAGE TO DEFINE COSTAB

The COS table name (COSTAB) cannot be defined because of insufficient storage.

INSUFFICIENT STORAGE TO DEFINE MAXSUBA

The maximum subarea value (MAXSUBA) cannot be defined because of insufficient storage.

INSUFFICIENT STORAGE TO DEFINE SUBAREA

The subarea cannot be defined because of insufficient storage.

MAXSUBA USE COUNT OVERFLOW

VTAM has exceeded its ability to record *gatewaynode*'s sharing of the maximum subarea value coded on the MAXSUBA operand.

MODEL NETWORK NOT FOUND

The model network coded on the NETWORK definition statement with COPIES= was not defined for *gatewaynode*.

UNEXPECTED RETURN CODE

An unexpected return code was found while adding or deleting network *netid*.

UNEXPECTED RETURN CODE DEFINING COSTAB

An unexpected return code was found while defining the COS table.

UNEXPECTED RETURN CODE DEFINING MAXSUBA

An unexpected return code was found while defining the maximum subarea value.

UNEXPECTED RETURN CODE DEFINING SUBAREA

An unexpected return code was found while defining the subarea value.

UNEXPECTED RETURN CODE DELETING COSTAB

An unexpected return code was found while deleting the COS table.

UNEXPECTED RETURN CODE DELETING MAXSUBA

An unexpected return code was found while deleting the maximum subarea value.

UNEXPECTED RETURN CODE DELETING SUBAREA

An unexpected return code was found while deleting the subarea value.

System action: If this message was issued because network *netid* could not be added, all cross-network sessions destined to network *netid* will fail except for SSCP-SSCP sessions and for LU-LU sessions that use the default blank COS entry.

The system action depends on the value of *reason*:

COSTAB NOT FOUND

Network *netid* is ignored for *gatewaynode*.

IST1035I

COSTAB USE COUNT OVERFLOW

The COS table name is ignored. Even though the Class of Service table is defined for other active NCPs, it still cannot be used for this NCP definition, since its usage cannot be recorded to VTAM.

DUPLICATE COSTAB

The COS table name is ignored. The original COS table name for the NETID defined in this NCP definition is used.

DUPLICATE MAXSUBA

The maximum subarea value is ignored. A different value has already been defined successfully to this host, and cannot be changed or redefined for the network identified by the coded NETID until all networks that depend on this maximum subarea value are deactivated.

DUPLICATE SUBAREA

The subarea name is ignored. The original subarea name for the NETID defined in this NCP definition is used.

INSUFFICIENT STORAGE

Network *netid* cannot be added or deleted because of insufficient storage. Processing continues.

INSUFFICIENT STORAGE TO DEFINE COSTAB

The COS table name is ignored.

INSUFFICIENT STORAGE TO DEFINE MAXSUBA

The maximum subarea value is ignored. If this host resides in the gateway NCP's native network, and will own links or link stations in the network identified by the NETID operand, it will be impossible to activate those links or link stations without knowledge of that network's maximum subarea value. However, if the definition of another NCP has successfully defined the maximum subarea for the network, such link and link station activations will be possible, as long as that other NCP is not deactivated.

INSUFFICIENT STORAGE TO DEFINE SUBAREA

The subarea name is ignored.

MAXSUBA USE COUNT OVERFLOW

The maximum subarea value is ignored.

MODEL NETWORK NOT FOUND

The definition of network *netid* fails.

UNEXPECTED RETURN CODE

The definition of network *netid* fails.

UNEXPECTED RETURN CODE DEFINING COSTAB

The COS table name is not defined.

UNEXPECTED RETURN CODE DEFINING MAXSUBA

The maximum subarea value is not defined.

UNEXPECTED RETURN CODE DEFINING SUBAREA

The subarea value is not defined.

UNEXPECTED RETURN CODE DELETING COSTAB

The COS table name is not deleted.

UNEXPECTED RETURN CODE DELETING MAXSUBA

The maximum subarea value is not deleted.

UNEXPECTED RETURN CODE DELETING SUBAREA

The subarea value is not deleted.

Operator response:

- If *text* is **COSTAB NOT FOUND**, **DUPLICATE COSTAB**, or **COSTAB USE COUNT OVERFLOW**, enter a `DISPLAY COS,ORIGIN=gatewaynode,NETID=*` command, and save the system log for problem determination.
- If *text* is **INSUFFICIENT STORAGE...**, deactivate all links to network *netid*, then reactivate those links later when more storage is available. Enter a `DISPLAY BFRUSE` command. Issue the `DISPLAY STORUSE` command to display storage usage for storage pools. Save the system log and request a dump for problem determination.
- For all other *reasons*, save the system log for problem determination.

System programmer response:

COSTAB NOT FOUND

Review the output from the DISPLAY COS command and contact the IBM software support center.

COSTAB USE COUNT OVERFLOW

Review the output from the DISPLAY COS command. Restrict the usage of the COSTAB name for each network and NCP to less than 256. If many NCPs need to be active simultaneously, use different COSTAB names, each defining COSTABs for many other networks. Use the MODIFY TABLE command to correct problems.

DUPLICATE COSTAB

Identify the COSTAB name coded for the same NETID by reviewing all the BUILD and NETWORK definition statements preceding the definition statement specified for the indicated network, *netid*. Code only a single COSTAB name for any one network in this NCP definition. Use the MODIFY TABLE command to correct problems.

DUPLICATE MAXSUBA

Check to determine whether the maximum subarea value specified on the MAXSUBA keyword for the BUILD or NETWORK definition statement for the indicated NETID start option, *netid* is valid. This value must also be identical to the maximum subarea values on all other BUILD or NETWORK definition statements in this or another NCP definition that have ever been activated.

DUPLICATE SUBAREA

Check all the BUILD and NETWORK definition statements preceding the definition statement specified for the indicated network to identify the subarea value coded for the same NETID. Code only a single subarea value for any one network in this NCP definition. Be sure to check all definition statements that are active.

INSUFFICIENT STORAGE...

It may be necessary to cancel nonessential jobs or deactivate an unused part of the network to prevent further losses. You might have to halt and restart VTAM if there are too many failures.

You might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

MAXSUBA USE COUNT OVERFLOW

Contact the IBM software support center.

MODEL NETWORK NOT FOUND

This error can be caused in one of two ways:

- The NCP was generated with a definition statement that included a model network, but the model network was removed before the definition was activated by VTAM. If this is the case, restore the model network and activate the corrected definition statement.
- There is an error in the NCP that is causing it to generate requests for no reason. Contact the IBM software support center.

UNEXPECTED RETURN CODE

Contact the IBM software support center.

UNEXPECTED RETURN CODE DEFINING COSTAB

Contact the IBM software support center.

UNEXPECTED RETURN CODE DEFINING MAXSUBA

Contact the IBM software support center.

UNEXPECTED RETURN CODE DEFINING SUBAREA

Contact the IBM software support center.

UNEXPECTED RETURN CODE DELETING COSTAB

Contact the IBM software support center.

UNEXPECTED RETURN CODE DELETING MAXSUBA

Contact the IBM software support center.

IST1036I • IST1037I

UNEXPECTED RETURN CODE DELETING SUBAREA

Contact the IBM software support center.

Routing code: 8

Descriptor code: 4

IST1036I NODE ABEND-UNUSABLE RESOURCE IS *resource*

Explanation: VTAM issues this message when a resource defined in an external communication adapter (XCA) major node cannot recover from an abend.

resource contains the type and name of the abended resource. Possible values are:

LINE *linename*

Line *linename* in an XCA major node is unusable. All other lines in this major node are unaffected.

SAP *sapnum* **IN NODE** *nodename*

Service access point (SAP) *sapnum* in XCA major node *nodename* is unusable.

If *sapnum* is an SNA SAP, all lines associated with this SAP are unusable. Any VCNS line in this major node is unaffected.

If *sapnum* is a VCNS SAP, the specified SAP is unusable. All other SAPs associated with the VCNS line are unaffected. All SNA lines are unaffected.

NODE *nodename*

XCA major node *nodename* is unusable. All SNA and VCNS lines in this major node are unusable. Other VTAM major nodes are unaffected.

System action: The resource identified in the message and all resources using it are marked unusable. Processing continues unchanged for all other resources.

Operator response: Save the system log and dump for problem determination.

System programmer response: Use the system log and dump to assist you in determining the reason for the abend. To use the failed resource, you must halt and restart VTAM. If you need additional assistance, contact the IBM software support center.

Routing code: 2

Descriptor code: 2

IST1037I NODE ABEND-INOP REPORTED FOR *resource*

Explanation: VTAM issues this message when a resource defined in an XCA major node abends and recovers by processing an inoperative condition. The line or lines in the scope of the failing resource will eventually become inoperative.

resource contains the type and name of the abended resource. Possible values are:

LINE *linename*

Line *linename* in an XCA major node is processed as inoperative. All other lines in this major node are unaffected.

SAP *sapnum* **IN NODE** *nodename*

Service access point (SAP) *sapnum* in XCA major node *nodename* is processed as inoperative.

If *sapnum* is an SNA SAP, all lines associated with this SAP are processed as inoperative. Any VCNS line in this major node is unaffected.

If *sapnum* is a VCNS SAP, the specified SAP is processed as inoperative. All other SAPs associated with the VCNS line are processed as inoperative. All SNA lines are unaffected.

NODE *nodename*

XCA major node *nodename* is processed as inoperative. All SNA and VCNS lines in this major node are processed as inoperative. Other VTAM major nodes are unaffected.

System action: The resource identified in the message and all resources using the identified resource are processed as inoperative.

Operator response: When inoperative processing is complete, VTAM issues message IST259I. Restart the inoperative resources. If only a few resources are inoperative, you can restart them individually; otherwise, restart the XCA major node. Save the system log and dump for problem determination.

System programmer response: Use the system log and dump to assist you in determining the reason for the abend. If you need additional assistance, contact the IBM software support center. See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information on the abend procedure and dumps.

Routing code: 2

Descriptor code: 2

IST1038I MODIFY NOTRACE REJECTED-VIT IS NOT WAITING TO TERMINATE

Explanation: VTAM issues this message in response to a MODIFY NOTRACE,TYPE=VTAM,OPTION=FORCE command when the VTAM internal trace (VIT) is not waiting to terminate. OPTION=FORCE is only valid when you previously tried (unsuccessfully) to stop the VIT using OPTION=END.

System action: The MODIFY NOTRACE command is rejected. Processing continues.

Operator response: Enter a MODIFY NOTRACE,TYPE=VTAM,OPTION=END command to stop the VTAM internal trace. This should terminate the VIT. If it does not, reenter the MODIFY NOTRACE,TYPE=VTAM,OPTION=FORCE command.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1039I SSCP TKOVR FOR ID = *nodename* FAILED-INACT GVBK SCHEDULED

Explanation: VTAM issues this message when a takeover for *nodename* failed and was overridden by a VARY INACT,TYPE=GIVEBACK command. If an error occurred during takeover processing, this message informs the operator that an internal VARY INACT,TYPE=GIVEBACK command was entered.

System action: Nondisruptive deactivation of *nodename* and attached nodes continues.

Operator response: Save the system log for problem determination.

System programmer response: Check the system log to determine the cause of the problem.

Routing code: 2

Descriptor code: 5

IST1040I CONVERSATION(S) FOUND FOR *applname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY CONVID command. A complete description of the message group follows.

```
IST1040I CONVERSATION(S) FOUND FOR applname
IST1007I PARTNER = partner, LOGMODE = logmode
IST1008I CONVID = convid, STATUS = status, ETIME = etime
IST2161I BLOCKED TIME = btime
IST1009I SID = sid, HPDT = hpdvalue
IST924I -----
IST1007I PARTNER = partner, LOGMODE = logmode
IST1008I CONVID = convid, STATUS = status, ETIME = etime
IST2161I BLOCKED TIME = btime
IST1009I SID = sid, HPDT = hpdvalue
IST924I -----
:
:
IST314I END
```

IST1040I

Message IST1040I provides the name of the LU 6.2 application program, *applname*, specified on the operator command. Messages IST1007I, IST1008I, IST2161I, and IST1009I provide information concerning an individual conversation with the LU 6.2 application program. Message IST924I is used as a line separator to separate the different individual conversations found for the LU 6.2 application program.

applname is the name of the LU 6.2 application program specified in the operator command.

partner is the name of the partner LU for which DISPLAY information was requested.

logmode is the logon mode name for which DISPLAY information was requested.

convid is the conversation identifier for the specified application program and its partner LU.

status is the status of the conversation. Possible values are: If the *status* value ends with */D*, deallocation is pending for the conversation. The */D* modifier applies to persistent sessions only. If the *status* value ends with */B*, the conversation is blocked due to session level pacing. If the *status* value ends with */V*, the conversation is blocked due to virtual route pacing. If the status ends with */H*, the conversation is blocked due to HPR backpressure.

Status

Meaning

E_CONV

Half-duplex end conversation; the conversation is being deallocated.

F_SR

Full-duplex send/receive; the application program is capable of sending data to and receiving data from the partner LU.

F_S0

Full-duplex send only; the application program has received a deallocation request from the partner LU. The application program can send data to the partner LU and is expected to send a deallocation request to end the conversation.

F_RO

Full-duplex receive only; the application program has sent a deallocation request to the partner LU. The application program can receive data from the partner LU and is expecting to receive a deallocation request to end the conversation.

FP_SR_L

Full-duplex pending send/receive log; the application program has received an error notification accompanied by error log data. After the application receives the data, the conversation will return to a SEND/RECEIVE state.

FP_RO_L

Full-duplex pending receive only log; the application program has received an error notification accompanied by error log data. After the application receives the data, the conversation will return to a RECEIVE_ONLY state.

FP_RS_L

Full-duplex pending reset log; the end of the conversation is pending receipt of error log data. After the application program receives the error log data, the conversation will enter a RESET state.

F_R_FM5

Full-duplex receive FMH-5; the conversation is in a SEND/RECEIVE state, but there is an FMH-5 waiting to be received. After the application program receives the FMH-5, the conversation becomes usable.

P_ALOC

Pending allocation state; the application has reserved a session and conversation, but an FMH-5 has not been processed on the conversation.

P_DEAL

Half-duplex pending deallocation; the application program is waiting for the partner LU to confirm the receipt of data.

P_E_LOG

Half-duplex pending end conversation log; the end of the conversation is pending the receipt of error log data.

P_R_LOG

Half-duplex pending receive log; the application program can receive error log data that does not precede the end of the conversation.

P_SEND

Half-duplex pending send; the application program has received data and the change direction command. The conversation will be placed in SEND state following the acceptance of data and a subsequent SEND operation.

R_CFM

Half-duplex receive confirmation; the application program is expected to reply to a confirmation request.

R_CFM_D

Half-duplex receive confirmation deallocate; the application program is expected to reply to a confirmation request that will also change the state to deallocate.

R_CFM_S

Half-duplex receive confirmation send; the application program is expected to reply to a confirmation request and has also received a change direction command, implying that the application program will be placed in a SEND state after the confirmation.

R_FMH5

Half-duplex receive FMH-5; the conversation is in a RECEIVE state, but there is an FMH-5 waiting to be received. After the application program receives the FMH-5, the conversation will become usable.

RECEIVE

Half-duplex receive; the application program is expecting information from the partner LU.

RESET

Full-duplex or half-duplex reset; the conversation has been deallocated.

SEND

Half-duplex send; the application program is capable of sending data to or requesting confirmation from the partner LU.

etime is the elapsed time, in minutes, since the last API operation was performed on the conversation. If the elapsed time is greater than 99999, the value of *etime* is **99999**.

btime is the elapsed time, in minutes, since the conversation went into a blocked state due to session level pacing, virtual route pacing, or HPR backpressure. If the elapsed time is greater than 99999, the value of *btime* is **99999**.

sid is the session identifier for the conversation.

hpdtvalue will be either YES or NO indicating whether high performance data transfer (HPDT) services were available on the session, used by the conversation, at the time the session was established.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1041I *nodename nodetype*

Explanation: This message is part of a group of messages that VTAM issues in response to the following commands:

- DISPLAY TRACES,TYPE=NODES,ID=(*nodename1, nodename2,...,nodenamen*)
- DISPLAY TRACES,TYPE=NODES,ID=*
- DISPLAY TRACES,TYPE=ALL

A complete description of the message group follows.

```
IST350I  DISPLAY TYPE = type
IST075I  NAME = nodename, TYPE = nodetype
IST1041I nodename nodetype
```

IST1041I

```
[IST752I GPT TRACE STATUS = status [ALSNAME = alsname]]
:
:
[IST1042I tracetype = status [- AMOUNT = value] [- SAVED = {YES|NO}]]
IST2183I QDIOSYNC = armstate - SYNCID = syncid - SAVED = saved_state
[IST924I -----]
IST1422I SAVED TRACE REQUESTS FOR value
IST1041I nodename nodetype
[IST1042I tracetype = status [- AMOUNT = value] [- SAVED = {YES|NO}]]
IST2183I QDIOSYNC = armstate - SYNCID = syncid - SAVED = saved_state
:
:
IST314I END
```

If ID identifies multiple resources to be displayed or ID=*, the IST1041I subgroup is repeated for each resource that has active traces. Line separator message IST924I is issued to separate information for each major node.

IST075I

- *nodename* is the name of the major or minor node that is associated with the trace data displayed in this message subgroup. If ID=* was entered on the DISPLAY TRACES command, *nodename* is a major node containing subordinate nodes with active traces.
- *nodetype* is the resource type of the major or minor node. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.
 - If *nodetype* is **CP**, **RESOURCE**, or **SSCP**, *nodename* is a resource that may not yet be defined to VTAM. In this case, *nodetype* is the IDTYPE specified on the MODIFY TRACE command, and *status* in message IST1042I is always **SAVED**.

IST350I

- This message identifies the type of information shown in the display. Possible values are:

TRACES, TYPE=NODES

The display contains the status of the BUF, GPT, IO, LINE, SIT, and TG trace for a particular resource and its subordinate nodes.

TRACES, TYPE=SMS

The display contains the status of the SMS buffer trace.

TRACES, TYPE=VTAM

The display contains the status of the VTAM internal trace.

IST752I

This message is displayed when the generalized PIU trace (GPT) is displayed for an independent LU. VTAM issues this message once for each adjacent link station (ALS) that the independent LU is using. VTAM issues this message only for adjacent link stations that exist in an NCP major node (or, for a switched connection, link stations that are connected through a link in an NCP major node).

status is the trace status code. See the z/OS Communications Server: IP and SNA Codes for more information on resource status codes.

alsname is the name of the adjacent link station that the independent LU is using.

IST1041I

- *nodename* can be one of the following:
 - The major or minor node displayed in message IST075I.
 - The name of a resource subordinate to the major or minor node displayed in message IST075I, if there is an active trace for that resource.
- *nodetype* is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

IST1042I

- This message is always issued in this group except in the case when the GPT trace status is displayed for an independent LU. Then message IST752I is displayed.
- *tracetype* is the name of an active trace and can be one of the following:

BUF
Buffer contents trace

GPT
Generalized PIU trace (GPT)

IO Input/output trace

LINE
Line trace

SIT
Scanner interface trace (SIT)

STATE
Resource state trace

TG Transmission group (TG) trace

- *status* is the status of the displayed trace and can be one of the following:

ON *tracetype* is **BUF**, **IO**, or **STATE**, and the trace is active for this resource.

SAVED
tracetype is **BUF** or **IO**, and the trace command is saved for this resource. This status is displayed when **SAVE=YES** was specified on the **MODIFY TRACE** command, and the resource has not yet been defined to VTAM.

TRACT
tracetype is **GPT**, **LINE**, **SIT**, or **TG**, and the trace is active for this resource.

TRPAR
tracetype is **GPT**, **LINE**, **SIT**, or **TG**, and the trace is in the process of being activated.

For additional *status* information, see the z/OS Communications Server: IP and SNA Codes.

TRPDR
tracetype is **GPT**, **LINE**, **SIT**, or **TG**, and the trace is in the process of being deactivated.

For additional *status* information, see the z/OS Communications Server: IP and SNA Codes.

AMOUNT = *value* is displayed only if the buffer contents trace is active (*tracetype* is **BUF**) and indicates how much of the buffer's contents are traceable.

- *value* represents the **AMOUNT** operand value specified on the **TRACE** start option or the **MODIFY TRACE** command, and can be one of the following:

PARTIAL
The trace record has a maximum size of 256 bytes including header information.

FULL All of the buffer's contents are traceable.

Note: If **AMOUNT** is not specified when the buffer contents trace is activated, the default *value* **PARTIAL** is displayed.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

SAVE = {YES|NO} indicates the value that was specified on the **SAVE** operand of the **MODIFY TRACE** command and is displayed only if the buffer contents, I/O, or resource state trace is active.

IST1422I

This message is displayed if there are traces saved for resources that are not active. Messages IST1041I and IST1042I are displayed following this message for each resource.

value is the value specified on the **ID** operand of the **DISPLAY TRACES** command. If **TYPE=ALL** was specified on the command, *value* is *.*.

IST2183I

IST1042I • IST1043I

- This message will only appear for a TRLE representing an OSA-Express2 or later Adapter and only when the OSA-Express2 or later adapter is armed for QDIOSYNC. See QDIOSYNC trace in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for a description of the QDIOSYNC trace function.
- *armstate* is the OPTION operand value from the MODIFY TRACE command or TRACE start option.

Tip: The OSA might be collecting more than what is specified here while OSA merges the options for all Armed data devices. Valid values are:

ALLIN OSA is collecting inbound diagnostic data for all devices.

ALLINOUT

OSA is collecting inbound and outbound diagnostic data for all devices.

ALLOUT

OSA is collecting outbound diagnostic data for all devices.

IN OSA is collecting inbound diagnostic data for devices defined to this VTAM.

INOUT

OSA is collecting inbound and outbound diagnostic data for devices defined to this VTAM.

OUT OSA is collecting outbound diagnostic data for devices defined to this VTAM.

- *syncid* is the SYNCID operand value from the MODIFY TRACE command or TRACE start option. This value is to be used as part of a correlator when the OSA-Express2 or later diagnostic data is captured.
- *saved_state* is the SAVE operand value from the MODIFY TRACE command or TRACE start option. Valid values are YES or NO.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1042I *tracetype = status* [- AMOUNT = *value*] [- SAVED = {YES|NO}]

Explanation: VTAM issues this message as part of a message group. See the explanation of message IST1041I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1043I CP NAME = *cpname*, CP NETID = *netid*, DYNAMIC LU = {YES|NO}

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1.

cpname is the name of the CP associated with the PU.

The meaning of *netid* is determined by the XNETALS start option and the NETID value specified on the PU definition statement. See the z/OS Communications Server: SNA Resource Definition Reference for information about the XNETALS start option.

If *cpname* or *netid* is not known, VTAM issues *****NA*****.

DYNAMIC LU indicates whether the PU supports dynamic independent LUs. This corresponds to the value of the DYNLU operand on the PU definition statement.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1044I **ALSLIST** = *alsname alsname alsname alsname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an independent LU.

The *alsnames* are the names of all adjacent link stations defined for the independent LU specified in the DISPLAY ID command. VTAM issues this message until all adjacent link station names are displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1045I **NODE TYPE** = *nodetype*

Explanation: VTAM issues this message as part of several different message groups. See the explanation of the first message in the group for a complete description.

See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

Routing code: 2

Descriptor code: 5

IST1046I *nodetype nodename* **ALSO EXISTS**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID=*name* command or a DISPLAY VTAMSTOR,RESOURCE command and indicates that more than one resource has the same name.

nodetype is one of the following:

CP Control point *nodename* exists, in addition to the SSCP (or CDRM) displayed in message IST075I.

SHADOW

A shadow for *nodename* exists, in addition to the resource displayed in message IST075I.

SSCP

SSCP (or CDRM) *nodename* exists, in addition to the CP displayed in message IST075I.

nodename is the network-qualified name of the resource in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1048I **COMPRESSION LEVEL – INPUT** = *input_level*, **OUTPUT** = *output_level*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1049I PERCENT REDUCTION – INPUT = *input_percent*, OUTPUT = *output_percent*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1050I MAXIMUM COMPRESSION LEVEL – INPUT = *input_level*, OUTPUT = *output_level*

Explanation: VTAM issues this message in response to a DISPLAY ID command entered for an application. The message displays the maximum compression level for the application when the application is the primary logical unit (PLU).

input_level is the maximum compression level for input session traffic that is specified on the CMPAPPLI operand on the APPL definition statement.

output_level is the maximum compression level for output session traffic that is specified on the CMPAPPLO operand on the APPL definition statement.

See the z/OS Communications Server: SNA Resource Definition Reference for more information on the APPL definition statement. See the z/OS Communications Server: SNA Network Implementation Guide for more information on compression limits and compression levels.

System action: Processing continues.

Operator response: To change the maximum compression levels, use the MODIFY COMPRESS command. Otherwise, no action is necessary. See z/OS Communications Server: SNA Operation for more information.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1051I EVENT CODE = *code*

Explanation: VTAM issues this message as part of a message group. The first message in the group is either IST530I or IST1436I. See the first message in the group for a complete description.

See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

Routing code: 8

Descriptor code: 4

IST1052I SYNTAX ERROR AFTER *option*—ALL FURTHER OPTIONS IGNORED

Explanation: VTAM issues this message when the start option after *option* contains a syntax error.

System action: VTAM ignores any start options after *option*. VTAM will issue message IST1311A to prompt you for the correct start options.

Operator response: Enter all start options after the last valid start option in response to IST1311A. You can also enter a blank if you want to accept the default values for all further start options.

System programmer response: If *option* is coded in an ATCSTRxx file, correct the syntax of the options following *option* in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1053I VALUE FOR *option* MUST BE 'YES' OR 'NO'

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when *option* contains a value other than YES or NO.

System action: VTAM ignores *option*.

- If the error occurred during START processing, VTAM will issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing, enter a value of YES or NO for *option* in response to IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered *option* correctly.

System programmer response:

- If the error occurred during START processing, correct the value for *option* if *option* is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1054I VALUE FOR *option* MUST BE BETWEEN *min* AND *max*

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the value of *option* is out of range. The value of *option* must be between *min* and *max*.

System action: VTAM ignores the option specified by the *option* value.

- If the error occurred during START processing, VTAM might issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing and you were prompted to enter a value for the option, specify a value between the *min* value and the *max* value, in response to message IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered the *option* value correctly.

System programmer response:

- If the error occurred during START processing, correct the option value if the value that is coded represents an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1055I VALUE FOR *option* MUST BE *type*

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the value of *option* is not the correct *type*. Possible values are:

NUMERIC

The value for *option* must be an integer.

TIMER The value for *option* must be in the form **xxI**, where **xx** is a numeric value and **I** is a character designation of

IST1056I • IST1057I

a time interval (**S** = seconds, **M** = minutes, **H** = hours, **D** = days). Individual start options that use **TIMER** notation have different valid ranges. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

System action: VTAM ignores *option*.

- If the error occurred during START processing, VTAM will issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing, enter a valid value for *option* in response to IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered *option* correctly.

System programmer response:

- If the error occurred during START processing, correct the value for *option* if *option* is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1056I *option* **PARAMETER *n* MUST BE BETWEEN *min* AND *max***

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the *n*th parameter specified for *option* is out of range. The value of this parameter must be between *min* and *max*.

System action: VTAM ignores *option*.

- If the error occurred during START processing, VTAM will issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing, enter a value between *min* and *max* for parameter *n* in response to IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered *option* correctly.

System programmer response:

- If the error occurred during START processing, correct the value for *option* if *option* is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1057I *resourcename* **IS ALSO A REAL RESOURCE**

Explanation: VTAM issues this message in response to the following commands:

- DISPLAY SESSIONS

VTAM displays information about sessions for the active network resource *resourcename*. This message follows IST113I or IST1156I and indicates that a USERVAR and an active network resource have the same name.

resourcename is the network-qualified name of the resource in the form *netid.name*.

- DISPLAY ID=*displayname*,IDTYPE=LUALIAS or IDTYPE=USERVAR

This message is part of a group of messages headed by IST075I. The name specified on the command identifies both an LUALIAS or USERVAR name **and** a network resource.

- If IDTYPE=USERVAR was specified, *resourcename* is the name of the resource. If a network-qualified name was entered on the command for *displayname*, *resourcename* is issued as a network-qualified name in the form *netid.name*.
- If IDTYPE=LUALIAS was specified, *resourcename* is not network-qualified.
- DISPLAY VTAMSTOR,RESOURCE command

System action: Processing continues.

Operator response:

- DISPLAY SESSIONS

For session information about the value of the USERVAR, enter a DISPLAY SESSIONS command for the USERVAR value in message IST113I or IST1156I. You can enter a DISPLAY USERVAR command to list the current active USERVARS defined in this network.

For information about additional sessions with the active network resource *resourcename*, rename your USERVAR.

- DISPLAY ID=*displayname*,IDTYPE=LUALIAS or IDTYPE=USERVAR

You can display information about the network resource by entering the DISPLAY ID=*displayname*,IDTYPE=RESOURCE command, where *displayname* is the name of the resource.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1058I **MODEL LU GROUP =** *lugroup*, **LUSEED =** *pattern*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command entered for a PU that supports dynamic LU definitions.

lugroup is the model LU group used to define dynamic LUs for this PU. The value of *lugroup* corresponds to the LUGROUP keyword on the PU definition statement.

pattern is the character pattern passed to the selection of definitions for dependent LUs (SDDL) exit. This pattern can be used to generate names for dynamically defined LUs. The value of *pattern* corresponds to the LUSEED keyword on the PU definition statement. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1059I **MODEL NAME =** *modelname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a dynamically defined resource. *modelname* is the name of the model that was used to build the resource.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1060I LUGROUP MAJOR NODE = *lugroupnode*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY LUGROUPS command. *lugroupnode* is the name of the LUGROUP major node being displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1061I FAILURE OCCURRED ON *puname* AT *locaddr*

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1016I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1062I EVENT ID = *eventid*

Explanation: VTAM issues this message as part of a message group. The first message in the group is either IST530I or IST1436I. See the first message in the group for a complete description.

See the z/OS Communications Server: IP and SNA Codes for a description of *eventid*.

Routing code: 8

Descriptor code: 4

IST1063I MODELS AFTER THE 255TH MODEL IN LUGROUP *lugroup* IGNORED

Explanation: VTAM issues this message during the activation of LUGROUP *lugroup* when *lugroup* contains more than 255 model LU definitions. An LUGROUP cannot have more than 255 models.

System action: Only the first 255 models in *lugroup* are defined; all models after the 255th model are ignored. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the definition of *lugroup*. An LUGROUP major node cannot contain more than 255 model LUs. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

Routing code: 2

Descriptor code: 5

IST1064I TRACE IGNORED, *nodename* – STORAGE SHORTAGE

Explanation: This message is the first in a group of messages that VTAM issues when sufficient storage is not available to start the requested trace. A complete description of the message group follows.

IST1064I TRACE IGNORED, *nodename* – STORAGE SHORTAGE

IST1045I NODE TYPE = *nodetype*

IST314I END

If a network-qualified name was entered on the start option or the MODIFY TRACE command, VTAM issues *nodename* in the form *netid.name*.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action:

- If *nodename* is **VTAM** and you are trying to start an internal trace (for example, `type=VTAM`), initialization continues without a VTAM internal trace table.
- If *nodename* is anything other than **VTAM**, VTAM issues message IST1311A which prompts you to reenter any start option overrides.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the `DISPLAY BFRUSE` command. Issue the `DISPLAY STORUSE` command to display storage usage for storage pools. Save the system log and dump for problem determination.

For a VTAM internal trace, enter a `MODIFY TRACE` command, specifying a smaller buffer size.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the `MODIFY VTAMOPTS` command, you must modify the VTAM start options file (`ATCSTRxx`) and restart VTAM to use the start option.

- See the *z/OS Communications Server: SNA Resource Definition Reference* for a description of VTAM start options.
- See *z/OS Communications Server: SNA Operation* for information about the `DISPLAY BFRUSE` command, the `DISPLAY STORUSE` command, and the `MODIFY VTAMOPTS` command.
- See the *z/OS Communications Server: SNA Network Implementation Guide* for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the *z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT* for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1065I LOAD MODULE REQUESTED IPL ESTIMATED IPL

Explanation: VTAM issues this message as part of a subgroup of messages in response to a `DISPLAY DISK` command.

This message subgroup is displayed in a message group headed by IST951I. See the explanation of that message for additional information.

A complete description of this message subgroup follows.

```
IST1065I LOAD MODULE REQUESTED IPL ESTIMATED IPL
IST1066I load_module requested_time estimated_time
:
```

This subgroup is issued when an IPL has been scheduled for at least one load module on the disk. IST1066I is repeated for each load module.

- If there is only one load module with a scheduled IPL, VTAM issues message IST1066I for this load module. In addition, IST1066I is repeated for all load modules even if they do not have a scheduled IPL. An example follows:

```
IST1065I LOAD MODULE REQUESTED IPL ESTIMATED IPL
IST1066I load_module requested_time estimated_time
IST1066I load_module ***NA***      ***NA***
IST1066I load_module ***NA***      ***NA***
```

- If there are no load modules with a scheduled IPL, VTAM does not issue the subgroup.

IST1066I

load_module is the name of the load module on the disk.

requested_time is the time for which an IPL was scheduled as entered in a `MODIFY LOAD` command. This time reflects the time zone where `MODIFY LOAD` was entered, not the time zone where `DISPLAY DISK` was entered.

estimated_time is the time the IPL will take place as calculated by VTAM. This time reflects the time zone where `DISPLAY DISK` was entered. Differences between *requested_time* and *estimated_time* can be caused by the following:

- The `MODIFY LOAD` and `DISPLAY DISK` commands were entered in different time zones.

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- There was a network delay between VTAM and NCP when the MODIFY LOAD was entered. In this case, *estimated_time* is the actual IPL time.
- There is a network delay between VTAM and NCP when the DISPLAY DISK is entered. In this case, the actual IPL time will be earlier than *estimated_time*.
- The host system clock was adjusted between the time MODIFY LOAD was entered and the time DISPLAY DISK was entered.

The *requested_time* and *estimated_time* values specify when an IPL was scheduled. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1066I *load_module requested_time estimated_time*

Explanation: VTAM issues this message as part of a message subgroup. The first message in this subgroup is IST1065I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1067I LOGICAL LINES:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU that is the physical resource for one or more groups of logical lines. VTAM issues message IST080I to indicate the name and status of the logical lines associated with the preceding PU.

VTAM also issues this message as part of a group of messages in response to a DISPLAY ID command for a switched frame relay physical line whose switched PU is the physical resource for one or more groups of logical lines. VTAM issues message IST080I to indicate the name and status of the logical lines associated with the preceding physical line.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1068I PHYSICAL RESOURCE (PHYSRSC) = *puname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a line or a line group.

puname is the name of the physical resource associated with the resource (a logical line or line group containing logical lines or a transport resource list element) that is being displayed.

If the physical unit, defined in the NCP definition, whose name is specified by the PHYSRSC keyword is a switched PU that is not currently connected, then *highernode* is the physical line.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1069I **PARAMETER *n* FOR *option* MUST BE *type***

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the *n*th parameter specified for start option *option* is not the correct *type*. Possible values are:

NUMERIC

The value for *option* must be a numeric value.

TIMER The value for *option* must be in the form **xxI**, where **xx** is a numeric value and **I** is a character designation of a time interval (**S** = seconds, **M** = minutes, **H** = hours, **D** = days). Individual start options that use **TIMER** notation have different valid ranges. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

System action: VTAM ignores *option*.

- If the error occurred during START processing, VTAM will issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing, enter a valid value for parameter *n* of *option* in response to IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered *option* correctly.

System programmer response:

- If the error occurred during START processing, correct the value for *option* if *option* is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1070I ***value* FOR *option* NOT VALID – START CONTINUES**

Explanation: VTAM issues this message when the value specified for start option *option* is not valid.

System action: VTAM ignores *option*. VTAM will issue message IST1311A to prompt you for the correct value of *option*.

Operator response: Enter a valid value for *option* in response to message IST1311A. You can also enter a blank if you want to accept the default value for *option*.

For the NNSPREF start option, a prompt might be issued, depending on the type of error. If no prompt is issued, enter a MODIFY VTAMOPTS,NNSPREF command with the correct value following the completion of VTAM initialization.

For the DISABLED value of the HPRSESLM start option, a prompt is not issued and the HPRSESLM start option is set to NOLIMIT. To change this value, enter a MODIFY VTAMOPTS,HPRSESLM command with the correct value following the completion of VTAM initialization.

System programmer response: If *option* is coded in an ATCSTRxx file, correct the value for *option* in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1071I SONLIM OPTION PARAMETER 1 MUST BE GREATER THAN PARAMETER 2

Explanation: VTAM issues this message when the second parameter for the SONLIM start option is greater than the first parameter.

System action: VTAM ignores the values coded for SONLIM. VTAM will issue message IST1311A to prompt you for the correct value of SONLIM.

Operator response: Enter the correct parameters for SONLIM in response to message IST1311A. You can also enter a blank if you want to accept the default value for SONLIM.

System programmer response: If SONLIM is coded in an ATCSTRxx file, correct the value for SONLIM in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1072I *option* HAS TOO MANY PARAMETERS—START OPTION IGNORED

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when too many parameters are specified for start option *option*.

System action: VTAM ignores *option*.

- If the error occurred during START processing, VTAM will issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing, enter the correct parameters for *option* in response to IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered *option* correctly.

System programmer response:

- If the error occurred during START processing, correct the value for *option* if *option* is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1073I *option2* CAN ONLY BE SPECIFIED AFTER OPTION *option1*

Explanation: VTAM issues this message when start option *option2* for TRACE, NOTRACE, TNSTAT, or NOTNSTAT is out of sequence. Start option *option1* is TRACE, NOTRACE, TNSTAT, or NOTNSTAT. *option2* must be specified after *option1*.

System action: VTAM ignores *option2*. VTAM will issue message IST1311A to prompt you for the correct value of *option1*.

Operator response: Enter *option2* after a TRACE, NOTRACE, TNSTAT, or NOTNSTAT start option. You can also enter a blank if you want to accept the default value for *option1*.

System programmer response: If *option2* is coded in an ATCSTRxx file, move the value for *option2* after the value for *option1* in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1074I PARAMETERS FOR *option* ARE NOT in THRESHOLD LIMITS

Explanation: This message is issued when one of the following occurs while processing buffer pool start options:

- The base number (baseno) is less than or equal to the slow point (slowpt) or expansion point (xpanpt).
- The expansion point is not 0 and is less than or equal to the slow point. For SPBUF and LPBUF, the difference between the base number and the expansion point or between the base number and the slow point is less than or equal to five.

System action: VTAM ignores *option*. VTAM will issue message IST1311A to prompt you for the correct value of *option*.

Operator response: Enter the correct values for *option* in response to message IST1311A. You can also enter a blank if you want to accept the default values for *option*.

System programmer response: If *option* is coded in an ATCSTRxx file, correct the value for *option* in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1075I PARAMETER *n* FOR *option* IS NOT VALID

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the *n*th parameter specified for start option *option* contains a value that is not valid.

System action: VTAM ignores *option*.

- If the error occurred during START processing, VTAM will issue message IST1311A to prompt you for the correct value of *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response:

- If the error occurred during START processing, reenter all values for *option* in response to IST1311A. You can also enter a blank if you want to accept the default value for *option*.
- If the error occurred in response to a MODIFY VTAMOPTS command, ensure that you entered *option* correctly.

System programmer response:

- If the error occurred during START processing, correct the value for *option* if *option* is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1076I VALUE DEFINED FOR HOSTPU, *value*, IS A RESERVED KEYWORD

Explanation: VTAM issues this message when the host subarea PU name defined on the HOSTPU start option is one of the following reserved words: VTAMSEG, VTAMSG2, VTAM, ISTNOP, ISTPDCLU, ISTGROUP, or ISTATA00. *value* is the value defined for HOSTPU.

System action: VTAM ignores the value of HOSTPU. VTAM will issue message IST1311A to prompt you for the correct value of HOSTPU.

Operator response: Enter a valid value for HOSTPU in response to message IST1311A. You can also enter a blank if you want to accept the default value for HOSTPU.

System programmer response: If HOSTPU is coded in an ATCSTRxx file, correct the value for HOSTPU in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1077I **OPTION** *option* **AFTER** *type* **keyword** **IS NOT VALID**

Explanation: VTAM issues this message when an option specified after a certain type of TRACE/NOTRACE is not valid. *option* is a VTAM start option. *type* is the type of trace that is not valid. *Keyword* will be **TRACE** or **NOTRACE**.

System action: VTAM ignores the TRACE or NOTRACE start option. VTAM will issue message IST1311A to prompt you for the correct value of the TRACE or NOTRACE option.

Operator response: Enter the TRACE or NOTRACE again with all options in response to message IST1311A. You can also enter a blank if you want to accept the default values for the TRACE or NOTRACE.

System programmer response: If these start options are coded in an ATCSTRxx file, correct the option value for the TRACE or NOTRACE in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1078I **LIST START OPTION CANNOT BE IN START FILE—OPTION IGNORED**

Explanation: VTAM issues this message when the LIST start option is found in an ATCSTRxx file. This start option can be entered only when prompted or on the VTAM START command. See the z/OS Communications Server: SNA Resource Definition Reference for more information on the LIST start option.

System action: VTAM ignores the specified start option. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Remove LIST=xx statements from any ATCSTRxx files.

Routing code: 2

Descriptor code: 5

IST1079I *ncpname* **ACTIVATION CONTINUES—CANNOT ASSOCIATE** *groupname*

Explanation: This message is the first in a subgroup of messages that VTAM issues during the activation of NCP *ncpname*. A complete description of the message subgroup follows.

IST1079I *ncpname* ACTIVATION CONTINUES—CANNOT ASSOCIATE *groupname*
 IST1117I PHYSICAL RESOURCE (PHYSRSC) *puname* {IS NOT KNOWN|IS NOT A PU}

IST1079I

ncpname is the name of the NCP that is being activated.

groupname is the name of the line group that is defined to have an association with physical resource *puname* in message IST1117I.

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puname is the resource defined on the PHYSRSC operand of the GROUP definition statement.

This message describes the reason VTAM cannot associate *groupname* in message IST1079I and *puname*.

System action: VTAM does not associate line group *groupname* or its subordinate resources with *puname*. *groupname* is activated as an independent line group.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that the PHYSRSC operand on the GROUP statement for *groupname* specifies a PU statement in the same NCP definition and that the PU is owned by the host activating the NCP.

Routing code: 2

Descriptor code: 5

IST1080I {DUMP|LOAD} STATION NAME = *station_name*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 4.

station_name is the DUMP or LOAD station name for an NCP. If the DUMP or LOAD station name is not available when the DISPLAY command is issued, VTAM displays *****NA***** in this field.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1081I ADJACENT LINK STATION = *alsname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an LU.

alsname is the name of the adjacent link station associated with the LU specified in the DISPLAY ID command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1082I GENERATED ADDRESS FOR *cdrsname* DELETED FROM *alsname*

Explanation: VTAM issues this message in response to an address mismatch error. VTAM attempts to delete cross domain resource *cdrsname* that was generated under adjacent link station *alsname*. This message indicates that *cdrsname* was deleted.

If the PU for *alsname* is not found, VTAM issues *****NA*****.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1083I ERROR ACTIVATING ADJCP *adjcpname* SENSE = *code*

Explanation: VTAM issues this message when it encounters an error during the dynamic allocation of an adjacent control point.

adjcpname is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form *netid.name*.

code indicates the reason for the error. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

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System programmer response: Use the information in the system log and the explanation of *code* to resolve the problem.

Routing code: 2

Descriptor code: 5

IST1084I START LIST IGNORED – *name* WILL BE USED

Explanation: VTAM issues this message when an error occurs while processing the start list in message IST1215I and LISTBKUP=*backup_list* or LISTBKUP=DEFAULTS has been specified.

name can be one of the following:

- If *backup_list* is specified on the LISTBKUP start option, *name* is the name of the backup start list that will be processed in the place of the start list in error.
- If DEFAULTS is specified on the LISTBKUP start option, *name* is either **VTAM DEFAULTS** or **ATCSTR00**.
 - If *name* is **VTAM DEFAULTS**, the error occurred while processing ATCSTR00, and start option values are reset to the IBM defaults.
 - If *name* is **ATCSTR00**, the error occurred while processing ATCSTR*xx*, and start option values are reset to their values prior to processing ATCSTR*xx*.

See the z/OS Communications Server: SNA Resource Definition Reference for information about the LISTBKUP start option. See the z/OS Communications Server: SNA Network Implementation Guide for more information.

System action: VTAM ignores the start list in error and uses *name*. Other processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1085I *type* ACTIVATION ERROR *resource* SENSE = *code*

Explanation: VTAM issues this message when an error is encountered during the activation of a boundary function-based connection or a virtual route-based connection.

type indicates the type of transmission group connection that failed and is one of the following:

BF-TG

Boundary function-based connection

VR-TG

Virtual route-based connection

resource is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *resource* is issued as a network-qualified name in the form **CP** *netid.name*.

code indicates the reason for the error. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

Tip: If the PU name in the preceding IST590I message is an Enterprise Extender (EE) PU, this transmission group connection traverses EE. If *code* is 1016000B and the transmission group traverses EE, a duplicate CP name might be in the network. Issue a D NET,EE,CPNAME=*resource* command to obtain more information about the CP with the active EE connection.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in the system log and the explanation of *code* to resolve the problem.

Routing code: 2

Descriptor code: 5

IST1086I APPN CONNECTION FOR *adjcpname* IS ACTIVE-TGN= *tgn*

Explanation: VTAM issues this message when an APPN connection for an adjacent control point becomes active.

adjcpname is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form *netid.name*.

tgn is the transmission group number.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1088I ADJCP *adjcpname* HAS BEEN DEACTIVATED

Explanation: VTAM issues this message when the deactivation of an adjacent control point major node is completed.

adjcpname is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1089I MODIFY FAILED-TGP *tgpname* DOES NOT EXIST

Explanation: VTAM issues this message in response to a MODIFY TGP command.

tgpname is the name of the transmission group profile that was entered on the command.

System action: Processing continues.

Operator response: Ensure that you entered *tgpname* correctly. If the command fails again, save the system log for problem determination.

System programmer response: Verify that *tgpname* is correct, and that the resource is defined to VTAM. If not, update the TGP definition.

Routing code: 2

Descriptor code: 5

IST1090I TGP FOR *type resource* IS SET TO *tgpname*

Explanation: VTAM issues this message in response to a MODIFY TGP command.

Possible values are:

Type **Resource**

CDRM *cdrmname*

cdrmname is the name of a CDRM capable of requesting a VR-based (virtual route-based) TG connection. *cdrmname* can be a network-qualified name in the form *netid.name*.

type is CDRM when TGN=255 is specified on the MODIFY TGP command.

IST1091I

CP *cpname(tgn)*

cpname is the name of the adjacent control point. If *cpname* is session-capable, VTAM issues *cpname* as a network-qualified name in the form *netid.name*.

tgn is the transmission group number.

type is CP when TGN is specified as anything other than 255 on the MODIFY TGP command.

LINE *linename*

linename is the name of an active line (NCP/Token-Ring Interconnection [NTRI]) that has the connection network function defined.

PORT *portname*

portname is the name of an active port (external communication adapter [XCA]) that has the connection network function defined.

PU *puname*

puname is the name of an active type 2.1 physical unit.

tgpname is the name of the transmission group profile.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1091I MODIFY TGP FAILED – *type resource* IS UNKNOWN

Explanation: VTAM issues this message in response to a MODIFY TGP command when *type resource* is not known to VTAM.

Possible values are:

Type Resource

CDRM *cdrmname*

cdrmname is the name of a CDRM capable of requesting a VR-based (virtual route-based) TG connection. *cdrmname* can be a network-qualified name in the form *netid.name*.

type is CDRM when TGN=255 is specified on the MODIFY TGP command.

CP *cpname(tgn)*

cpname is the name of the adjacent control point. If *cpname* is session-capable, VTAM issues *cpname* as a network-qualified name in the form *netid.name*.

tgn is the transmission group number.

type is CP when TGN is specified as anything other than 255 on the MODIFY TGP command.

ID *resourcenname*

resourcenname is the name of the resource. The type of resource is not known to VTAM.

type is ID when TGN is not specified on the MODIFY TGP command.

LINE *linename*

linename is the name of an active line (NCP/Token-Ring Interconnection [NTRI]) that has the connection network function defined.

PORT *portname*

portname is the name of an active port (external communication adapter [XCA]) that has the connection network function defined.

PU *puname*

puname is the name of an active type 2.1 physical unit.

System action: Processing continues.

Operator response: Ensure that you entered *resource* correctly. If VTAM continues to issue this message, save the system log for problem determination.

System programmer response: Verify that *type resource* is correct and, if not, update the TGP definition. See the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1092I MODIFY TGP FAILED, INSUFFICIENT STORAGE

Explanation: VTAM issues this message in response to a MODIFY TGP command when there is insufficient storage.

System action: Processing continues.

Operator response: Try the MODIFY TGP command again. If VTAM continues to issue this message, enter the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you may need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information.

Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY STORUSE command. The z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures provides additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1093I *start_option1* IS IGNORED—ONLY VALID WHEN *start_option2* IS SPECIFIED

Explanation: VTAM issues this message when *start_option2*, which is required with *start_option1*, is not specified.

start_option2 is the name of the start option or the name of the start option with its required value.

System action: *start_option1* is ignored. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Examine the VTAM start options contained in ATCSTRxx and verify that the correct options are specified. *start_option2* needs to be specified in order to specify *start_option1*. See the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1094I GWSSCP VALUE FORCED TO NO—NODETYPE IS EN

Explanation: VTAM issues this message when both GWSSCP=YES and NODETYPE=EN are specified as start options. An end node (EN) cannot be used for intermediate routing. This message is also issued when the default value for GWSSCP is used and NODETYPE=EN is specified.

System action: The GWSSCP start option is changed to NO. Processing continues.

Operator response: Save the system log for problem determination.

IST1095I • IST1096I

System programmer response: Examine the VTAM start options contained in ATCSTRxx and verify that the correct options are specified.

Determine whether this node is to be used for intermediate routing.

- If it is, specify NODETYPE=NN.
- If not, use GWSSCP=NO.

See the z/OS Communications Server: SNA Resource Definition Reference for more information on the GWSSCP and NODETYPE start options.

Routing code: 2

Descriptor code: 5

IST1095I INITIATION FAILED FOR *cpname* – NO LINK TO ADJCP

Explanation: VTAM issues this message in response to a VARY ACT,ID=*cpname* command.

Session initiation failed because no usable link exists for a control point service manager (CPSVCMG) session to the adjacent CP. The cross-domain resource (CDRSC) representing the adjacent CP remains active because the adjacent CP can send a BIND to the host.

cpname is the name of the adjacent control point. VTAM issues *cpname* as a network-qualified name in the form *netid.name*.

Note: If this message is displayed as the result of a VARY ACT command for a CDRM on a VRTG connection, ignore this message. CP-CP sessions will become active once the SSCP-SSCP session becomes active.

System action: Processing continues.

Operator response: Verify that the link supports CP-CP sessions by entering the DISPLAY ID=*cpname* command.

If your node does not support CP-CP sessions, reactivate the link and initiate the desired session by entering the VARY ACT,ID=*puname*,CPCP=YES command. This command will override your PU definition. If this is not successful, the other node does not support CP-CP sessions.

System programmer response: If the other node does not support CP-CP sessions, the following steps are required:

1. Deactivate the other node
2. Change the PU definitions for the other node
3. Reactivate the other node.

Routing code: 2

Descriptor code: 5

IST1096I CP-CP SESSIONS WITH *adjcpname* ACTIVATED

Explanation: This message is part of a group of messages that VTAM issues when CP-CP sessions with an adjacent control point (CP) have been activated and are usable. A complete description of the message group follows.

```
IST1096I CP-CP SESSIONS WITH adjcpname ACTIVATED
[IST1673I SWITCH TO PREFERRED NETWORK NODE SERVER IS COMPLETE]
IST314I END
```

IST1096I

This message identifies the adjacent control point (CP) with which this node has successfully activated CP-CP sessions. This message may be issued in response to a command.

Note: CP-CP sessions see the contention winner and contention loser sessions of the CP-CP session pair. *adjcpname* is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form *netid.name*

IST1673I

VTAM issues this message when this end node has deactivated CP-CP sessions with its current network node server and then successfully activated CP-CP sessions with its preferred network node server, which is identified in message IST1096I. This message may be issued in response to a MODIFY VTAMOPTS,NNSPREF command.

System action: Processing continues.

Operator response: None

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1097I CP-CP SESSION WITH *cpname* TERMINATED

Explanation: This message is the first in a group of messages that VTAM issues when a CP-CP session with an adjacent control point has been terminated. This message may be issued in response to a command. A complete description of the message group follows.

```
IST1097I CP-CP SESSION WITH cpname TERMINATED
IST1280I SESSION TYPE = sessiontype - SENSE = code
IST314I END
```

IST1097I

cpname is the name of the adjacent control point. If *cpname* is session-capable, VTAM issues *cpname* as a network-qualified name in the form *netid.name*.

IST1280I

sessiontype indicates the session type of the CP-CP session that is terminating and is either **CONWINNER** (contention winner) or **CONLOSER** (contention loser).

code is the sense code associated with the termination. See the z/OS Communications Server: IP and SNA Codes for an explanation of *code*.

System action: Processing continues.

Operator response: You can take the following actions:

- If this is a nonswitched connection, display the status of the resources.
- Attempt to reactivate the CP-CP sessions by issuing a VARY ACT,ID=*cpname* command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1098I *resource* DEACTIVATED, DEPLETING IO BUFFER POOL

Explanation: VTAM deactivates the logical unit in an SSCP-LU session or physical unit in an SSCP-PU session because the session is depleting the I/O buffer pool. This happens when VTAM detects a session using more of the buffer pool than allowed.

resource is the name of the LU or PU that is deactivated.

Message IST930I or IST1153I is displayed before this message and identifies the two session partners.

System action: Processing continues.

Operator response: Reactivate the session after you find and correct the reason for the depletion. For additional information, see IST930I or IST1153I.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1099I **SESSION TERMINATED, DEPLETING *bp* BUFFER POOL**

Explanation: VTAM terminates the LU-LU session because the session is depleting the *bp* buffer pool.

bp is the name of the buffer pool and is LF. This can be an LU-LU or a CP-CP session.

This occurs when VTAM detects a session using a percentage of the I/O buffer pool that is greater than or equal to the value specified on the HOTTOTRM start option.

Message IST930I or IST1153I is displayed before this message and identifies the two LU-LU session partners.

System action: Processing continues.

Operator response: Reactivate the session after you find and correct the reason for the depletion. For additional information, see IST930I or IST1153I.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1100I **ADJACENT CONTROL POINTS FROM MAJOR NODE *majornode***

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY command for an adjacent control point major node. A complete description of the message group follows the example.

```

IST1100I ADJACENT CONTROL POINTS FROM MAJOR NODE majornode
IST1102I NODENAME      NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I nodename     nodetype connections cp_connections native
IST2157I ALIASRCH = searchoption
[IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:]
[IST2252I netid [netid] [netid] [netid] [netid] [netid]
:
:
IST314I END
    
```

IST1100I

majornode is the name of the adjacent control point major node.

IST1102I

This message is a header message for the information displayed in message IST1103I.

IST1103I

- *nodename* is the network-qualified name of the minor node in the form *netid.name*.
- *nodetype* is the type of node and can be EN (end node), NN (network node), or VN (virtual node). *NA* is displayed in either of the following situations:
 - The device is connected and is a LEN node.
 - The node type has not been predefined for the adjacent CP. The correct node type will be displayed when a connection to the node is made.
- *connections* is the number of active connections to the node.
- *cp_connections* is the number of active connections that show support for CP-CP sessions.
- *native* indicates whether *nodename* is in the same APPN topology subnetwork as the node issuing the DISPLAY command. Possible values are :

YES If *nodetype* is NN and *nodename* shares APPN topology information with the node issuing the DISPLAY command.

NO If *nodetype* is NN and *nodename* does not share APPN topology information with the node issuing the DISPLAY command.

NA If *nodetype* is EN or VN.

See the z/OS Communications Server: SNA Network Implementation Guide for more information on nodetypes and APPN connections.

IST2157I

- The *searchoption* value indicates which ALIASRCH operand has been coded on the adjacent CP major node specified in message IST1100I. Possible values are:

YES ALIAS searches entering this non-native entry border node are permitted. This is also the default value.

NO ALIAS searches entering this non-native entry border node are not permitted.

***NA** This value is displayed if this node is not an entry border node (BN).

IST2251I

This message is a header message for the information displayed in message IST2252I.

IST2252I

The *netid* value is a NETID specified on the AUTHNETS operand of the adjacent CP minor node that is specified in message IST1103I. If the *netid* value is *NONE*, then the AUTHNETS operand was specified without any NETID values.

IST2252I is repeated until all NETIDs are displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

Example:

```
D NET, ID=ADJCP1, SCOPE=ALL
IST097I DISPLAY ACCEPTED
IST075I NAME = ADJCP1, TYPE = ADJCP MAJOR NODE
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1100I ADJACENT CONTROL POINTS FROM MAJOR NODE ADJCP1
IST1102I NODENAME          NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I NETA.CP2A        NN          1          1          NO
IST2157I ALIASRCH = YES
IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:
IST2252I  NETA      NETB      NETC
IST1103I NETB.CPAA        NN          1          1          NO
IST2157I ALIASRCH = YES
IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:
IST2252I  NETA      NETB      NETC
IST1103I NETB.CPBA        NN          0          0          *NA*
IST2157I ALIASRCH = YES
IST1103I NETC.CPCA        EN          1          1          *NA*
IST2157I ALIASRCH = *NA
IST1493I RTP SUMMARY FOR NETA.CP2A COUNT = 2 RTPONLY = NO
IST1493I RTP SUMMARY FOR NETB.CPAA COUNT = 2 RTPONLY = NO
IST1493I RTP SUMMARY FOR NETC.CPCA COUNT = 1 RTPONLY = NA
IST314I END
```

IST1101I ADJCP DISPLAY SUMMARY FOR *adjcpname*

Explanation: This message is the first of a subgroup of messages that VTAM issues in response to a DISPLAY ADJCP command for an adjacent control point.

Possible message groups follow.

- If there are active TG connections, VTAM issues the following messages:

```
IST350I DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = majornode
IST1101I ADJCP DISPLAY SUMMARY FOR adjcpname
IST1102I NODENAME          NODETYPE CONNECTIONS CP_CONNECTIONS NATIVE
IST1103I nodename         nodetype connections cp_connections native
```

IST1101I

```
⋮
IST1104I CONNECTION SUMMARY FOR adjcpname
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I resource status tgn cp-cp tg_characteristics
IST2157I ALIASRCH = searchoption
[IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:]
[IST2252I netid [netid] [netid] [netid] [netid] [netid]
⋮
IST314I END
```

- If there are no active TG connections, VTAM issues the following messages:

```
IST350I DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = majornode
IST1101I ADJCP DISPLAY SUMMARY FOR adjcpname
IST1102I NODENAME NODETYPE CONNECTIONS CP_CONNECTIONS NATIVE
IST1103I nodename nodetype connections cp_connections native
IST2157I ALIASRCH = searchoption
[IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:]
[IST2252I netid [netid] [netid] [netid] [netid] [netid]
⋮
IST1104I CONNECTION SUMMARY FOR adjcpname
IST172I NO CONNECTIONS ACTIVE
IST314I END
```

IST1101I

adjcpname is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form *netid.name*.

IST1102I

This message is a header message for the information displayed in message IST1103I.

IST1103I

- *nodename* is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *nodename* is issued as a network-qualified name in the form *netid.name*.
- *nodetype* is the type of node and can be **EN** (end node), **NN** (network node), or **VN** (virtual node). ***NA*** is displayed in either of the following situations:
 - The device is connected and is a LEN node.
 - The node type has not been predefined for the adjacent CP. The correct node type will be displayed when a connection to the node is made.
- *connections* is the number of active connections to the node.
- *cp_connections* is the number of active connections that show support for CP-to-CP sessions.
- *native* indicates whether *nodename* is in the same APPN topology subnetwork as the node issuing the DISPLAY command. Possible values are :

YES If *nodetype* is **NN** and *nodename* shares APPN topology information with the node issuing the DISPLAY command.

NO If *nodetype* is **NN** and *nodename* does not share APPN topology information with the node issuing the DISPLAY command.

NA If *nodetype* is **EN** or **VN**.

See the z/OS Communications Server: SNA Network Implementation Guide for more information on APPN connections and nodetypes.

IST1104I

adjcpname is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form *netid.name*.

IST1105I

This message is a header message for the information displayed in message IST1106I.

IST1106I

- *resource* is the name of the PU, CDRM, PORT, or LINE associated with the transmission group number.
- *status* is the connection status and can be one of the following:

AC/N

Active, but not reported to APPN topology and routing services

AC/R

Active and reported to APPN topology and routing services

A0/N

Active with override but not reported to APPN topology and routing services

A0/R

Active with override and reported to APPN topology and routing services

AP/N

APPN connection pending, but not reported to APPN topology and routing services

AQ/N

Quiesced, but not reported to APPN topology and routing services

AQ/R

Quiesced and reported to APPN topology and routing services

IN/N

Inactive, but not reported to APPN topology and routing services

IN/R

Inactive and reported to APPN topology and routing services

NEV

Never reported to APPN topology and routing services

- *tgn* is the transmission group number.
- *cp-cp* is a user-defined value that can be specified on the GROUP, LINE, or PU definition statements or on the VARY ACT command. This value indicates whether the connection is capable of supporting CP-CP sessions.
 - Possible values are: **YES** or **NO**.
 - For additional information on the CPCP operand, see the z/OS Communications Server: SNA Resource Definition Reference.
- *tg_characteristics* is a 16-byte hexadecimal string representing the transmission group characteristics for *puname*. **** NA **** is displayed if *puname* is a low entry networking (LEN) node. LEN PUs do not have transmission groups associated with them.

Byte Description

1 TG status and CP-CP session support.

Bit Description

1	TG status
0	TG is not operational
1	TG is operational
2	Reserved (zero)
3	TG status
0	TG is not quiescing
1	TG is quiescing
4–8	Reserved (not always zero)

2 Capacity. This value corresponds to the CAPACITY value coded in the TGP definition statement. The displayed value is an internal representation of the coded value. For more information on how the

IST1101I

CAPACITY value coded in the TG profile is mapped to the internal representation used by VTAM, see the z/OS Communications Server: SNA Resource Definition Reference.

- 3-7 Reserved (zero).
- 8 Cost per unit time. This value corresponds to the COSTTIME value coded in the TGP definition statement.
- 9 Cost per byte. This value corresponds to the COSTBYTE value coded in the TGP definition statement.
- 10 Reserved (zero).
- 11 Security. This value corresponds to the SECURITY value coded in the TGP definition statement as follows:
 - X'01' UNSECURE
 - X'20' PUBLIC
 - X'40' UNDERGRO
 - X'60' SECURE
 - X'80' GUARDED
 - X'A0' ENCRYPT
 - X'C0' SHIELDED
- 12 Propagation delay. This value corresponds to the PDELAY value coded in the TGP definition statement as follows:
 - X'4C' NEGLIGIB
 - X'71' TERRESTR
 - X'91' PACKET
 - X'99' LONG
- 13 Reserved (zero).
- 14-16 User-defined. These values correspond to the values coded for UPARM1, UPARM2, and UPARM3 respectively in the TGP definition statement.

IST2157I

- The *searchoption* value indicates which ALIASRCH operand has been coded on the adjacent CP major node specified in message IST1100I. Possible values are:
 - YES ALIAS searches entering this non-native entry border node are permitted. This is also the default value.
 - NO ALIAS searches entering this non-native entry border node are not permitted.
 - *NA This value is displayed if this node is not an entry border node (BN).

IST2251I

This message is a header message for the information displayed in message IST2252I.

IST2252I

The *netid* value is a NETID specified on the AUTHNETS operand of the adjacent CP minor node that is specified in message IST1103I. If the *netid* value is *NONE*, then the AUTHNETS operand was specified without any NETID values.

IST2252I is repeated until all NETIDs are displayed.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If there are transmission group characteristics (contained in *tg_characteristics*) that you do not want, recode the resource definition statements.

See the z/OS Communications Server: SNA Resource Definition Reference for more information.

Routing code: 2

Descriptor code: 5

Example:

```
D NET,ADJCP,ID=NETA.CP2A,SCOPE=ALL
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = ADJCP1
IST1101I ADJCP DISPLAY SUMMARY FOR NETA.CP2A
IST1102I NODENAME          NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I NETA.CP2A          NN          1          1          NO
IST2157I ALIASRCH = YES
IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:
IST2252I NETA          NETB          NETC
IST1104I CONNECTION SUMMARY FOR NETA.CP2A
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I AHCPU5 AC/R      21 YES    9871000000000000100014C00808080
IST1500I STATE TRACE = OFF
IST1493I RTP SUMMARY FOR NETA.CP2A COUNT = 2 RTPONLY = NO
IST1486I RTP NAME STATE          DESTINATION CP      MNPS TYPE
IST1487I CNR00002 CONNECTED      NETA.CP2A          NO   CPCP
IST1487I CNR00001 CONNECTED      NETA.CP2A          NO   CPCP
IST314I END
```

IST1102I NODENAME NODETYPE CONNECTIONS CP CONNECTIONS NATIVE

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID=*adjcpname* command or a DISPLAY ADJCP command.

- DISPLAY ID=*adjcpname* command
See the explanation of message IST1100I for a complete description of this message group.
- DISPLAY ADJCP command
See the explanation of message IST1101I and message IST1197I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1103I *nodename nodetype connections cp_connections native*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID=*adjcpname* command or a DISPLAY ADJCP command.

- DISPLAY ID=*adjcpname* command
See the explanation of message IST1100I for a complete description of this message group.
- DISPLAY ADJCP command
See the explanation of message IST1101I and message IST1197I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1104I CONNECTION SUMMARY FOR *adjcpname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ADJCP command. See the explanations of message IST1101I and message IST1197I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1105I

IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY ID command for a type 2.1 PU, a CDRM with a virtual route-based transmission group, an external communication adapter (XCA) port that is part of a connection network, or a NCP/Token-Ring interconnected (NTRI) line that is part of a connection network. A complete description of this message group follows.

```
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I resource status tgn cp-cp tg_characteristics
.
.
IST314I END
```

- DISPLAY ADJCP command for an adjacent control point

See the explanations of message IST1101I and message IST1197I for a complete description of possible message groups.

resource is the name of the PU, CDRM, PORT, or LINE associated with the transmission group or connection network virtual routing node.

status displays the connection status and can be one of the following:

AC/N

Active, but not reported to APPN topology and routing services.

AC/R

Active and reported to APPN topology and routing services.

AO/N

Active with override but not reported to APPN topology and routing services.

AO/R

Active with override and reported to APPN topology and routing services.

AP/N

APPN connection pending and not reported to APPN topology and routing services.

AQ/N

Quiesced, but not reported to APPN topology and routing services.

AQ/R

Quiesced and reported to APPN topology and routing services.

IN/N

Inactive, but not reported to APPN topology and routing services.

IN/R

Inactive and reported to APPN topology and routing services.

NEV

Never reported to APPN topology and routing services.

tgn is the transmission group number. *NA* is displayed if there is no TG number assigned to *puname*.

cp-cp is a user-defined value that can be specified on the GROUP, LINE, or PU definition statements or on the VARY ACT command. This value indicates whether the connection is capable of supporting CP-CP sessions.

- Possible values are: **YES** or **NO**.
- For additional information on the CPCP operand, see the z/OS Communications Server: SNA Resource Definition Reference.

tg_characteristics is a 16-byte hexadecimal string representing the transmission group characteristics for *puname*. ****NA **** is displayed if *puname* is a low entry networking (LEN) node. LEN PUs do not have transmission groups associated with them.

Byte Description

1 TG status and CP-CP session support.

Bit	Description
1	TG status
0	TG is not operational
1	TG is operational
2	Reserved (zero)
3	TG status
0	TG is not quiescing
1	TG is quiescing
4–8	Reserved (not always zero)
2	Capacity. This value corresponds to the CAPACITY value coded in the TGP definition statement. The displayed value is an internal representation of the coded value. For more information on how the CAPACITY value coded in the TG profile is mapped to the internal representation used by VTAM, see the z/OS Communications Server: SNA Resource Definition Reference.
3–7	Reserved (zero).
8	Cost per unit time. This value corresponds to the COSTTIME value coded in the TGP definition statement.
9	Cost per byte. This value corresponds to the COSTBYTE value coded in the TGP definition statement.
10	Reserved (zero).
11	Security. This value corresponds to the SECURITY value coded in the TGP definition statement as follows:
X'01'	UNSECURE
X'20'	PUBLIC
X'40'	UNDERGRO
X'60'	SECURE
X'80'	GUARDED
X'A0'	ENCRYPT
X'C0'	SHIELDED
12	Propagation delay. This value corresponds to the PDELAY value coded in the TGP definition statement as follows:
X'4C'	NEGLIGIB
X'71'	TERRESTR
X'91'	PACKET
X'99'	LONG
13	Reserved (zero).
14–16	User-defined. These values correspond to the values coded for UPARM1, UPARM2, and UPARM3 respectively in the TGP definition statement.

System action: Processing continues.

Operator response: None.

System programmer response: If there are transmission group characteristics (contained in *tg_characteristics*) that you do not want, change the TGP definitions.

See the z/OS Communications Server: SNA Resource Definition Reference for more information on defining TGP definitions.

Routing code: 2

Descriptor code: 5

IST1106I *resource status tgn cp-cp tg_characteristics*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a type 2.1 PU, a VRTG-capable CDRM, a GROUP (XCA) that is part of a connection network, or a LINE (NTRI) that is part of a connection network, or DISPLAY ADJCP command. The first message in the group is IST1105I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1107I TGP NAME TG CHARACTERISTICS

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY TGPS command. A complete description of the message group follows.

```

IST1107I  TGP NAME TG CHARACTERISTICS
IST1108I  tgpname  tg_characteristics
:
:
[IST1315I DISPLAY TRUNCATED AT MAX = number]
IST1454I  count TGP(S) DISPLAYEDIST314I  END
    
```

IST1107I

This message is a header message for information displayed in message IST1108I.

IST1108I

- *tgpname* is the transmission group profile name.
- *tg_characteristics* is a 16-byte hexadecimal string representing the transmission group characteristics for the PU associated with *tgpname*. **** NA **** is displayed if the PU is a low entry networking (LEN) node. LEN PUs do not have transmission groups associated with them.

Byte Description

1	This byte is zero when you display a TG profile, but other values may appear when you display the TG characteristics for an active resource. (for example, the output of the DISPLAY ADJCP command).														
2	Capacity. This value corresponds to the CAPACITY value coded in the TGP definition statement. The displayed value is an internal representation of the coded value. For more information on how the CAPACITY value coded in the TG profile is mapped to the internal representation used by VTAM, see the z/OS Communications Server: SNA Resource Definition Reference.														
3–7	Reserved (zero).														
8	Cost per unit time. This value corresponds to the COSTTIME value coded in the TGP definition statement.														
9	Cost per byte. This value corresponds to the COSTBYTE value coded in the TGP definition statement.														
10	Reserved (zero).														
11	Security. This value corresponds to the SECURITY value coded in the TGP definition statement as follows: <table border="0" style="margin-left: 20px;"> <tr><td>X'01'</td><td>UNSECURE</td></tr> <tr><td>X'20'</td><td>PUBLIC</td></tr> <tr><td>X'40'</td><td>UNDERGRO</td></tr> <tr><td>X'60'</td><td>SECURE</td></tr> <tr><td>X'80'</td><td>GUARDED</td></tr> <tr><td>X'A0'</td><td>ENCRYPT</td></tr> <tr><td>X'C0'</td><td>SHIELDED</td></tr> </table>	X'01'	UNSECURE	X'20'	PUBLIC	X'40'	UNDERGRO	X'60'	SECURE	X'80'	GUARDED	X'A0'	ENCRYPT	X'C0'	SHIELDED
X'01'	UNSECURE														
X'20'	PUBLIC														
X'40'	UNDERGRO														
X'60'	SECURE														
X'80'	GUARDED														
X'A0'	ENCRYPT														
X'C0'	SHIELDED														
12	Propagation delay. This value corresponds to the PDELAY value coded in the TGP definition statement as follows: <table border="0" style="margin-left: 20px;"> <tr><td>X'4C'</td><td>NEGLIGIB</td></tr> </table>	X'4C'	NEGLIGIB												
X'4C'	NEGLIGIB														

- X'71' TERRESTR
 X'91' PACKET
 X'99' LONG
- 13 Reserved (zero).
- 14–16 User-defined. These values correspond to the values coded for UPARM1, UPARM2, and UPARM3 respectively in the TGP definition statement.

IST1315I

number is the value specified for the MAX operand.

IST1454I

count is the total number of transmission group profiles displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1108I *tgpname tg_characteristics*

Explanation: This message is part of a message group that VTAM issues in response to a DISPLAY TGPS command. The first message in the group is IST1107I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1110I ACTIVATION OF CP-CP SESSION WITH *cpname* FAILED

Explanation: This message is the first in a group of messages that VTAM issues when a CP-CP session with *cpname* cannot be activated. A complete description of the message group follows.

```
IST1110I ACTIVATION OF CP-CP SESSION WITH cpname FAILED
[IST1002I RCPRI=rcpri RCSEC=rcsec]
[IST1111I ADJACENT NODE DOES NOT SUPPORT UNSOLICITED BINDS]
[IST1112I CP ALREADY HAS A CP-CP SESSION WITH current_NN]
[IST1113I EN-EN SESSION IS NOT VALID]
[IST1119I FAILURE REASON - INSUFFICIENT STORAGE]
[IST1246I ADJACENT CP NOT DEFINED IN CURRENT NETWORK NODE SERVER LIST]
[IST1247I ALL ATTEMPTS TO ESTABLISH A SESSION WERE UNSUCCESSFUL]
[IST1280I SESSION TYPE = sessiontype - SENSE = code]
[IST1356I NETWORK NODE DOES NOT PROVIDE REQUIRED SERVER FUNCTION]
[IST1507I VR-BASED TG NOT SUPPORTED]
[IST1508I CP-CP SESSIONS ON VR-BASED TG NOT SUPPORTED]
[IST1676I SWITCH TO PREFERRED NETWORK NODE SERVER FAILED - CODE = code]
[IST1765I ADJACENT CP WINNER LOSER STATE NODE ANDCB]
[IST1766I adjacent_cp cw_state cl_state state node address]
```

IST1110I

cpname is the name of the adjacent control point. If *cpname* is session-capable, VTAM issues *cpname* as a network-qualified name in the form *netid.name*.

Subsequent messages in the group indicate the reason that VTAM cannot activate the CP-CP session.

IST1002I

- This message is issued when there is a nonzero value in either or both of the RCPRI or RCSEC return code fields.
 - rcpri* is the value of the primary return code issued by VTAM.
 - rcsec* is the value of the secondary return code issued by VTAM.

IST1110I

- See the z/OS Communications Server: IP and SNA Codes for a detailed explanation of *rcpri* and *rcsec*.

IST1111I

This message is issued in response to a VARY ACT,ID=*cpname* command. The adjacent node does not support receipt of unsolicited binds. It will not accept another node sending a bind to it for CP-CP sessions, unless the bind flows as the result of link activation. The adjacent node will only allow itself to start CP-CP sessions, not another node.

IST1112I

This message is issued in response to a VARY ACT,ID=*cpname* command when an attempt is made to establish a CP-CP sessions for an end node (EN) that already has a CP-CP session with a network node (NN). An EN can have a CP-CP session with only one NN at a time.

current_NN is the name of the NN with which VTAM currently has a CP-CP session.

IST1113I

This message is issued in response to a VARY ACT,ID=*cpname* command when an EN-EN session was attempted. CP-CP sessions between ENs are not permitted.

IST1119I

This message is issued in response to a VARY ACT,ID=*cpname*,IDTYPE=CP command. VTAM could not allocate storage for internal signals needed to establish CP-CP sessions.

IST1246I

This message is issued at an end node when a network node attempts to establish CP-CP sessions and the network node cannot be used as a network node server according to the contents of the network node server list.

IST1247I

This message is issued in response to a VARY ACT,ID=*cpname*,IDTYPE=CP command. VTAM at an end node attempted to establish a CP-CP session with the network node specified on the command, but all attempts were unsuccessful.

IST1280I

- This message is issued when the CP-CP session activation failed for one of the following reasons:
 - An unrecoverable error occurred during session activation.
 - An error occurred during contention winner session activation, and the error remained after the maximum number of retries was attempted.
- This message might be preceded by IST1356I. See the explanation of IST1356I that follows for more information.
- *sessiontype* is either **CONWINNER** (contention winner) or **CONLOSER** (contention loser).
- *code* is the sense code associated with the error. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

IST1356I

- This message is issued at an end node when that end node has attempted to activate a CP-CP session with network node *cpname* and the following is true:

The end node's network node server list specifies that *cpname* must provide SLU-initiated session capability as one of the requirements of becoming its network node server. However, *cpname* has informed the end node that it does not support SLU-initiated sessions.

IST1507I

This message is issued when an attempt has been made to establish a CP-CP session over a virtual route-based transmission group (VR-based TG) and the adjacent SSCP does not support the VR-based TG function. This may be because the adjacent SSCP has coded VRTG=NO in the CDRM major node for the SSCP that is attempting the VR-based TG connection or the adjacent SSCP may be pre-VTAM V4R2, which does not support the VR-based TG function.

IST1508I

This message is issued when an attempt has been made to establish a CP-CP session over a virtual route-based transmission group (VR-based TG) and the adjacent SSCP supports the VR-based TG function but does not allow CP-CP sessions to use the VR-based TG. The adjacent node has specified VRTGCPCP=NO as a start option or the start option has been modified with the MODIFY VTAMOPTS command.

IST1676I

- This message is issued when this end node has attempted but failed to switch CP-CP sessions from its current network node server to its preferred network node server.
- *code* is the code associated with the failure:
 - 4—There is no active CP-capable link to the preferred server.
 - 8—See the sense code in message IST1280I to determine the reason for the failure.
 - 12—The switch to the preferred network node server specified by the MODIFY VTAMOPTS,NNSPREF command currently being processed has been terminated because a later MODIFY VTAMOPTS,NNSPREF command has superseded it.
 - 16—The switch of CP-CP sessions to the adjacent CP specified on the NNSPREF start option failed because the adjacent CP is actually an end node. CP-CP sessions between adjacent end nodes (EN) are not allowed.

IST1765I

This message is a header message for the information displayed in message IST1766I.

IST1766I

- One IST1766I will be issued for the network node displayed in the IST1112I message.
- *adjacent_cp* is the network-qualified CP name of the adjacent control point.
- *cw_state* is the status of the contention winner CP-CP session. Valid values are:
 - ACT** active
 - INACT** inactive
 - PACT** pending active
 - PINACT** pending inactive
- *cl_state* is the status of the contention loser CP-CP session. Valid values are:
 - ACT** active
 - INACT** inactive
 - PACT** pending active
 - PINACT** pending inactive
- *state* is the state of the CP-CP sessions to the adjacent node being displayed. Valid values are:
 - UP** One or more of the contention winner and contention loser sessions are active or pending-active.
 - DOWN** Both contention winner and contention loser sessions are coming down but are not completely inactive.
 - BOTH DOWN** Both contention winner and contention loser sessions are inactive.
- *node* is the APPN node type of the adjacent control point. The only valid value for this message group is NN (network node).
- *address* is the hexadecimal storage address for the adjacent node control block where the CP-CP session information is saved.

System action: Processing continues.

Operator response:

IST1002I

Save the system log for problem determination.

IST1110I

IST1111I

Deactivate the link with the adjacent node which supports CP-CP sessions and then reactivate it. This will allow the other node to start the bind processing. This may cause CP-CP sessions to be activated.

IST1112I, IST1765I, and IST1766I

This CP is an EN. Verify that the EN has a CP-CP session established with the correct NN.

IST1113I

None.

IST1119I

Issue the DISPLAY BFRUSE command to display information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

IST1246I

Enter the VARY ACT,ID=*cpname* command and specify the desired server. VTAM will attempt to establish a CP-CP session with *cpname* even if *cpname* is not allowed by the current network node server list.

The network node server list should be modified. If the network node server list is left unchanged, then VTAM may not be able to acquire a new server if the current server fails. After the list has been modified, issue a VARY ACT,ID=*member_name* command where *member_name* is the member in the definition library that contains the edited network node server list.

IST1247I

You should determine that the adjacent nodes are working properly and check for any connection problems between the nodes.

Then enter the VARY ACT,ID=*cpname* command and specify the desired server.

The network node server list should be modified to allow more network nodes to act as servers. After the list has been modified, issue a VARY ACT,ID=*member_name* command where *member_name* is the member in the definition library that contains the edited network node server list.

IST1280I

Save the system log for problem determination.

IST1356I

Save the system log for problem determination.

IST1507I

The command that initiated CDRM-CDRM session activation implicitly or explicitly attempted activation of a CP-CP session over the virtual route used by the CDRM-CDRM session.

If the VR-based TG is not desired, no response is necessary. However, explicitly specifying VRTG=NO on the V ACT,ID=*cdrm name* command prevents VTAM from attempting VR-based TG activation.

If the CP-CP session is desired, this message indicates that the adjacent SSCP is not capable of performing the VR-based TG function. Save the system log for problem determination.

IST1508I

The command that initiated CDRM-CDRM session activation implicitly or explicitly attempted activation of a CP-CP session over the virtual route used by the CDRM-CDRM session.

If the CP-CP session is not desired, no response is necessary. However, explicitly specifying VRTGCPCP=NO on the V ACT,ID=*cdrm name* command prevents VTAM from attempting CP-CP session activation.

If the CP-CP session is desired, this message indicates that the adjacent SSCP does not allow CP-CP sessions over VR-based TGs. Save the system log for problem determination.

IST1676I

Operator response is determined by the error code:

- 4 Activate a CP-capable link from the EN to the preferred network node server.
- 8 Save the console output and contact system programmer to determine causes for failure of CP-CP session activation attempt.
- 12 No action is necessary.
- 16 Contact the system programmer to help determine the correct value for the NNSPREF start option.

System programmer response:**IST1002I**

Use the explanations of *rcpri* and *rcsec* to assist you in solving the problem.

IST1111I, IST1112I, IST1113I, IST1765I, and IST1766I

None.

IST1119I

Increase storage as required. You might want to redefine your CSA start options using the MODIFY VTAMOPTS command. After the storage shortage problem is corrected, enter a VARY ACT,ID=*cpname* command and specify the desired server.

See z/OS Communications Server: SNA Operation for more information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool.

IST1246I and IST1247I

Additional network nodes can be defined as acceptable servers by modifying the network node server list. Add new NETSRVR definition statements for individual network nodes or add a NETSRVR definition statement that allows any known network node to act as the network node server.

For information on the NETSRVR definition statement, see the z/OS Communications Server: SNA Resource Definition Reference

IST1280I

Use the explanation of the sense code to assist you in solving the problem.

IST1356I

The network node server list must be modified. Specify SLUINIT=OPT on the NETSRVR definition statement for either the network node server entry for *cpname* or the nameless entry.

Ask the operator to reactivate the modified network node server list before trying to activate the session again.

IST1507I

If CP-CP sessions are desired or required using virtual route-based transmission groups (VR-based TGs), both SSCPs must allow the function by having VRTG=YES coded on the CDRM statement in the CDRM major node for the adjacent SSCP.

IST1508I

If CP-CP sessions are desired using virtual route-based transmission groups (VR-based TGs), both SSCPs must allow the function by specifying VRTG=YES on the CDRM definition statement in the CDRM major node for the adjacent SSCP. In addition, VRTGCPCP=YES must be specified in both hosts as the start option value or modified with the MODIFY VTAMOPTS command to allow CP-CP sessions to use a VR-based TG.

IST1676I

If the switchover fails with reason code 8, determine reason for failure from sense code displayed in message IST1280I.

Routing code: 2

Descriptor code: 5

IST1111I ADJACENT NODE DOES NOT SUPPORT UNSOLICITED BINDS

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1110I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1112I CP ALREADY HAS A CP-CP SESSION WITH *current_NN*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1110I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1113I EN-EN SESSION IS NOT VALID

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1110I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1114I *option* START OPTION IGNORED – NOT VALID FOR *value*

Explanation: VTAM issues this message when *option* is not valid for the specified *value*.

option is the start option that is ignored.

value is one of the following:

- A specified node type that is not valid for *option*
- A specified start option and its value that conflict with *option*.

System action: *option* is ignored. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Examine the VTAM start options contained in ATCSTRxx and verify that the correct options are specified. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VTAM start options.

Routing code: 2

Descriptor code: 5

IST1115I CDRM NAME *cdmname* IS DIFFERENT THAN SSCPNAME START OPTION

Explanation: This message is the first in a subgroup of messages that VTAM issues in response to an attempt to activate the host cross-domain resource manager (CDRM) major node with a name different than the host system services control point (SSCP) name specified in the start options.

A complete description of the message subgroup follows.

IST1115I CDRM NAME *cdmname* IS DIFFERENT THAN SSCPNAME START OPTION

IST1116I SSCP NAME *sscpname* IS USED

IST1115I

cdmname is the name specified in the CDRM major node definition.

IST1116I

sscpname is the name specified on the SSCPNAME start option.

System action: The name specified for the host CDRM major node is ignored, and the SSCP name is used for the host CDRM name.

Operator response: Save the system log for problem determination.

System programmer response: Change either the name in the host CDRM definition or the SSCP name specified in the START options so that the names match. If the START option is changed, VTAM must be restarted. If the name in the host CDRM definition is changed, you must deactivate and reactivate the major node to use the new definition.

Routing code: 2

Descriptor code: 6

IST1116I SSCP NAME *sscpname* IS USED

Explanation: VTAM issues this message as part of a subgroup of messages. The first message in the subgroup is IST1115I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 6

IST1117I PHYSICAL RESOURCE (PHYSRSC) *puname* {IS NOT KNOWN|IS NOT A PU}

Explanation: VTAM issues this message as part of a group of messages. The first message in this group is IST1079I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1118I LINK DEFINITION FAILURE, CP = *cpname* TGN = *tgn*

Explanation: This message is the first in a group of messages that VTAM issues when an attempt to define the link to topology and routing services failed. The second message in the group gives the reason for the failure. Possible message groups follow.

```
IST1118I LINK DEFINITION FAILURE, CP = cpname TGN = tgn
IST1119I FAILURE REASON - INSUFFICIENT STORAGE
IST314I  END
```

```
IST1118I LINK DEFINITION FAILURE, CP = cpname TGN = tgn
IST1261I ABEND OCCURRED DURING LINK DEFINITION
IST314I  END
```

IST1118I

- *cpname* is the name of the control point to which this link is attached. If *cpname* is session-capable, VTAM issues *cpname* as a network-qualified name in the form *netid.name*.
tgn is the transmission group number associated with this link.

IST1119I

There was not enough storage to define the link to topology and routing services.

IST1261I

An abend occurred before the link was defined to topology and routing services.

System action: No sessions will be assigned to the link. Other processing continues.

Operator response:

1. Issue the DISPLAY ADJCP, ID=*cpname*, E command and use the information displayed in messages IST1105I and IST1106I to identify the PU associated with the link specified by *cpname* and *tgn*.
2. Enter the VARY INACT command to deactivate the link. The link must be deactivated before another attempt at link definition is made. When the VARY INACT command has completed, enter a VARY ACT command to activate the link.
3. If VTAM continues to issue this message group, see the operator response for the second message.

IST1119I

- Issue the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you may need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information.

Save the system log and dump for problem determination.

IST1119I • IST1121I

IST1261I

Save the system log for problem determination.

System programmer response: IST1119I

Increase storage as required.

IST1261I

Review the contents of the system dump to determine the correct problem determination action.

Routing code: 2

Descriptor code: 3

IST1119I FAILURE REASON - INSUFFICIENT STORAGE

Explanation: VTAM issues this message as part of several different message groups. See the explanation of the first message in the group for a complete description.

Routing code: 2

Descriptor code: 3

IST1120I *macroname* APPNCOS DEFINITION FAILED—INSUFFICIENT STORAGE

Explanation: VTAM issues this message in response to an APPN class of service (CoS) definition failure. The definition statement failed because there was not enough private storage to process the request.

macroname is the name of the Class of Service being defined in the definition statement.

System action: Processing continues.

Operator response: Issue the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you may need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information.

Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE and DISPLAY STORUSE commands. The z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures provides additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1121I COSAPPN IN *library errortype* — PROCESSING CONTINUES

Explanation: VTAM issues this message when the library member COSAPPN was empty, not found, or contained a syntax error.

library is the data definition name (DDNAME) specified for the definition library.

errortype indicates the type of error and can be **IS EMPTY**, **NOT FOUND**, or **IN ERROR** (contains a syntax error).

System action: VTAM initialization continues. However, the IBM-supplied classes of service may not be available for APPN route selection.

Operator response: If the APPN classes of service have been defined under a different member name and are activated by configuration list processing or by a VARY ACT command, then no action is necessary.

Otherwise, save the system log for problem determination.

System programmer response:

- If **IS EMPTY** or **NOT FOUND** is displayed, verify that COSAPPN was either intentionally left empty or not found.
- If **IN ERROR** is displayed, see the z/OS Communications Server: SNA Resource Definition Reference for additional information.

Note: If an alternate set of appropriate classes of service is not defined through another configuration file specified in the start options, attempting to activate APPN sessions will yield unpredictable results.

Routing code: 2

Descriptor code: 5

IST1122I **CHKPT TO DATASET** *datasetname* **WAS NOT SUCCESSFUL, CODE =** *code*

Explanation: VTAM issues this message in response to one of the following commands:

- MODIFY CHKPT
- MODIFY CHKPT,ALL
- MODIFY CHKPT,DIR
- MODIFY CHKPT,TOPO
- Z NET
- Z NET,QUICK

This message confirms that VTAM was unable to write either the APPN directory database or the APPN topology database to the specified *datasetname*.

code indicates the reason for the error and is one of following:

Code Error

- | | |
|----|---|
| 1 | Insufficient storage. |
| 2 | The disk file is undefined. |
| 3 | A MODIFY CHKPT command was attempted before the initial database load was complete. |
| 4 | Disk I/O errors occurred. These errors may be reported in a separate messages issued prior to this message. |
| 5 | A Z NET or Z NET,QUICK command may have been entered before the initial database load was complete. Or, the disk I/O subtask is unavailable due to a previous abend or initialization error and termination processing has begun. |
| 6 | The MODIFY CHKPT command was not entered at a network node. |
| 7 | The APPN directory contains no resources to checkpoint. |
| 10 | The topology and routing services task abended while attempting to process the MODIFY CHKPT command. |

System action: Processing continues.

Operator response:

Code Response

- | | |
|---|---|
| 1 | Issue the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you may need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See z/OS Communications Server: SNA Operation for additional information.

Save the system log and dump for problem determination. |
| 2 | Save the system log for problem determination. |
| 3 | If you entered a MODIFY CHKPT command, wait a short time and reenter the command. |
| 4 | Save the system log and dump for problem determination. |

IST1123I

- 5 Regardless of how termination processing began, do not attempt another checkpoint. If you did not enter a termination command, save the system log and dump for problem determination.
- 6 VTAM ignores the MODIFY CHKPT command because it was not entered at a network node. Ensure that you are working with a network node and reenter the command.
- 7 None.
- 10 Save the system log and dump for problem determination.

System programmer response:

Code Response

- 1 Increase storage as required.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY BFRUSE and DISPLAY STORUSE commands. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- 2 You must define the missing disk file. See the applicable sequential access method documentation and the z/OS Communications Server: SNA Network Implementation Guide for additional information.
- 3 None.
- 4 See the applicable sequential access method documentation for more information.
- 5 Use the messages issued prior to this message to determine the cause of the failure. This message is only informing you that the directory services or topology routing services database was not written to *datasetname*. VTAM can continue without the disk I/O subtask, but the checkpoint function will not be available.
- 6 None.
- 7 None.
- 10 Review the contents of the system dump to determine the correct problem determination action. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure.

Routing code: 2

Descriptor code: 5

IST1123I MODIFY CHKPT TO DATASET *datasetname* WAS SUCCESSFUL

Explanation: VTAM issues this message in response to any one of the following commands:

MODIFY CHKPT
MODIFY CHKPT, DIR
MODIFY CHKPT, ALL
MODIFY CHKPT, TOPO
Z NET
Z NET, QUICK

This message indicates that either directory services or topology and routing services has completed writing out its database to the specified *datasetname*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1124I UNABLE TO REGISTER RESOURCES WITH *nodename*

Explanation: This message is the first in a group of messages that VTAM issues when VTAM at this end node is unable to register resources with its network node server.

nodename is the network-qualified name of the network node server control point in the form *netid.name*.

The second message in the group indicates the reason that the end node is unable to register resources and can be one of the following:

IST1125I END NODE IS NOT AUTHORIZED

The end node is unable to register resources because the end node is not authorized at the network node server.

IST1126I END NODE NETID REJECTED

The network node server rejected the network ID of the end node because the network node exceeded the maximum number of network IDs allowed.

IST1127I UNRECOGNIZED REGISTRATION REQUEST

The network node *nodename* has repeatedly reported that it is unable to interpret registration requests from this end node. This is due to one of the following software errors:

- The end node software is failing and sending incorrect requests.
- The network node software is failing and unable to recognize the requests from the end node.

System action:**IST1125I or IST1126I**

VTAM stops registering resources until CP-CP sessions with network node server *nodename* are deactivated. CP-CP sessions with this server or any other network node are then activated.

IST1127I

CP-CP sessions with *nodename* are deactivated. Either VTAM or the operator may activate CP-CP sessions with another network node and VTAM will resume resource registration.

Operator response:**IST1125I or IST1126I**

Save the system log for problem determination.

IST1127I

Enter the MODIFY TRACE,TYPE=BUF,ID=*nodename* command. Save the system log for problem determination.

System programmer response:**IST1125I**

If CP-CP sessions are desired between the end node and network node *nodename*, modify the network node server list to define the end node as authorized at that network node. If necessary, include a NETSRVR definition statement for the selected network node in the network node server list, or include a NETSRVR definition statement that allows any known network node to act as the network node server for the end node.

After the list has been edited, issue VARY ACT,ID=*member_name*, where *member_name* is the name of the definition list member that contains the edited network node server list. Then, enter the VARY TERM,ID=*nodename* command to deactivate CP-CP sessions between this end node and network node *nodename*. VTAM will automatically reactivate CP-CP sessions, using the new network node server list.

IST1126I

Select a network node server that can accommodate the network ID. If necessary, include a NETSRVR definition statement for the selected network node in the network node server list, or include a NETSRVR definition statement that allows any known network node to act as the network node server for the end node.

IST1127I

Examine the system log and trace output. Verify the REGISTR and DELETE GDS variables against the published formats.

- See *SNA Formats* or *SNA Network Product Formats* for a description of the REGISTR and DELETE GDS variables and an explanation of GDS variable formats.
- See the *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* for more information about analyzing traces.

IST1125I • IST1128I

Alternatively, select a new network node to act as the server for this end node. If necessary, include a NETSRVR definition statement for the selected network node in the network node server list, or include a NETSRVR definition statement that allows any known network node to act as the network node server for the end node.

After the list has been modified, issue `VARY ACT,ID=member_name`, where *member_name* is the name of the definition list member that contains the edited network node server list.

Routing code: 2

Descriptor code: 3

IST1125I END NODE IS NOT AUTHORIZED

Explanation: VTAM issues this message as part of a group of messages when VTAM at this end node is unable to register resources with its network node server. The first message in the group is IST1124I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 3

IST1126I END NODE NETID REJECTED

Explanation: VTAM issues this message as part of a group of messages when VTAM at this end node is unable to register resources with its network node server. The first message in the group is IST1124I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 3

IST1127I UNRECOGNIZED REGISTRATION REQUEST

Explanation: VTAM issues this message as part of a group of messages when VTAM at this end node is unable to register resources with its network node server. The first message in the group is IST1124I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 3

IST1128I PATH *pathname* IGNORED, *nodename* – STORAGE SHORTAGE

Explanation: This message is the first in a group of messages that VTAM issues when sufficient storage is not available to update the dynamic path update set *pathname* for node *nodename*. A complete description of the message group follows.

```
IST1128I  PATH pathname IGNORED, nodename – STORAGE SHORTAGE
IST1045I  NODE TYPE = nodetype
IST314I   END
```

VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action: VTAM does not update the dynamic path update set *pathname*.

Operator response: Wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM

start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1129I *command FAILED, nodename – DEACTIVATE PENDING*

Explanation: This message is the first in a group of messages that VTAM issues when the resource *nodename* that the operator specified on *command* has a deactivation request pending. A complete description of the message group follows.

```
IST1129I  command FAILED, nodename – DEACTIVATE PENDING
IST1045I  NODE TYPE = nodetype
IST314I  END
```

If the *command* that failed was a VARY INACT command, the pending deactivation is of a stronger type (Immediate or Force).

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action: VTAM rejects the command. Other processing continues.

Operator response: Monitor the progress of the deactivation by using the DISPLAY command. When *nodename* is deactivated, reenter the VARY command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1130I *command FOR nodename FAILED – STORAGE SHORTAGE*

Explanation: This message is the first in a group of messages that VTAM issues when *command* for resource *nodename* failed because VTAM could not obtain enough storage to process the request. A complete description of the message group follows.

```
IST1130I  command FOR nodename FAILED – STORAGE SHORTAGE
IST1045I  NODE TYPE = nodetype
IST314I  END
```

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action: VTAM rejects the command. Processing continues.

Operator response: Messages IST561I, IST562I, IST563I, IST564I, IST565I or IST566I may be issued prior to this message to indicate the type of storage affected.

Issue the DISPLAY BFRUSE command to display storage used by VTAM buffer pools and information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the

IST1131I • IST1132I

DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

If *nodename* is an independent logical unit that is being converted to a definition for a resource in another domain, then the NCP major node for *nodename* must be deactivated. Activate the NCP major node when the storage shortage no longer exists.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1131I **DEVICE = *devicetype* [- CONTROLLING LU = *luname*]**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command.

devicetype is the device type. If *devicetype* is ILU/CDRSC, the node is an independent LU that is represented by a CDRSC.

luname is the name of the controlling LU that was previously specified on the LOGAPPL operand of the definition statement or on the LOGON operand of the VARY LOGON command.

- If a network-qualified name was entered on the command line, VTAM issues *luname* in the form *netid.name*.
- If there is no controlling application program, VTAM does not display **CONTROLLING LU = *luname***.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1132I ***nodename* IS ACTIVE, TYPE = *nodetype***

Explanation: VTAM issues this message when *nodename* has been successfully activated in response to a VARY command.

nodename is the name of the node that has been activated. If the node *nodename* is a resource such as an APPL or an LU, with a network-qualified name, then *nodename* will be in the form *netid.name*. If the node *nodename* is a resource that is known only by this network, such as a PU or a line, then *nodename* will be in the form *name*.

nodetype is the type of node that is displayed. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

Note: If you are expecting this message to confirm activation of a resource and it is not issued, this can occur if the VARY command was overridden by other VTAM processing.

For example, if an NCP INOPs prior to completion of a VARY ACT command and recovery is attempted, then VTAM activates the resource rather than the operator command. In this situation, message IST493I or IST1141I would be displayed indicating that the VARY ACT command was overridden.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1133I *nodename* IS NOW INACTIVE, TYPE = *nodetype*

Explanation: VTAM issues this message when *nodename* has been successfully deactivated. In most cases, this is the result of a VARY INACT command. If *nodename* is a cross-domain resource manager (CDRM) in another domain, then deactivation could be the result of a deactivation request from the domain of *nodename*.

nodename is the name of the node that has been deactivated. If the node *nodename* is a resource such as an APPL or an LU, with a network-qualified name, then *nodename* will be in the form *netid.name*. If the node *nodename* is a resource that is only known by this network, such as a PU or a line, then *nodename* will be in the form *name*.

nodetype is the type of node that is displayed. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1134I *nodename* NOW HAS CONTROLLING LU *luname*

Explanation: VTAM issues this message when processing of the LOGON operand of either a VARY ACT or VARY LOGON command has been completed.

When logical unit *nodename*, or the logical units associated with *nodename*, are not in session with another application program, VTAM will automatically log them on to application program *luname*. Resources must be active in order for the logon to complete. This does not mean that a session with the application program has been initiated.

If a network-qualified name was entered on the ID operand of the command, VTAM issues *nodename* in the form *netid.name*.

If a network-qualified name was entered on the LOGON operand of the command, VTAM issues *luname* in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1135I FORCED VARY INACT SCHEDULED FOR *nodename*

Explanation: VTAM issues this message in response to a VARY INACT,TYPE=FORCE command to deactivate node *nodename*.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

System action: VTAM issues a VARY INACT command for node *nodename*.

Operator response: None.

System programmer response: None.

Routing code: 2,8,1

Descriptor code: 5

IST1136I **VARY INACT** *nodename* **SCHEDULED – UNRECOVERABLE ERROR**

Explanation: VTAM issues this message when a VARY INACT command for resource *nodename* has been scheduled because one of the following occurred:

- An unrecoverable error occurred in a communication controller, physical unit, logical unit, link, or link station.
- VTAM scheduled an internal VARY INACT,TYPE=FORCE command because the maximum RU size was exceeded on the SSCP-LU session or the SSCP-PU session.

VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: VTAM automatically issues a VARY INACT command for resource *nodename*.

Operator response: Save the system log for problem determination.

System programmer response: Run your operating system service aid program, and contact IBM for service. See the *EREP User's Guide and Reference* for more information on using EREP.

Routing code: 2,8,1

Descriptor code: 5

IST1137I *command* **FAILED**, *nodename* – *reason*

Explanation: VTAM issues this message when the *command* failed for the specified *reason*.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

reason indicates the cause of the failure and can be one of the following:

ALSNAME NOT GIVEN

A MODIFY TRACE,TYPE=GPT command was entered for *nodename*. No ALSNAME was specified, and a default ALSNAME could not be determined because of one of the following:

- The adjacent link station list for *nodename* contains no entries.
- The adjacent link station list for *nodename* contains two or more entries (other than ISTAPNPU).

ALSNAME NOT VALID

A MODIFY TRACE,TYPE=GPT command was entered for *nodename*. The adjacent link station name (ALSNAME) that was either specified or used by default was not in a valid state when the command was entered. If ISTAPNPU was used by default because it was the only entry in the adjacent link station list, then this is the reason the command failed. ISTAPNPU is the name of the generic APPN adjacent link station. A real adjacent link station name must be specified for the command to succeed.

ARM REJECTED

A MODIFY TRACE command or TRACE start option was specified with the value TYPE=QDIOSYNC. An Arm request was initiated and the reply indicates that the OSA-Express2 or later adapter supports the QDIOSYNC function, but an error occurred while attempting to arm the OSA-Express2 or later adapter.

CDRSC IS DYNAMIC

nodename is a dynamic cross-domain resource; this is not valid for the TRACE command you entered.

CDRSC NOT ACTIVE

Giveback processing or internal delete for node *nodename* failed. VTAM found a predefined CDRSC to be **not** active, and VTAM was not able to transfer the active sessions from the LU to the CDRSC.

CDRSC NOT ALLOCATED

Giveback processing or internal delete for node *nodename* failed. VTAM has insufficient resources to allocate a cross-domain resource or does not support a dynamic CDRSC and was not able to transfer the active sessions from the LU to a CDRSC.

DEACTIVATE PENDING

VTAM rejected a VARY INACT, TYPE=GIVEBACK or VARY REL, TYPE=GIVEBACK command because a logical unit subordinate to *nodename* has LU-LU sessions and is pending deactivation.

EXIT IS NOT FOUND

The operator entered a DISPLAY EXIT command for a VTAM installation-wide exit which could not be located.

INSTALL EXIT REJECT

The operator entered a MODIFY ENCR command for *nodename*, and VTAM rejected the MODIFY ENCR command because of user-written routines related to the GENKEY function.

INSTALL PROGRAM

A MODIFY ENCR command was entered for *nodename* and the cryptographic facility is not supported by this host.

ISTLSXCF NOT ACTIVE

Another node in the sysplex attempts to establish a connection with an XCF node, but the connection is not established because the dynamic local SNA major node, ISTLSXCF, is not in an active state.

ISTLSXCF NOT FOUND

Another node in the sysplex attempts to establish a connection with an XCF node, but the connection is not established because the dynamic local SNA major node, ISTLSXCF, does not exist.

ISTTRL NOT FOUND

Another node in the sysplex attempts to establish a connection with an XCF node, but the connection is not established because the TRL major node, ISTTRL, does not exist.

MACLNTH NOT VALID

The operator entered a MODIFY SECURITY command with a MACLNTH value that is not valid. The MACLNTH value is dependent on the most recent specification of MACTYPE. The MACTYPE value might have been specified on a MODIFY SECURITY command or on the APPL definition statement.

MACTYPE NOT VALID

The operator entered a MODIFY SECURITY command with a MACTYPE value that is not valid with the most recent specification of MACLNTH. The MACLNTH value might have been specified on a previous MODIFY SECURITY command or on the APPL definition statement.

MODEL LU NOT VALID

The operator entered a DISPLAY LUGROUPS command for *nodename*. Model LU *nodename* was not found in the LUGROUP specified on the GROUP operand of the DISPLAY LUGROUPS command.

MODULE LOAD FAILED

Attempt to load XCF modules fails.

MUST BE APPLICATION

The operator entered a MODIFY ENCR command or MODIFY SECURITY command for *nodename* for one of the following purposes:

- To set the encryption level to CONDITIONAL
- To set the values of MACLNTH or MACTYPE.

MACLNTH, MACTYPE, and the CONDITIONAL encryption level are valid only if *nodename* is an application program.

MUST BE MORE SECURE

The operator entered a MODIFY ENCR command or MODIFY SECURITY command for *nodename* to lower (make less secure) the level of cryptographic session for the logical unit or application program indicated by *nodename*. The level of cryptographic session for a logical unit or application program can only be raised (made more secure). For example, if you have defined an LU as *selective*, you cannot modify it to *optional*. You can modify it to *required*.

NODE KEY UNDEFINED

The operator entered a MODIFY ENCR command or a MODIFY SECURITY command for *nodename*, and the node *nodename* does not have a properly defined cryptographic key in the cryptographic key data set.

NOT SUPPORTED

A MODIFY TRACE command or TRACE start option was specified with the value TYPE=QDIOSYNC. When the OSA-Express2 or later adapter was contacted, it was discovered that it does not support the QDIOSYNC function.

PROGRAM NOT ACTIVE

The Cryptographic Facility is not available to process a MODIFY ENCR command.

IST1137I

RESOURCE NOT VALID

The operator entered a MODIFY SECURITY command with the CKEY operand for *nodename*, but *nodename* is not a device type LU.

RESOURCES NOT FOUND

The operator entered a VARY ACQ or a VARY REL command, but it had no effect on the NCP.

Either all the resources were acquired or released already, or the OWNER specified on the command did not match any of the owner names specified on the NCP's resources. Two different networks cannot share the same native resources.

RTP PU NOT VALID

A VARY ACT command for an RTP PU is issued. This is a dynamic PU and activates automatically if RTP is supported. A VARY ACT of a RTP PU is invalid.

SECURITY DATA ERROR

VTAM detected a mismatch of the encrypted security data fields during the XID exchange. This mismatch may be caused by one of the following:

- An unauthorized subarea dial physical unit attempted to establish a connection over a switched line.
- The PRTCT operand was absent.
- The correct password was not coded for both the caller and receiver.
- One of the subarea nodes is of a level that does not support call security verification.

SECURITY ERROR

A security error occurred while VTAM was processing the command *command*.

STORAGE SHORTAGE

The operator entered a MODIFY ENCR command for *nodename* and the VTAM address space has insufficient storage.

SUPPORT UNAVAILABLE

The security manager is not available or the resource class APPCLU is not active.

SYSPLEX JOIN FAILED

VTAM is attempting to join the sysplex, but a nonzero return code is sent from MVS.

SYSPLEX UNAVAILABLE

VTAM is attempting to join the sysplex, but the sysplex is not active.

VTAM ABEND

One of the following occurred:

- VTAM abended while processing a MODIFY PROFILES command.
- VTAM abended while processing a MODIFY ENCR command for *nodename*. The error may be due to the improper cleanup of the cryptographic facility (that is, the operator cancelled the cryptographic facility via the CANCEL command).

XCF BUILD FAILED

A VARY ACT command fails for a dynamic local SNA major node.

XCF PU NOT FOUND

A D TRL,XCFCP=*cp_name* command was issued for *nodename*. The *nodename* is the CP name specified in the display command. The associated dynamic PU for that CP was not located.

XCF TRLE NOT FOUND

One of the following occurred:

- A D,TRL,XCFCP=*cpname* command was issued for *nodename*. The *nodename* is the CP name specified in the display command. The associated dynamic TRLE for that CP was not located.
- A V,NET,ACT,ID=ISTLSXCF command was issued. An XCF connection is in the process of being deactivated and an activation request is received. The dynamic TRLE which is required for activation does not exist.

System action: The command is not completed. Processing continues.

CDRSC IS DYNAMIC or CDRSC NOT ALLOCATED

LU *nodename* remains known to VTAM in an inactive state with active sessions.

FUNCTION NOT OPERATIONAL, NOT SUPPORTED, or ARM REJECTED

The command is not executed.

INSTALL PROGRAM

Install Cryptographic Facility.

SECURITY DATA ERROR

VTAM terminates the switched connection and deactivates the PU.

SECURITY ERROR or SUPPORT UNAVAILABLE

VTAM does not refresh the profiles and continues to use the profiles that are in storage.

Operator response: The *reason* determines the response:

ALSNAME NOT GIVEN

Enter a DISPLAY ID command for *nodename* to determine the correct adjacent link station, and reenter the command.

ALSNAME NOT VALID

Enter a DISPLAY ID command for *nodename* to determine the correct adjacent link station, and reenter the command.

The state (active or inactive) of the PU with which the independent LU is associated must be as follows:

- Active if it has been dynamically reconfigured in the NCP
- Active if it is on an NCP switched line
- Active or inactive if it is on an NCP nonswitched line.

CDRSC IS DYNAMIC or CDRSC NOT ALLOCATED

Activate a CDRSC major node that defines a CDRSC with *nodename*.

DEACTIVATE PENDING

Wait until all subordinate nodes have completed deactivation and try the command again.

ISTLSXCF NOT ACTIVE

Enter a VARY,ACT,ID=ISTLSXCF to activate ISTLSXCF.

MACLNTH NOT VALID

Try the command again with a valid value for MACLNTH.

MACTYPE NOT VALID

Try the command again with a valid value for MACTYPE.

MODEL LU NOT VALID

Check that *nodename* is correct and try the command again. If problems persist, save the system log for problem determination.

NOT SUPPORTED

Issue the DISPLAY NET,TRL,TRLE=*trlename* command to display the active OSA-Express2 or later TRLE. Look for message IST1716I or message IST2263I in the response. The OSA CODE LEVEL field is at the end of these messages. Record this value for the system programmer.

PROGRAM NOT ACTIVE

Make sure the Cryptographic Facility is installed and operational.

RESOURCE NOT VALID

Check that *nodename* is correct and try the command again. If problems persist, save the system log for problem determination.

RESOURCES NOT FOUND

Verify that all of the NCP resources have been acquired or released or that the OWNER specified on the command matches the owner name specified on the resources to be acted upon.

SECURITY DATA ERROR

Monitor the console for further occurrences of this message. If VTAM continues to issue this message, use the VARY ANS command to take the line out of answer mode.

SECURITY ERROR

Try the command again. If VTAM continues to issue this message, contact the security administrator.

IST1137I

STORAGE SHORTAGE

If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

VTAM ABEND

Save the system log and dump for problem determination.

If the error was due to the improper cleanup of the cryptographic facility, enter the STOP command to stop the cryptographic facility, and save the system log for problem determination.

XCF PU NOT FOUND

Check the CP name specified on the parameter XCFCP to ensure it is correct and try the command again. Issue a DISPLAY TRLE,CONTROL=XCF to determine whether any XCF TRLEs exist. Issue a DISPLAY ID=ISTLSXCF to determine whether an associated dynamic PU exists for the connection.

XCF TRLE NOT FOUND

Check the CP name specified on the parameter XCFCP to ensure it is correct and try the command again. Issue a DISPLAY TRLE,CONTROL=XCF to determine whether any XCF TRLEs exist.

All other reasons

Save the system log for problem determination.

System programmer response: The *reason* determines the response:

ARM REJECTED

Perform the following traces to help you determine the cause of the rejection:

- A CCW trace of the TRLE read and write control channels taken at the time of the first attempt to arm the adapter. This trace will show the Arm request being written and the Arm reply being read. Use a CCW trace data length of 256 bytes.
- A CTRACE using the VTAM and VTAMDATA options.
- A VTAM internal trace using the CIA and CIO options.

CDRSC IS DYNAMIC

Reenter the TRACE command with a resource that is not a dynamic cross-domain resource. You cannot trace a dynamic cross-domain resource.

CDRSC NOT ALLOCATED

Take VTAM down, and restart it so that it supports dynamic CDRSCs.

EXIT IS NOT FOUND

Make sure the VTAM installation-wide exit that could not be found has been installed on your system.

INSTALL EXIT REJECT

GENKEY failed with RETURN CODE 16 from the common cryptographic architecture product (CCA) or the IBM Cryptographic Unit Support product (CUSP).

For further information, see the documentation for the cryptographic facility that you are using.

MODEL LU NOT VALID

Check the definition of *nodename* to ensure that it is correct.

MUST BE APPLICATION

Make sure *nodename* is the correct node name. If *nodename* is the correct name, see z/OS Communications Server: SNA Operation for more information on valid encryption levels. Otherwise, reenter the MODIFY ENCR command with the correct value for *nodename*.

MUST BE MORE SECURE

If you want to lower the cryptographic session level of a node, you must redefine the system definition cryptographic option in SYS1.VTAMLST and reactivate the major node that contains *nodename*.

NODE KEY UNDEFINED

Define the cryptographic key for node *nodename* in the cryptographic key data set. For information about defining cryptographic keys, see the z/OS Cryptographic Services ICSF System Programmer's Guide and the z/OS Communications Server: SNA Network Implementation Guide.

NOT SUPPORTED

The OSA code level determined by the operator indicates the OSA processor code level of the OSA-Express2 or

later adapter. That value will show that the OSA-Express2 or later processor code level is insufficient. You must upgrade to a level that supports QDIOSYNC to use the function.

SECURITY DATA ERROR

Verify that all nodes involved in the dial process are at a level that supports call security verification. The passwords used to verify the identity of the caller and the receiver must match. See the PRTCT keyword on the PU statement in the switched major node definition.

STORAGE SHORTAGE

If this error occurs often, review the VTAM storage allocation. Increase storage as required.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

SYSPLEX JOIN FAILED

Trace the return code from MVS. Verify that the sysplex environment exists and restart VTAM.

VTAM ABEND

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the abend procedure. If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM software support center.

If the error was due to the improper cleanup of the cryptographic facility, start the cryptographic facility if it is not already started.

XCF BUILD FAILED

Restart VTAM with full XCF support.

XCF PU NOT FOUND

Verify that XCF support is active for this VTAM.

XCF TRLE NOT FOUND

Verify that XCF support is active for this VTAM.

For all other *reasons*, no further action is recommended.

Routing code: 2

Descriptor code: 5

IST1138I **REQUIRED** *resource* [*luname*] *reason*

Explanation: VTAM issues this message as part of a group of messages when a resource requests a session, and the session initiation request fails for one of the reasons listed below. The first message in the group is IST663I.

Message IST664I, which is part of the IST663I message group, shows the names of the partners for which a session could not be established.

The combination of *resource* and *reason* may be any of the following:

ADJSSCP TABLE

UNDEFINED

COS NAME *cosname*

UNDEFINED

LOGMODE NAME *logmode*

UNDEFINED

IST1138I

RESOURCE *luname*
UNDEFINED

RESOURCE *luname*
NOT ACTIVE

RESOURCE *luname*
UNSTABLE (device-type LUs only)

RESOURCE *luname*
DISABLED

RESOURCE *luname*
QUIESCING

RESOURCE *luname*
BLOCKING LOGONS (for application PLUs only)

STORAGE
NOT AVAILABLE

luname is displayed when *resource* is **RESOURCE**. *luname* is the real name of the LU or application that was in error. If the SLU is not known, *****NA***** is displayed for *luname*.

- If a network-qualified name was entered on the command line, VTAM issues *luname* as a network-qualified name in the form *netid.name*.
- If *luname* is the SLU, the resource is undefined, not active, disabled, or quiescing.
- If *luname* is the PLU, the resource is undefined, not active, disabled, quiescing, or blocking logons.
- For *cosname*, no COS (Class of Service) entry with that name has been defined. *cosname* is blank if the default Class of Service was used.
- For *logmode*, the logon mode is not valid for the SLU because:
 - The logon mode is not in the logon mode table for the SLU in the VTAM definition statements.
 - No logon mode table is associated with the SLU, and the logon mode is not included in the default logon mode table.
 - No valid logon mode table is associated with the SLU, and no default logon mode table exists.
- If *logmode* is not provided or contains blanks, IST264I is still issued. *****NA***** is displayed for *logmode*.

System action: VTAM rejects the session initialization request. The session setup fails.

Operator response: Follow the appropriate action:

- If the required resource is **UNDEFINED**, enter a VARY ACT command to activate the resource major node in which the resource is defined.
- If the required resource is **NOT ACTIVE**, enter a VARY ACT command to activate the resource. If the resource is an application program, start it.
- If the required resource is **UNSTABLE**, it may be going through some type of error recovery process. This can be due to ERP, an INOP, or session termination. Display the resource and try the request again after it has recovered.
- If the required resource is **DISABLED** and it is a device type LU, check to determine whether it is powered on.
- If the required resource is **DISABLED** and it is an application program, start the application program or ensure that the application has issued SETLOGON START.
- If the required resource is an application program and is **QUIESCING**, SETLOGON QUIESCE is in effect. The application program is shutting down and cannot accept new sessions unless VTAM closes and reopens the ACB.
- If the required resource is an application program, and the ACB was opened with MACRF=NLOGON, it is **BLOCKING LOGONS**. The only LU-LU sessions allowed for the application program are those initiated by the application program itself using OPNDST OPTCD=ACQUIRE.
- For a **LOGMODE** problem, verify that the resource specified the correct logon mode on the request. You can use the DISPLAY ID command to determine the table identified for the resource. You can use the MODIFY TABLE command to change the logon mode table name associated with a resource.
- If **STORAGE** is **NOT AVAILABLE**, wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.

System programmer response:

- For a **COS** problem, verify that you have defined the Class of Service.
- For a **LOGMODE** problem, either correct the logon mode table currently assigned to the SLU or assign a different logon mode table that does contain the correct mode.
- For a **STORAGE** problem, allocate more storage to the pageable system queue area (SQA). For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the **MODIFY VTAMOPTS** command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
 - See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
 - See z/OS Communications Server: SNA Operation for information about the **DISPLAY BFRUSE** command, the **DISPLAY STORUSE** command, and the **MODIFY VTAMOPTS** command.

Routing code: 8**Descriptor code:** 4

IST1139I *runame* **FOR** *nodename* **FAILED – SENSE:** *code*

Explanation: This message is the first in a group of messages that VTAM issues when the request *runame* for node *nodename* failed with sense code *code*. A complete description of the message group follows.

```

IST1139I  runame FOR nodename FAILED – SENSE: code
IST1045I  NODE TYPE = nodetype
[IST1840I DLUR = dlurname]
IST314I   END

```

IST1139I

runame is the request that was entered for *nodename*. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *runame*.

If the network where the resource resides is known to VTAM, *nodename* is issued as a network-qualified name in the form *netid.name*.

code is the sense code and indicates the reason for the error. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

IST1045I

nodetype is the resource type of *nodename*. See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for possible values.

IST1840I

dlurname is the network-qualified CP name of the dependent LU requester (DLUR) in the form *netid.name*. It is the DLUR associated with *nodename* in message IST1139I.

System action: VTAM does not perform the request *runame*.

When VTAM receives a failing activation request for RUs such as **ACTLINK**, **CONTACT**, **ACTLU**, or **ACTPU**, VTAM usually deactivates the resource and all subordinate resources, regardless of whether the resource was being activated or deactivated.

Operator response:

- Attempt to activate or trace the node again.
- If a failure still occurs, save the system log for problem determination.
- If VTAM issues this message repeatedly, disable the line. Save the system log for problem determination.
- If *code* indicates a storage problem, wait a short time and reenter the command. If VTAM continues to issue this message, enter the **DISPLAY BFRUSE** command to display storage used by VTAM buffer pools and information about the common service area (CSA). Message IST981I displays total VTAM private storage information. Issue the **DISPLAY STORUSE** command to display storage usage for storage pools.
Save the system log and request a dump for problem determination.
- **Sense Code 081Cmmnn**

IST1140I

Correct the cause indicated by the user portion of the sense code (*nnnn*), and try the command again.

System programmer response:

- If *code* indicates a storage problem, increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
 - See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
 - See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
 - See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

• Sense Code 081Cnnnn

If an ACTLINK request failed on a VARY ACT request with the sense code of 081Cnnnn, check the CUADDR operand of the PU (local SNA) or PCCU definition statement to make sure that the correct channel unit address (CUA) was specified for the node *nodename*.

If sense code 081C0010 is received and message IST1386I is issued, see the return code and reason code in message IST1386I to determine the cause of the failure.

• Sense Code 08A30001

If VTAM issues sense code 08A30001 repeatedly, determine the subarea node that is attempting to establish a switched connection. If the SSCP is authorized to request that connection, verify that both SSCPs have identical PRTCT operands coded for their PU statements on the switched major nodes. Also verify that both nodes and their SSCPs are of a level that supports call security verification.

VTAM might issue this message with sense code 08A30001 because an unauthorized subarea node is attempting to establish a switched connection to the host that received the message.

- You might need to include the LUDRPOOL macro in the NCP generation.
- Make sure that the device is available to the system and that there are no hardware problems.

Routing code: 2

Descriptor code: 5

IST1140I *command* FAILED *nodename* – STATE *state* NOT VALID

Explanation: This message is the first in a group of messages that VTAM issues when the *command* is rejected because the resource *nodename* was not in a state that is valid for the request. A complete description of the message group follows.

```
IST1140I  command FAILED nodename – STATE state NOT VALID
IST1045I  NODE TYPE = nodetype
IST314I   END
```

IST1140I

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

state is the status of *nodename* at the time of the request. See the z/OS Communications Server: IP and SNA Codes for a description of *state*.

IST1045I

nodetype is the resource type of *nodename*. See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for possible values.

System action: VTAM rejects the command.

Operator response: Use the DISPLAY ID command to monitor the progress of the node. When processing is completed, enter the commands required to obtain the network configuration or device state required.

System programmer response: Check the system log to determine the series of events that caused the problem.

Routing code: 2

Descriptor code: 5

IST1141I *command1* FOR *nodename* OVERRIDDEN BY *command2*

Explanation: VTAM issues this message when *command2* overrides *command1*, even though *command1* was entered first.

VTAM might have issued *command2* when it could not complete *command1*. For example, a VARY INACT,TYPE=IMMED command for a physical unit causes VTAM to reject a VARY REL command for the same device. The VARY INACT,TYPE=IMMED command is processed, and the VARY REL command is not executed, because the release processing is part of the deactivation processing.

See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command1* and *command2*.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

System action: VTAM rejects *command1*. Processing of *command2* continues.

Operator response: VTAM cannot process *command1* and *command2* concurrently. *command1* is always rejected. Check the system log to determine the reason for the sequence in which the two commands were entered.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1142I TRACE REQUEST FAILED – *nodename* NOT VALID

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY TRACE command or TRACE start option. The trace for resource *nodename* failed because:

- *nodename* does not exist.
- *nodename* is not valid for the type of trace requested.
- if SCOPE=ALL was specified, no subnodes of the resource *nodename* were found which were valid for the type of trace requested.

A complete description of the message group follows.

```
IST1142I TRACE REQUEST FAILED – nodename NOT VALID
IST1045I NODE TYPE = nodetype
IST314I END
```

If a network-qualified name was entered on the command line or start option, VTAM issues *nodename* in the form *netid.name*.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action: VTAM rejects the command.

Operator response: Ensure that you entered *nodename* correctly. If problems persist, verify that *nodename* is valid for the type of trace requested or, if SCOPE=ALL was specified, verify that at least one subnode exists that is valid for the type of trace requested.

For more information on the MODIFY TRACE command or TRACE start option, see z/OS Communications Server: SNA Operation.

System programmer response: None.

Routing code: 2

IST1143I • IST1144I

Descriptor code: 5

IST1143I TRACE TERMINATED FOR *nodename* [ALSNAME = *alsname*]

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY NOTRACE command when the trace activity on resource *nodename* has stopped. A complete description of the message group follows.

```
IST1143I TRACE TERMINATED FOR nodename [ALSNAME = alsname]  
IST1045I NODE TYPE = nodetype  
IST314I END
```

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

alsname is the name of the adjacent link station (ALS) over which the LU is traced. *alsname* is displayed if the traced node is an independent LU.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action: VTAM stops tracing *nodename*. Processing continues.

Note: If MODIFY NOTRACE is entered with the SCOPE=ALL operand, VTAM also stops all traces on subordinate nodes to *nodename*.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1144I TRACE INITIATED FOR *nodename* [ALSNAME = *alsname*]

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY TRACE command when trace activity for the node *nodename* has successfully started. A complete description of the message group follows.

```
IST1144I TRACE INITIATED FOR nodename [ALSNAME = alsname]  
IST1045I NODE TYPE = nodetype  
IST314I END
```

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

alsname is the name of the adjacent link station (ALS) over which the LU is traced. *alsname* is displayed if the traced node is an independent LU.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for possible values.

System action: VTAM starts tracing *nodename*.

Note: If you coded the SCOPE=ALL operand on the MODIFY TRACE command, VTAM initiates traces on all subordinate nodes as well.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1145I TRACE REQUEST FAILED, *nodename* – STORAGE SHORTAGE

Explanation: This message is the first in a group of messages that VTAM issues when a MODIFY TRACE command, MODIFY NOTRACE command, TRACE start option, or NOTRACE start option is entered to activate or deactivate a VTAM trace for resource *nodename*, but sufficient storage is not available to build a parameter list. A complete description of the message group follows.

```
IST1145I  TRACE REQUEST FAILED, nodename – STORAGE SHORTAGE
IST1045I  NODE TYPE = nodetype
IST314I   END
```

If a network-qualified name was entered on the command line or start option, VTAM issues *nodename* in the form *netid.name*.

nodetype is the resource type of *nodename*. See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for possible values.

System action: VTAM rejects the command or start option. Processing continues.

Operator response:

- If VTAM issues this message in response to a command, wait a few minutes, and reenter the command. If the error persists, enter a DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and dump for problem determination.
- If VTAM issues this message during startup, wait until VTAM is initialized, and enter a DISPLAY BFRUSE command. Save the system log and dump for problem determination.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1146I *nodename* command U = *operand* FAILED

Explanation: VTAM issues this message when *command* failed for *nodename* because an unacceptable *operand* was entered.

- If *operand* is Δ (blank), a line in a channel attachment major node or a local SNA PU was defined without a channel unit address, and the channel unit address was not specified with the U operand on the VARY ACT command.
- If *operand* is *cua*, a VARY ACT command specifying U=*cua* was entered for a line in a channel attached major node or a local SNA PU that was not active. This error occurs when *cua* does not match the channel unit address currently in use.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

System action: VTAM rejects the command.

Operator response: If *operand* is (blank), reenter the VARY ACT command specifying the channel unit address on the U operand.

If *operand* is *cua*, and *cua* is the correct channel unit address, deactivate the line or PU and reenter the command.

IST1147I • IST1149I

System programmer response: If *operand* is (blank), you may want to specify a default channel unit address for the line or PU.

If *operand* is *cua*, no action is required.

Routing code: 2

Descriptor code: 5

IST1147I *nodename* command LOGON= *operand* FAILED

Explanation: VTAM issues this message in response to a **VARY ACT** or **VARY LOGON** command. *command* failed for *nodename* because an unacceptable *operand* was entered.

If *operand* is a controlling LU, a controlling LU name was specified on the **LOGON** operand of a **VARY ACT** command for an application. Controlling LUs are only valid for logical units.

If a network-qualified name was entered on the ID operand of the command, VTAM issues *nodename* in the form *netid.name*.

If a network-qualified name was entered on the LOGON operand of the command, VTAM issues *operand* in the form *netid.name*.

System action: VTAM rejects the command.

Operator response: If *operand* is a controlling LU, see z/OS Communications Server: SNA Operation for information on the correct syntax of the **VARY ACT** command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1148I *nodename* command RNAME = *operand* FAILED

Explanation: VTAM issues this message when *command* failed for *nodename* because an unacceptable *operand* was entered.

The command failed for one of the following reasons:

- **RNAME** = *nodename* was specified during activation of a communication controller where *nodename* is the name of a logical unit and therefore is not valid.
- The value specified in the **RNAME** *operand* is not a valid link station name.
- **RNAME** = *backup* was specified, but VTAM was not able to process backup link station *backup*.
- The value specified in the **RNAME** *operand* does not match the Network Control Program (NCP) definition.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

System action: VTAM rejects the command.

Operator response: Reenter the command specifying a valid *nodename* or value for *operand*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1149I **VARY** *command* PROCESSING FOR NODE *nodename* COMPLETE

Explanation: VTAM issues this message when the specified **VARY** command processing has completed for resource *nodename*.

If a network-qualified name was entered on the command line, VTAM issues *nodename* in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST1150I *uservar* **CHANGED:** *value1* **TO** *value2*

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY USERVAR command is used to change the value of a USERVAR. The first message in the group is IST1283I. See that message for a complete description of the group.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information. *value1* is the original value of *uservar*. If a network-qualified name was entered on the previous MODIFY command, VTAM issues *value1* in the form *netid.name*.

value2 is the new value of *uservar*. If a network-qualified name was entered on the current MODIFY command, VTAM issues *value2* in the form *netid.name*.

Any subsequent session requests to *uservar* are routed to the application named in *value2*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1151I **USERVAR** *uservar* **DEFINED: VALUE =** *value*

Explanation: This message is the first in a group of messages that VTAM issues when a MODIFY USERVAR command is used to define a USERVAR. A complete description of the message group follows.

```
IST1151I USERVAR uservar DEFINED: VALUE = value
[IST1030I USERVAR EXIT IS exitname]
IST314I  END
```

Note: This message group is percolated. See “Message rerouting and percolation” on page 1146 for additional information.

IST1151I

uservar is the name of the USERVAR.

The value of *uservar* has been initialized to *value*. If a network-qualified name was entered on the command line, VTAM issues *value* in the form *netid.name*.

Any subsequent session requests to *uservar* are routed to the resource named in *value*.

IST1030I

exitname is the name of the USERVAR exit. If no USERVAR exit is defined, VTAM does not issue this message.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1152I *nodename* CONTROLLING LU [*luname*] REMOVED

Explanation: VTAM issues this message when processing of the VARY NOLOGON command has been completed. Resource *nodename* will no longer be automatically logged on to *luname* when *nodename* is not in session with or queued for a session with another PLU. *luname* may or may not be included depending on how the LU is specified in the NOLOGON command.

If a network-qualified name was entered on the ID operand of the command, VTAM issues *nodename* in the form *netid.name*.

If a network-qualified name was entered on the NOLOGON operand of the command, VTAM issues *luname* in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1153I *nodename1 nodename2* SESSION *bp*BUF USE *percentage*

Explanation: VTAM detected that the session indicated is using 10 percent or greater of the *bp*BUF buffer pool.

Note: This message is percolated. See “Message rerouting and percolation” on page 1146 for additional information. *nodename1* and *nodename2* are the session partners for the session using the largest percentage of the pool. VTAM issues *nodename1* and *nodename2* as network-qualified names in the form *netid.name*. If VTAM does not know a node name, the node ID is presented in the form *subareaelement*, where *subarea* is the subarea and *element* is the element portion of the network address.

*bp*BUF, the name of the buffer pool, will always be IO.

percentage is the percentage of this buffer pool used by this session.

If the session between *nodename1* and *nodename2* is not using a large percentage of the buffer pool, the size of the buffer pool was probably underestimated.

If the session between *nodename1* and *nodename2* is using a large percentage of the buffer pool, one of the following conditions probably exists:

- Either *nodename1* or *nodename2* is malfunctioning. This could be a hardware, microcode, or application program error that causes VTAM to be flooded with data.
- Neither *nodename1* nor *nodename2* is malfunctioning, but a large amount of data is being transmitted on this session with no pacing in effect.

System action: Message IST154I, IST1098I, or IST1099I is displayed with this message.

- If message IST154I is displayed, the buffer pool is not expanded at this time. When more storage becomes available, VTAM may try again to expand the buffer pool. VTAM may be adversely affected by this failure to obtain more buffers.
- If message IST1098I or IST1099I is displayed, processing continues.
 - If the session is an SSCP-LU session, then the LU is deactivated, and message IST1098I is displayed.
 - If the session is an LU-LU session (including CP-CP) then the session is terminated, and message IST1099I is displayed.

Once VTAM has determined that a session is using greater than 10 percent of the buffer pool, a determination is made whether to automatically terminate the session. If the percentage is greater than or equal to the HOTIOTRM start option value, VTAM initiates termination of all the sessions between *nodename1* and *nodename2*. VTAM issues message IST1099I when sessions are automatically terminated.

Operator response:

- If it appears that the problem is caused by a malfunctioning device LU, try to deactivate the device using the VARY INACT command. In extreme cases, you may have to physically disconnect or power off the device.
- If it appears that the problem is caused by a VTAM application program, take a dump of that program and terminate it. Save the system log for problem determination.
- If VTAM continues to issue this message, enter the DISPLAY BFRUSE command. Save the system log and request a dump for problem determination.

System programmer response:

- Ensure that session pacing is in effect for the session using the largest percentage of the buffer pool. The BIND request unit contains the values used for each session. See the z/OS Communications Server: SNA Network Implementation Guide for more information about session pacing.
- If message IST154I is displayed before this message, and the session between *nodename1* and *nodename2* is not using a large percentage of the buffer pool, the size of the buffer pool was probably underestimated.
- If message IST154I was issued, use the explanation of *code* in that message to determine which buffer pool you need to modify.
- You might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.
- If you want VTAM to automatically terminate these sessions, specify the HOTIOTRM start option with a value that is less than or equal to *percentage*. This start option can be modified using the MODIFY VTAMOPTS command.
- For additional information, see:
 - The z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
 - The z/OS Communications Server: SNA Resource Definition Reference for more information on the HOTIOTRM start option and other VTAM start options.
 - The z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
 - The z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2**Descriptor code:** 5**IST1154I** *resourcename_1 ... resourcename_n*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY LMTBL, TYPE=LUNAME command. The first message in the group is either IST986I or IST1006I. See the explanation of those messages for a complete description.

Routing code: 2**Descriptor code:** 5**IST1155I** *nodename* VARY NOLOGON = *applname* FAILED

Explanation: VTAM issues this message in response to a VARY NOLOGON command. The command failed because a controlling relationship existed for *nodename* with a different application than the specified *applname*.

If a network-qualified name was entered on the ID operand of the command, VTAM issues *nodename* in the form *netid.name*.

If a network-qualified name was entered on the NOLOGON operand of the command, VTAM issues *applname* in the form *netid.name*.

System action: Processing continues.

Operator response: Enter a DISPLAY ID command for *nodename* to verify that a controlling relationship exists. Reenter the VARY NOLOGON command with the indicated *applname*.

System programmer response: None.**Routing code:** 2

IST1156I • IST1157I

Descriptor code: 5

IST1156I USERVAR *uservar* IN *netid* HAS VALUE *value*

Explanation: VTAM issues this message in response to one of the following commands:

- DISPLAY SESSIONS

This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS command when the resource name specified on the command is the name of a USERVAR.

- DISPLAY ID

This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command when the resource name specified on the ID operand is the name of a USERVAR. The first message in the group is IST075I.

uservar is a user-defined name for a network resource in network *netid* with the value of *value*. If *uservar* has a network-qualified USERVAR value, VTAM issues *value* as a network-qualified name in the form *netid.name*.

If *uservar* is both a user variable and a network resource, VTAM will display the resource and ignore the user variable value. Otherwise, VTAM will display the resource represented by the value of the USERVAR, *value*. If this message is issued in response to a DISPLAY ID command, message IST075I contains the name of the resource being displayed.

Note: If IDTYPE=USERVAR is entered on the command, VTAM displays the USERVAR *value* in message IST075I and not the real resource.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1157I DUPLICATE REGISTRATION *endnode1 endnode2*

Explanation: This message is the first in a group of messages that VTAM issues when it receives registration requests for the same resource from two different end nodes *endnode1* and *endnode2*. This happens when one of the following conditions occurs:

- The resource has been moved from one end node to another, and the first end node has failed to delete the resource from the network node server. This is not an error condition.
- Both end nodes have a definition for the same resource, and have specified that the resource should be registered. This is an error condition.

A complete description of the message group follows the example.

```
IST1157I  DUPLICATE REGISTRATION endnode1 endnode2
IST1194I  DUPLICATE RESOURCE IS resourcename
IST314I   END
```

IST1157I

endnode1 and *endnode2* are the network-qualified names of the two end node control points, in the form *netid.name*.

IST1194I

This message identifies the resource that has been registered twice.

resourcename is the network-qualified name of the resource, in the form *netid.name*.

System action: The information in the second registration request replaces the information from the first registration request. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that duplicate resource definition has not taken place.

Routing code: 2

Descriptor code: 3

IST1158I **MODIFY TOPO COMMAND FAILED, ID = *nodename* [TGN = *tgnumber*]**

Explanation: This message is the first in a group of messages that VTAM issues when a MODIFY TOPO command fails. A complete description of the message group follows the example.

```
IST1158I  MODIFY TOPO COMMAND FAILED, ID = nodename
[IST1159I  HOST NODE DATABASE ENTRY CANNOT BE DELETED]
[IST1160I  TYPE=FORCE MUST BE SPECIFIED FOR LOCAL TG OR ADJACENT NODE]
[IST1248I  DEACTIVATE LOCAL LINK BEFORE DELETING]
[IST1308I  RESOURCE WAS NOT FOUND IN THE TOPOLOGY DATABASE]
IST314I  END
```

IST1158I

nodename is the name of the resource specified on the ID operand of the command. If a network-qualified name was entered on the command, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

tgnumber, if specified, is the transmission group (TG) number on the TGN operand of the command.

TGN = *tgnumber* is not displayed if the second message in the group is IST1159I.

IST1159I

This message is issued when *nodename* is the same node from which the command is entered. In this message group, *nodename* in message IST1158I is the same node as **HOST NODE** in message IST1159I. You cannot delete the topology database entry representing the host node.

IST1160I

This message is issued when TYPE=FORCE was not specified on the command, and the resource is a locally attached TG or an adjacent node. TYPE=FORCE is required to delete the topology database entry for a locally attached TG or an adjacent node.

IST1248I

This message is issued when you attempt to delete locally attached TG *tgnumber*, and it is active. VTAM does not allow you to delete an active locally attached TG.

IST1308I

This message is issued when *nodename* or *tgnumber* cannot be found in the topology database.

System action: The topology database is not changed. Other processing continues.

Operator response: **IST1159I**

Verify that *nodename* was entered correctly. If *nodename* is the same node from which the command is entered, you cannot delete the topology database entry for this resource.

IST1160I

To delete the local TG *tgnumber* or the adjacent node *nodename*, enter the command again specifying TYPE=FORCE.

IST1248I

To delete TG *tgnumber*, enter a VARY INACT command to deactivate the link first, and then reenter the MODIFY TOPO,FUNCTION=DELETE command.

IST1308I

Verify that *nodename* and *tgnumber*, if applicable, were entered correctly.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1159I HOST NODE DATABASE ENTRY CANNOT BE DELETED

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1158I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1160I TYPE=FORCE MUST BE SPECIFIED FOR LOCAL TG OR ADJACENT NODE

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1158I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1161I SSCP SESSIONS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY SESSIONS command. The first message in the group is either IST873I or IST878I. See the explanation of the first message in the group for a complete description.

Routing code: 2

Descriptor code: 5

IST1162I *sessiontype = count*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY SESSIONS command. The first message in the group is either IST873I or IST878I. See the explanation of the first message in the group for a complete description.

Routing code: 2

Descriptor code: 5

IST1163I RSN HPR LEFT WEIGHT

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1164I *rsn hpr time isl_wgt*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1166I VIRTUAL NODE *nodename* CONNECTION ACTIVATION FAILED

Explanation: This message is the first in a group of messages that VTAM issues in response to a VARY ACT for a line when the activation of the logical connection with the virtual node fails. Possible message groups follow:

```
IST1166I  VIRTUAL NODE nodename CONNECTION ACTIVATION FAILED
IST1226I  TOPOLOGY UPDATE FAILED, INSUFFICIENT STORAGE
IST314I   END
```

```

IST1166I VIRTUAL NODE nodename CONNECTION ACTIVATION FAILED
IST1334I TGN NOT AVAILABLE
IST314I END

IST1166I VIRTUAL NODE nodename CONNECTION ACTIVATION FAILED
IST1346I NCP DOES NOT SUPPORT CONNECTION NETWORK FUNCTION
IST314I END

IST1166I VIRTUAL NODE nodename CONNECTION ACTIVATION FAILED
IST134I GROUP = groupname, MAJOR NODE = nodename
[IST1622I DLCADDR SUBFIELD subfield_id NOT VALID - subfield_description]
[IST1623I DUPLICATE DLCADDR SUBFIELD subfield_id - subfield_description]
[IST1624I DLCADDR SUBFIELD 7 NOT SPECIFIED - TRAFFIC DESCRIPTOR]
IST314I END

```

This message group is issued when one of the following has occurred:

- A transmission group (TG) number could not be assigned because all of the TG numbers for the connection network are being used.
- The topology update for the active logical connection failed due to insufficient storage.
- The NCP does not support the connection network function because it is running on a version prior to Version 6 Release 3.
- The activation of an ATM native connection network failed because of an improperly coded set of DLCADDR operands on the GROUP definition statement in the external communication adapter (XCA) major node.

IST134I

groupname is the symbolic name of the line group in which the connection network is defined.

nodename is the name of the major node in which the line group is defined.

This message is followed by message IST1622I, IST1623I, or IST1624I.

IST1622I

- This message indicates that a particular DLCADDR operand in a set of DLCADDR operands is coded incorrectly.
- *subfield_id* and *subfield_description* can be one of the following combinations:

<i>subfield_id</i>	<i>subfield_description</i>
7	TRAFFIC DESCRIPTOR
8	QUALITY OF SERVICE (QoS)
9	TRANSIT NETWORK SELECTION
21	ATM ADDRESS
51	ATM BEARER CAPABILITIES
61	ATM ADAPTATION LAYER (AAL)

IST1623I

- This message indicates that two DLCADDR operands in a set of DLCADDR operands are coded with the same subfield ID.
- *subfield_id* and *subfield_description* can be one of the following combinations:

<i>subfield_id</i>	<i>subfield_description</i>
7	TRAFFIC DESCRIPTOR
8	QUALITY OF SERVICE (QoS)
9	TRANSIT NETWORK SELECTION
21	ATM ADDRESS
51	ATM BEARER CAPABILITIES

IST1166I

61 ATM ADAPTATION LAYER (AAL)

IST1624I

This message indicates that a DLCADDR operand with subfield 7 is not coded in a set of DLCADDR operands. A DLCADDR operand with subfield 7 is required for ATM native connections.

System action: Processing continues.

Operator response: IST1226I

Issue the DISPLAY BFRUSE command to display information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST98II.

Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

IST1334I

Save the system log for problem determination.

IST1346I

Save the system log and request a dump for problem determination.

IST1622I

Save the system log for problem determination.

IST1623I

Save the system log for problem determination.

IST1624I

Save the system log for problem determination.

System programmer response: IST1226I

Increase storage as required.

See z/OS Communications Server: SNA Operation for more information.

IST1334I

- Make additional TG numbers available using one of the following methods:
 - Deactivate one or more lines in order to free up TG numbers.
 - Define a new virtual node by specifying a new VNNAME on one or more of the lines and reactivate the line. Each virtual node must be defined on both sides of the line.

IST1346I

Verify that the NCP is at a level that supports the connection network function (Version 6 Release 3 or higher). See the appropriate NCP manual for more information.

IST1622I

Correct the DLCADDR operand that is in error in the set of DLCADDR operands on the GROUP definition statement in the XCA major node indicated in message IST134I. See the z/OS Communications Server: SNA Resource Definition Reference for information about how to code the DLCADDR operand on the GROUP definition statement in the XCA major node.

IST1623I

Delete all but one DLCADDR operand with the same subfield identifier in the set of DLCADDR operands on the GROUP definition statement in the XCA major node indicated in message IST134I. See the z/OS Communications Server: SNA Resource Definition Reference for information about how to code the DLCADDR operand on the GROUP definition statement in the XCA major node.

IST1624I

Code a DLCADDR operand with subfield 7 to define traffic management options in the set of DLCADDR operands on the GROUP definition statement in the XCA major node indicated in message IST134I. See the z/OS Communications Server: SNA Resource Definition Reference for information about how to code the DLCADDR operand on the GROUP definition statement in the XCA major node.

Routing code: 2

Descriptor code: 5

IST1167I VN *nodename* CONNECTION DEACTIVATION FAILED

Explanation: This message is the first in a group of messages VTAM issues when the deactivation of the logical connection with the virtual node fails because the topology update for the inactive logical connection did not complete successfully. A complete description of the message group follows.

```
IST1167I  VN nodename CONNECTION DEACTIVATION FAILED
IST1226I  TOPOLOGY UPDATE FAILED, INSUFFICIENT STORAGE
IST314I   END
```

nodename is the name of the virtual node.

System action: Processing continues.

Operator response: Issue the DISPLAY BFRUSE command to display information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I.

Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

System programmer response: Increase storage.

For more information see the z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

Routing code: 2

Descriptor code: 5

IST1168I VIRTUAL NODE *nodename* CONNECTION ACTIVE

Explanation: VTAM issues this message in response to a VARY ACT command for a line when the logical connection with the virtual node becomes active.

nodename is the name of the virtual node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1169E *poaname* REPLY ID FOR MESSAGE *msgid* NOT AVAILABLE

Explanation: VTAM has a write-to-operator with reply (WTOR) message *msgid* to send to the program operator application (POA) *poaname*, but a reply ID is not available for this *poaname*. This can occur for either of the following reasons:

- The POA is not issuing RCVCMD macros quickly enough to receive outstanding WTOR messages.
- The outstanding WTOR messages have been received by the POA, but replies have not been received by VTAM.

poaname is the name of the POA that is to receive the VTAM message.

msgid is the ID of the failing message.

IST1176I • IST1183I

System action: Message *msgid* and all subsequent WTOR messages will be rerouted to the system console until a reply ID becomes available for this *poaname*.

Operator response:

1. Issue DISPLAY ID=*poaname* and save the system log for problem determination. Message IST271I will provide the *jobname* related to the *poaname*.
2. Request a dump of the application program (*jobname*) and VTAM for problem determination.

System programmer response:

- If the POA is not issuing RCVCMD macros quickly enough, you can clear the VTAM message queue for *poaname* by issuing RCVCMD macros with OPTCD=NQ until the queue is empty.
- If RCVCMD macros are being issued quickly enough, examine the dump and the VTAM internal trace (if available) to determine why the messages are not being received or responded to quickly enough.
- The POA must issue a SENDCMD macro to send a REPLY command to VTAM for each of the outstanding WTOR messages. Check to ensure that the RCVCMD and SENDCMD macros are being received by VTAM.
- You might need to change the POA RCVCMD processing so that RCVCMDs are issued more frequently.
- You can also change the dispatching priority of the POA. See your operating system documentation for information on dispatching priority.
- You can cancel the job related to *poaname*. This will clear the VTAM message queue for *poaname*.

See program operator coding requirements in z/OS Communications Server: SNA Programming for information on program operator applications, RCVCMD and SENDCMD macros, and VTAM reply IDs.

Routing code: 2

Descriptor code: 11

IST1176I BASIC FROZEN

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STATS command when TYPE=COMPRESS is specified. See the explanation of message IST1435I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1177I *level input basic frozen*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY STATS command when TYPE=COMPRESS is specified. See the explanation of message IST1435I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1183I *exitname* EXIT RETURNED A CODE OF *usercode* [*label diagcode*]

Explanation: This message is issued by VTAM in response to a condition identified in an installation-wide exit.

- For base exits, this message is issued as a stand-alone message.
- For multiple exits, this message is issued in a message group. A complete description of the message group follows the example.

```
IST1183I exitname EXIT RETURNED A CODE OF usercode [label diagcode ]
IST314I  END
```

IST1183I

- *exitname* is the name of the installation-wide routine.
- *usercode* is the hexadecimal return code in register 15 passed by the exit routine.
- *label* and *diagcode* are not issued for all exits.

label is message text specific to *exitname* that labels the VTAM diagnosis code *diagcode*.

diagcode is a VTAM-generated code for the exit *exitname*.

System action: The system action depends on the hexadecimal *usercode* for *exitname* in message IST1183I. If *diagcode* is displayed, the system action might depend on this code.

Operator response: Save the system log for problem determination.

System programmer response: Use *exitname*, the exit return code *usercode*, *label*, and *diagcode* in message IST1183I when referring to z/OS Communications Server: SNA Customization to determine the meaning of the codes and to ensure that the proper codes are defined in the exit routine.

If you are using the IBM-supplied USERVAR exit routine specific to the Transaction Processing Facility (TPF) environment, see the z/OS Communications Server: SNA Customization for return codes.

If z/OS Communications Server: SNA Customization requires no specific exit return code from the exit, check with the author of the exit routine for a description of the user-written codes.

Routing code: 2

Descriptor code: 5

IST1184I CPNAME = *cpname* – NETSRVR = *network_node_server*

Explanation: This message is part of several groups of messages that VTAM issues in response to a DISPLAY DIRECTORY or DISPLAY ID=*cdrsc* command.

- If DISPLAY DIRECTORY is issued, the first message in the group is IST1186I. See the description of IST1186I for more information.
- If DISPLAY ID=*cdrsc* is issued, IST1184I may be issued alone or in a message subgroup or both.
 - IST1184I may be issued with other messages displaying CDRSC information:


```
IST1184I CPNAME = cpname – NETSRVR = ***NA***
```
 - IST1184I may be issued in the following subgroup:


```
[IST075I NAME = nodename, TYPE = nodetype]
IST1186I DIRECTORY ENTRY = entrytype resourcetype
IST1184I CPNAME = cpname – NETSRVR = network_node_server
[IST1402I SRTIMER = srtimer SRCOUNT = srcount]
[IST1401I RESOURCE NOT FOUND-RETRY IN time SEC(S) OR number REQUEST(S)]
IST314I END
```

Note: If the IDTYPE operand was specified on the DISPLAY ID command, information about subarea resources might precede the IST1186I subgroup. See z/OS Communications Server: SNA Operation for more information.

IST075I

This message is only displayed for a DISPLAY ID command.

nodename is the resource name specified on the ID operand of the command.

nodetype is the resource type of *nodename*. See Chapter 17, “Node and ID types in VTAM messages,” on page 1137 for a description of *nodetype*.

IST1184I

- *cpname* is the network-qualified name of the owning control point in the form *netid.name*.
In the combined APPN and subarea network, the owning CP might be an SSCP or a network node in a different APPN subnetwork. All owning CPs found in or through a subarea network are represented to the origin CP as an end node being served by the interchange node through which the resource was found.
- *network_node_server* is the network-qualified name of the network node server in the form *netid.name*.
network_node_server represents the network node in the host's APPN subnetwork that should be contacted to locate the target resource. If DISPLAY ID=*cdrsc* is issued, *network_node_server* might be *****NA*****, indicating that this information is not applicable.

Note: If the CPNAME displayed is actually a CDRM name and the subject resource has a different NETID than its owning CDRM, then the NETID displayed might be that of the resource (rather than the CDRM), if this is the only information available.

IST1185I

IST1186I

- This message indicates that the resource has been found in the directory database and displays information about the resource.
- *entrytype* is one of the following:

DEFINED

The resource was pre-defined to the directory database. A DEFINED directory entry might become a DYNAMIC directory entry if a search request learns new information about the resource, such as the NETID or the name of the owning CP.

DYNAMIC

The resource was learned of as the result of a dynamic search request and was stored.

REGISTERED

The resource was registered to the directory database through end node resource registration.

- *resourcetype* represents the resource type known by the host APPN directory and may be different from the actual type of the resource. *resourcetype* is one of the following:

EN Represents an end node, which is also known as the owning control point (CP) of a resource.

LU Represents a logical unit.

NN Represents the network node in the host's APPN subnetwork.

IST1401I

- *cpname* is the network-qualified name of the owning control point in the form *netid.name*.
In the combined APPN and subarea network, the owning CP might be an SSCP or a network node in a different APPN subnetwork. All owning CPs found in or through a subarea network are represented to the origin CP as an end node being served by the interchange node through which the resource was found.
- *network_node_server* is the network-qualified name of the network node server in the form *netid.name*.
network_node_server represents the network node in the host's APPN subnetwork that should be contacted to locate the target resource. If DISPLAY ID=*cdrsc* is issued, *network_node_server* might be *****NA*****, indicating that this information is not applicable.

Note: If the CPNAME displayed is actually a CDRM name and the subject resource has a different NETID than its owning CDRM, then the NETID displayed might be that of the resource (rather than the CDRM), if this is the only information available.

IST1402I

- VTAM issues this message when the SRCHRED start option is ON. The SRCOUNT and SRTIMER values that are being used for the displayed resource are shown.

srtimer is the amount of time in seconds that VTAM will limit searching for a resource that it previously was unable to locate.

srcount is the number of requests that VTAM limit searching for the resource that it was previously unable to locate.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1185I **NAME** = *resourcename* – **DIRECTORY ENTRY** = *entrytype resourcetype*

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY DIRECTORY command. The first message in the subgroup is IST1184I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1186I DIRECTORY ENTRY = *entrytype resourcetype*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command or a DISPLAY DIRECTRY command.

- If DISPLAY DIRECTRY is issued, the following message group is displayed:

```
[IST350I DISPLAY TYPE = DIRECTORY]
  IST1186I DIRECTORY ENTRY = entrytype resourcetype
  IST1184I CPNAME = cpname - NETSRVR = network_node_server
[IST484I SUBAREA = subarea]
[IST1703I DESIRED LOCATE SIZE = desiredlocatesize, LAS LOCATE SIZE = lastlocatesize]
[IST1402I SRTIMER = srtimer SRCOUNT = srcount]
[IST1401I RESOURCE NOT FOUND-RETRY IN time SEC(S) OR number REQUEST(S)]
[IST1185I NAME = resourcename - DIRECTORY ENTRY = entrytype resourcetype]
  IST314I END
```

- If DISPLAY ID is issued, the following message group may be displayed:

```
[IST075I NAME = nodename, TYPE = nodetype]
  IST1186I DIRECTORY ENTRY = entrytype resourcetype
  IST1184I CPNAME = cpname - NETSRVR = network_node_server
[IST484I SUBAREA = subarea]
[IST1703I DESIRED LOCATE SIZE = desiredlocatesize, LAS LOCATE SIZE = lastlocatesize]
[IST1402I SRTIMER = srtimer SRCOUNT = srcount]
[IST1401I RESOURCE NOT FOUND-RETRY IN time SEC(S) OR number REQUEST(S)]
  IST314I END
```

Note: If the IDTYPE operand was specified on the DISPLAY ID command, information about subarea resources might precede the IST1186I subgroup. See z/OS Communications Server: SNA Operation for more information.

IST075I

This message is only displayed for a DISPLAY ID command.

nodename is the resource name specified on the ID operand of the command.

nodetype is the resource type of *nodename*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

IST350I

This message is only displayed for a DISPLAY DIRECTRY command and is always **DIRECTORY**.

IST484I

subarea is the subarea number of the logical unit.

IST1184I

- *cpname* is the network-qualified name of the owning control point in the form *netid.name*.

In the combined APPN and subarea network, the owning CP might be an SSCP or a network node in a different APPN subnetwork. All owning CPs found in or through a subarea network are represented to the origin CP as an end node being served by the interchange node through which the resource was found.

- *network_node_server* is the network-qualified name of the network node server in the form *netid.name*. *network_node_server* represents the network node in the host's APPN subnetwork that should be contacted to locate the target resource. If DISPLAY ID=*cdrsc* is issued, *network_node_server* might be *****NA*****, indicating that this information is not applicable.

Note: If the CPNAME displayed is actually a CDRM name and the subject resource has a different NETID than its owning CDRM, then the NETID displayed might be that of the resource (rather than the CDRM), if this is the only information available.

IST1185I

- This message is issued only when there are resources subordinate to *cpname* in message IST1184I, and is repeated for each subordinate resource.
- *resourcename* is the network-qualified name of a resource that is subordinate to *cpname* in message IST1184I. VTAM issues *resourcename* in the form *netid.name*.
- *entrytype* is one of the following:

IST1186I

DEFINED

The resource was pre-defined to the directory database. A DEFINED directory entry might become a DYNAMIC directory entry if a search request learns new information about the resource, such as the NETID or the name of the owning CP

DYNAMIC

The resource was found as the result of a dynamic search request and was stored.

REGISTERED

The resource was registered to the directory database through end node resource registration.

- *resourcetype* represents the resource type known by the host APPN directory and may be different from the actual type of the resource. *resourcetype* is one of the following:

EN Represents the owning control point (CP) of a resource.

In a combined APPN and subarea network, the owning CP may actually be an SSCP or a network node in a different APPN subnetwork. All owning CPs found in or through a subarea network are represented to the origin CP as an end node being served by the interchange node through which the resource was found.

LU Represents a logical unit.

NN Represents the network node in the host's APPN subnetwork that should be contacted to locate the target resource.

See z/OS Communications Server: SNA Operation for more information.

IST1186I

- This message indicates that the resource has been found in the directory database and displays information about the resource.
- *entrytype* is one of the following:

DEFINED

The resource was pre-defined to the directory database. A DEFINED directory entry might become a DYNAMIC directory entry if a search request learns new information about the resource, such as the NETID or the name of the owning CP.

DYNAMIC

The resource was learned of as the result of a dynamic search request and was stored.

REGISTERED

The resource either was registered to the directory database through end node resource registration, or resource represents the host CP.

- *resourcetype* represents the resource type known by the host APPN directory and may be different from the actual type of the resource. *resourcetype* is one of the following:

EN Represents an end node, which is also known as the owning control point (CP) of a resource.

LU Represents a logical unit.

NN Represents the network node in the host's APPN subnetwork.

IST1401I

- VTAM issues this message when the SRCHRED start option is ON, and the resource being displayed represents a search reduction entry. Searches will be limited for this resource as indicated by the *time* and *number* fields. See the z/OS Communications Server: SNA Network Implementation Guide for more information on the processing of a search reduction entry.
 - *time* is the remaining number of seconds that VTAM will limit searches for the resource it previously was unable to locate. Once the specified number of seconds expire, subsequent searches for the resource will not be limited.
 - *number* indicates the amount of requests necessary before VTAM will search for the resource with no search reduction limitations.
 - If **NEXT** is displayed, VTAM will not limit the next search request for the resource.
 - Otherwise, VTAM will limit the search until *number* requests have been received. For example, if *number* is 2, VTAM will limit the first request received, but will not limit the second request received.

- A value of *NA* for *time* or *number* means **Not applicable**. This value will appear when the timer or counter has been set to 0.
- The SRTIMER and SRCOUNT threshold values being used for this resource are displayed in message IST1402I.

IST1402I

- VTAM issues this message when the SRCHRED start option is ON. The SRCOUNT and SRTIMER values that are being used for the displayed resource are shown.

srtimer is the amount of time in seconds that VTAM will limit searching for a resource that it previously was unable to locate.

srcount is the number of requests that VTAM limit searching for the resource that it was previously unable to locate.

IST1703I

desiredlocatesize is the size of the APPN locate message required to retrieve the complete routing information for the target LU. The valid range is 1-128 kilobytes.

lastlocatesize is the size of the APPN locate message last used to retrieve the routing information for the target LU. The valid range is 1-128 kilobytes.

The node that initiates the APPN search will attempt to find a route on which every APPN network node supports the *desiredlocatesize* required by the target LU. If such a route is not available, a route that supports a smaller locate message size will be used to gather routing information for the target LU. In this case, the *desiredlocatesize* will be greater than the *lastlocatesize*. This implies that the origin node that initiated the search does not have all the routing information for the target LU and this could result in the selection of a non-optimal session route to the target LU, or a session setup failure in the worst case.

lastlocatesize refers to only the locate path between network nodes and does not include the path between a network node server and served end nodes. If the destination LU is on an end node that does not support locate sizes larger than 1K, the *lastlocatesize* may be larger than 1K. To display the locate size supported by served end nodes, issue the command D NET,TOPO,LIST=EN,LOCSIZE=* at the network node server.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1187I *value* NOT VALID–APPN NOT SUPPORTED BY *resourcename*

Explanation: VTAM issues this message when the specified command or operand is not valid because *resourcename* does not support advanced peer-to-peer networking (APPN).

value is one of the following:

- The name of the command that failed. For a description of *value*, see Chapter 16, “Command and RU types in VTAM messages,” on page 1123.
- The name of the operand that caused the command to fail.

For more information on *value*, see z/OS Communications Server: SNA Operation.

resourcename is the name of the resource.

- If ID=*resourcename* was specified, *resourcename* is the network-qualified name of the resource that was specified on the command.
- If ID=*resourcename* was not specified, *resourcename* is the network-qualified name of the host where the command was entered.

VTAM issues *resourcename* in the form *netid.name*.

System action: VTAM rejects the command.

Operator response: Ensure that you entered the command correctly. If problems persist, save the system log for problem determination.

IST1188I

If ID=*resourcename* was specified, print the major node definition for *resourcename*.

System programmer response: If ID=*resourcename* was specified, verify that *resourcename* supports APPN.

Routing code: 2

Descriptor code: 5

IST1188I VTAM *level* STARTED AT *time* ON *date*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY VTAMOPTS command.

Possible message groups follow.

- This message group is issued in response to a DISPLAY VTAMOPTS command when FORMAT=CURRENT is specified or defaulted on the command.

```
IST1188I VTAM level STARTED AT time ON date
IST1349I COMPONENT ID IS dddd-ddddd-ddd
IST1348I VTAM STARTED AS nodetype
IST1189I option = current_value [option = current_value]
:
:
IST1904I option = current_value
[IST1911I value]
:
:
IST314I END
```

- This message group is issued in response to a DISPLAY VTAMOPTS command when FORMAT=MODIFIED or FORMAT=COMPLETE is specified on the command.
 - If FORMAT=MODIFIED is entered, VTAM displays information about start options that have been modified since VTAM initialization.
 - If FORMAT=COMPLETE is entered, VTAM displays information about all specified options.

```
IST1188I VTAM level STARTED AT time ON date
IST1349I COMPONENT ID IS dddd-ddddd-ddd
IST1348I VTAM STARTED AS nodetype
IST1309I START OPTION    CURRENT VALUE    ORIGINAL VALUE    ORIGIN
IST1310I option          current_value  original_value    origin
:
:
IST924I -----
IST1905I START OPTION    = option
IST1906I CURRENT VALUE  = current_value
[IST1911I value]
IST1907I ORIGINAL VALUE = original_value
[IST1911I value]
IST1908I ORIGIN         = origin
:
:
IST314I END
```

See z/OS Communications Server: SNA Operation for more information.

IST1188I

level is the version (x) and release (y) of VTAM for z/OS Communications Server that is being run. For example, **CSVxRy** is displayed for VTAM for z/OS Communications Server Version x Release y.

The *date* and *time* values specify when VTAM was started. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST1189I

- *option* is the name of a VTAM start option.
 - This message, and optionally IST1904I, are repeated to display all options specified on the command.
 - If OPTION=* is specified, VTAM displays the value of all start options.
- See the z/OS Communications Server: SNA Resource Definition Reference for the names of possible *options*.
- *current_value* is the current value of *option*.

- If *current_value* represents time, this message displays this value in seconds. For example, if a value of 1 minute is specified for the CDRSCTI start option, VTAM displays *current_value* as **60S**.
- If *current_value* is *****NA*****, this indicates that *option* is not applicable for the host configuration. For example, if the host is configured as a subarea node without any APPN function, an APPN *option* cannot be specified.
- If *current_value* is ***BLANKS***, this indicates that no value was entered, and the default is blanks.
- If *current_value* represents a character string that can be longer than 17 characters, then IST1904I is used to display *option*.

IST1309I and IST1310I

- *option* is the name of the VTAM start option.
 - IST1309I, IST1310I, and IST1905I are issued as many times as necessary to display all the options specified on the command.
 - If OPTION=* is specified, VTAM displays the value of all start options.
- See the z/OS Communications Server: SNA Resource Definition Reference for the names of possible *options*.
- *current_value* is the current value of *option*.
- *original_value* is the original value that was specified for *option*.
 - If *current_value* and *original_value* represent time, this message displays those values in seconds. For example, if a value of 1 minute is specified for the CDRSCTI start option during start processing, VTAM displays *current_value* as **nS** and *original_value* as **60S**.
 - If *current_value* and *original_value* are *****NA*****, this indicates that *option* is not applicable for the host configuration. For example, if the host is configured as a subarea node without any APPN function, an APPN *option* cannot be specified.
 - If *current_value* and *original_value* are ***BLANKS***, this indicates that no value was entered, and the default is blanks.
 - If *current_value* or *original_value* represents a character string that can be longer than 17 characters, then the message group starting with IST1905I is used to display *option*.

origin indicates where *original_value* was specified. Possible values are:

ATCSTRxx

The start list

DEFAULT

The IBM-supplied default start options

OPERATOR

The start options entered by the operator

NA

current_value and *original_value* are *****NA*****

IST1348I

nodetype indicates the node type of this host and is determined by start options that are specified or defaulted. Possible values are:

- END NODE
- INTERCHANGE NODE
- MIGRATION DATA HOST
- NETWORK NODE
- SUBAREA NODE

IST1349I

ddd-ddd-ddd is the component identifier assigned by VTAM. This identifier is used by IBM for VTAM program maintenance. See the z/OS Communications Server: SNA Programming for a description of vector lists and more information about the component identifier.

IST1904I

IST1188I

- *option* is the name of a VTAM start option.
 - Messages IST1189II, IST1904I, or IST1911I are repeated to display all options specified on the command.
 - If OPTION=* is specified, VTAM displays the value of all start options.

See the z/OS Communications Server: SNA Resource Definition Reference for the names of possible options.

- *current_value* is the current value, or up to the first 49 characters of the current value, of *option*.
IST1904I is displayed only if *current_value* is longer than 17 characters. If *current_value* is longer than 49 characters, the first 49 characters are displayed as *current_value* and the remaining characters are displayed using one or more IST1911I messages.

IST1905I

- *option* is the name of the start option being displayed.
 - The message group beginning with IST1905I is used instead of IST1309I and IST1310I when the value of the start option is a character string that can exceed 17 characters.
 - See the z/OS Communications Server: SNA Resource Definition Reference for the names of possible options.

IST1906I

current_value is the current setting of the start option identified as *option* in message IST1905I.

If *current_value* is *BLANKS*, then no value was entered, and the default is blanks.

IST1906I is used only if either *current_value* represents a character string that is longer than 17 characters, or *original_value* on IST1907I represents a character string that is longer than 17 characters. If *current_value* is greater than 43 characters, the first 43 characters are displayed as *current_value* and the remaining characters are displayed using one or more IST1911I messages.

IST1907I

original_value is the original value that was specified for the start option identified as *option* in message IST1905I.

If *original_value* is *BLANKS*, then no value was entered, and the default is blanks.

IST1907I is used only if either *original_value* represents a character string that is longer than 17 characters, or *current_value* on IST1906I represents a character string that is longer than 17 characters. If *original_value* is greater than 43 characters, the first 43 characters are displayed as *original_value* and the remaining characters are displayed using one or more IST1911I messages.

IST1908I

- *origin* indicates where *original_value*, as displayed in message IST1907I, was initially specified for the start option identified as *option* in message IST1905I. Possible values are:

ATCSTRxx

The start list.

DEFAULT

The IBM-supplied default start options.

OPERATOR

The start options entered by the operator.

IST1911I

value is the continuation of *current_value* on IST1904I or IST1906I, or the continuation of *original_value* on IST1907I.

IST1911I is repeated as often as necessary to display the entire *current_value* or *original_value*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1189I *option = current_value [option = current_value]*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1190I **OPEN FAILED FOR** *datasetname* **ABEND = abendcode RC = returncode**

Explanation: The sequential access method OPEN function failed for the specified data set.

datasetname is the DDNAME for the data set.

abendcode is the abend code associated with the OPEN failure. The values for *abendcode* are found in the applicable operating system documentation.

returncode is the return code associated with the abend code. The values for *returncode* are found in the applicable operating system documentation.

System action: VTAM processing continues. *datasetname* is not available for use.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that *datasetname* is defined in the VTAM start procedure and is available for use. The data set characteristics should be compatible with those specified in the z/OS Communications Server: New Function Summary. For further responses, consult the applicable sequential access method documentation.

Routing code: 2

Descriptor code: 3

IST1191I **I/O ERROR ON** *datasetname* {**ERROR = description** | **ABEND = abendcode RC = returncode**}

Explanation: An I/O error occurred for the specified data set.

datasetname is the DDNAME for the data set.

description is the error description portion of the message generated by the sequential access method SYNADAF macro.

abendcode is the abend code associated with the failure. The values for *abendcode* are found in the applicable operating system documentation.

returncode provides the return code associated with the abend code. The values for *returncode* are found in the applicable operating system documentation.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If an abend code and a return code are provided, see your operating system documentation for an explanation of the codes. Use the codes in conjunction with your applicable sequential access method documentation to resolve the problem.

If the error description portion of the message generated by the SYNADAF macro is provided, see the applicable sequential access method documentation for more information.

Routing code: 2

Descriptor code: 3

IST1192I **CLOSE FAILED FOR** *datasetname* **ABEND = abendcode RC = returncode**

Explanation: The sequential access method CLOSE function failed for the specified data set.

datasetname is the DDNAME for the data set.

abendcode is the abend code associated with the CLOSE failure. The values for *abendcode* are found in the applicable operating system documentation.

IST1193I • IST1196I

returncode is the return code associated with the abend code. The values for *returncode* are found in the applicable operating system documentation.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Consult the applicable sequential access method documentation for appropriate responses.

Routing code: 2

Descriptor code: 3

IST1193I *sessiontype* SESSION DEACTIVATION FAILURE FOR *resource*

Explanation: VTAM issues this message when it is unable to complete the *sessiontype* session deactivation.

- If *sessiontype* is **CP-CP**, *resource* is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *resource* is issued as a network-qualified name in the form *netid.name*. The CP-CP session deactivation failure is due to a lack of storage.
- If *sessiontype* is **CP-SVR**, *resource* is the name of the CDRSC representing the dependent LU requester (DLUR). If the network where the resource resides is known to VTAM, *resource* is issued as a network-qualified name in the form *netid.name*. The CP-SVR session deactivation failure is due to either a lack of storage or a failure to find the DLUR element control block.

System action: Processing continues.

Operator response:

- If *sessiontype* is **CP-CP**, issue a DISPLAY ID=*resource*,CPNODE=YES,E command to determine whether CP-CP sessions are still active with *resource*. If they are, issue a VARY INACT,ID=*resource*,CPNODE=YES command to bring the CP-CP sessions down. When the CP-CP sessions are successfully deactivated, message IST1097I will appear.
- If *sessiontype* is **CP-SVR**, issue a DISPLAY ID=*resource* command to determine whether CP-SVR sessions are still active with *resource*. If they are, issue a VARY INACT,ID=*resource* command to bring the CP-SVR sessions down. When the CP-SVR sessions are successfully deactivated, message IST1133I will appear.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST1194I DUPLICATE RESOURCE IS *resourcenname*

Explanation: VTAM issues this message as part of a group of messages when VTAM has received registration requests for the same resource from two different end nodes. The first message in the group is IST1157I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 3

IST1196I APPN CONNECTION FOR *resourcenname* INACTIVE – TGN = *tgn*

Explanation: VTAM issues this message when an APPN connection for an adjacent control point becomes inactive. The major node to which the adjacent control point was attached has been deactivated.

resourcenname is the network-qualified name of the adjacent control point in the form *netid.name*.

tgn is the transmission group number. If the APPN connection fails before it is fully established, the TGN might be this host's view of the TGN before it has been fully negotiated.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1197I **ADJCP MAJOR NODE = *majornode***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ADJCP command for an adjacent control point. Possible message groups follow.

- If SCOPE=ALL was specified on the command, VTAM issues the following message group:

```

IST350I  DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I  STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = majornode
IST1101I ADJACENT CP DISPLAY SUMMARY FOR adjcpname
IST1102I NODENAME           NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I nodename          nodetype connections cp_connections native
IST2157I ALIASRCH = value
[IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:]
[IST2252I netid [netid] [netid] [netid] [netid] [netid] [netid]]
:
:
IST1104I CONNECTION SUMMARY FOR adjcpname
IST1105I RESOURCE STATUS   TGN CP-CP TG CHARACTERISTICS
IST1106I resource status tgn cp-cp tg_characteristics
:
:
IST314I  END

```

- If SCOPE=ALL was not specified on the command, VTAM issues the following message group:

```

IST350I  DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I  STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = majornode
IST314I  END

```

IST1197I

majornode is the name of the major node that contains the resources. VTAM issues *majornode* in the form *netid.name*.

IST1101I – IST1106I, IST2157I, IST2251I, IST2252I

For a description of this message subgroup, see the explanation of message IST1101I.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

Example:

```

D NET,ADJCP,ID=NETA.CP2A,SCOPE=ALL
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CONTROL POINT
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
IST1197I ADJCP MAJOR NODE = ADJCP1
IST1101I ADJCP DISPLAY SUMMARY FOR NETA.CP2A
IST1102I NODENAME           NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I NETA.CP2A          NN           1           1           NO
IST2157I ALIASRCH = YES
IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:
IST2252I NETA NETB NETC
IST1104I CONNECTION SUMMARY FOR NETA.CP2A
IST1105I RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I AHHCPU5 AC/R 21 YES 9871000000000000100014C00808080
IST1500I STATE TRACE = OFF
IST1493I RTP SUMMARY FOR NETA.CP2A COUNT = 2 RTPONLY = NO

```

IST1198I • IST1199I

IST1486I	RTP NAME	STATE	DESTINATION CP	MNPS	TYPE
IST1487I	CNR00002	CONNECTED	NETA.CP2A	NO	CPCP
IST1487I	CNR00001	CONNECTED	NETA.CP2A	NO	CPCP
IST314I	END				

IST1198I *resourcename* DELETED FROM DIRECTORY

Explanation: VTAM issues this message when the MODIFY DIRECTORY, ID=*name* command changed the owning CP's name (CPNAME) for *resourcename* to this host's CP name.

Resources owned by this host are not duplicated in the APPN resource directory so *resourcename* has been deleted from the APPN resource directory.

resourcename is the network-qualified name of the resource in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1199I *command* FOR *resourcename* FAILED, UNKNOWN RESOURCE

Explanation: VTAM issues this message in response to one of the following commands:

- MODIFY DIRECTORY, UPDATE which attempted to change the owning CP or the network node server for *resourcename*. The name specified on either the CPNAME, ID or NETSRVR operand is unknown to the APPN directory and cannot be modified.
- MODIFY DIRECTORY, DELETE which attempted to delete resource *resourcename*. The name specified on the ID operand is not known to the APPN directory and cannot be modified.

command is always **F DIRECTORY** which refers to the MODIFY DIRECTORY, UPDATE or MODIFY DIRECTORY, DELETE commands.

resourcename is the network-qualified name of the resource in the form *netid.name*. *resourcename* can be the same resource that was specified on the ID operand of the MODIFY DIRECTORY command or a resource that is subordinate to the resource named on the command.

- If *resourcename* is the same as the name specified on the ID operand, then *resourcename* is not known to the APPN directory.
- If *resourcename* is not the same as the name specified on the ID operand, then the name specified on the ID operand is a CDRSC major node. VTAM is in the process of changing the owning CP or network node server for all the minor nodes subordinate to the CDRSC major node. The *resourcename* minor node is no longer known to the APPN directory.

System action: Processing continues.

Operator response:

- If *resourcename* is the same as the name specified on the ID operand of the MODIFY DIRECTORY command, ensure that you entered *resourcename* correctly.
- If *resourcename* is not the same as the name specified on the ID operand of the MODIFY DIRECTORY command, then no further action is needed.

System programmer response: None.

Routing code: 2

Descriptor code: 5

Chapter 8. IST messages for VTAM network operators

IST1200I – IST1599I

This chapter lists the VTAM messages beginning with IST in the range of IST1200I through IST1599I. These messages can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

Note: Messages that begin with the prefix **ISTF** are issued by the VTAM dump analysis tool and the VTAM internal trace (VIT) analysis tool. Help information is available as a part of each tool by pressing F1. Therefore, **ISTF** messages are not documented in *z/OS Communications Server: SNA Messages*. See *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* for additional information.

IST1200I *tsouserid* TSO USERID, TRACE = {ON|OFF}

Explanation: VTAM issues this message as part of a message group in response to one of the following commands:

- DISPLAY TRACES, TYPE=TSO,ID=*tsouserid*
- DISPLAY TRACES, TYPE=TSO,ID=*
- DISPLAY TRACES, TYPE=ALL

This message indicates whether the TSO trace for *tsouserid* is active or inactive.

- For DISPLAY TRACES, TYPE=TSO,ID=*tsouserid* and DISPLAY TRACES, TYPE=TSO,ID=*, the following message group is displayed:

```
IST350I  DISPLAY TYPE = TRACES,TYPE=TSO
IST1200I tsouserid TSO USERID, TRACE = {ON|OFF}
      .
      .
IST314I  END
```

- For DISPLAY TRACES, TYPE=ALL, VTAM issues additional messages displaying the output for TYPE=NODES, TYPE=TSO, and TYPE=VTAM.

For additional information and examples of command displays, see the *z/OS Communications Server: SNA Operation*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1201I COMMAND REJECTED BY ISTCMMND EXIT

Explanation: The user command verification exit (**ISTCMMND**) rejected the operator command. This message always refers to the command last entered. See *z/OS Communications Server: SNA Customization* for more information on the user command verification exit.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Ensure that the command issued was supposed to fail.

IST1202I • IST1203I

- If the command was programmed to fail, there is no action; the command and verification exit is working as designed.
- If the command was not programmed to fail, review the command and verification exit to ensure proper execution.

Routing code: 2

Descriptor code: 5

IST1202I VALUE *resourcename* FOR *operand* IS NOT A VALID NAME

Explanation: VTAM issues this message when the value *resourcename* of *operand* is not a valid resource name because it is syntactically incorrect. This message is issued in response to the following commands:

- DISPLAY APPLS
- DISPLAY CDRMS
- DISPLAY CDRSCS
- DISPLAY CLSTRS
- DISPLAY EE
- DISPLAY EEDIAG
- DISPLAY GROUPS
- DISPLAY LINES
- DISPLAY PENDING
- DISPLAY RSCLIST
- DISPLAY STATIONS
- DISPLAY STORUSE
- DISPLAY TERMS

System action: If *operand* is **ID**, and at least one valid resource name has been specified, processing of the DISPLAY command will continue.

Operator response: Ensure that you entered the command correctly. If problems persist, see z/OS Communications Server: SNA Operation for information on the correct syntax of DISPLAY commands.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1203I VALUE *resourcename* FOR *operand* IS UNKNOWN RESOURCE

Explanation: VTAM issues this message when the value *resourcename* of *operand* is a resource that is syntactically correct, but is not defined to VTAM. This message is issued in response to the following commands:

- DISPLAY APPLS
- DISPLAY CDRMS
- DISPLAY CDRSCS
- DISPLAY CLSTRS
- DISPLAY EE
- DISPLAY EEDIAG
- DISPLAY GROUPS
- DISPLAY LINES
- DISPLAY PENDING
- DISPLAY RSCLIST
- DISPLAY STATIONS
- DISPLAY TERMS
- MODIFY RTP

System action: If *operand* is **ID**, and at least one valid resource name has been specified, processing of the DISPLAY or MODIFY command will continue.

Operator response: Ensure that you entered the command correctly. If problems persist, save the system log and print the major node definition for problem determination.

System programmer response: Add a definition statement for the major node of the resource. To use the new definition, you must deactivate and reactivate the major node. See the z/OS Communications Server: SNA Resource Definition Reference for more information on definition statements.

Routing code: 2

Descriptor code: 5

IST1204I VALUE *resourcename* FOR *operand* NOT VALID FOR REQUEST

Explanation: VTAM issues this message when the value *resourcename* for *operand* is a resource that is defined to VTAM, but cannot be specified for this particular command, *operand*, or configuration. This message is issued in response to the following commands:

- DISPLAY APPLS
- DISPLAY CDRMS
- DISPLAY CDRSCS
- DISPLAY CLSTRS
- DISPLAY EE
- DISPLAY EEDIAG
- DISPLAY ID=*physical_unit*
- DISPLAY GROUPS
- DISPLAY LINES
- DISPLAY PENDING
- DISPLAY STATIONS
- DISPLAY TERMS
- MODIFY RTP

System action: If *operand* is **ID**, and at least one valid resource name has been specified, processing of the DISPLAY or MODIFY command will continue.

Operator response: Ensure that you entered the command correctly. If problems persist, see z/OS Communications Server: SNA Operation for a description of the type of resources that are valid for the ID operand of the DISPLAY command you are using.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1205I MANAGEMENT SERVICES TRANSPORT UNAVAILABLE

Explanation: This message is the first in a group of messages that VTAM issues when the management services transport is not available.

The second message in the group indicates the reason that the management services transport is not available and can be one of the following:

IST1206I LOAD FAILED FOR THE PROGRAM-TO-PROGRAM INTERFACE

VTAM is unable to load the program-to-program interface module (CNMCNETV). This module is needed to send management services transport data to network management.

IST1207I NETWORK MANAGEMENT IS INACTIVE

VTAM is unable to use the management services transport because a network management application, such as the NetView program, is inactive.

IST1206I • IST1207I

IST1208I PROGRAM-TO-PROGRAM INTERFACE MODULE IS INACTIVE

VTAM is not able to send management services transport data to network management because the program-to-program interface module is not initialized.

IST1209I PROGRAM-TO-PROGRAM INTERFACE MODULE STORAGE SHORTAGE

VTAM is unable to send management services transport data to network management because the program-to-program interface module is out of storage.

System action: Processing continues.

Operator response:

IST1206I

Save the system log for problem determination.

IST1207I

Ensure that network management has been started. When network management connects to the network management interface module, then VTAM continues initialization for the Management Services Transport. See your network management documentation for details on how to start network management.

IST1208I

Ensure that the program-to-program interface module has been initialized. VTAM will continue trying to connect to the program-to-program interface module repeatedly for the first hour, and then once every hour. See your program-to-program interface documentation for details on how to initialize the interface module.

IST1209I

Save the system log for problem determination.

System programmer response:

IST1206I

Ensure that the program-to-program interface module CNMCNETV resides in LPALIB. You must restart VTAM to use the management services transport.

IST1207I

None.

IST1208I

None.

IST1209I

You might need to increase the buffer queue limit for the program-to-program interface module. See your program-to-program interface documentation for more details.

Routing code: 2

Descriptor code: 5

IST1206I LOAD FAILED FOR THE PROGRAM-TO-PROGRAM INTERFACE

Explanation: VTAM issues this message as part of a group of messages when the management services transport is not available. The first message in the group is IST1205I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1207I NETWORK MANAGEMENT IS INACTIVE

Explanation: VTAM issues this message as part of a group of messages when the management services transport is not available. The first message in the group is IST1205I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1208I PROGRAM-TO-PROGRAM INTERFACE MODULE IS INACTIVE

Explanation: VTAM issues this message as part of a group of messages when the management services transport is not available. The first message in the group is IST1205I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1209I PROGRAM-TO-PROGRAM INTERFACE MODULE STORAGE SHORTAGE

Explanation: VTAM issues this message as part of a group of messages when the management services transport is not available. The first message in the group is IST1205I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1211I I/O ERROR *terminalname command ncp_response[bsc_status]*

Explanation: VTAM issues this message when an I/O error occurred on a BSC 3270 terminal or control unit. This is probably a hardware error.

terminalname is the name of a terminal or control unit. If the network where the resource resides is known to VTAM, *terminalname* is issued as a network-qualified name in the form *netid.name*.

command is the basic transmission unit (BTU) command and modifier. It represents the command that the NCP received when the I/O error occurred. For more information, see *NCP and EP Reference Summary and Data Areas* for the 3725 and 3745.

ncp_response is the system and extended response that the NCP sends upon receiving the command. For more information, see *NCP and EP Reference Summary and Data Areas* for the 3725 and 3745.

bsc_status is the BSC status information. For more information, see the *3174 Functional Description*

System action:

- For an I/O error on a BSC 3270 terminal, VTAM sends an error indication to the application program.
- For an I/O error on a BSC 3270 control unit, VTAM may resume polling for the data from the control unit.

Operator response: If the problem persists, save the system log for problem determination.

System programmer response: Correct the problem as determined by the problem determination output.

Routing code: 2,8,1

Descriptor code: 4

IST1212I {ACBNAME|LUNAME} = *nodename* STATUS = *status*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY TSOUSER command. A complete description of the message group follows the example.

```
IST075I NAME = nodename, TYPE = TSO USERID
IST486I STATUS = currentstatus, DESIRED STATE = desiredstate
IST576I TSO TRACE = {ON|OFF}
IST1212I ACBNAME = nodename STATUS = status
IST1212I LUNAME = nodename STATUS = status
IST314I END
```

IST075I

This message displays the name of the TSO user ID associated with the application and the logical unit (LU).

IST486I

This message indicates the current status of the TSO user ID and the state that is desired. If VTAM cannot determine the desired state, *desiredstate* will be *****NA*****.

IST1213I

IST576I

This message indicates whether the TSO trace is on or off for a particular TSO user.

IST1212I

- This message appears twice in the group:
 - With **ACBNAME** displaying the application status *status* of the application name *nodename* with which the TSO user ID is associated
 - With **LUNAME** displaying the status *status* of the logical unit *nodename*.

If the network where the resource resides is known to VTAM, *nodename* is issued as a network-qualified name in the form *netid.name*.

- See the z/OS Communications Server: IP and SNA Codes for a description of *status*.
- If the TSO user ID has been disconnected from the LU, the LU *status* will still be **ACT/S** (active and in session) if it is in session with another application. To find the LU's session partner, enter a DISPLAY ID command for the logical unit *nodename*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2,8

Descriptor code: 5

IST1213I *profilename* LU-LU VERIFY ERROR *code*

Explanation: VTAM issues this message when an LU 6.2 application program requests that a session be established, but a session level LU-LU verification violation or error occurred.

profilename is the name of the security manager profile defined for the LU pair. The format of *profilename* is *local_netid.local_name.partner_netid.partner_name* where:

local_netid is the local network ID

local_name is the ACB name of the local application program

partner_netid is the network ID of the session partner

partner_name is the LU name of the session partner.

code is the type of security violation that occurred.

- 03** The security manager locked the profile.
- 04** The profile contains an invalid session key.
- 05** *partner_name* rejected the session due to a security related error.
- 06** *local_name* was defined with REQUIRED session level LU-LU verification, but one of the following occurred:
 - *local_name* is the PLU, but no password was defined for *profilename*.
 - *partner_name* is the PLU requesting a session without using session level LU-LU verification.
- 07** Session level LU-LU verification data for the session between *local_name* and *partner_name* matched the data for an outstanding session activation request.
- 08** *local_name* was defined with optional verification, and a password was defined for *profilename*, indicating that session level LU-LU verification is necessary. *partner_name* requested a session without verification.
- 09** *local_name* was defined with optional verification, and no password was defined for *profilename*, indicating that session level LU-LU verification should not be used. *partner_name* requested a session with verification.
- 0B** The profile was changed during session activation.
- 0C** The password for the profile has expired.
- 0D** *local_name* was defined to use only the enhanced protocol (SECLVL=LEVEL2 is specified on the APPL definition statement). *partner_name* does not support the enhanced protocol.

20 The security manager component is either not available or overloaded (received a large number of requests in a short period of time).

3C The security manager component failed.

System action: Session activation failed.

Operator response: For codes **03**, **04**, **0B**, and **0C**, enter the MODIFY PROFILES command for the local LU. If VTAM issues this message repeatedly, notify the security administrator of *code* and *profilename*.

For code **05**, consult message IST970I or message IST1213I issued to the partner LU for specific actions.

For codes **06**, **08**, and **09**, enter the MODIFY PROFILES command for the local LU. If VTAM issues this message repeatedly, save the system log for problem determination.

For codes **07** and **0D**, notify the security administrator of *code* and *profilename*.

For codes **20** and **3C**, save the system log for problem determination.

System programmer response: For code **05**, consult message IST970I or message IST1213I issued to the partner LU for specific actions.

For codes **06**, **08**, and **09**, check the VERIFY operand specified on the APPL statements to identify the correct level for the two LUs.

For code **20**, verify that the security manager is installed and resource class APPCLU is active.

If the security manager is installed and resource class APPCLU is active, the problem may be that the security manager is overloaded. Lowering the value of AUTOSSES on the LU definition statements may solve the problem.

For code **3C**, verify that the security manager is installed and resource class APPCLU is active.

Routing code: 2

Descriptor code: 5

IST1214I FFST *text*

Explanation: VTAM attempted to establish an interface to and was unsuccessful. The failure is related to the FFST™ installation on the operating system.

text is one of the following:

SUBSYSTEM IS NOT INSTALLED

The FFST Subsystem is not installed on your operating system. VTAM can be initialized without it.

INITIALIZATION MODULE IS NOT FOUND

The FFST initialization module, EPWINIT, could not be found in an accessible library. The FFST subsystem may or may not be installed on your system. VTAM initializes without it.

INTERFACE MODULE IS NOT FOUND

The FFST Subsystem is installed but the interface module cannot be found.

VTAM CONFIGURATION MODULE IS NOT FOUND

The FFST Subsystem is installed but the VTAM configuration module cannot be found.

System action: VTAM initialization continues, but FFST will not be available to support VTAM diagnostics.

Operator response: Save the system log for problem determination.

System programmer response: Determine whether FFST support is desired for VTAM. If so, then verify that ISTRACZF was installed during VTAM installation.

You must restart VTAM if FFST support is desired for diagnosis.

Routing code: 2

Descriptor code: 5

IST1215I ERROR IN START LIST *list* – *reason*

Explanation: VTAM issues this message when an error occurs while processing the start list *list*.

list is the start option list that contains the error.

reason can be one of the following:

I/O ERROR

An error occurred while reading the start list *list*.

MEMBER NOT FOUND

The start list *list* could not be found in the VTAM definition library.

START OPTION NOT VALID

There is an error in a start option.

SYNTAX ERROR

The start list *list* contains invalid syntax.

System action: This message is followed by either message IST1216A or message IST1084I.

- Message IST1216A prompts you for a response, and VTAM will wait for a reply.
- Message IST1084I indicates whether VTAM defaults, ATCSTR00, or a specific start list will be used. Processing continues.

Operator response: If prompted by message IST1216A, enter 1, 2, or 3. Otherwise, no response is needed.

System programmer response:

I/O ERROR

See the applicable sequential access method documentation for more information.

MEMBER NOT FOUND

Message IST116I is issued prior to this message. See the explanation of that message for additional information.

START OPTION NOT VALID

There are several messages that may be issued prior to this message depending on the reason for the problem. Possible messages include IST057I, IST058I, IST059I, IST092I, IST176I, IST652I, IST1052-1056I, IST1064I, and IST1069I-1078I. See the explanation of the appropriate messages for additional information.

SYNTAX ERROR

Message IST052I, IST115I or IST1249I is issued prior to this message. See the explanation of the appropriate message for additional information.

Routing code: 2

Descriptor code: 5

IST1216A ENTER 1 TO CONTINUE-2 TO REENTER LIST-3 TO TERMINATE VTAM

Explanation: VTAM issues this message when an error occurs in a start list. Message IST1215I is issued prior to this message and indicates the name of the start list and the reason for the failure. See that message for additional information.

System action: VTAM waits for a response.

- If 1 is entered, VTAM will continue processing. The *reason* in message IST1215I determines the action.

I/O ERROR

The start list is not processed.

MEMBER NOT FOUND

All start options in the list are ignored.

START OPTION NOT VALID

Valid start options in the list are processed, and message IST1311A is issued to prompt for new start options.

SYNTAX ERROR

All start options processed before the syntax error is encountered are processed. Message IST1311A is issued to prompt for new start options.

- If 2 is entered, VTAM issues message IST015A to prompt for a new start list ID.
- If 3 is entered, all processing is stopped and VTAM is terminated.

Operator response: Enter 1, 2, or 3.

1 to continue

2 to reenter a new start list ID when prompted by IST015A

3 to terminate VTAM.

System programmer response: None.

Routing code: 1

Descriptor code: 2

IST1217A RESPONSE NOT VALID: REENTER 1, 2, OR 3

Explanation: VTAM issues this message when 1, 2, or 3 is not entered in response to message IST1216A. See the explanation of that message for additional information.

Routing code: 1

Descriptor code: 2

IST1218I ACB ERROR FIELD = *acberflg*

Explanation: VTAM issues this message as part of a group of messages when VTAM is terminated because an access method control block (ACB) macro failed. The first message in the group is IST049I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1219I RTNCD = *rtncd*, FDB2 = *fdb2*

Explanation: VTAM issues this message as part of a group of messages when an APING transaction failed or VTAM is terminated because a SETLOGON macro failed. The first message in the group is IST049I or IST1472I. See the explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1220I SSCPNAME NETID CURRENT STATE ROUTING STATUS

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST611I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1221I *chtyp* DEV = *device_address* STATUS = *status* STATE = *system_state*

Explanation: VTAM issues this message as part of a message group in response to:

- A DISPLAY ID command to identify the operational status of all **READ** and **WRITE** subchannels.
- A DISPLAY ID command for an MPC line or a transport resource list entry (TRLE).
- A DISPLAY TRL command for an active TRLE.

The message group varies if the TRLE is using the Queued Direct I/O (QDIO) interface to either an IBM OSA-Express Adapter or a HiperSockets™ device. If the message group is for a TRLE that is not using QDIO, the message group will look as follows:

This message group displays a TRLE that does not represent an OSA-Express adapter or HiperSockets interface.

IST1221I

```
IST075I NAME = nodename, TYPE = LINE
IST486I STATUS = currentstatus, DESIRED STATE = desiredstate
IST087I TYPE = line_type, CONTROL = line_control, HPDT = hpdvalue
IST1954I TRL MAJOR NODE = trl_major_node_name
IST1715I MPCLEVEL = mpc_level MPCUSAGE = mpc_usage
IST1717I ULPID = ulp_id
[IST2219I resource ACTIVATION WAITING FOR MINIMUM NUMBER OF DEVICES]
[IST1801I UNITS OF WORK FOR NCB AT ADDRESS stor_addr]
[IST1802I pn CURRENT = cur AVERAGE = avg MAXIMUM = max]
[IST1577I HEADER SIZE = hpsize DATA SIZE = dsize STORAGE = storage]
IST1221I chtyp DEV = device_address STATUS = status STATE = system_state
:
:
[IST1577I HEADER SIZE = hpsize DATA SIZE = dsize STORAGE = storage]
[IST1221I chtyp DEV = device_address STATUS = status STATE = system_state]
:
:
IST314I END
```

Note: VTAM displays all **WRITE** subchannel addresses for *nodename* value, followed by all **READ** subchannel addresses for *nodename*. For TCP/IP channel DLC connections, there is only one **R/W** subchannel. The following is an example of the message group if it is for a TRLE that uses QDIO:

```
IST075I NAME = nodename, TYPE = LINE
IST486I STATUS = currentstatus, DESIRED STATE = desiredstate
IST087I TYPE = line_type, CONTROL = line_control, HPDT = hpdvalue
IST1954I TRL MAJOR NODE = trl_major_node_name
IST1715I MPCLEVEL = mpc_level MPCUSAGE = mpc_usage
[IST1716I PORTNAME = port_name LINKNUM = link_num OSA CODE LEVEL = code_level]
[IST2263I PORTNAME = port_name PORTNUM = port_num OSA CODE LEVEL = code_level]
[IST2337I CHPID TYPE = ch_type CHPID = chpid_num PNETID = network_id]
[IST2184I QDIOSYNC = ALLINOUT - SYNCID = TRAP01 - SAVED = YES]
[IST1577I HEADER SIZE = hpsize DATA SIZE = dsize STORAGE = storage]
IST1221I chtyp DEV = device_address STATUS = status STATE = system_state
:
:
[IST1577I HEADER SIZE = hpsize DATA SIZE = dsize STORAGE = storage]
[IST1221I chtyp DEV = device_address STATUS = status STATE = system_state]
:
:
IST924I -----
[IST1221I DATA DEV = device_address STATUS = status STATE = system_state]
[IST1724I I/O TRACE = iotrc TRACE LENGTH = length]
[IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface]
[IST2309I ACCELERATED ROUTING ENABLED]
[IST2310I ACCELERATED ROUTING DISABLED]
[IST2331I QUEUE QUEUE READ QUEUE ]
[IST2332I ID TYPE STORAGE STATUS ]
[IST2205I ----- ]
[IST2333I qid qtype storage_amount qstat ]
[IST2305I NUMBER OF DISCARDED INBOUND READ BUFFERS = sbalcnt]
[IST2386I NUMBER OF DISCARDED OUTBOUND WRITE BUFFERS = wbufcnt]
[IST1757I PRIORITYx: congstate PRIORITYx: congstate]
[IST1757I PRIORITYx: congstate PRIORITYx: congstate]
[IST2190I DEVICEID PARAMETER FOR OSAENTA TRACE COMMAND = deviceid]
[IST1801I UNITS OF WORK FOR NCB AT ADDRESS stor_addr]
[IST1802I pn CURRENT = cur AVERAGE = avg MAXIMUM = max]
IST924I -----
:
:
[IST1221I TRACE DEV = device_address STATUS = status STATE = system_state]
[IST1724I I/O TRACE = iotrc TRACE LENGTH = length]
[IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface]
[IST2319I IQD NETWORK_ID = netid]
[IST2309I ACCELERATED ROUTING ENABLED]
[IST2310I ACCELERATED ROUTING DISABLED]
[IST2331I QUEUE QUEUE READ QUEUE ]
[IST2332I ID TYPE STORAGE STATUS ]
[IST2205I ----- ]
[IST2333I qid qtype storage_amount qstat ]
```

```

[IST2305I NUMBER OF DISCARDED INBOUND READ BUFFERS = sba1cnt]
[IST2386I NUMBER OF DISCARDED OUTBOUND WRITE BUFFERS = wbufcnt]
[IST1757I PRIORITY1: congstate PRIORITY2: ****NA****]
[IST1757I PRIORITY3: ****NA**** PRIORITY4: ****NA****]
IST1801I UNITS OF WORK FOR NCB AT ADDRESS stor_addr
IST1802I pn CURRENT = cur AVERAGE = avg MAXIMUM = max
[IST924I -----]
:
:
IST314I END

```

Note: VTAM displays all **WRITE** subchannel addresses for the node specified by the *nodename* value, followed by all **READ** subchannel addresses for that node, followed by all **DATA** subchannel addresses, followed by all **TRACE** subchannel addresses. DATA subchannel addresses and TRACE subchannel addresses are displayed only for an OSA-Express TRLE. For each DATA and TRACE subchannel address that is currently being used by an upper-layer protocol (ULP), the name of the z/OS Communications Server ULP (for example, the TCP/IP procedure name) using that data subchannel is displayed.

IST075I

In the message text:

nodename

The name of the resource that was entered on the DISPLAY ID command.

nodetype

The resource type of the major or minor node. The *nodetype* value is always **LINE** for this message group.

IST087I

In the message text:

line_type

The type of line. The *line_type* value is always **LEASED** for this message group.

line_control

The *line_control* value is always **MPC** (multipath channel) for this message group.

hpdvalue

The *hpdvalue* can be one of the following:

YES

Indicates the connection is capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NO

Indicates the connection is not capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NA

Is displayed when the connection is not active.

IST486I

In the message text:

currentstatus

The current status of the node. See the z/OS Communications Server: IP and SNA Codes for status information.

desiredstate

The node state that is desired. See the z/OS Communications Server: IP and SNA Codes for status information. If VTAM cannot determine the desired state, *desiredstate* is *****NA*****.

IST1221I

In the message text:

chtyp

The type of subchannel. Possible values are READ, WRITE, R/W, DATA, or TRACE

IST1221I

device_address

The hexadecimal address of the subchannel that is displayed.

status

The condition or state of the subchannel that is displayed. Possible values are:

ACTIVE

Subchannel is active.

INOP Subchannel path is inoperative.

RESET Subchannel path is not ready.

SLOWDN

Subchannel path is in slowdown mode.

ACTPEND

DLC is in the process of activating.

OPEN.PEND

DLC is in the process of opening a connection.

IDX.PEND

DLC is in the process of IDXINIT transmission for a DATA channel.

START.PEND

DLC is in the process of starting data flow for a connection.

INACT.PEND

DLC is in the process of deactivating.

system_state

The *system_state* value can be one of the following:

ONLINE

An MVS VARY ONLINE command for the subchannel has completed successfully and the channel is now available for use.

OFFLINE

An MVS VARY OFFLINE command has been issued for the subchannel and the command has completed successfully. The subchannel is no longer available for use.

PEND_OFFLINE

An MVS VARY OFFLINE command has been issued for the subchannel and the subchannel is in the process of completing the command.

N/A The system state cannot be determined for DATA subchannel addresses. This state is also displayed in cases where VTAM has not allocated or could not allocate the UCB for the subchannel.

Tip: If the MVS status of the subchannel is required, you can use the D U,xxxx command, where xxxx is the subchannel address.

IST1577I

This message is displayed only when HPDT=YES in message IST087I. This message is not displayed if the TRLE is IUTSAMEH, which is the TRLE for same-host communication.

In the message text:

hpsize

The MPC header segment size, in bytes.

dsiz

The maximum MPC data segment size, in kilobytes.

storage

The storage medium that is used for inbound data (on READ subchannels). Possible values are:

ECSA

An extended common service area buffer provided by the communications storage manager (CSM).

DATASPACE

A data space buffer provided by the communications storage manager (CSM).

NA

Not applicable. This value is issued for WRITE subchannels.

IST1715I

In the message text:

mpc_level

The level of MPC connection. Possible values are:

HPDT

Indicates that the connection is capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NOHPDT

Indicates that the connection is not capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

QDIO

(Queued Direct I/O) Indicates that the connection performs channel I/O operations using direct IO instead of CCW channel operations. The connection is also HPDT capable, and can therefore perform the direct IO to or from communications storage manager (CSM) buffers.

mpc_usage

Indicates whether the MPC connection can be used exclusively by only one ULP, or shared by multiple ULPs. Possible values are:

SHARE

Indicates that the connection can be shared by multiple ULPs.

EXCLUSIVE

Indicates that the connection can only be used by the first ULP that requests usage of the MPC connection.

IST1716I

This message is displayed only for TRLEs representing an IBM OSA-Express Adapter or an IBM Open Systems Adapter used for native access to an ATM network.

In the message text:

port_name

The port name to be assigned to the port on the IBM Open Systems Adapter. Each IBM Open Systems Adapter has one *port_name* that is represented by one TRLE.

link_num

The relative adapter number of the OSA-Express Adapter port represented by this TRLE. For an IBM Open Systems Adapter used for native access to an ATM network, the *link_num* value is N/A.

code_level

The OSA processor code level of the OSA-Express. For some versions of OSA-Express, the *code_level* value is N/A. For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

IST1717I

This message is displayed for all TRLEs that are currently being used by at least one ULP. A separate IST1717I message will be displayed for each ULP using this TRLE. For a dynamic TCP TRLE, or an exclusively owned TRLE, only one message with ULPID will be issued, because there can only be one ULP using each of these TRLEs. For an OSA-Express Adapter, one message with ULPID will be issued for each Datapath channel address in use by a ULP. For other TRLEs, more than one ULPID message might be issued, depending on how many upper-layer protocols are using the TRLE.

IST1221I

In the message text:

ulp_id

The name of a z/OS Communications Server upper-layer protocol (ULP) that is using the TRLE or using one of the datapath channels of an OSA-Express TRLE.

- For TCP/IP ULPs, the *ulp_id* value is the TCPIP job name.
- For ANNC ULPs, the *ulp_id* value is the SNA PU name.
- For ATM or EE ULPs, the *ulp_id* value is the XCA major node name.

For all TRLEs with MPCLEVEL = QDIO, IST1717I will also display the interface dedicated to this datapath channel address. For all TRLEs whose MPCLEVEL is not QDIO, the *ulp_interface* will be *NA*.

ulp_interface

The name of either the interface or the device that is using one of the datapath channels of an OSA-Express TRLE.

IST1724I

This message is issued in response to DISPLAY ID or DISPLAY TRL commands. This message appears for a TRLE representing an OSA-Express adapter.

In the message text:

iotrc

Specifies whether I/O Trace is active for this OSA-Express data device (ON or OFF).

length

Specifies the number of bytes being recorded for I/O Trace for this OSA-Express data device.

For information about setting up an OSA-Express feature, see zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

IST1757I

This message is issued in response to DISPLAY ID or DISPLAY TRL commands. This message will appear for a TRLE representing an OSA-Express Adapter.

In the message text:

x The write priority level.

congstate

The congestion state of that priority level. The *congstate* value is **CONGESTED** when, at least once in the last congestion reporting window, all 128 writes for the priority level were unavailable. Otherwise *congstate* will be **UNCONGESTED**.

IST1954I

In the message text:

trl_major_node_name

The name of the TRL major node defining the TRLE.

IST2184I

This message is displayed for only a TRLE that represents an OSA-Express2 or later adapter and only when the OSA-Express2 or later adapter is armed for QDIOSYNC. See QDIOSYNC trace in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for a description of the QDIOSYNC trace function.

In the message text:

armstate

The OPTION operand value from the MODIFY TRACE command or TRACE start option.

Tip: The OSA might be collecting more than what is specified by the *armstate* value while OSA merges the options for all Armed data devices.

Possible values are:

ALLIN

OSA is collecting inbound diagnostic data for all devices.

ALLINOUT

OSA is collecting inbound and outbound diagnostic data for all devices.

ALLOUT

OSA is collecting outbound diagnostic data for all devices.

IN OSA is collecting inbound diagnostic data for devices defined to this VTAM.

INOUT

OSA is collecting inbound and outbound diagnostic data for devices defined to this VTAM.

OUT

OSA is collecting outbound diagnostic data for devices defined to this VTAM.

syncid

The SYNCID operand value from the MODIFY TRACE command or TRACE start option. This value is to be used as part of a correlator when the OSA-Express2 or later diagnostic data is captured.

saved_state

The SAVE operand value from the MODIFY TRACE command or TRACE start option. Valid values are YES or NO.

IST2190I

This message is issued in response to DISPLAY ID or DISPLAY TRL commands for a TRLE configured with an MPCLEVEL parameter value of QDIO representing an OSA-Express adapter. This message appears for each active datapath channel if the OSA supports the OSA-Express network traffic analyzer (OSAENTA) trace function. The message displays the DEVICEID parameter, a number that uniquely identifies this datapath channel to the OSA-Express adapter. When a TCP/IP stack is performing the OSAENTA trace function for this OSA, this DEVICEID parameter can be specified on a TCP/IP OSAENTA profile configuration statement or a VARY TCPIP,,OSAENTA command to limit the tracing to just the user of this data device. See OSA-Express network traffic analyzer trace in z/OS Communications Server: IP Configuration Guide for more information about the OSAENTA trace function.

In the message text:

deviceid

The form *cs-mf-cl-us*, where

cs is the Channel subsystem ID for this data path device.

mf is the LPAR multiple image facility ID for the LPAR using this datapath device.

cl is the control unit logical identifier for this datapath device.

ua is the unit address for this data path device.

Each identifier is a 2 digit hexadecimal value in the range 00-FF.

IST2219I

This message is issued if the *resource* value defines an MPC channel-to-channel group, the activation of which is presently suspended waiting for the minimum required number of read and write devices to become available.

In the message text:

resource

The name of the TRLE or MPC subarea line that defines the MPC group.

IST2263I

This message is displayed if either of the following scenarios is true:

IST1221I

- PORTNUM is specified on the QDIO TRLE definition statement.
- VTAM detected it is connected to an IBM OSA-Express3 or later feature in QDIO mode.

In the message text:

port_name

The port name to be assigned to the port on the IBM Open Systems Adapter. Each IBM Open Systems Adapter has one port name that is represented by one TRLE.

port_num

The OSA-Express3 or later physical port number to be used for this QDIO MPC group. For OSA-Express2 and earlier or later adapters, only one physical port is available, so the *port_num* value will be 0.

code_level

The OSA processor code level of the OSA-Express. For some versions of OSA-Express, the *code_level* value will be N/A.

IST2305I

This is issued in response to DISPLAY NET,ID=*trlename* or DISPLAY NET,TRL,TRLE=*trlename* commands when the TRLE represents HiperSockets or an OSA-Express adapter.

In the message text:

sbalcnt

The number of storage block address lists (SBAL) that have been discarded since the activation of the device.

IST2309I

This message indicates that the upper-layer protocol (ULP) that is using the datapath channel of the OSA-Express or HiperSockets TRLE is using accelerated routing. If the ULP is a TCP/IP stack, then you can display the accelerator routing table by issuing the Netstat ROUTE/-r command with the QDIOACCEL modifier for a particular TCP/IP stack. For details about how to display the accelerator routing table, see the Netstat ROUTE/-r report in z/OS Communications Server: IP System Administrator's Commands.

IST2310I

This message indicates that the upper-layer protocol (ULP) that is using the datapath channel of the OSA-Express or HiperSockets TRLE is not using accelerated routing.

IST2319I

This message is issued if the TRLE that is displayed represents an IBM iQDIO Adapter (CHPID).

In the message text:

netid

The internal QDIO (IQD) Network ID is an internal system generated identifier that represents the internal logical network. The ID is associated with the IQD CHPID and can span the entire central processor complex (CPC), based on the system configuration of the IQD CHPID. Operating Systems that are running on this CPC, which are connected to the same IQD Network ID, are using the same internal logical network and therefore have network connectivity. The ID is subject to change during a power-on reset of the CPC, or with dynamic I/O updates for the IQD CHPID.

IST2331I

This message is the first of two header messages for the information displayed in message IST2333I.

IST2332I

This message is the second of two header messages for the information displayed in message IST2333I.

IST2333I

When OSA Express supports QDIO inbound workload queueing, z/OS Communications Server can initialize multiple input queues. IST2333I is displayed once for each initialized read queue.

In the message text:

qid

The queue identifier of the read queue. The *qid* value is in the form RD/*qid*. RD/1 represents the primary read queue and RD/2 through RD/8 represent any initialized ancillary read queues.

qtype

The queue type for this read queue. Possible values are PRIMARY, BULKDATA, EE, or SYSDIST.

storage_amount

The amount of storage defined by the VTAM start option QDIOSTG (or IQDIOSTG for iQDIO data devices). The VTAM start option value can be overridden on an individual device basis when READSTORAGE is configured on the LINK or INTERFACE statement in the TCP/IP profile.

A *storage_amount* value of ***NA*** appears if the *qstat* value is not ACTIVE. The queue has no read buffers and cannot be used by OSA Express to present inbound data.

The *storage_amount* value is displayed both in megabytes and in the number of QDIO read buffers that are storage block access lists (SBALS) that VTAM will use for this data device for inbound (read) processing. The *storage_amount* value is in the following format:

n.nM(nnn SBALS)

where *n.n* is the amount of storage in megabytes and *nnn* is the number of SBALS.

For an OSA-Express in QDIO mode, the size of an SBAL is fixed at 64 KB. For an iQDIO (HiperSockets) device, the SBAL size is variable. The iQDIO SBAL size is configured in a hardware configuration definition (HCD) when the maximum frame size (MFS) is specified. The default MFS is 16 KB, and the values 24 KB, 40 KB, and 64 KB are also supported. For an iQDIO device, both the VTAM start option IQDIOSTG and TCP/IP profile LINK or INTERFACE statement parameter READSTORAGE have an effect only when an MFS of 64 KB was configured.

qstat

The status of this read queue. Possible values are:

ACTIVE

The queue type is initialized and currently in use by the TCP/IP stack.

INITIALIZATION FAILURE

The queue type failed to initialize and will not be used by the TCP/IP stack.

NOT IN USE

The queue type is not currently in use by the TCP/IP stack.

NOT SUPPORTED BY OSA

The queue type is not supported by the OSA-Express adapter and will not be used by the TCP/IP stack.

IST2337I

This message is issued in response to DISPLAY NET,ID=*trlename* or DISPLAY NET,TRL,TRLE=*trlename* commands when the TRLE represents HiperSockets or an OSA-Express adapter.

In the message text:

chpid_type

The type of channel path identifier (CHPID) used by this TRLE:

OSD

Channel type for an OSA-Express CHPID configured in QDIO mode.

OSM

Channel type for an OSA-Express CHPID configured for attachment to the intranode management network.

IST1222I

OSX

Channel type for an OSA-Express CHPID configured for attachment to the intraensemble data network.

IQD

Channel type for HiperSockets (Internal Queued Direct I/O) communications.

chpid_num

The hexadecimal channel path identifier (CHPID) for the OSA adapter or HiperSockets device.

network_id

The physical network identifier.

- When *chpid_type* is OSX, *network_id* is always IEDN.
- When *chpid_type* is OSD or IQD, *network_id* is either the configured network identifier of the adapter, or ****NA**** if no network identifier was configured for the adapter.
- For all other *chpid_type* values, *network_id* is ****NA****.

IST2386I

This message is issued in response to DISPLAY NET,ID=*trlename* or DISPLAY NET,TRL,TRLE=*trlename* commands when the TRLE represents HiperSockets or an OSA-Express adapter.

In the message text:

wbufcnt

The number of outbound write buffers that have been discarded since the activation of the device.

System action: Processing continues.

Operator response: For MPC or TRLE configurations defined with multiple READ and multiple WRITE devices, MPC dynamics enables an operator to dynamically add and remove subchannels to and from the MPC/TRLE group.

- If a READ or WRITE MPC or TRLE subchannel displays as OFFLINE, issue an MVS ONLINE command (for example, VARY cua,ONLINE) to dynamically add the device back to the MPC or TRLE group.
- If a READ or WRITE MPC or TRLE subchannel displays as ONLINE, and you want to remove the subchannel from the group, issue the MVS OFFLINE command (for example, VARY cua,OFFLINE) to dynamically remove the device from the MPC or TRLE group.

Restriction: For subarea MPC connections, the MPCDYN=YES operand must be coded on the MPC GROUP or LINE definition to enable MPC dynamics.

System programmer response: For message IST2333I, use the *storage_amount* value to confirm the system storage use and to tune the performance of a specific data device.

Routing code: 2

Descriptor code: 5

IST1222I {WRITE|READ|DATA|TRACE} DEVICE *device_address* IS INOPERATIVE, NAME IS *resource_name*

Explanation: VTAM issues this message when a WRITE, READ, DATA, or TRACE path to or from an adjacent node is no longer active. It provides information about potential problems and may be issued prior to the deactivation of a line.

device_address is the hexadecimal address of the WRITE, READ, DATA, or TRACE subchannel that is displayed.

resource_name is either:

- The name of a leased line defined for a type 5 physical unit.
- The name of an element in the active transport resource list, also called a TRLE name.

System action: Processing continues.

Operator response:

- If *resource_name* is a transport resource list element (TRLE) name, you might want to deactivate the resource that is using this TRLE, and then activate the resource again. If *resource_name* is a line, you might want to take the line down and restart the line. If *resource_name* is neither a TRLE name or a line, no action is necessary. Note that the efficiency of data transfer might be affected.
- If the inoperative subchannel path is critical to your network, save the system log for problem determination.
 - Message IOS000I or other related messages may be issued and can provide additional information.
 - If there are no available paths and the line is deactivated, VTAM issues additional error messages. Also check for messages on the console log of the VTAM on the other side of the multipath channel.
- Check for any FFST probe output. See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about FFST and for a description of FFST probes.
- Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP.
- If you use a network management application such as the NetView program, check to see whether an alert was recorded for this problem.

System programmer response: If the output does not indicate a hardware problem, and you cannot determine the cause of the problem, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.
If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 4

IST1223I BN NATIVE TIME LEFT LOCATE SIZE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1224I *bn native time_left locate_size*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1225I VIRTUAL NODE *nodename* CONNECTION INACTIVE

Explanation: VTAM issues this message in response to a VARY INACT for a line when the logical connection with the virtual node becomes inactive.

nodename is the name of the virtual node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1226I TOPOLOGY UPDATE FAILED, INSUFFICIENT STORAGE

Explanation: This message is part of a group messages that VTAM issues in response to a VARY ACT for a line when the activation of the logical connection to the virtual node fails. The failure occurred because the topology update for the active logical connection failed due to insufficient storage. The first message in the group is IST1166I or IST1167I. See the explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1227I *id value = description*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY STATS command. See the explanation of IST1345I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1228I *command FOR resourcename FAILED, CODE = code*

Explanation: VTAM issues this message in response to a MODIFY DIRECTRY,UPDATE command which attempted to change the owning CP or the network node server for *resourcename*. The name specified for either the CPNAME or NETSRVR operand is not consistent with the information found in the APPN directory.

command is always **F DIRECTRY** which refers to the MODIFY DIRECTRY,UPDATE command.

resourcename is the network-qualified name of the resource in the form *netid.name*. *resourcename* can be the same resource that you entered on the ID operand of the MODIFY DIRECTRY,UPDATE command or a resource that is subordinate to the resource named on the command.

The following list of values for *code* describes the failure:

Code Error

- | | |
|---|---|
| 1 | <i>resourcename</i> was identified in the APPN directory as a network node. Attempting to change the owning CP or network node server of a network node is not valid. |
| 2 | <i>resourcename</i> was identified in the APPN directory as an end node and the CPNAME operand was specified on the MODIFY DIRECTRY,UPDATE command. Attempting to change the owning CP of an end node is not valid. |
| 3 | <i>resourcename</i> was identified as a non-control point in the APPN directory and the CPNAME operand was not specified on the MODIFY DIRECTRY,UPDATE command. When <i>resourcename</i> is a non-control point, the CPNAME operand is required to identify the resource's owning control point (CP). |

System action: The hierarchy for *resourcename* is not updated. Other processing continues.

Operator response: Use the DISPLAY ID command to obtain the current type of *resourcename*. Then, reenter the MODIFY DIRECTRY,UPDATE command with the proper operands specified. See the z/OS Communications Server: SNA Operation for more information on the MODIFY DIRECTRY command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1229I *command FAILED, resourcename IS NOT A {CP|EN|NN}*

Explanation: VTAM issues this message in response to a MODIFY DIRECTRY,UPDATE command for **one** of the following reasons:

- The MODIFY DIRECTRY,UPDATE command included the operand CPNAME=*resourcename* which attempted to specify *resourcename* as a CP (control point). *resourcename* is not identified as a CP in the APPN directory.
- The MODIFY DIRECTRY,UPDATE command included the operands CPNAME=*resourcename* and NETSRVR=*name* which indicates that *resourcename* is a EN (end node). *resourcename* is not identified as a EN in the APPN directory.

- The MODIFY DIRECTRY,UPDATE command included the operand NETSRVR=*resourcenam*e which attempted to specify *resourcenam*e as a NN (network node). *resourcenam*e is not identified as a NN in the APPN directory.

command is always F DIRECTRY which refers to the MODIFY DIRECTRY,UPDATE command.

*resourcenam*e is the network-qualified name specified on either the CPNAME operand or the NETSRVR operand, in the form *netid.name*.

System action: VTAM ignores the MODIFY DIRECTRY,UPDATE command. Other processing continues.

Operator response: Verify that *resourcenam*e is spelled correctly, and reenter the command.

Issue the DISPLAY ID command to verify the current type of *resourcenam*e. If *resourcenam*e is expected to be either a control point or a network node, save the system log for problem determination.

System programmer response: You can change the type of *resourcenam*e in the APPN directory with the following actions:

- Enter the MODIFY DIRECTRY,DELETE,ID=*resourcenam*e command.
- Change the type of the *resourcenam*e specified in the definition list and activate the list.
- Reenter the MODIFY DIRECTRY,UPDATE command with either the CPNAME or NETSRVR operand, depending upon the desired result.

Routing code: 2

Descriptor code: 5

IST1230I TIME = *time* DATE = *date* ID = *id*

Explanation: This message is the first in a group of messages that displays tuning statistics.

If message IST1505I appears in the display, see that message for a complete description of the message group for XCF connections.

If message IST1613I appears in the display, see that message for a complete description of the message group for TCP/IP resources.

If message IST2366I appears in the display, see that message for a complete description of the message group for 10 GbE RoCE Express resources.

A complete description of the message groups for other connections follows.

This message group displays tuning statistics for a multipath channel-to-channel adapter. Messages IST924I - IST1570I are repeated for each subchannel address.

```
IST1230I TIME      = time      DATE      = date      ID = id
IST1231I IPDU      = ipdu      OPDU       = opdu
IST1569I INLP      = inlp      ONLP       = onlp
IST1232I TSWEET    = tsweep    QSWEET    = qsweep
IST924I -----
IST1233I DEV       = dev       DIR        = dir
IST1234I BSIZE     = bsize     MAXBYTES  = maxbytes
IST1235I SIO       = sio       SLOWDOWN  = slowdown
IST1236I BYTECNT0 = bytecnt0  BYTECNT  = bytecnt
IST1570I NBYTECTO = nbyTECTO  NBYTECT  = nbyTECT
IST314I END
```

This message group displays tuning statistics for a queued direct I/O (QDIO) or a HiperSockets (iQDIO) adapter. Message subgroup IST924I - IST1570I is repeated for each subchannel address. Message subgroup IST924I - IST1811I is repeated for each direct I/O READ or WRITE queue.

The IST924I - IST1811I message subgroup for a direct I/O READ queue contains different messages than the message subgroup that is displayed for a direct I/O WRITE queue. In this example, each direct I/O queue subgroup contains an actual value in the *dir* field in message IST1233I, so each subgroup can be identified clearly.

```
IST1230I TIME      = time      DATE      = date      ID = id
IST1231I IPDU      = ipdu      OPDU       = opdu
IST1569I INLP      = inlp      ONLP       = onlp
```

IST1230I

```
IST1232I TSWEEP = tsweep QSWEEP = qsweep
IST924I -----
IST1233I DEV = dev DIR = dir
IST1234I BSIZE = bsize MAXBYTES = maxbytes
IST1235I SIO = sio SLOWDOWN = slowdown
IST1236I BYTECNT = bytecnt BYTECNT = bytecnt
IST1570I NBYTECTO = nbyTECTO NBYTECT = nbyTECT
IST924I -----
IST1233I DEV = dev DIR = RD/x (queue_type)
[IST1719I PCIREALO = pcirealo PCIREAL = pcireal]
[IST1720I PCIVIRTO = pcivirto PCIVIRT = pcivirt]
[IST1750I PCITHRSO = pcithrso PCITHRSH = pcithrsh]
[IST1751I PCIUNPRO = pciunpro PCIUNPRD = pciunprd]
[IST2316I EARLYINO = earlyino EARLYINT = earlyint]
[IST2317I ULPRETUO = ulpretuo ULPRETU = ulpretu]
[IST1752I RPROCDEO = rprocdeo RPROCDEF = rprocdef]
[IST1753I RREPLDEO = rrepldeo RREPLDEF = rrepldef]
IST1754I NOREADSO = noreadso NOREADS = noreads
IST1721I SBALCNTO = sbalcnto SBALCNT = sbalcnt
IST1722I PACKCNTO = packcnto PACKCNT = packcnt
IST2185I FRINVCTO = frinvcto FRINVCT = frinvct
IST1236I BYTECNT = bytecnt BYTECNT = bytecnt
IST1810I PKTIQDO = pktiqdo PKTIQD = pktiqd
IST1811I BYTIQDO = bytiqdo BYTIQD = bytiqd
IST924I -----
IST1233I DEV = dev DIR = WR/1
IST1755I SBALMAX = sbalmax SBALAVG = sbalavg
IST1756I QDPHMAX = qdpthmax QDPTHAVG = qdpthavg
IST1723I SIGACNTO = sigacnto SIGACNT = sigacnt
IST1721I SBALCNTO = sbalcnto SBALCNT = sbalcnt
IST1722I PACKCNTO = packcnto PACKCNT = packcnt
IST2242I SIGMCNTO = sigmcnto SIGMCNT = sigmcnt
IST1236I BYTECNT = bytecnt BYTECNT = bytecnt
IST1810I PKTIQDO = pktiqdo PKTIQD = pktiqd
IST1811I BYTIQDO = bytiqdo BYTIQD = bytiqd
IST314I END
```

Many of the messages in this group contain both a count and an overflow. Both the count and overflow are maintained in unsigned 32-bit variables (unless otherwise indicated). Since an unsigned 32-bit variable can only contain a value up to and including 4294967295 ('FFFFFFFF'X), the variable will wrap through 0 if an increment results in exceeding this value. When such a wrap occurs, the overflow is incremented by 1. Therefore, the total count is determined as follows:

$$\text{Total} = (\text{overflow} * 4294967296) + \text{count}$$

Note: in the context of the QDIO (Queued Direct IO) interface, a single DATAPATH subchannel address represents both read and write DMA (Direct Memory Access) based data transfer points. In addition, the write transfer point is comprised of multiple priority levels (sometimes referred to as queues). For QDIO DATAPATH subchannel addresses, this sequence of messages is repeated for each data transfer point or priority level.

IST1230I

In the message text:

date and time

The *date* and *time* values specify when the record was reported. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

id The name of the link for which tuning statistics are being recorded. The link name is from one of the following sources:

- The name specified on the LINE definition statement in the associated channel-attached major node.
- The name specified on the TRLE definition statement in the TRL definition deck.
- An internally generated TRLE name.

IST1231I

In the message text:

ipdu

The total number of inbound PDUs received.

opdu

The total number of outbound PDUs transmitted.

IST1232I

In the message text:

tsweep

The number of sweeps initiated as a result of a timeout. A sweep is a special data block that is exchanged with the adjacent host to verify that data has not been lost. Only the host with the highest subarea number will initiate timer sweeps.

qsweep

The number of sweeps initiated as a result of excessive receive queue depth.

- Receive queue depth represents the number of bytes of data waiting to be passed to the next layer.
- Excessive receive queue depth usually indicates a problem with reserialization of the data segment. Possible causes are a mismatch in the speed of the read subchannels or a lack of available I/O buffers.

IST1233I

In the message text:

dev

The hexadecimal subchannel address of the device for which tuning statistics are being recorded. It corresponds to one of the addresses coded on the READ, WRITE, or DATAPATH statement on the LINE or TRLE definition statement.

dir

The direction of this resource. Possible values are:

- READ
- WRITE
- RD/*x* (*queue_type*)
 - The *x* value is the QDIO read input queue number for this QDIO data device.
 - The *queue_type* value is the queue type. The *queue_type* value can be a maximum of 8 characters. Possible values include PRIMARY, BULKDATA, SYSDIST, EE, or N/A. The N/A value indicates that the queue is initialized but is not currently in use by the TCP/IP stack.
- WR/*x*
 - The *x* value is the QDIO write priority level.

IST1234I

In the message text:

bsize

The maximum buffer size supported by this device.

maxbytes

The number of bytes used in the largest channel program. This field provides information about the utilization or packing of data into the transmit or receive buffer. As this number approaches *bsize*, this indicates that maximum instantaneous utilization of the device's buffer has occurred.

IST1235I

In the message text:

sio

The number of start I/O operations counted for the subchannel. This number is reset each time VTAM reports

IST1230I

tuning statistics and is expressed in decimal. The value of *sio* is never larger than 65535. If *sio* is 65535, its value is reset to 0 when the next start I/O operation takes place.

slowdown

The number of times slowdown mode has been entered. If *slowdown* is incrementing, this indicates a lack of available I/O buffers.

- If **DIR = READ** in message IST1233I, *slowdown* is incremented every time the channel program cannot be reinitiated immediately because of a lack of I/O buffers to unpack the inbound data.
- If **DIR = WRITE** in message IST1233I, *slowdown* is ****N/A****.

IST1236I

In the message text:

bytecnto

The PDU byte count overflow.

bytecnt

The byte count. This value represents the accumulated number of bytes of PDUs transmitted on the **WRITE** subchannel or received on the **READ** subchannel.

IST1569I

In the message text:

inlp

The total number of inbound NLPs received.

onlp

The total number of outbound NLPs transmitted.

IST1570I

In the message text:

nbytecto

The NLP byte count overflow.

nbytect

The NLP byte count. This value represents the accumulated number of bytes of NLPs transmitted on the **WRITE** subchannel or received on the **READ** subchannel.

IST1719I

In the message text:

pcirealo

The real PCI (Program Controlled Interrupt) overflow.

pcireal

The real PCI count. This value represents the accumulated number of real PCI interrupts fielded by the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.

A real PCI is an execution of the QDIO Program-Controlled Interrupt Exit as a result of a call from the system interrupt handler. The higher the ratio of real PCI to virtual PCI, the less successful QDIO is at avoiding the overhead of the system interrupt handler.

IST1720I

In the message text:

pcivirto

The virtual PCI overflow.

pcivirt

The virtual PCI count. This value represents the accumulated number of virtual PCI interrupts fielded by the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.

A virtual PCI is an execution of the QDIO Program-Controlled Interrupt Exit as a result of a call from the QDIO device driver. The higher the ratio of virtual PCI to real PCI, the more successful QDIO is at avoiding the overhead of the system interrupt handler.

IST1721I

- *sbalcnto* is the storage block address list (SBAL) count overflow.
- *sbalcnt* is the SBAL count. This value represents the accumulated number of SBALs used for I/O on the QDIO **WRITE** priority level or the QDIO **READ** data transfer point.
An SBAL serves a similar function in QDIO that an indirect-data-address word (IDAW) list serves in traditional I/O.

IST1722I

- *packcnto* is packet count overflow.
- *packcnt* is packet count. This value represents the accumulated number of packets transmitted on the QDIO **WRITE** priority level or received on the QDIO **READ** data transfer point.
A packet is a single unit of data as presented to the QDIO device driver (for example, a datagram or TCP packet).

IST1723I

- *sigacnto* is SIGA (Signal Adapter) count overflow.
- *sigacnt* is SIGA count. This value represents the accumulated number of SIGA instructions issued for the QDIO **WRITE** priority level.
SIGA tells the QDIO adapter that data is ready to be written. This count will not directly correlate with the data rate as QDIO employs a tack-in mechanism similar to Seldom Ending Channel Program.

IST1750I

- *pcithrso* is threshold PCI overflow.
- *pcithrsh* is threshold PCI count. This value represents the accumulated number of threshold PCI interrupts fielded by the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.
A threshold PCI is a real PCI generated by the adapter because one of the threshold conditions which controls the PCI processing was met.
A count of zero indicates that the QDIO device driver is providing sufficient resources to keep pace with the inbound data stream from the adapter.

IST1751I

- *pciunpro* is unproductive PCI overflow.
- *pciunprd* is unproductive PCI count. This value represents the accumulated number of unproductive PCI interrupts fielded by the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.
An unproductive PCI is a real PCI where the QDIO Program-Controlled Interrupt Exit failed to find any completed reads. An unproductive PCI will occur when a virtual PCI causes the processing of read completions for which a real PCI is pending. An unproductive PCI indicates that the system interrupt handler overhead was incurred unnecessarily.

IST1752I

- *rprocdeo* is read processing deferral overflow.
- *rprocdef* is read processing deferral count. This value represents the accumulated number of read processing deferrals by the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.
A read processing deferral occurs when the QDIO Program-Controlled Interrupt Exit must defer a read completion because a control block cannot be obtained to represent the inbound data. Read processing deferrals (along with read replenishment deferrals) might cause the NOREADS count to be nonzero.

IST1753I

IST1230I

- *rrepldeo* is read replenishment deferral overflow.
- *rrepldef* is read replenishment deferral count. This value represents the accumulated number of read replenishment deferrals by the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.

A read replenishment deferral occurs when the QDIO Program-Controlled Interrupt Exit does not have enough available read buffers to tack-in a new read. Read replenishment deferrals (along with read processing deferrals) might cause the NOREADS count to be nonzero.

IST1754I

- *noreadso* is reads exhausted overflow.
- *noreads* is reads exhausted count. This value represents the accumulated number of times reads were exhausted on entry to the QDIO Program-Controlled Interrupt Exit for the QDIO **READ** data transfer point.

This value is incremented by 1 each time the QDIO Program-Controlled Interrupt Exit is invoked and it detects that all the read buffers are full (the adapter has no place to move additional inbound data). A zero total is preferred because lack of read buffers might result in the adapter discarding inbound data. Examination of the read processing and read replenishment deferral counts might indicate the reason the QDIO device driver is not providing sufficient resources to accept the inbound data from the adapter.

IST1755I

sbalmax is the maximum number of active SBALs at the completion of the write initiation process for the QDIO **WRITE** priority level. This value will be in the range 0-128 (0 meaning the priority level had no outbound activity in the interval and 128 meaning that at one point in the interval ALL the SBALs for the priority level were active).

sbalavg is the average number of active SBALs at the completion of the write initiation process for the QDIO **WRITE** priority level. This value will be in the range 0-128 (0 meaning the priority level had no outbound activity in the interval and 128 meaning that every time the QDIO write initiator completed, all 128 SBALs were active).

IST1756I

- *qdpthmax* is the maximum number of work elements left on the outbound work queue at the completion of the write initiation process for the QDIO **WRITE** priority level. This value will be a number in the range 0-54 or a character constant >254.
- *qdpthavg* is the average number of work elements left on the outbound work queue at the completion of the write initiation process of the QDIO **WRITE** priority level. This value will be a number in the range 0-254 or a character constant >254.

A nonzero value for either of these fields suggests the adapter is not accepting outbound data as fast as the device driver is presenting it.

IST1810I

pktiqdo is the IQDIO packet count overflow.

pktiqd is the IQDIO packet count. If this message is for a QDIO or IQDIO DATAPATH device with a direction of read, the value represents the accumulated number of packets received on this particular QDIO or IQDIO READ data transfer point and subsequently routed outbound using IQDIO routing or QDIO Accelerator. If this message is for a QDIO or IQDIO DATAPATH device with a direction of WR, the value represents the accumulated number of packets transmitted on the write priority level for this device after being received inbound and subsequently routed outbound using IQDIO routing or QDIO Accelerator.

A packet is a single unit of data as presented to the QDIO device driver (for example, a datagram or TCP packet).

IST1811I

bytiqdo is the IQDIO byte count overflow.

bytiqd is the IQDIO byte count. If this message is for a QDIO or IQDIO DATAPATH device with a direction of read, the value represents the accumulated number of bytes received on this particular QDIO or IQDIO READ data transfer point and subsequently routed outbound using IQDIO routing or QDIO Accelerator. If this message is for a QDIO or IQDIO DATAPATH device with a direction of WR, the value represents the accumulated number of bytes transmitted on the write priority level for this device after being received inbound and subsequently routed outbound using IQDIO routing or QDIO Accelerator.

IST2185I

frinvcto is the frame invalidation error count overflow.

frinvt is the frame invalidation error count. This message applies to inbound data received on a QDIO DATAPATH device. The value represents the accumulated number of frame invalidation packets that were received and discarded. A frame invalidation packet is an inbound packet marked as invalid by OSA-Express3 or later.

Result: These fields are 0 for OSA-Express, OSA-Express2 or later, and iQDIO ports.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

IST2242I

sigmcto is the iQDIO (HiperSockets) multiple write SIGA count overflow.

sigmct is the iQDIO (HiperSockets) multiple write SIGA count. This value is the accumulated number of signal adapter (SIGA) multiple write instructions issued for the IQDIO WRITE priority level.

SIGA multiple write tells the IQDIO device that multiple storage block address lists (SBALs) with data are ready to be written. This count does not directly correlate with the data rate because the number of SBALs represented by each SIGA multiple write might vary.

IST2316I

earlyino is the early interrupt count overflow.

earlyint is the early interrupt count. This message applies to inbound data that is received on a QDIO DATAPATH device. The value represents the number of times that an OSA-Express feature that is operating in optimized latency mode signaled the host with an interrupt that indicates that no data was currently available to process, but that data that is destined to this host was received.

Result: These fields are both 0 for any QDIO DATAPATH device that is not operating in optimized latency mode.

IST2317I

ulpretuo is the Upper-Layer Protocol (ULP) return with no data available count overflow.

ulpretu is the ULP return with no data available count. This message applies to inbound data received on a QDIO DATAPATH device. The value represents the number of times that VTAM presented data to the ULP from an OSA-Express feature that is operating in optimized latency mode, and when VTAM received the ULP return, it found that there was no more data to process.

Result: These fields are both 0 for any QDIO DATAPATH device that is not operating in optimized latency mode.

System action: Processing continues.

Operator response: To discontinue statistics recording, enter the MODIFY NOTNSTAT command.

System programmer response: For additional information on tuning and analyzing tuning statistics, see the z/OS Communications Server: SNA Network Implementation Guide.

Routing code: 2

Descriptor code: 4

Example: This message group displays tuning statistics for a Multi Path Channel Adapter with the following TRLE definitions:

```
TRLE1C  TRLE  LNCTL=MPC,
          READ=(0408,02F0),
          WRITE=(0508,03F0)
```

```
IST1230I TIME      = 07570625   DATE      = 08102      ID   = TRLE1C
```

```
IST1231I IPDU      =      53987  OPDU      =      52031
```

```
IST1569I INLP      =          0  ONLP      =          0
```

```
IST1232I TSWEPT   =          0  QSWEPT   =          0
```

```
IST924I -----
```

```
IST1233I DEV       = 0508      DIR       = WRITE
```

```
IST1234I BSIZE     =      4095  MAXBYTES =      3930
```

```
IST1235I SIO       =      8203  SLOWDOWN = *****
```

```
IST1236I BYTECNTO =          0  BYTECNT = 157031499
```

```
IST1570I NBYTECTO =          0  NBYTECT =          0
```

```
IST924I -----
```

```
IST1233I DEV       = 03F0      DIR       = WRITE
```

```
IST1234I BSIZE     =      4095  MAXBYTES =      3930
```

IST1230I

```

IST1235I SIO      =      21988 SLOWDOWN = *****
IST1236I BYTECNTO =          0 BYTECNT  =  77055685
IST1570I NBYTECTO =          0 NBYTECT  =          0
IST924I -----
IST1233I DEV      = 0408      DIR      = READ
IST1234I BSIZE    =          4095 MAXBYTES =      341
IST1235I SIO      =      53032 SLOWDOWN =          0
IST1236I BYTECNTO =          0 BYTECNT  =  8199621
IST1570I NBYTECTO =          0 NBYTECT  =          0
IST924I -----
IST1233I DEV      = 02F0      DIR      = READ
IST1234I BSIZE    =          4095 MAXBYTES =      301
IST1235I SIO      =          35 SLOWDOWN =          0
IST1236I BYTECNTO =          0 BYTECNT  =   7719
IST1570I NBYTECTO =          0 NBYTECT  =          0
IST314I END

```

This message group displays tuning statistics for a QDIO or an iQDIO Adapter with the following TRLE definitions:

```

NSQDIO11 TRLE LNCTL=MPC,
               MPCLEVEL=QDIO,
               READ=(0E28),
               WRITE=(0E29),
               DATAPATH=(0E2A,0E2B),
               PORTNAME=(NSQDIO1,0)

```

```

IST1230I TIME     = 18051835  DATE     = 09182  ID    = QDI0101
IST1231I IPDU     =          0 OPDU     =          0
IST1569I INLP     =          0 ONLP     =          0
IST1232I TSWEEP   =          0 QSWEEP   =          0
IST924I -----
IST1233I DEV      = 0E29      DIR      = WRITE
IST1234I BSIZE    =          4096 MAXBYTES =          0
IST1235I SIO      =          0 SLOWDOWN = *****
IST1236I BYTECNTO =          0 BYTECNT  =          0
IST1570I NBYTECTO =          0 NBYTECT  =          0
IST924I -----
IST1233I DEV      = 0E28      DIR      = READ
IST1234I BSIZE    =          4092 MAXBYTES =          0
IST1235I SIO      =          0 SLOWDOWN =          0
IST1236I BYTECNTO =          0 BYTECNT  =          0
IST1570I NBYTECTO =          0 NBYTECT  =          0
IST924I -----
IST1233I DEV      = 0E2A      DIR      = RD/1 (PRIMARY)
IST1719I PCIREALO =          0 PCIREAL  =          12
IST1720I PCIVIRTO =          0 PCIVIRT  =          0
IST1750I PCITHRSO =          0 PCITHRSH =          0
IST1751I PCIUNPRO =          0 PCIUNPRD =          0
IST2316I EARLYINO =          0 EARLYINT =          0
IST2317I ULPRETUO =          0 ULPRETU  =          0
IST1752I RPROCDEO =          0 RPROCDEF =          0
IST1753I RREPLDEO =          0 RREPLDEF =          0
IST1754I NREADSO  =          0 NREADS   =          0
IST1721I SBALCNTO =          0 SBALCNT  =          6
IST1722I PACKCNTO =          0 PACKCNT  =          6
IST2185I FRINVCTO =          0 FRINVCT  =          0
IST1236I BYTECNTO =          0 BYTECNT  =          528
IST1810I PKTIQDO =          0 PKTIQD   =          5
IST1811I BYTIQDO  =          0 BYTIQD   =          444
IST924I -----
IST1233I DEV      = 0E2A      DIR      = RD/2 (SYSDIST)
IST1754I NREADSO  =          0 NREADS   =          0
IST1721I SBALCNTO =          0 SBALCNT  =          6
IST1722I PACKCNTO =          0 PACKCNT  =          6
IST2185I FRINVCTO =          0 FRINVCT  =          0
IST1236I BYTECNTO =          0 BYTECNT  =          528
IST1810I PKTIQDO =          0 PKTIQD   =          6

```

```

IST1811I BYTIQDO =          0 BYTIQD =          528
IST924I -----
IST1233I DEV      = 0E2A      DIR      = WR/1
IST1755I SBALMAX =          0 SBALAVG =          0
IST1756I QDPHMAX =          0 QDPHAVG =          0
IST1723I SIGACNTO =          0 SIGACNT =          0
IST1721I SBALCNTO =          0 SBALCNT =          0
IST1722I PACKCNTO =          0 PACKCNT =          0
IST2242I SIGMCNTO =          0 SIGMCNT =          0
IST1236I BYTECNTO =          0 BYTECNT =          0
IST1810I PKTIQDO =          0 PKTIQD  =          0
IST1811I BYTIQDO =          0 BYTIQD  =          0
IST924I -----
IST1233I DEV      = 0E2A      DIR      = WR/2
IST1755I SBALMAX =          0 SBALAVG =          0
IST1756I QDPHMAX =          0 QDPHAVG =          0
IST1723I SIGACNTO =          0 SIGACNT =          0
IST1721I SBALCNTO =          0 SBALCNT =          0
IST1722I PACKCNTO =          0 PACKCNT =          0
IST2242I SIGMCNTO =          0 SIGMCNT =          0
IST1236I BYTECNTO =          0 BYTECNT =          0
IST1810I PKTIQDO =          0 PKTIQD  =          0
IST1811I BYTIQDO =          0 BYTIQD  =          0
IST924I -----
IST1233I DEV      = 0E2A      DIR      = WR/3
IST1755I SBALMAX =          0 SBALAVG =          0
IST1756I QDPHMAX =          0 QDPHAVG =          0
IST1723I SIGACNTO =          0 SIGACNT =          0
IST1721I SBALCNTO =          0 SBALCNT =          0
IST1722I PACKCNTO =          0 PACKCNT =          0
IST2242I SIGMCNTO =          0 SIGMCNT =          0
IST1236I BYTECNTO =          0 BYTECNT =          0
IST1810I PKTIQDO =          0 PKTIQD  =          0
IST1811I BYTIQDO =          0 BYTIQD  =          0
IST924I -----
IST1233I DEV      = 0E2A      DIR      = WR/4
IST1755I SBALMAX =          0 SBALAVG =          0
IST1756I QDPHMAX =          0 QDPHAVG =          0
IST1723I SIGACNTO =          0 SIGACNT =          0
IST1721I SBALCNTO =          0 SBALCNT =          0
IST1722I PACKCNTO =          0 PACKCNT =          0
IST2242I SIGMCNTO =          0 SIGMCNT =          0
IST1236I BYTECNTO =          0 BYTECNT =          0
IST1810I PKTIQDO =          0 PKTIQD  =          0
IST1811I BYTIQDO =          0 BYTIQD  =          0

```

IST1231I IPDU = *ipdu* OPDU = *opdu*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1232I TSWEEP = *tsweep* QSWEEP = *qsweep*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1233I DEV = *dev* DIR = *dir*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1234I BSIZE = *bsize* MAXBYTES = *maxbytes*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1235I SIO = *sio* SLOWDOWN = *slowdown*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1236I BYTECNT0 = *bytecnt0* BYTECNT = *bytecnt* [DIR = *direction*]

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1237I *state = number* [*state = number*]

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY SESSIONS,LIST=SUMMARY command. The first message in the group is IST873I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1238I DSPNAME CURRENT MAXIMUM QUEUED

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY STORUSE,DSPNAME=*dspname* command requesting information for a specific network management application.

A complete description of the message group follows.

```
IST350I  DISPLAY TYPE = STORAGE USAGE
IST1238I DSPNAME CURRENT MAXIMUM QUEUED
IST1239I dspname current maximum queued
IST314I  END
```

Note: If DISPLAY STORUSE,DSPNAME=* is entered, VTAM displays storage usage for all network management applications and all other data spaces.

IST350I

This message identifies the type of information in the display and is always **STORAGE USAGE** for this message group.

IST1238I

This message is a header message for the information displayed in message IST1239I.

IST1239I

- *dspname* is the name of a data space created by VTAM and is the network management data space specified on the DISPLAY STORUSE command. The data space name is generated automatically when the data space is created by VTAM and is in one of the following formats:

–

IST*cccc*

cccc is **0–FFFFC**

*cccc***IST**

cccc is **1–99999**

current is the current storage usage, and is expressed in kilobytes.

maximum is the maximum storage usage since the data space was created, and is expressed in kilobytes.

queued is the current storage usage of requests queued for processing, and is expressed in kilobytes.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1239I *dspname current maximum queued*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST1238I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1240I DSPNAME CURRENT MAXIMUM JOBNAME APPL COUNT

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY STORUSE command. A complete description of the message group follows.

This message group is issued for the following commands:

DISPLAY STORUSE, DSPNAME=*dspname*

Displays storage usage for a specific data space.

DISPLAY STORUSE, JOBNAME=*jobname*

Displays storage usage for a specific VTAM application job.

DISPLAY STORUSE, APPL=*applname*

Displays storage usage for a specific application.

DISPLAY STORUSE, APPL=*

Displays storage usage for all applications.

IST350I DISPLAY TYPE = STORAGE USAGE

IST1240I DSPNAME CURRENT MAXIMUM JOBNAME APPL COUNT

IST1241I dspname current maximum jobname applname applcount

IST1240I

⋮

```
[IST1315I DISPLAY TRUNCATED AT keyword = number]
IST1454I count type DISPLAYED
IST314I  END
```

DISPLAY STORUSE,DSPNAME=*

Displays storage usage for all data spaces.

DISPLAY STORUSE,JOBNAME=*

Displays storage usage for all VTAM application jobs.

IST350I

This message identifies the type of information in the display and is always **STORAGE USAGE** for this message group.

IST1240I

This message is a header message for the information displayed in message IST1241I.

IST1241I

dspname is the name of a data space created by VTAM. The data space name is generated automatically when the data space is created by VTAM and is in one of the following formats:

ISTcccc

cccc is 0-FFFFC

ccccIST

cccc is 1-99999

current is the current storage usage, and is expressed in kilobytes.

maximum is the maximum storage usage since the data space was created, and is expressed in kilobytes.

jobname is the name of one of the VTAM application jobs that can store information in the data space *dspname*.

applname is the name of one of the VTAM applications that can store information in the data space *dspname*.

applcount is the number of active VTAM applications that can store information in the data space *dspname*.

IST1315I

VTAM issues this message when the number of resources to be displayed exceeds the value specified for the MAX or NUM operand.

keyword is either **MAX** or **NUM**.

number is the value specified for either the MAX or NUM operand.

IST1454I

This message gives the number of resources displayed.

count is the number of resources displayed.

type is the type of resource for which storage information is displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1241I *dspname current maximum jobname applname applcount*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST1240I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1242I POOL CURRENT MAXIMUM [POOL CURRENT MAXIMUM]

Explanation: This message is the first message in a group of messages that VTAM issues in response to a DISPLAY STORUSE command.

Examples of possible message groups follow.

- DISPLAY STORUSE,POOL=*poolname*

This message group displays information for a specific storage pool.

```
IST350I DISPLAY TYPE = STORAGE USAGE
IST1242I POOL      CURRENT  MAXIMUM
IST1243I poolname current  maximum
[IST1315I DISPLAY TRUNCATED AT keyword = number]
IST1454I 1 POOL(S) DISPLAYED
IST314I  END
```

- DISPLAY STORUSE,POOL=* command.

This message group displays storage usage for all storage pools, including summary information for storage pools and modules.

```
IST350I DISPLAY TYPE = STORAGE USAGE
IST1242I POOL      CURRENT  MAXIMUM [POOL      CURRENT  MAXIMUM]
IST1243I poolname current  maximum [poolname current  maximum]
[IST1315I DISPLAY TRUNCATED AT keyword = number]
IST1454I 1 POOL(S) DISPLAYED
IST924I -----
IST1244I TOTAL    storage_type POOL STORAGE USAGE:  current maximum
IST1244I TOTAL    storage_type POOL STORAGE USAGE:  current maximum
IST1244I TOTAL    storage_type POOL STORAGE USAGE:  current maximum
IST924I -----
[IST981I VTAM PRIVATE: CURRENT = currentK, MAXIMUM USED = maximumK]
IST924I -----
IST1565I type     MODULES = currentK
IST1565I type     MODULES = currentK
IST1565I type     MODULES = currentK
IST314I  END
```

IST350I

This message identifies the type of information in the display and is always **STORAGE USAGE** for this message group.

IST981I

currentK is the amount of VTAM private storage currently in use. This does not include the amount of private storage required to load the VTAM modules.

maximumK is the maximum amount of VTAM private storage ever in use since VTAM was started.

See the z/OS Communications Server: SNA Network Implementation Guide for more information about storage pools.

If this message does not appear in the display, you may need to reissue the DISPLAY STORUSE command, specifying a higher value for the MAX operand. See the z/OS Communications Server: SNA Operation for additional information.

IST1242I

This message is a header message for the information displayed in message IST1243I.

IST1243I

IST1243I • IST1244I

poolname is the name of the storage pool specified on the DISPLAY STORUSE command.

current is the total current storage usage, in kilobytes, for storage pools¹.

maximum is the total maximum storage usage, in kilobytes, for storage pools since VTAM was initialized¹.

IST1244I

storage_type is either **PRIVATE** (private storage), **COMMON** (common storage), or **HVCOMM** (High Virtual Common).

current is the total current storage usage for storage pools and is expressed in kilobytes¹.

maximum is the total maximum storage usage since VTAM was initialized, and is expressed in kilobytes¹.

IST1315I

VTAM issues this message when the number of pools to be displayed exceeds the value specified for the MAX or NUM operand.

keyword is either **MAX** or **NUM**.

number is the value specified for either the MAX or NUM operand.

IST1454I

This message shows the total number of storage pools for which storage usage information is displayed.

IST1565I

- *type* can be one of the following:

CSA 31-bit and 24-bit addressable common storage acquired for VTAM modules

CSA24 24-bit addressable common storage acquired for VTAM modules

PRIVATE

Private storage used to load VTAM modules

- *currentK* is the current VTAM CSA allocation for modules.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1243I *poolname current maximum [poolname current maximum]*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST1242I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1244I **TOTAL** *storage_type* **POOL STORAGE USAGE:** *current maximum*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STORUSE,POOL=* command requesting storage usage for all private, common, and high virtual common storage pools. See IST1242I for a complete description of this message group.

storage_type is either **PRIVATE** (private storage), **COMMON** (common storage), or **HVCOMM** (High Virtual Common).

current is the total current storage usage, and is expressed in kilobytes¹.

1. High virtual common storage *current* and *maximum* values might exceed 9999999 kilobytes (approximately 10 gigabytes). If they do, 9999999 is displayed.

maximum is the total maximum storage usage since VTAM was initialized, and is expressed in kilobytes².

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1245I NO NETWORK NODE SERVER IS AVAILABLE FOR CP-CP SESSIONS

Explanation: VTAM issues this message when an active CP-CP session with a network node was lost, and VTAM could not find another suitable network node server. In this situation, the original CP-CP session could have been activated by an operator command.

This message is also issued when no CP-CP session with a network node exists, and VTAM could not find a suitable network node server when one of the following events occurred:

- Activation of a new network node server list
- Operator modification of the NNSPREF start option to specify a new preferred network node server
- Completion of VTAM initialization when the NNSPREF start option has been specified with the name of a network node

Note: If this message appears when VTAM is initializing, it might indicate a temporary condition that will be resolved when the pending link activations initiated by the VTAM configuration list are completed.

System action: Processing continues.

Operator response: Enter the VARY ACT,ID=*adjcpname* command and specify the desired server. VTAM will attempt to establish a CP-CP session with *adjcpname* even if *adjcpname* is not allowed by the current network node server list.

System programmer response: You should modify the network node server list to define additional network nodes as acceptable servers. Either add new NETSRVR definition statements for individual network nodes or add a nameless NETSRVR definition statement that allows any known network node to act as the network node server.

After the list has been modified, issue a VARY ACT,ID=*member_name* command where *member_name* is the member in the definition library that contains the edited network node server list.

If the network node server list is left unchanged, VTAM may not be able to acquire a new server if the current server fails.

Routing code: 2

Descriptor code: 5

IST1246I ADJACENT CP NOT DEFINED IN CURRENT NETWORK NODE SERVER LIST

Explanation: VTAM issues this message as part of a group of messages when this end node is unable to establish a session with a network node. The first message in the group is IST1110I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1247I ALL ATTEMPTS TO ESTABLISH A SESSION WERE UNSUCCESSFUL

Explanation: VTAM issues this message as part of a group of messages when this end node is unable to establish a session with a network node. The first message in the group is IST1110I. See the explanation of that message for a complete description.

2. High virtual common storage *current* and *maximum* values might exceed 9999999 kilobytes (approximately 10 gigabytes). If they do, 9999999 is displayed.

IST1248I • IST1250I

Routing code: 2

Descriptor code: 5

IST1248I DEACTIVATE LOCAL LINK BEFORE DELETING

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1158I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1249I SYNTAX ERROR AT RECORD *record_number* IN MEMBER *member*

Explanation: This message is the first in a group of messages that VTAM issues when a syntax error is detected in a statement in the definition library. A complete description of the message group follows.

IST1249I SYNTAX ERROR AT RECORD *record_number* IN MEMBER *member*

IST258I STMT IN ERROR = *text*

IST314I END

record_number is the number of logical records of *member* that had been processed when the error was detected. This number is equivalent to the line or record number seen for that record when *member* is viewed in an editor.

member is the member of the definition library containing the statement that is in error.

text is the text of the statement containing the syntax error. The error could be any assembler coding error, such as a non-blank character in column 72 followed by a blank in column 16 of the continuation line. A common error is a comma missing before a continuation symbol in column 72.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the statement in error. See the z/OS Communications Server: SNA Resource Definition Reference for more information on correct syntax for definition statements.

Routing code: 2

Descriptor code: 5

IST1250I NAME LEVEL MODULE STATUS

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY EXIT,ID=*exitname* or DISPLAY EXIT,ID=* command. A complete description of the message group follows.

```
IST350I DISPLAY TYPE = EXIT
IST1250I NAME      LEVEL      MODULE      STATUS
IST1251I exitname exitlevel module      status
:
:
[IST1315I DISPLAY TRUNCATED AT MAX = number]
[IST199I OPTIONS = {NONE|optionlist}]
:
:
IST1454I count EXIT(S) DISPLAYED
IST314I END
```

Note: If the command specifies ID=*, IST1251I is repeated to display the status of all exits. If the command specifies ID=ISTEXCAA, and the exit is active, IST199I is repeated to display all functions supported by this exit.

IST199I

- *optionlist* can include the following options:

ACCTING

Initial and final accounting

ADJ_DSRL

Adjacent SSCP selection for DSRLST processing

ADJSSCP Adjacent SSCP selection

ALIAS Alias translation

ALL All functions of the exit are traced

ALS Adjacent link station selection

ALS_CDRS Adjacent link station selection for CDRSCs

ALS_DSRL Adjacent link station selection for DSRLST processing

BEGIN Begin function

END End function

GWPATH Gateway path selection

INITA_IO Initial authorization for INIT OTHER CD

INITAUTH Initial authorization

REPL Exit replacement and replaced function

SECAUTH Secondary authorization

VRSEL Virtual route selection

XRF XRF session switch

IST350I

This message identifies the type of information shown in the display. For this message group, the display type is always **EXIT**.

IST1250I and IST1251I subgroup

- *exitname* is the name of a user-written exit routine.
- *exitlevel* is the internal exit version identifier. See z/OS Communications Server: SNA Customization for the explanation of *exitlevel* for *exitname*. If *exitlevel* is not coded, *****NA***** is displayed.
- *module* is the module name of a user-written exit routine.
- *status* is the state of *exitname* when the DISPLAY EXIT command was issued, and can be one of the following:

ACTIVE

The exit is operational.

INACTIVE

The exit is not available for use.

PENDING ACTIVE

The exit is in the process of being activated.

PENDING ACTIVE REPLACE

The exit is in the activation phase of a MODIFY EXIT,ID=*exitname*,OPT=REPL command.

PENDING INACTIVE

The exit is in the process of being deactivated and is available only for termination activity.

PENDING INACTIVE REPLACE

The exit is in the deactivation phase of a MODIFY EXIT,ID=*exitname*,OPT=REPL command.

IST1315I

IST1251I • IST1252I

VTAM issues this message when the number of exits to be displayed exceeds the value specified on the MAX operand.

number is the value specified for the MAX operand.

IST1454I

count is the number of exits displayed.

System action: Processing continues.

Operator response:

ACTIVE

None.

INACTIVE

This value of *status* is displayed in two situations:

- The exit is installed but is not available for use.

Use the MODIFY EXIT command to activate *exitname*. See the z/OS Communications Server: SNA Operation for information on the MODIFY EXIT command.

- The exit is not installed.

Save the system log for problem determination.

PENDING ACTIVE, PENDING ACTIVE REPLACE, PENDING INACTIVE, and PENDING INACTIVE REPLACE

If *exitname* remains in a pending state, there may be a problem. Save the system log for problem determination.

System programmer response: If the exit is necessary for your operation, you may have to halt VTAM and fix the problem with the user-written exit before continuing. See z/OS Communications Server: SNA Customization for additional information.

Routing code: 2

Descriptor code: 5

IST1251I *exitname exitlevel module status*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the subgroup is IST1250I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1252I **DEFINED NETWORK NODE SERVER LIST, NAME = *nmslist***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY NETSRVR command. A complete description of the message group follows.

```
IST350I   DISPLAY TYPE = NETWORK NODE SERVER LIST
IST1252I  DEFINED NETWORK NODE SERVER LIST, NAME = nmslist
IST1253I  nodename [sluinit] [enbcast]

:
:
IST924I   -----
[IST1254I  SERVER LIST PROCESSED ORDER = {FIRST|NEXT}
IST924I   -----]
[IST1255I  OTHER NETWORK NODES ALLOWED AS SERVERS
IST1253I  nodename [sluinit] [enbcast]]
:
:
IST924I   -----
IST1256I  CURRENT NETWORK NODE SERVER
IST1253I  nodename [sluinit] [enbcast]
[IST924I   -----]
[IST1672I  CURRENT NETWORK NODE SERVER NOT FOUND IN ACTIVE NETSRVR LIST]
IST1677I  PREFERRED NETWORK NODE SERVER
IST1253I  nodename [sluinit] [enbcast]
IST314I   END
```

IST350I

This message identifies the type of information in the display and is always **NETWORK NODE SERVER LIST** for this message group.

IST1252I and IST1253I subgroup: List of Network Nodes Defined as Servers

- This message subgroup displays all network nodes that are explicitly defined in the network node server list *nnslist*.
- *nodename* can be one of the following:
 - The network-qualified name of an adjacent network node in the form *netid.name*.
 - ***NAMELESS***** is displayed if the network node server list contains a nameless entry.
 - NONE** is displayed if no network nodes have been explicitly defined as potential servers, and the network node server list does not contain a nameless entry.
- *sluinit* is displayed for a *nodename*, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **SLUINIT=REQ** or **SLUINIT=OPT**.
- *enbcast* is displayed for a *nodename*, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **ENBCAST=NO** or **ENBCAST=YES**.

IST1254I: Order for Processing the Network Node Server List

- This message is displayed when one or more network nodes have been explicitly defined to act as a server for this end node. It indicates the order in which the network node server list is processed.
 - FIRST** indicates that the search for a server begins with the first network node specified on the list.
 - NEXT** indicates that the search for a server begins with the network node on the list that follows the last entry that was successfully or unsuccessfully tried.

IST1255I and IST1253I subgroup: List of Other Network Nodes Allowed as Servers

- This message subgroup is only displayed if **SCOPE=ALL** was specified on the command. It displays all the network nodes that can act as a network node server for this end node but are not explicitly defined in the network node server list.
- *nodename* is the network-qualified name of an adjacent network node in the form *netid.name*.
 - **NONE** is displayed in either of the following situations:
 - The network node server list does not contain a nameless entry.
 - The network node service list contains a nameless entry, but there are no other known adjacent network nodes that support CP-CP sessions.
 - *sluinit* is displayed for a *nodename*, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **SLUINIT=REQ** or **SLUINIT=OPT**.
 - *enbcast* is displayed for a *nodename*, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **ENBCAST=NO** or **ENBCAST=YES**.

IST1256I and IST1253I subgroup: Network Node Currently Selected as Server

- This message subgroup displays the name of the network node currently selected as this end node's network node server. The name displayed here is the name of an adjacent network node that this end node has most recently determined to be a suitable network node server and with which this end node has either established CP-CP sessions or is in the process of establishing CP-CP sessions. At the time the **DISPLAY NETSRVR** command displays this name, CP-CP sessions with this network node might not yet be fully active.
- *nodename* is the network-qualified name of an adjacent network node in the form *netid.name*.
 - NONE** is displayed if this end node could not find a suitable network node server or could not successfully establish CP-CP sessions with any of the network nodes it found suitable as network node servers.
- *sluinit* is displayed for a *nodename*, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **SLUINIT=REQ** or **SLUINIT=OPT**.
- *enbcast* is displayed for a *nodename*, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **ENBCAST=NO** or **ENBCAST=YES**.

IST1672I

IST1252I

- This message is displayed in response to a DISPLAY NETSRVR command. VTAM displays the message when the active network node server list does not contain either an explicit entry for the current network node server or a nameless entry.

IST1677I and IST1253I subgroup: Network Node Specified as the Preferred Network Node Server

- This message subgroup displays the name of the network node specified as the preferred network node server for this end node. The preferred network node server is specified by the NNSPREF start option.
- *nodename* is the network-qualified name of an adjacent network node in the form *netid.name*.
- **NONE** is displayed if this end node does not have a preferred network node server.
- *sluinit* is displayed for a nodename, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **SLUINIT=REQ** or **SLUINIT=OPT**.
- *enbcas*t is displayed for a nodename, and is the value specified on the NETSRVR definition statement, or the default value. The values can be either **ENBCAST=NO** or **ENBCAST=YES**.

System action: Processing continues.

Operator response: If this message group displays the network node server list as expected, no response is necessary.

If the message group displays unexpected results, save the system log for problem determination.

IST1256I and IST1253I subgroup:

If *nodename* is not the desired server but the network node server list is correct, then deactivate the session to the current server and reactivate the list.

IST1672I

- If the current network node server is the one desired, activate a network node server list that includes the current network node server. If no network node server list member includes the current network node server, contact the system programmer to code the current network node server in a network node server list member. Then activate that list.

If the current network node server is not the one desired, deactivate the CP-CP session with the current network node server. The new network node server will be selected from the candidates specified in the active network node server list.

System programmer response: If the message group displays unexpected results:

1. Correct the network node server list.
2. Ask the operator to reactivate the modified list by entering the VARY ACT,ID=*member_name* command where *member_name* is the name of the definition list member that contains the network node server list.

IST1252I and IST1253I subgroup:

- If a specific node is missing from the list, add a NETSRVR definition statement that explicitly adds that node to the group of network node server list definition statements.

Note: List all NETSRVR definition statements that explicitly name a network node **before** a NETSRVR definition statement that allows any network node to act as server.

IST1254I:

If **ORDER** does not display the desired value, then change the VBUILD,TYPE=NETSRVR definition statement to specify the correct order of server selection.

IST1255I and IST1253I subgroup:

- By default, when no network nodes are explicitly defined as servers, any network node can be used as long as SLUINIT=OPT is defined on the nameless entry.

Also, if a NETSRVR definition statement without a specific network node name is included at the end of the definition statements, then any network node is allowed to act as server as long as SLUINIT=OPT is defined on the nameless entry.

To use only explicitly defined network nodes as servers, build the network node server list with the VBUILD,TYPE=NETSRVR definition statement and explicitly name each network node on an individual NETSRVR definition statement.

IST1256I and IST1253I subgroup:

- If *nodename* is not the desired server and the network node server list is not correct, then modify the network node server list with the VBUILD,TYPE=NETSRVR definition statement and explicitly name each network node on an individual NETSRVR definition statement.

For information on building the network node server list, see the z/OS Communications Server: SNA Resource Definition Reference.

IST1672I

- If requested by the operator, code the name of the current network node server in a network node server list member.

IST1677I and IST1253I subgroup

- If *nodename* is not the network node you want as the preferred network node server for this end node, have the operator change the NNSPREF start option value to the network node that you want.

Routing code: 2

Descriptor code: 5

IST1253I *nodename [sluinit] [enbcast]*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY NETSRVR command. The first message in the group is IST1252I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1254I **SERVER LIST PROCESSED ORDER = {FIRST|NEXT}**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY NETSRVR command. The first message in the group is IST1252I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1255I **OTHER NETWORK NODES ALLOWED AS SERVERS**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY NETSRVR command. The first message in the group is IST1252I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1256I **CURRENT NETWORK NODE SERVER**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY NETSRVR command. The first message in the group is IST1252I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1257I **SEQUENCE NOT VALID, STATEMENT IGNORED, SKIPPING TO EOF**

Explanation: This message is the first in a group of messages that VTAM issues when the network node server list contains NETSRVR statements that are out of order. All NETSRVR statements that explicitly name a network node to act as server must **precede** a NETSRVR statement that does not explicitly name a network node.

A complete description of the message group follows the example.

IST1258I • IST1259I

```
IST1257I SEQUENCE NOT VALID, STATEMENT IGNORED, SKIPPING TO EOF
IST701I  CONFIG configname LABEL = labelname
          STMT TYPE = statementname
IST314I  END
```

IST701I

configname is the name assigned to the VBUILD statement.

labelname is the name of the network node specified on the NETSRVR statement.

statementname is the NETSRVR statement.

System action: Any NETSRVR statements following the NETSTVR statement that does not explicitly name a network node are ignored. Processing continues.

Operator response: The system programmer should modify the network node server list. After the list has been modified, issue VARY ACT,ID=*member_name*, where *member_name* is the name of the definition list member that contains the edited network node server list.

System programmer response: Correct the ordering of the NETSRVR definition statements that comprise the network node server list. See the z/OS Communications Server: SNA Resource Definition Reference for information on building the network node server list.

Routing code: 2

Descriptor code: 5

IST1258I *value* IS NOT VALID FOR *nodetype*

Explanation: VTAM issues this message when the command or operand is not valid for the node.

value is one of the following:

- The name of the command that failed. For a description of *value*, see Chapter 16, "Command and RU types in VTAM messages," on page 1123.
- The name or value of the operand that caused the command to fail.

For more information on *value*, see z/OS Communications Server: SNA Operation.

System action: VTAM rejects the command.

Operator response: Ensure that you entered the command correctly. If problems persist, save the system log for problem determination.

System programmer response: If necessary, correct the NODETYPE start option for this end node or network node. Then, reactivate the system. For information on the NODETYPE start option, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1259I VBUILD TYPE = *type1* IS ONLY VALID FOR *type2*

Explanation: VTAM issues this message in the following situations:

- If the *type1* value is NETSRVR, VTAM issues this message at this network node when an attempt is made to build a network node server list. Network nodes function as their own servers. In this case, the *type2* value is EN.
- If the *type1* value is ADJCLUST or BNCOSMAP, VTAM issues this message when a VBUILD statement is defined for a node that is not a border node. In this case, the *type2* value is BN.
- If the *type1* value is GRPREFS, VTAM issues this message when a VBUILD statement is defined for a node that is not in a sysplex. In this case, the *type2* value is SYSPLEX.

System action: The VBUILD statement is ignored. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If the *type1* value is NETSRVR:

- To define this node as a network node, delete the network node server list definition from the network node system definitions.
- To define this node as an end node, correct the start options to define this node as an end node. See the z/OS Communications Server: SNA Resource Definition Reference.

If the *type1* value is ADJCLUST:

- To define this node as a border node, modify the start options as needed.
- If you do not want to define this node as a border node, delete the appropriate ADJCLUST or COSMAP definition statements.

If the *type1* value is GRPREFS or BNCOSMAP:

- To define this node in a sysplex, modify MVS to be a sysplex host.
- If you do not want to define this node in a sysplex, delete the GRPFREFS definition statement.

Routing code: 2

Descriptor code: 5

IST1260I *type* TRUNCATED-INSUFFICIENT STORAGE

Explanation: This message is the first in a group of messages that VTAM issues when a lack of storage prevents VTAM from creating a complete internal representation of the specified resource type. It is also issued as a stand-alone message when a lack of storage prevents VTAM from allocating a larger trace table for TRS topology or route traces.

The message is issued alone when one 40 KB buffer of storage for the TRStopology table or route trace table is full and an attempt is made to allocate an additional buffer of storage for TRS trace table entries.

A complete description of the message group follows the example.

```
IST1260I  type TRUNCATED-INSUFFICIENT STORAGE
IST7011   CONFIG configname LABEL = labelname STMT TYPE = statementname
IST314I   END
```

type indicates the specified resource and can be one of the following:

NETWORK NODE SERVER LIST
ADJACENT CLUSTER TABLE
COSMAP TABLE
TRS TOPOLOGY TRACE TABLE
APPN ROUTE TRACE TABLE

IST701I

This message identifies where in the resource the truncation occurred.

- If *type* is **NETWORK NODE SERVER LIST**:
 - *configname* is the name assigned to the VBUILD definition statement.
 - *labelname* is the name of the network node specified on the NETSRVR definition statement.
 - *statementname* is the NETSRVR definition statement.
- If *type* is **ADJACENT CLUSTER TABLE** or **COSMAP TABLE**:
 - *configname* is the name assigned to the VBUILD definition statement.
 - *labelname* is the name specified by NETID on the NETWORK definition statement.
 - *statementname* is the NETWORK definition statement.

The VTAM definition statements and tables are described in the z/OS Communications Server: SNA Resource Definition Reference.

System action: VTAM uses as many of the entries as it is able to process successfully and ignores the rest.

If *type* is **TRS TOPOLOGY TRACE TABLE** or **APPN ROUTE TRACE TABLE**, the table will be truncated at the end

IST1261I • IST1262I

of the already allocated buffer of storage and additional entries in the table will wrap back to the beginning of the table. If storage is available the next time the end of the trace table is reached, another attempt will be made to allocate an additional buffer of storage for the table.

If *type* is **NETWORK NODE SERVER LIST**, an entry indicating that any known network node can act as the network node server is added at the end of the truncated list.

Processing continues.

Operator response: Issue the DISPLAY BFRUSE command to display information about the common storage area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

If *type* is **ADJACENT CLUSTER TABLE** or **COSMAP TABLE**, enter a DISPLAY ADJCLUST command or a DISPLAY COSMAP command to determine which entries were recorded.

Save the system log and request a dump for problem determination.

System programmer response: Increase storage as required.

If *type* is **NETWORK NODE SERVER LIST**, after the storage shortage problem is corrected:

- Ask the operator to enter the VARY ACT,ID=*member_name* command where *member_name* is the name of the definition list member that contains the network node server list.

See the z/OS Communications Server: SNA Operation for more information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1261I ABEND OCCURRED DURING LINK DEFINITION

Explanation: VTAM issues this message as part of a message group when an attempt to define the link to APPN Topology and Routing Services has failed. The first message in the group is IST1118I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 3

IST1262I MODULE *modulename* LOAD FAILED – *reason*

Explanation: VTAM issues this message in response to a MODIFY EXIT command when the module *modulename* fails to load.

modulename is the name of the module that failed to load.

reason provides information about the cause of the load failure and can be one of the following:

DEFINED AS ALIAS IN CSLOD

Either the alias module *modulename* could not be located in the vector list of its load module or the alias module was loaded before the vector list.

INSUFFICIENT STORAGE

Not enough storage was available to process the load request.

I/O ERROR LOADING MODULE

An I/O error occurred when loading *modulename*.

I/O TIMEOUT LOADING MODULE

An attempt was made to load *modulename*, but a system or hardware problem has caused the module load facility to time out while waiting for I/O to complete.

LOADER INOPERATIVE

This can occur for one of the following reasons:

- A previous module load never completed.
- The VTAM-directed load subtask, ISTINMLS, abnormally ended during a load request.
- The VTAM-directed load subtask, ISTINMLS, has not completed its initialization.

LOCK PROTOCOL VIOLATION

A locking protocol violation occurred while VTAM was trying to satisfy the load request.

MODULE NOT IN ISTCSLOD

modulename is not in ISTCSLOD.

MODULE NOT FOUND

The resource identified by *modulename* does not exist.

System action:

- If *reason* is **LOADER INOPERATIVE**, all subsequent commands that require the loader will fail. If the I/O load operation eventually succeeds, load operations are again enabled.
- If *reason* is **MODULE NOT IN ISTCSLOD** or **DEFINED AS ALIAS IN CSLOD**, VTAM initialization or an activation request might fail.
- For all other *reasons*, the MODIFY EXIT command is ignored, and VTAM uses the old exit.

Operator response:

- If *reason* is **INSUFFICIENT STORAGE**, enter the DISPLAY BFRUSE command. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination. When more storage is available, reenter the command.
- If *reason* is **MODULE NOT FOUND**, ensure that you entered the command correctly. See the z/OS Communications Server: SNA Operation for more information.
- For the following values of *reason*, save the system log for problem determination.
 - **DEFINED AS ALIAS IN CSLOD**
 - **I/O ERROR LOADING MODULE**
 - **I/O TIMEOUT LOADING MODULE**
 - **LOADER INOPERATIVE**
 - **LOCK PROTOCOL VIOLATION**
 - **MODULE NOT IN ISTCSLOD**

System programmer response:

- If *reason* is **INSUFFICIENT STORAGE**, use the z/OS Communications Server: New Function Summary to review VTAM storage requirements. See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

If the operation is critical, deactivate some major nodes in order to free up storage for the command, and then reenter the command.

- If *reason* is **I/O ERROR LOADING MODULE** or **I/O TIMEOUT LOADING MODULE**, examine your VTAMLST file to make sure the requirements for the VTAM system are correct for your system.
- If *reason* is **LOADER INOPERATIVE** or **LOCK PROTOCOL VIOLATION**, contact the IBM Support Center.
- If *reason* is **MODULE NOT IN ISTCSLOD** or **DEFINED AS ALIAS IN CSLOD**, contact the IBM Support Center.

Routing code: 2

Descriptor code: 5

IST1263I *command* FOR *nodename* FORCED COLD, *datasetname* {EMPTY|ERROR}

Explanation: VTAM activated *nodename* to its initial (cold) status because the configuration restart data set (checkpoint data set) for the node *nodename* contained no records or an error occurred.

command is either **START** or **VARY ACT**.

nodename is the name of the affected node. If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

datasetname is the DDNAME for the checkpoint data set.

IST1264I • IST1265I

- An empty configuration restart data set indicates that the node has not been previously activated with checkpointing. You cannot perform a warm activation for a node that was not previously activated.
- If the message indicates an error, a previous message will give an explanation of the error.

NO DATA SET

The checkpoint data set does not exist

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1264I *command* FOR *nodename* FAILED DURING DEFINITION

Explanation: VTAM issues this message when the *command* entered to activate or acquire the major node *nodename* failed during network definition.

command is the command that failed. Possible values are:

VARY ACT or VARY ACQ

The VARY ACT or VARY ACQ command for a major node definition is in error.

VARY DRDS

Processing of a VARY DRDS (dynamic reconfiguration data set) command failed, and the entire definition was rejected.

MODIFY DR

A MODIFY DR command failed.

nodename is the name of the major node that was specified on the command. If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: The command fails. The major node or DRDS definition and its resources remain inactive, and VTAM cannot use them.

Operator response: Save the system log and print the major node definition for problem determination.

System programmer response: Previous messages provide information about the cause of the failure.

- If this is a definition error, correct the major node definition or DRDS definition to resolve the problem before the operator reenters the command.
- If this is not a definition error, tell the operator to reenter the command using the correct major node name. See *z/OS Communications Server: SNA Operation* for more information about *command*.

Routing code: 2

Descriptor code: 5

IST1265I *command* FOR *nodename* FAILED – *reason*

Explanation: The operator entered a VARY ACT command *command* with the WARM operand for the node *nodename*.

command is the command that failed.

nodename is the name of the node specified on the command. If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

VTAM rejected the command for one of the following *reasons*:

cpdsname EMPTY

Configuration-restart data set (checkpoint data set) *cpdsname* contained no records. (An empty configuration-restart data set generally indicates that the node has not been previously activated with checkpointing. You cannot reactivate a node to a warm status if the node was not previously activated.)

cpdsname ERROR

VTAM encountered an error while processing the configuration-restart data set (checkpoint data set) *cpdsname*. A previous message provides an explanation of the error.

NO DATA SET

The checkpoint data set does not exist.

System action: The command fails. Other processing continues.

Operator response: To activate the node to initial (cold) status, reenter the VARY ACT command without the WARM operand.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1266I *command* **FOR** *nodename* **AFFECTS NEW SESSIONS ONLY**

Explanation: The operator entered the MODIFY ENCR *command* and changed the cryptographic session level of *nodename*. However, node *nodename* is in session or has queued sessions. The change will not affect the current or queued sessions, but will affect future sessions for *nodename*.

nodename is the name of the node specified on the command. If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: VTAM retains the new cryptographic session level specified in the MODIFY ENCR command and uses it when processing subsequent session-establishment requests.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1267I *command* **FAILED – CANNOT DEFINE** *nodename*

Explanation: VTAM stopped processing the *command*. VTAM could not define the resource *nodename* for one of the following reasons:

- *nodename* has the same name as another resource in this domain.
- *nodename* has the same network address as another resource in this domain.
- The value for VNNAME for *nodename* matches the value for CPNAME on a PU in this domain.
- The value for VNNAME for *nodename* refers to an ADJCP for which VN=YES is not specified.

command is the command that failed. See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

nodename is the name of the resource specified on the command. If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: VTAM rejects the command.

Operator response: Display *nodename*:

- If the resource already exists, *command* failed because the resource was already defined.
- If *nodename* is a communication controller, enter a DISPLAY STATIONS command.
- If the subarea of *nodename* is listed as an adjacent subarea in the display, another communication controller has been defined for that subarea. The communication controller might still exist if the link to that subarea is still active. To correct the problem, enter a VARY INACT command for the link to the adjacent subarea.
- If the resource does not exist, display VNNAME. If VNNAME already exists, *command* failed because the VNNAME was already defined with a different nodetype.

Save the system log for problem determination.

IST1268I • IST1269I

System programmer response: Ensure that *nodename* has a unique name, unique network address, or unique VNNAME. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VNNAME definitions.

Routing code: 2

Descriptor code: 5

IST1268I *nodename* DEACTIVATION *request* FAILED: *code*

Explanation: VTAM cannot complete deactivation of *nodename* because *request* has failed with a sense code of *code*.

For a description of *request*, see Chapter 16, "Command and RU types in VTAM messages," on page 1123.

code is the sense code. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: VARY deactivate processing for *nodename* is pending. The node is not available to VTAM.

Operator response: Enter a VARY INACT,TYPE=FORCE command to deactivate the node. If the problem persists, save the system log for problem determination.

System programmer response: Use the system log and *code* to assist you in determining the cause of the problem.

Routing code: 2

Descriptor code: 5

IST1269I *command* FOR *nodename* FAILED

Explanation: VTAM issues this message when processing of the *command* for *nodename* failed. For example, a deactivate command failed because no storage was available to continue.

nodename is the name of the resource and is either an NCP or logical unit (LU). If the resource is an LU, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: VTAM rejects the command.

Operator response:

- If message IST383I or IST1268I precedes this message, enter a VARY INACT,TYPE=FORCE command to deactivate the resource.
- If this is a storage problem, messages IST561I, IST562I, IST563I, IST564I, IST565I or IST566I may be issued prior to this message to indicate the type of storage affected.

If message IST467I is displayed with contacted error type 5, see the programmer response of that message for additional information.

Issue the DISPLAY BFRUSE command to display storage used by VTAM buffer pools and information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a dump for problem determination.

System programmer response: For a storage problem, verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx), and restart VTAM to use the start option.

See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1270I *command* FAILED – *nodename* NOT ACTIVE

Explanation: VTAM issues this message when the *command* failed because *nodename* is not active.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

Either of the following conditions may have occurred.

- A forced deactivate command was entered for *nodename*, and the resource is already inactive.
- A forced reactivate command was entered for *nodename*. The resource is being activated, but the activate processing has not proceeded far enough.

If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: VTAM stops processing *command*.

Operator response: Ensure that you entered the command for the correct node. If so, save the system log for problem determination.

System programmer response: Use the system log to assist you in correcting the problem. When you have corrected the error condition, ask the operator to reenter the command.

Routing code: 2

Descriptor code: 5

IST1271I *command2* FOR *nodename* SCHEDULED BY *command1*

Explanation: VTAM issues this message when *command2* has been scheduled for *nodename*. *command1* is responsible for scheduling *command2*. For example, explicit deactivation of a peripheral node causes implicit deactivation of that node’s LUs.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command1* and *command2*.

If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: Processing of *command2* continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1272I *command nodename* CONTINUES – *name* UNDEFINED

Explanation: During processing of the *command*, VTAM determined that it cannot define *name* as a part of *nodename* for one of the following reasons:

- Adjacent control point *name* is not a valid node type.
- NCP frame relay switching equipment set (FRSESET) *name* has the same name as another FRSESET in this domain.
- Resource *name* contains one of the following errors:
 - *name* has the same name as another resource in this domain.
 - *name* has the same network address as another resource in this domain.
 - *name* has the same value for CPNAME as another resource in this domain.
 - *name* has the same value for LUALIAS as another resource in this domain.
 - *name* has the same values for IDBLK and IDNUM as another resource in this domain.
 - *name* is in an NCP major node definition, and there is a CDRM definition with the same SUBAREA address as the NCP major node definition.
 - *name* has a value for VNNAME that matches the value for CPNAME on a PU in this domain.
 - *name* has a value for VNNAME that refers to an ADJCP for which VN=YES is not specified.
 - *name* has the same transmission group number (TGN) as another resource in this domain.

IST1273I

- Storage is not available to process the request.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

If *name* is session-capable, VTAM issues *name* as a network-qualified name in the form *netid.name*.

System action: Processing of *command* continues. However, VTAM cannot use *name*.

Operator response:

- This is usually a definition error. Enter a DISPLAY ID command for *name* to check for duplicate names. Save the system log for problem determination.
- If you cannot find a definition error, check for an insufficient storage problem by entering the DISPLAY BFRUSE command. Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

This message might be issued during session takeover processing. See the section on common APPN problems in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for a description of session takeover problems.

This message might be issued while processing a VARY ACT command with the UPDATE=ALL option specified. The resource specified by *name* did not complete processing. Issue the command again to allow this resource to process completely.

System programmer response:

- If the definition failed because of a definition error, use the system log to assist you in correcting the problem. If there are duplicate operands on NCP and VTAM definition statements, you must change one or both of the duplicate statements if you want both resources to be defined at the same time. See the section on common APPN problems in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about this problem. See the z/OS Communications Server: SNA Resource Definition Reference for more information on VNNAME definitions.
- If the definition failed because of insufficient storage, increase storage as required for the VTAM address space.
 - See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
 - See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, and the DISPLAY STORUSE command.
 - See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1273I *command2 nodename FAILED: command1 PENDING*

Explanation: Processing of *command1* causes VTAM to reject *command2* for *nodename* because *command1* takes precedence over *command2*. For example, the VARY REL command causes any subsequent VARY INACT for the same node to fail.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command1* and *command2*.

If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: Processing of *command1* continues, but VTAM rejects *command2*.

Operator response: Monitor the progress of *command1* with DISPLAY commands. When *command1* processing has completed, enter the command required to achieve the desired network configuration or device state.

In the above example, if you want *nodename* to be an active part of the network, enter a VARY ACQ command for *nodename* followed by a VARY ACT command for *nodename*.

Save the system log for problem determination.

System programmer response: Check the system log to determine the series of commands that caused the problem.

Routing code: 2

Descriptor code: 5

IST1274I *command minornode* **FAILED: highernode NOT ACTIVE**

Explanation: VTAM issues this message when a *command* was entered to activate node *minornode* (a logical unit, physical unit, physical unit type 4, or link). The command failed because its higher-level node *highernode* is not currently in a valid state.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

minornode is a logical unit, physical unit (device or communication controller), or link.

- If *minornode* is a logical unit, *highernode* is a physical unit. VTAM issues *minornode* as a network-qualified name in the form *netid.name*.
- If *minornode* is a physical unit (device or communication controller), *highernode* is its link.
- If *minornode* is a link, *highernode* is the physical unit specified on the PHYSRSC operand on the GROUP definition statement for the line group.

If the physical unit, defined in the NCP definition, whose name is specified by the PHYSRSC keyword is a switched PU that is not currently connected, then *highernode* is the physical line.

highernode must be active before *minornode* can be activated.

System action: VTAM rejects the command.

Operator response: Enter a VARY ACT command for *highernode* before activating *minornode*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1275I *operand* **IGNORED ON command nodename**

Explanation:

Explanation: VTAM issues this message when an *operand* was entered that is not valid for the resource *nodename* specified on the *command*.

See Chapter 16, “Command and RU types in VTAM messages,” on page 1123 for a description of *command*.

If *nodename* is session-capable, VTAM issues *nodename* as a network-qualified name in the form *netid.name*.

System action: Processing of *command* continues, but VTAM ignores *operand*.

Operator response: You do not need to reenter the command. For the next use of the command, check the valid operands for the command in z/OS Communications Server: SNA Operation.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1276I *cdrsname status* **CDRM = cdrmname**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command for cross-domain resources. It results from one of the following:

- A DISPLAY ID command that specifies a CDRSC major node.
- A DISPLAY ID command that specifies a model CDRSC.
- A DISPLAY CDRSCS command requesting information about cross-domain resources defined to this domain.

The message lists the resource name, its status, and the name of the controlling CDRM.

IST1277I

VTAM repeats this message as many times as needed to list all the cross-domain resources in this major node, in this domain, or that were created from this model CDRSC.

cdrsname is the name of the resource. The name is network-qualified in the form *netid.name* if the resource is a real CDRSC. The name is not network-qualified if the resource is an alias CDRSC.

status is the status of the resource. See z/OS Communications Server: IP and SNA Codes for a description of *status*.

cdmname is the name of the controlling CDRM. If the CDRM is not available, then *cdmname* is *****NA*****.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1277I *commandinfo* [*statementname*] *action resource* [TO *toname*] [FROM *fromname*] FAILED

Explanation: This message is the first in a group of messages that VTAM issues to indicate that a dynamic reconfiguration or dynamic change failed. The failure resulted from one of the following commands:

- MODIFY DR command
- VARY ACT command
- VARY DRDS command

Possible message groups follow:

- **MODIFY DR command**

```
IST1277I MODIFY DR action resource [TO toname] FROM fromname FAILED
IST523I REASON = reason
IST314I END
```

IST1277I

- *commandinfo* is always **MODIFY DR** for this message group.
- *action* is the command type:
 - **DELETE** to delete a physical or logical unit
 - **MOVE** to move a physical unit and its associated LUs.
- *resource* is the name of the physical unit or logical unit affected by the command. If the resource is a logical unit, VTAM issues *resource* as a network-qualified name in the form *netid.name*.
- *toname* is the name of the line to which the PU is being moved, and is only displayed when *action* is **MOVE**.
- *fromname* is the name of the line from which the PU is being moved or deleted, or the name of the PU from which the LU is being deleted.

IST523I

This message explains the reason for the failure. Possible values of *reason* are explained later in this message explanation.

- **VARY DRDS command**

```
IST1277I DR drname [statementname] action resource [TO toname]
          [FROM fromname] FAILED
IST523I REASON = reason
IST368I FUNCTION GROUP functiongroup FAILED
IST314I END
```

IST1277I

- *commandinfo* is always **DR** *drname* for this message group. *drname* is the name of the dynamic reconfiguration data set containing the reconfiguration definition statements.
- *statementname*, if specified, is the name of the specific definition statement that failed.

- *action* is the definition statement:
 - **ADD** to add a physical or logical unit
 - **DELETE** to delete a physical or logical unit
 - **MOVE** to move a physical unit and its associated LUs.
- *resource* is the name of the physical unit or logical unit affected by the definition statement. If the resource is a logical unit, VTAM issues *resource* as a network-qualified name in the form *netid.name*.
- *toname* is the name of the line to which the PU is being moved or added, or the name of the PU to which the LU is to be added. *toname* is only displayed when *action* is **MOVE** or **ADD**.
- *fromname* is the name of the line from which the PU is being moved or deleted, or the name of the PU from which the LU is being deleted. *fromname* is only displayed when *action* is **MOVE** or **DELETE**.

IST523I

This message explains the reason for the failure. Possible values of *reason* are explained later in this message explanation.

IST368I

This message names the specific definition statement in the dynamic reconfiguration data set that failed.

functiongroup is the name on the **ADD**, **DELETE**, or **MOVE** definition statement in the VARY DRDS deck of the specific definition statement that failed.

- **VARY ACT command**

```
IST1277I DR drname [statementname] action resource
          [TO toname] [FROM fromname] FAILED
IST523I REASON = reason
IST314I END
```

IST1277I

- *commandinfo* is always **VARY ACT** for this message group.
- *statementname* is the major node name which was specified on the ID operand of the VARY ACT command.
- *action* is the action being performed when the failure occurred:
 - **ADD** to add a resource
 - **CHANGE** to change an operand value
 - **DELETE** to delete a resource
 - **MOVE** to move a physical unit and its associated LUs or to move an logical unit
- *resource* is the name of the resource affected by the command. If the resource is a logical unit, VTAM issues *resource* as a network-qualified name in the form *netid.name*.
- *toname* is the name of the higher level resource to which the resource is being moved or added. *toname* is only displayed when *action* is **MOVE** or **ADD**.
- *fromname* is the name of the higher level resource from which the resource is being moved or deleted. *fromname* is only displayed when *action* is **MOVE** or **DELETE**.

IST523I

This message explains the reason for the failure. Possible values of *reason* follow.

The second message in each message group is IST523I, and this message explains the reason for the failure. *reason* can be one of the following:

DUPLICATE STATION ID

An attempt was made to perform a DR CHANGE of IDBLK or IDNUM for a switched PU, but the resulting station ID was not unique in the network.

DR DELETE INVALID FOR INDEPENDENT LU

An attempt was made to perform a DR DELETE on an independent LU which is not associated to the adjacent link station specified on the FROM operand. This is not a valid request.

IST1277I

DR NOT SUPPORTED

An attempt was made to perform a DR function for a resource that is not an NCP or is a level of NCP that does not support DR or this function of DR.

INSUFFICIENT STORAGE

VTAM was unable to allocate storage during a DR operation.

INVALID MACRO

A definition statement was read that is not a valid member in this type of definition deck. For example, a GROUP definition statement is not a valid member in a DR deck.

INVALID NAME

functiongroup is invalid for the PU or LU definition statement.

INVALID PARAMETER

An operand was found in a definition statement that is not valid or allowed.

INVALID RESOURCE CURRENT STATE

An attempt was made to move or delete a resource whose current state will not allow the change. The resource must be in an inactive, reset, release, or defined state. Also, a model CDRSC must not have clone CDRSCs associated with it.

INVALID RESOURCE TYPE

An attempt was made to move or delete a resource for which dynamic reconfiguration is not allowed. DR ADD, DELETE and MOVE may be performed for SNA type 1, 2, or 2.1 PUs and their subordinate LUs, as well as for dependent LUs and some independent LUs.

INVALID TO/FROM RESOURCE TYPE

An attempt was made to add, delete, or move a resource to or from a target resource that does not allow dynamic reconfiguration. DR ADD is allowed to lines and PUs. DR DELETE is allowed from lines and PUs. DR MOVE is allowed both to and from lines and PUs.

INVALID VALUE

An operand on a definition statement was found to have a coded value that is invalid for this operand.

INVALID VALUE FOR ADDR

The value coded in a PU definition statement for the ADDR operand was found to be a duplicate of a PU ADDR already under the target line.

MACRO SEQUENCE ERROR

A DR definition deck contained definition statements that were out of sequence. Line targets must be followed by PUs; PU definition statements must be followed by LUs. PU definition statements must follow additions to lines, moves to lines, moves from lines, and deletions from lines. LU definition statements must follow additions to PUs, moves to PUs, and deletions from PUs.

MISSING MACRO

A DR definition deck was missing a definition statement. VBUILD definition statements are required. Null definition decks are invalid (a VBUILD definition statement with nothing following). Null function groups are invalid (a function group with no PU or LU definition statements).

MISSING NAME ON PU OR LU MACRO

A PU or LU definition statement in a DR definition deck did not have a name coded. The name is required on all PU and LU resources being added, deleted, or moved.

MISSING PARAMETER

A definition statement in a DR definition deck did not contain a required operand.

NO RESOURCES FOUND UNDER FROM LINE/PU

The line or PU resource for which a DR DELETE or DR MOVE function was requested had no resources under it.

PUTYPE CANNOT BE CHANGED DYNAMICALLY

An attempt was made to change the value of PUTYPE on the specified resource.

RESOURCE NOT FOUND WHERE SPECIFIED

An attempt was made to delete or move a resource that does not exist under the specified target *fromname*.

SYNTAX ERROR

There is a syntax error in the DR definition deck.

TO/FROM RESOURCE NOT IN SAME NCP

An attempt was made to DR move a PU or LU from a line in an NCP to a line in a different NCP.

TO/FROM RESOURCE UNKNOWN

An attempt was made to add or move a resource to a target that does not exist or to delete or move a resource from a target that does not exist.

UPDATE=ALL REQUIRED - UPDATE=ADD VIOLATES HIERARCHY

An attempt was made to update an Enterprise Extender XCA major node with a VARY ACT,UPDATE=ADD command after one of the following changes was made to the definitions:

- A second PU was added under a LINE
- A PU name was changed
- The PU prefix was added or changed on the AUTOGEN keyword on a GROUP definition statement.

System action:

- For MODIFY DR, processing of that command is terminated.
- For VARY DRDS, the *functiongroup* specified in message IST368I is not processed. Any other function groups in the DR data set *drname* are processed.
- For VARY ACT, the remaining definition statements are processed unless the *resource* is a PU. In that case, the LUs subordinate to *resource* are not processed.

Operator response: Enter a DISPLAY command for *resource* in message IST886I. Save the system log for problem determination.

If *reason* is **INSUFFICIENT STORAGE**, enter the DISPLAY BFRUSE or DISPLAY STORUSE command. Save the system log and request a dump for problem determination.

If *reason* is UPDATE=ALL REQUIRED - UPDATE=ADD VIOLATES HIERARCHY, do the following:

- If a second PU was added under a LINE, remove the second PU from the definitions. There can only be one PU defined per LINE.
- If a PU name was changed, re-enter the VARY ACT command with UPDATE=ALL instead of UPDATE=ADD.
- If the PU prefix was added or changed on the AUTOGEN keyword on a GROUP definition statement, re-enter the VARY ACT command with UPDATE=ALL instead of UPDATE=ADD.

System programmer response: Use the output from the operator to correct the command issued and the definition statements (if appropriate).

If *reason* is **INSUFFICIENT STORAGE**, increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA start options. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1278I *runame* FROM *fromnetid* TO *tonetid* FOR *fornodename*

Explanation: This message is part of a group of messages that VTAM issues when the request unit (RU) *runame* has been pending on the node *fornodename* for a period of time without receipt of a corresponding response unit. The first message in the group is IST1436I. See the description of that message for more information.

Routing code: 8

Descriptor code: 4

IST1279I *resourcename* NOT UPDATED, operand AND CDRSC CONFLICT

Explanation: VTAM issues this message when a MODIFY DIRECTRY,UPDATE command is processed for a CDRSC major node that contains a CDRSC with the same name as the resource specified on the CPNAME or NETSRVR operand.

The resource specified on either the CPNAME or NETSRVR operand cannot be the same name as the CDRSC that is being updated. Either an incorrect value was entered for the CPNAME or NETSRVR operand, or a CDRSC is incorrectly defined.

resourcename is the network-qualified name of the CDRSC being updated in the form *netid.name*.

operand is either **CPNAME** or **NETSRVR** and indicates the operand that was specified on the command.

System action: The CDRSC *resourcename* is not updated. Other processing continues.

Operator response: Verify that the resource specified on either the CPNAME or NETSRVR operand was correct and reenter the command. If problems persist, save the system log for problem determination.

System programmer response: Check the definition library to ensure that the CDRSC definition is correct. If necessary, change the CDRSC definition so that it can be defined as an owning CP or a network node server.

Routing code: 2

Descriptor code: 5

IST1280I SESSION TYPE = *sessiontype* – SENSE = *code*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is either IST1110I or IST1097I. See the explanation of the appropriate message for a complete description.

Routing code: 2

Descriptor code: 5

IST1281I *luname* ON command MUST BE NETWORK QUALIFIED

Explanation: VTAM issues this message in response to a MODIFY *command*. *luname* must be a network-qualified name because the application program that is in session with *luname* is using network-qualified names.

luname is the name of the logical unit that is specified on the MODIFY command.

command is the MODIFY command that is entered and is either **F CNOS** or **F DEFINE**.

System action: The command failed. Other processing continues.

Operator response:

- Reenter the MODIFY command with the required network-qualified name specified as *netid.luname*.
- If the network ID is not known, you can enter a DISPLAY,CNOS command or DISPLAY,CONVID command specifying *luname* on the LUNAME operand. VTAM displays all logical units with the specified name that are associated with the application program and the network ID of each logical unit.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1282I MESSAGE FROM *exitname* IN *modulename*

Explanation: VTAM issues this message as part of a message group when an exit (for example, the session management exit, ISTECAA) calls VTAM Exit Services to issue a message on the system console. A complete description of the message group follows.

Note: If VTAM detects an error in attempting to issue message IST1405I, message IST1455I may be issued. See the explanation of that message for a complete description.

```

IST1282I MESSAGE FROM exitname IN modulename
IST1405I     data
.
.
[IST1405I     data]
IST314I     END

```

IST1282I

exitname is the CSECT name of the exit, for example, ISTECAA, that provided the text for the message.

modulename is the name of the load module that contains exit *exitname*.

IST1405I

data is up to 56 characters of text provided by *exitname*.

One or more IST1405I messages will be issued until all of the text provided by *exitname* has been displayed. The maximum amount of text displayed in one message group is 4096 characters (approximately seventy-four IST1405I messages).

System action: Processing continues.

Operator response: Save the complete text of the message group for problem determination.

System programmer response: If you have questions regarding *data*, contact the author of *exitname*. See z/OS Communications Server: SNA Customization for information on *exitname*.

Routing code: 2

Descriptor code: 4

IST1283I MODIFY USERVAR COMMAND COMPLETE

Explanation: This message is the first in a group of messages that VTAM issues in response to a MODIFY USERVAR command when the USERVAR has previously been defined. Possible message groups follow.

Note: The following messages are percolated. See "Message rerouting and percolation" on page 1146 for additional information.

- If MSGLVL=V4R1 or above is specified, the following message group is displayed:

```

IST1283I MODIFY USERVAR COMMAND COMPLETE
[IST1150I uservar CHANGED: value1 TO value2]
[IST1030I USERVAR EXIT IS exitname]
[IST973I USERVAR uservar {CLASS HAS BEEN CHANGED FROM AUTO TO USER|
TYPE HAS BEEN CHANGED FROM type TO type}]
IST314I END

```

- If MSGLVL=BASE is specified or taken as the default, the following message group is displayed:

```

IST1283I MODIFY USERVAR COMMAND COMPLETE
[IST813I USERVAR uservar CHANGED FROM value1 to value2]
[IST1030I USERVAR EXIT IS exitname]
[IST973I USERVAR uservar {CLASS HAS BEEN CHANGED FROM AUTO TO USER|
TYPE HAS BEEN CHANGED FROM type TO type}]
IST314I END

```

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the MSGLEVEL start option and for a description of the MSGLVL operand on the USSMSG macro.

IST813I

If network-qualified names are not displayed, VTAM issues this message when the value of *uservar* has been changed.

value1 is the original value of *uservar*.

value2 is the new value of *uservar*.

Any subsequent session requests to *uservar* are routed to the application named in *value2*.

IST973I

IST1284I

- VTAM issues this message when one or both of the following has occurred:
 - **CLASS HAS BEEN CHANGED FROM AUTO TO USER**
The MODIFY command was entered for a USERVAR that was being managed automatically by VTAM, thereby changing the class to user-managed.

Note: VTAM no longer manages the updating or deletion of this USERVAR.
 - **TYPE HAS BEEN CHANGED FROM *type* TO *type***
The type of a user-managed USERVAR has been changed.
type can be **STATIC**, **DYNAMIC**, or **VOLATILE**.

IST1030I

VTAM issues this message if the USERVAR exit is associated with *uservar*.
exitname is the name of the USERVAR exit.
If no USERVAR exit is defined, VTAM does not issue this message.

IST1150I

If network-qualified names are displayed, VTAM issues this message when the value of *uservar* has been changed.
value1 is the original value of *uservar*. If a network-qualified name was entered on the previous MODIFY command, VTAM issues *value1* as a network-qualified name in the form *netid.name*.
value2 is the new value of *uservar*. If a network-qualified name was entered on the current MODIFY command, VTAM issues *value2* as a network-qualified name in the form *netid.name*.
Any subsequent session requests to *uservar* are routed to the application named in *value2*.

IST1283I

This message indicates that the MODIFY USERVAR command completed successfully.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1284I LUALIAS *lualias* IS *nodename* FOR APPLICATIONS

Explanation: This message is part of a group of messages that VTAM issues in response to the following commands:

- DISPLAY ID command when the resource name specified on the ID operand is the name of an LUALIAS.
- DISPLAY SESSIONS command when either or both of the LU names specified on the command has been defined as an LUALIAS.

The first message in the group is IST075I.

lualias is the LUALIAS name defined for the resource *nodename*.

nodename is the network-qualified name of the cross-domain resource (CDRSC) in the form *netid.name*.

If *nodename* does not identify the same resource as displayed in message IST075I, use of the name *lualias* will not always identify the same resource.

For example, application programs in this domain that use the name *lualias* will identify *nodename*. However, other logical units and operator commands that use the name *lualias* will not identify *nodename*, but they identify the resource displayed in message IST075I.

System action: Processing continues.

Operator response: If *nodename* (in this message) does not identify the same resource as displayed in message IST075I, save the system log for problem determination.

System programmer response: If *nodename* (in this message) does not identify the same resource as displayed in message IST075I, rename the LUALIAS for *nodename* because this name is already the real name of a resource.

Routing code: 2

Descriptor code: 5

IST1285I ADDRESS FOR *cdrsname* DELETED FROM *alsname*

Explanation: VTAM issues this message in response to an address mismatch error. VTAM attempts to delete cross-domain resource *cdrsname* that was generated under adjacent link station *alsname*. This message indicates that *cdrsname* was deleted.

If the PU for *alsname* is not found,

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1286I SHADOW PROCESSING FAILED, *majornode* – *minornode* RESET

Explanation: This message is the first in a group of messages that VTAM issues when a shadow resource (*minornode*) cannot be activated because it has the same LUALIAS name as another active resource. A complete description of the message group follows.

```
IST1286I SHADOW PROCESSING FAILED, majornode – minornode RESET
IST1287I FAILURE REASON IS LUALIAS luasliasename ALREADY IN USE
IST314I END
```

IST1286I

majornode is the name of the major node that contains the minor node *minornode*.

minornode is the network-qualified name of the resource that is in reset state due to the LUALIAS name conflict.

IST1287I

lualiasname is the duplicate LUALIAS name.

System action: VTAM deletes the shadow resource *minornode* and sets its state to reset. Other processing continues.

Operator response: If you want to activate *minornode*, deactivate the active resource with the defined LUALIAS name. Then, deactivate and reactivate major node *majornode*.

Otherwise, no action is necessary. The state of *minornode* is reset, and the active resource with the LUALIAS name remains active.

System programmer response: Ensure that your LUALIAS names are unique. See the z/OS Communications Server: SNA Network Implementation Guide for a description of shadow resources.

Routing code: 2

Descriptor code: 5

IST1287I FAILURE REASON IS LUALIAS *lualiasname* ALREADY IN USE

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST1286I. See that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1288I TOPOLOGY DATASET RETRIEVAL WAS NOT SUCCESSFUL, CODE = *code*

Explanation: VTAM issues this message when topology data from a previously saved data set could not be read successfully.

This message is issued primarily for information and does not indicate a loss of processing ability. If you see this message every time you start VTAM, this indicates that it will take longer to set up your first few sessions.

code indicates the reason for the error and is one of following:

Code Error

- 1 Insufficient storage.
- 2 The disk file is undefined.
- 4 Disk I/O errors occurred. These errors are reported in separate messages issued prior to this message.
- 8 The data set recovery task abended. This message is issued with no further attempt at data set recovery.
- 9 The previously saved data set was incomplete.
- 10 The topology and routing services task abended while attempting to recover topology from the database.
- 11 The topology and routing services data set was found, but the data set will be ignored because there is a name conflict.
- 12 The topology and routing services data set will be ignored because the data set was saved in a format that is not supported by VTAM.

System action: Processing continues.

Operator response:

Code(s) Error

- 1 Issue the DISPLAY STORUSE command to display storage usage for storage pools. Message IST981I displays total VTAM private storage information. If this message does not appear in the display, you may need to reissue the DISPLAY STORUSE command, specifying a higher value for the NUM operand. See the z/OS Communications Server: SNA Operation for additional information.

Save the system log and request a dump for problem determination.

2, 9, 11, 12

Save the system log for problem determination.

4, 8, 10 Save the system log and request a dump for problem determination.

System programmer response:

Code Error

- 1 Increase storage as required.
See the z/OS Communications Server: SNA Operation and the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.
See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.
- 2 You must define the missing disk file TRSDB. See the applicable sequential access method documentation and the z/OS Communications Server: New Function Summary for additional information.
- 4 See the applicable sequential access method documentation for more information.
- 8 See the applicable sequential access method documentation for more information.
- 9 This code indicates that no action was taken to correct an earlier problem identified in message IST1122I during a previous VTAM checkpoint. You may want to check the system log for the last time you issued the MODIFY CHKPT command to review the information in message IST1122I.
- 10 Review the contents of the system dump to determine the correct problem determination action.
- 11 This code indicates that the data set cannot be used because it was saved under a different control point

name. VTAM will not read the data set, but will write to it. The next time a MODIFY CHKPT command is entered, the old data set will be replaced with the new one.

- 12 This code indicates that the data set cannot be used because it was saved in a format that is not supported by VTAM. The next time a MODIFY CHKPT command is entered, the data set will be reformatted and can be used.

Routing code: 2

Descriptor code: 5

IST1289I FRSESET *frsesetname* PHYSICAL UNITS:

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for an NCP frame relay switching equipment set (FRSESET) or an NCP frame relay physical unit. Possible message groups follow.

- If the FRSESET statement was coded, the following message group is issued.

```
IST075I NAME = frsesetname, TYPE = STATIC FRSESET
IST1289I FRSESET frsesetname PHYSICAL UNITS:
IST080I primary_pu1 status primary_pu2 status
[IST080I [backup_pu1 status] [backup_pu2 status]]
IST314I END
```

- If the FRSESET statement was added dynamically using the VARY ACT,UPDATE=ALL command, the following message group is issued.

The second message in this group is IST1290I, IST1291I, IST1292I, or IST1294I, and indicates whether the FRSESET has been sent to the NCP.

```
IST075I NAME = frsesetname, TYPE = DYNAMIC FRSESET
[IST1290I FRSESET HAS BEEN SUCCESSFULLY SENT TO NCP ncpname]
[IST1291I FRSESET WILL BE SENT TO THE NCP DURING PU ACTIVATION]
[IST1292I FRSESET WILL NOT BE SENT TO THE NCP DUE TO DEFINITION ERROR]
[IST1294I FRSESET HAS BEEN SENT TO NCP ncpname BUT FAILURE OCCURRED]
IST1289I FRSESET frsesetname PHYSICAL UNITS:
IST080I primary_pu1 status primary_pu2 status
[IST080I [backup_pu1 status] [backup_pu2 status]]
IST314I END
```

- If the display is for an NCP frame relay physical unit, the following message group is issued.

```
IST075I NAME = puname, TYPE = PU_T1
IST486I STATUS = currentstatus, DESIRED STATE = desiredstate
IST081I LINE NAME = linename, LINE GROUP = linegroup, MAJNOD = majnode
IST1289I FRSESET frsesetname PHYSICAL UNITS:
IST080I primary_pu1 status primary_pu2 status
[IST080I [backup_pu1 status] [backup_pu2 status]]
IST654I I/O TRACE = {ON|OFF}, BUFFER TRACE = {ON|OFF}
IST355I LOGICAL UNITS:
IST080I nodename1 status1 nodename2 status2 nodename3 status3
IST314I END
```

IST075I

In message groups 1 and 2, *frsesetname* is the name of the NCP frame relay switching equipment set (FRSESET) specified on the ID operand of the command.

In message group 3, *puname* is the name of the physical unit specified on the ID operand of the command and is always a PU type 1.

IST080I

- If this message follows IST1289I, it displays the names of the primary and backup physical units defined for FRSESET *frsesetname*.

Backup PUs are optional, and one or both backup PUs can be specified. If only one backup PU is specified, VTAM displays the name and status of the specified backup PU and leaves the other field blank. If no backup PUs are specified, the message is not displayed.

primary_pu1 is the name of the first PU specified on the SUBPORTS operand of the FRSESET definition statement.

IST1289I

primary_pu2 is the name of the second PU specified on the SUBPORTS operand of the FRSESET definition statement.

backup_pu1, if specified, is the name of the third PU on the SUBPORTS operand of the FRSESET definition statement. *backup_pu1* is the backup PU for *primary_pu1*.

backup_pu2, if specified, is the name of the fourth PU on the SUBPORTS operand of the FRSESET definition statement. *backup_pu2* is the backup PU for *primary_pu2*.

- If this message follows IST355I, *nodename* is the name of a logical unit.
- *status* is the status of the resource that is displayed. See Resource Status Codes and Modifiers in z/OS Communications Server: IP and SNA Codes for a description of these status codes.

IST081I

linename is the line to which *majnode* is connected.

groupname is the line group to which the line *linename* belongs.

majnode is the major node with which the line is associated.

IST355I

This message is a header message for IST080I when logical units and their status are displayed.

IST486I

currentstatus is the current status of the resource. See the z/OS Communications Server: New Function Summary for a description of *currentstatus*.

desiredstate is the resource state that is desired. See the z/OS Communications Server: New Function Summary for a description of *desiredstate*. If VTAM cannot determine the desired state.

IST654I

This message indicates whether the I/O trace facility is active or inactive for *puname* in message IST075I, and whether the buffer trace facility is active or inactive for *puname*.

IST1289I

frsesetname is the name of the FRSESET definition statement displayed in message IST075I.

IST1290I

This message confirms that FRSESET *frsesetname* has been successfully sent to NCP *ncpname*.

ncpname is the name of the NCP that received FRSESET *frsesetname*.

IST1291I

This message indicates that FRSESET *frsesetname* is valid and will be sent to the NCP when all PUs in the FRSESET have received positive RNAA responses.

IST1292I

This message indicates that FRSESET *frsesetname* will not be sent to the NCP. The FRSESET is not valid because of a definition error in the FRSESET or one of the PUs. Messages issued prior to this message group provide additional information about the error.

IST1294I

This message indicates that even though FRSESET *frsesetname* has been sent to NCP *ncpname*, a failure occurred that prevented successful completion.

ncpname is the name of the NCP that rejected FRSESET *frsesetname*.

Either message IST380I or message IST1139I will be issued prior to this message group to provide additional information about the cause of the failure.

System action: Processing continues.

- If IST1291I is displayed, the FRSESET will be sent to the NCP when all PUs in the FRSESET have received positive RNAA responses.

- If IST1292I is displayed, the PUs may or may not become active. You can monitor this by checking the PU *status* in message IST080I.
- If IST1294I is displayed, VTAM deactivates the PUs in *frsesetname*.

Operator response: None, except in the following situations:

- If IST1291I is displayed, ensure that all the PUs in the FRSESET have been activated.
- If IST1292I or IST1294I is displayed, save the system log for problem determination.

System programmer response: None, except in the following situations:

- If IST1292I is displayed, correct the definition errors in the FRSESET or the PUs. Then add new PUs to the FRSESET using dynamic reconfiguration.
- If IST1294I is displayed, correct the error indicated by the sense code in message IST380I or IST1139I. Then add new PUs to the FRSESET using dynamic reconfiguration.

For more information on the FRSESET definition statement, see the *NCP, SSP, and EP Resource Definition Reference*

For information on dynamic reconfiguration, see the *z/OS Communications Server: SNA Network Implementation Guide*.

Routing code: 2

Descriptor code: 5

IST1290I FRSESET HAS BEEN SUCCESSFULLY SENT TO NCP *ncpname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an NCP Frame Relay Switching Equipment Set (FRSESET). See the explanation of message IST1289I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1291I FRSESET WILL BE SENT TO THE NCP DURING PU ACTIVATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an NCP Frame Relay Switching Equipment Set (FRSESET). See the explanation of message IST1289I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1292I FRSESET WILL NOT BE SENT TO THE NCP DUE TO DEFINITION ERROR

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an NCP Frame Relay Switching Equipment Set (FRSESET). See the explanation of message IST1289I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1293I CMIP SERVICES IS ACTIVE

Explanation: VTAM issues this message as the result of a start option or MODIFY VTAMOPTS,OSIMGMT=YES command when VTAM CMIP services has been initialized successfully.

This message could also be issued because CMIP services has recovered after an ABEND in CMIP services. In most cases when CMIP services ABENDs, it initiates recovery automatically, as if the user had issued the MODIFY command. The message appears at the end of a successful recovery.

System action: Processing continues with CMIP services available.

Operator response: None.

IST1294I • IST1295I

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1294I FRSESET HAS BEEN SENT TO NCP *ncpname* BUT FAILURE OCCURRED

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an NCP Frame Relay Switching Equipment Set (FRSESET). See the explanation of message IST1289I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1295I CP NAME NODETYPE ROUTERES CONGESTION CP-CP WEIGHT

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. Possible message groups follow.

- This message group is issued in response to the following commands:
 - DISPLAY,TOPO,ID=*cpname*
 - DISPLAY,TOPO,ID=*cpname*,LIST=ADJ
 - DISPLAY,TOPO,LIST=CDSERVR
 - DISPLAY,TOPO,LIST=ICN
 - DISPLAY,TOPO,LIST=VN
 - DISPLAY,TOPO,LIST=EN
 - DISPLAY,TOPO,LIST=NN
 - DISPLAY TOPO,ID=*cpname*,LIST=ALL when it is issued at an end node and the ID specified is not the local end node

```
IST350I  DISPLAY TYPE = TOPOLOGY
[IST1348I  VTAM STARTED AS nodetype]
[IST1805I  ONLY LOCAL TOPOLOGY INFORMATION IS AVAILABLE]
[IST1803I  parameter PARAMETER VALUE NOT VALID - DEFAULT default USED]
[IST1804I  parameter PARAMETER NOT VALID - IGNORED]
IST1295I  CP NAME          NODETYPE ROUTERES CONGESTION  CP-CP WEIGHT
IST1296I  cpname          nodetype routeres congestion  cp-cp weight
:
:
IST314I  END
```

- This message group is issued in response to a DISPLAY,TOPO,ID=*cpname*,LIST=ALL command when it is issued at a network node, or when it is issued at an end node and the ID that is specified is the local end node:

```
IST350I  DISPLAY TYPE = TOPOLOGY
IST1295I  CP NAME          NODETYPE ROUTERES CONGESTION  CP-CP WEIGHT
IST1296I  cpname          nodetype routeres congestion  cp-cp weight
IST1579I  -----
IST1297I          ICN/MDH  CDSERVR  RSN          HPR
IST1298I          icn/mdh  cdservr  rsn          option
IST1579I  -----
IST1223I          BN      NATIVE  TIME LEFT  LOCATE SIZE
IST1224I          bn      native  time_left  locate_size
IST924I  -----
IST2356I  PLATFORM = platform
[IST2355I  TDUDIAG THRESHOLD REACHED ON date AT time]
[IST2307I  THIS NODE DOES NOT SUPPORT UNKNOWN TOPOLOGY VECTORS]
[IST2277I  POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
IST924I  -----
IST2275I  TDU INFORMATION SINCE LAST RESET ON date AT time
[IST1769I  LAST TDU RECEIVED - date time FROM adjacent_cp]
[IST1784I  LAST TDU RECEIVED - NONE]
[IST2281I  LAST TDU SENT - date time]
[IST2315I  LAST TDU SENT - NONE]
IST2282I  TDU COUNTS:
```

```

IST2352I SENT = sent RECEIVED = received
IST2353I ACCEPTED = accepted REJECTED = rejected
IST2354I IGNORED = ignored
IST924I -----
IST1299I TRANSMISSION GROUPS ORIGINATING AT CP cpname
IST1357I
IST1300I DESTINATION CP TGN STATUS TGTYPE CPCP VALUE WEIGHT
IST1301I destcpname tgn status tgtype cpval weight
:
:
IST314I END

```

IST350I

This message identifies the type of information in the display and is always TOPOLOGY for this message group.

IST1223I, IST1224I

- This message subgroup displays the border node status, native status, time left, and locate size for this node. A description of the message subgroup follows:

```

IST1223I BN NATIVE TIME LEFT LOCATE SIZE
IST1224I bn native time_left locate_size

```

• **IST1223I**

This message is a header message for the information that is displayed in message IST1224I.

• **IST1224I**

- *bn* indicates whether the node is a border node. Possible values are:
 - YES** The node has the border node function enabled and at least one active intersubnetwork link (ISL). For VTAM, the border node function is enabled by coding BN=YES as a VTAM start option.
 - NO** The node does not have the border node function enabled, or the border node function is enabled but no intersubnetwork link is active.
- The *native* value indicates whether the node is in the same subnetwork as the host node. Possible values are:
 - YES** *bn* is **YES**, and this node and the node issuing the display are in a subnetwork sharing topology information.
 - NO** *bn* is **YES**, and this node and the node issuing the display are not in a subnetwork sharing topology information.
 - *NA*** *bn* is **NO**.
- *time_left* is the number of days remaining until the node entry is removed from the topology database (garbage collected).
- *locate_size* is the maximum APPN Locate message size supported by the node. Possible values are:
 - nnnK* The valid range for *nnn* is 1–128 expressed in kilobytes.

IST1295I, IST1296I

- This message subgroup displays the CP name, node type, route resistance, congestion, CP-CP session support and weight for a node. A description of the message subgroup follows:

```

IST1295I CP NAME NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I cpname nodetype routeres congestion cp-cp weight

```

• **IST1295I**

This message is a header message for information displayed in message IST1296I.

• **IST1296I**

- *cpname* is the network-qualified name of the control point (CP) specified on the command.
- *nodetype* is the value that was specified on the NODETYPE start option and is the node type of *cpname*. Possible values are:
 - EN** End node
 - NN** Network node
 - VN** Virtual node

IST1295I

GVRN Global Virtual Routing Node

UNKNOWN

The topology database has received conflicting information about *cpname* and is in the process of determining the node type. This is a temporary situation, and the node type should be available in a short time.

If the node is quiescent, **/Q** is appended to the end of the *nodetype* value. If the node is ready for garbage collection, **/G** is appended to the end of the *nodetype* value.

- *routeres* is route resistance. This is a user-defined value specified on either the start command or in the start list and indicates the desirability of using *cpname* in intermediate routes.
 - Possible values are 0–255. A smaller value indicates higher desirability.
 - ***NA*** is displayed when
 - *cpname* is an end node. End nodes are not involved in intermediate routing.
 - *cpname* is a virtual node. The weight of a virtual node is always 0, so *routeres* is not involved in path weight calculation.
 - See the ROUTERES start option information in z/OS Communications Server: SNA Resource Definition Reference.

- *congestion* provides session congestion information about *cpname*. Possible values are:

NONE Indicates that there is no session congestion for *cpname*.

NODE Indicates that *cpname* is at its session limit.

TDU Indicates that a large amount of topology database update (TDU) traffic is queued for the CP-CP session to *cpname*.

NODE/TDU

Indicates that *cpname* is at its session limit and a large amount of TDU traffic is queued for the CP-CP session to *cpname*.

NA

NA is displayed when:

- *cpname* is an end node. End nodes are not involved in intermediate routing.
- *cpname* is a virtual node. The weight of a virtual node is always 0, so congestion is not involved in path weight calculation.

TDU and **NODE/TDU** are displayed only when both of the following are true:

- **LIST=ADJ** is specified on the command.
 - The node specified on the ID operand of the command is the node at which the command is entered (the host node).
- *cp-cp* indicates whether a CP-CP session is active. Possible values are:
 - YES** A CP-CP session is active to this node.
 - NO** A CP-CP session is not active to this node.
 - *NA*** *cpname* is a virtual node or *cpname* is the node that is issuing the command.
 - *weight* represents the actual weight of *cpname* as calculated by VTAM using the node and Class of Service (CoS) definitions. The value of 32767 is displayed when a node is not operational or does not meet the CoS requirements specified by the APPNCOS parameter in the DISPLAY TOPO command.
 - The weight of *cpname* is a measure of the relative desirability of choosing that resource in the route selection process and is 0–255 or 32767.

See the APPN Class of Service definitions information in z/OS Communications Server: SNA Resource Definition Reference.

IST1297I, IST1298I

- This message subgroup displays whether the node is an interchange node, migration data host, or central directory server, as well as the resource sequence number (RSN) for the node and HPR start option value. A description of the message subgroup follows:

```

IST1297I          ICN/MDH  CDSERVR  RSN          HPR
IST1298I          icn/mdh  cdservr  rsn          option

```

- **IST1297I**

This message is a header message for information displayed in message IST1298I.

- **IST1298I**

- The information that is displayed for an end node might not be accurate if the node on which the command is executed is not the network node server (NNS) or dependent LU server (DLUS) of the end node, or if the end node does not support the registration of local topology information.
- *icn/mdh* indicates whether *cpname* is an interchange node (ICN) or a migration data host (MDH). Possible values are:

YES

- If NN is specified on the NODETYPE start option and the HOSTSA start option is specified, *cpname* is an interchange node.
- If EN is specified on the NODETYPE start option and the HOSTSA start option is specified, *cpname* is a migration data host.

NO

- If *cpname* is an NN, it is not an interchange node.
- If *cpname* is an EN, it is not a migration data node.

- *cdservr* indicates whether *cpname* is a central directory server. Possible values are:

YES *cpname* is a central directory server.

NO *cpname* is not a central directory server.

- *rsn* is the resource sequence number (RSN) of *cpname* expressed in decimal.

Displaying the RSN for a resource provides information about VTAM's current knowledge of that resource.

For example, if a display of a resource from two different VTAMs indicates different RSNs for the same resource, one VTAM has backlevel information. This mismatch might indicate a problem.

- *option* is the value that was coded for the HPR start option. Possible values are:

NONE This node has no HPR capabilities.

ANR This node provides ANR routing and can only function as an intermediate node in an HPR connection.

RTP This node has all the capabilities of an ANR node and it can function as endpoints for RTP connections.

For additional information on the meaning of the values for HPR for VTAM nodes, see the description of message IST1482I.

IST1299I, IST1300I, IST1301I, IST1357I

- This message subgroup displays the TGs that originate at this node. A description of the message subgroup follows:

```

IST1299I  TRANSMISSION GROUPS ORIGINATING AT CP cpname
IST1357I
IST1300I  DESTINATION CP      TGN      STATUS  TGTYPE  CPCP
IST1301I  destcpname         tgn     status  tgtype  VALUE WEIGHT
                                           cpval weight

```

- **IST1299I**

This is a header message for the TGs that originate in the node that is displayed.

cp_name is the network-qualified CP name of the origin node of the TGs.

- **IST1300I, IST1357I**

These are header messages for the TGs displayed in message IST1301I.

- **IST1301I**

- *destcpname* is the network-qualified CP name of the TG destination node.
- *tgn* is the TG number. Possible values are 0–255.
- *status* is the current state of the TG. Possible values are:

OPER The TG is operational.

IST1295I

INOP The TG is not operational.

QUIES The TG is quiescent.

Tip: The *status* value for an intercluster TG or a TG to a branch extender will always be QUIES when it is displayed in a non-owning node. The owning node of a TG is the node where the TG originates (origin node).

If the TG is ready for garbage collection, /G is appended to the end of the *status* value.

– *tgtype* is the TG type. Possible values are:

BRANCH

The TG is a branch extender. The BRANCH *tgtype* can be used by IBM Communications Server for Data Center Deployment on Linux. For more information about this function, see *IBM Communications Server for Linux, Quick Beginnings*, GC31-6768-04.

ENDPT

The TG is an endpoint TG. If the origin node or destination node is an EN, then the TG is an endpoint TG.

ENDPT VRTG

The TG is an endpoint VR-based TG (VRTG). A VRTG connects two APPN-capable VTAM nodes through a subarea network. A VRTG, although it creates the appearance of APPN, always represents underlying subarea connectivity. If the origin node or destination node is an EN, then the TG is an endpoint VRTG.

INTERM

The TG is an intermediate routing TG. An intermediate routing TG represents an NN to NN or NN to virtual routing node (VRN) connection.

INTERM VRTG

The TG is an intermediate routing VRTG. A VRTG connects two APPN-capable VTAM nodes through a subarea network. A VRTG, although it creates the appearance of APPN, always represents underlying subarea connectivity. An intermediate routing VRTG represents an NN to NN connection.

INTERCLUST

The TG is an intercluster (ICL) or intersubnet link (ISL) TG. These TGs are connections between border nodes or non-native nodes.

– *cpval* indicates whether this connection supports CP-CP sessions. Possible values are:

YES The connection supports CP-CP sessions. This is not an indication that a CP-CP session is active across the TG.

NO The connection does not support CP-CP sessions.

– *weight* represents the actual weight of the TG as calculated by VTAM using the TG, the TG profile, and the class of service (CoS) definitions. The value of 32767 is displayed when a TG is not operational or does not meet the CoS requirements specified by the APPNCOS parameter in the DISPLAY TOPO command.

- The weight of a TG is a measure of the relative desirability of choosing that resource in the route selection process. Valid values 0–255 or 32767.

- See the APPN transmission group profile and the APPN Class of Service definitions in *z/OS Communications Server: SNA Resource Definition Reference* for more information about coding TG profiles and APPN Class of Service definitions.

IST1348I

- *nodetype* indicates the node type of this host and is determined by start options that are specified. Possible values are:

END NODE

The host is a pure APPN end node.

MIGRATION DATA HOST

The host is a migration data host (MDH). A node is an MDH if EN is specified on the NODETYPE start option, and the HOSTSA start option is specified.

IST1769I

The *date* and *time* values specify when the last TDU was received for this node. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

The *adjacent_cp* value is the network-qualified CP name of the adjacent node that sent the last TDU that was received for this node.

IST1784I

This message is issued if no TDU about this resource was received.

IST1803I

This message is displayed when a DISPLAY TOPO command is issued at an end node and the parameter value displayed in this message is not valid.

value is the parameter value that is not valid and is ignored.

default is the default value used for the parameter. The default value shown in this message is used.

IST1804I

This message is displayed when a DISPLAY TOPO command is issued at an end node and the parameter displayed in this message is not valid. The parameter is ignored.

parameter is the parameter that is not valid.

IST1805I

This message is displayed when a DISPLAY TOPO command is issued at an end node. The information displayed from the local topology database might be a subset of the information displayed when the same command is issued at a network node.

IST2275I

- This message contains the date and time when all the TDU information and TDU counters were reset. The TDU information and TDU counters for a node are reset every 24 hours when garbage collection runs, or when one of the following commands is entered:

- DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES
- DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES
- DISPLAY NET,TOPO,LIST=TDUDIAG,ID=*cpname*,CLEAR=YES

See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2277I

This message indicates that possible topology control vector corruption was detected for the node. Because the topology control vectors contain the resource sequence number (RSN) for the node, which determines how a TDU is processed, it is possible that control vector corruption could cause a TDU war. A TDU war is the endless exchange of TDUs in contention over the same topology resource, resulting in continuous performance degradation of the APPN network. Possible corruption is detected when the topology control vectors saved in the topology database for the node being processed do not appear to be formatted correctly. The most probable cause of control vector corruption is a storage overlay.

IST2281I

This message identifies the date and time of the last topology database update (TDU) that was sent for this node. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2282I, IST2352I, IST2353I, IST2354I

- This message subgroup displays topology database update (TDU) counts for this node. A description of the message subgroup follows:

```
IST2282I TDU COUNTS:
IST2352I  SENT      = sent      RECEIVED = received
IST2353I  ACCEPTED = accepted  REJECTED = rejected
IST2354I  IGNORED  = ignored
```

- **IST2282I**

This is a header message for topology database update (TDU) counts for this node.

IST1295I

- **IST2352I**

This message displays counts of TDUs sent and received for this node.

The *sent* value is the number of TDUs about the node that were sent since the last time that the TDU counts were reset.

The *received* value is the number of TDUs about the node that were received since the last time that the TDU counts were reset.

- **IST2353I**

This message displays the counts of the TDUs that were accepted and rejected for this node.

The *accepted* value is the number of TDUs about the node that were accepted since the last time that the TDU counts were reset. The TDUs contain new information about the node and the topology database was updated.

The *rejected* value is the number of TDUs about the node that were rejected since the last time that the TDU counts were reset. The TDUs were rejected because the TDUs contain outdated information about the node. TDUs that are built from the local topology database information for the node were sent as corrections.

- **IST2354I**

This message displays counts of TDUs ignored for this node.

The *ignored* value is the number of TDUs about the node that were ignored since the last time that the TDU counts were reset. The TDUs were discarded because the TDUs contained no new information.

IST2307I

This message indicates that the node does not support the receipt of unknown topology vectors in TDUs.

Network nodes adjacent to this node can send only the originally architected control vectors, CV44 and CV45, in TDUs to this node.

IST2315I

This message is issued if no TDU about this resource was sent.

IST2355I

This message contains the date and time when the TDUDIAG threshold was reached for this resource. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference for more information about the TDUDIAG threshold. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2356I

- *platform* is the platform identifier this node. Possible values are:

****NA****

Platform identifier is unknown

CS/2

IBM Communications Server for OS/2

CS/AIX

IBM Communications Server for AIX®

CS/LINUX Z

IBM Communications Server for Linux on z Systems™

CS/LINUX I

IBM Communications Server for Linux on Intel

CS/WINDOWS

IBM Communications Server for Windows

ISERIES

IBM iSeries

SNAPLUS2

Hewlett-Packard SNAplus2

Z/OS VTAM

IBM z/OS Communications Server (VTAM)

Z/VM VTAM
IBM z/VM® VTAM

Z/VSE VTAM
IBM z/VSE® VTAM

System action: Processing continues

Operator response: None

System programmer response: None

Routing code: 2

Descriptor code: 5

Example: The following is an example of the display output from a DISPLAY TOPO,ID=SSCP1A,LIST=ALL command:

```

IST350I DISPLAY TYPE = TOPOLOGY
IST1295I CP NAME          NODETYPE ROUTERES CONGESTION CP-CP WEIGHT
IST1296I NETA.SSCP2A     NN          1          NONE          YES  *NA*
IST1579I -----
IST1297I          ICN/MDH CDSERVR RSN          HPR
IST1298I          NO          NO          8          RTP
IST1579I -----
IST1223I          BN          NATIVE  TIME LEFT  LOCATE SIZE
IST1224I          NO          YES     12          16K
IST924I -----
IST2356I PLATFORM = Z/OS VTAM
IST924I -----
IST2275I TDU INFORMATION SINCE LAST RESET ON 02/11/10 AT 10:48:52
IST1769I LAST TDU RECEIVED - 02/11/10 13:40:14 FROM NETA.SSCP1A
IST2281I LAST TDU SENT - 02/11/10 13:40:20
IST2282I TDU COUNTS:
IST2352I   SENT          = 3          RECEIVED = 3
IST2353I   ACCEPTED = 1          REJECTED = 0
IST2354I   IGNORED  = 2
IST924I -----
IST1299I TRANSMISSION GROUPS ORIGINATING AT CP NETA.SSCP2A
IST1357I          CPCP
IST1300I DESTINATION CP   TGN          STATUS  TGTYPE  VALUE WEIGHT
IST1301I NETA.SSCP1A     255          OPER    INTERM VRTG YES  *NA*
IST314I END

```

IST1296I *cpname nodetype routeres congestion cp-cp weight*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1297I *ICN/MDH CDSERVR RSN HPR*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST1298I *icn/mdh cdservr rsn option*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of possible message groups.

Routing code: 2

IST1299I

Descriptor code: 5

IST1299I TRANSMISSION GROUPS ORIGINATING AT CP *cpname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command.

- If this message is followed by IST1308I, see the explanation of that message for a complete description of the message group.
- If this message is issued in response to a DISPLAY,TOPO,ID=*cpname*,LIST=ALL command, see message IST1295I for a complete description of the message group.
- If this message is issued in response to the following commands, a complete description of the message group follows:
 - DISPLAY,TOPO,ORIG=*cpname*,DEST=*cpname*
 - DISPLAY,TOPO,ORIG=*cpname*,TGN=*tgn*

```
IST350I  DISPLAY TYPE = TOPOLOGY
IST1299I  TRANSMISSION GROUPS ORIGINATING AT CP cpname
IST1357I                                     CPCP
IST1300I  DESTINATION CP    TGN    STATUS  TGTYPE  VALUE WEIGHT
IST1301I  destcpname       tgn    status  tgtype  cpval weight
IST1579I  -----
IST2241I                                     TIME ISL
IST1163I                                     RSN          HPR          LEFT WEIGHT
IST1164I                                     rsn          hpr          time isl_wgt
IST1579I  -----
IST1302I  CAPACITY PDELAY  COSTTIME  COSTBYTE
IST1303I  capacity pdelay  costtime  costbyte
IST1579I  -----
IST1304I  SECURITY UPARAM1  UPARAM2  UPARAM3
IST1305I  security uparm1  uparm2   uparm3
IST1579I  -----
IST1736I  PU NAME
IST1737I  puname
[IST924I -----]
[IST2355I TDUDIAG THRESHOLD REACHED ON date AT time]
[IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
IST924I -----
IST2275I  TDU INFORMATION SINCE LAST RESET ON date AT time
[IST1769I LAST TDU RECEIVED - date time FROM adjacent_cp]
[IST1784I LAST TDU RECEIVED - NONE]
[IST2281I LAST TDU SENT - date time]
[IST2315I LAST TDU SENT - NONE]
IST2282I  TDU COUNTS:
IST2352I  SENT      = sent          RECEIVED = received
IST2353I  ACCEPTED = accepted      REJECTED = rejected
IST2354I  IGNORED = ignored
IST314I  END
```

IST350I

This message identifies the type of information in the display and is always TOPOLOGY for this message group.

IST1299I, IST1357I, IST1300I, IST1301I

- This message subgroup displays the origin CP name, destination CP name, TG number, status, type, CP-CP value and weight for this TG. A description of the message subgroup follows:

```
IST1299I  TRANSMISSION GROUPS ORIGINATING AT CP cpname
IST1357I                                     CPCP
IST1300I  DESTINATION CP    TGN    STATUS  TGTYPE  VALUE WEIGHT
IST1301I  destcpname       tgn    status  tgtype  cpval weight
```

- **IST1299I**

This is a header message for information about a TG that originates in *cp_name*.

The *cp_name* value is the network-qualified CP name of the origin node of the TG.

- **IST1357I, IST1300I**

These are header messages for information displayed in message IST1301I.

• **IST1301I**

- The *destcpname* value is the network-qualified CP name of the TG destination node.
- The *tgn* value is the TG number. Possible values are 0-255.
- The *status* value is the current state of the TG. Possible values are:

OPER The TG is operational.

INOP The TG is not operational.

QUIES The TG is quiescent.

Tip: The *status* value for an intercluster TG or a TG to a branch extender will always be QUIES when displayed in a non-owning node. The owning node of a TG is the node where the TG originates (origin node).

If the TG is ready for garbage collection, /G is appended to the end of the *status* value.

- The *tgtype* value is the TG type. Possible values are:

BRANCH

The TG is a branch extender. The BRANCH *tgtype* can be used by IBM Communications Server for Data Center Deployment on Linux. For more information about this function, see *IBM Communications Server for Linux, Quick Beginnings*, GC31-6768-04.

ENDPT

The TG is an endpoint TG. If the origin node or destination node is an EN, then the TG is an endpoint TG.

ENDPT VRTG

The TG is an endpoint VR-based TG (VRTG). A VRTG connects two APPN-capable VTAM nodes through a subarea network. A VRTG, although it creates the appearance of APPN, always represents underlying subarea connectivity. If the origin node or destination node is an EN, then the TG is an endpoint VRTG.

INTERM

The TG is an intermediate routing TG. An intermediate routing TG represents an NN to NN or NN to virtual routing node (VRN) connection.

INTERM VRTG

The TG is an intermediate routing VRTG. A VRTG connects two APPN-capable VTAM nodes through a subarea network. A VRTG, although it creates the appearance of APPN, always represents underlying subarea connectivity. An intermediate routing VRTG represents an NN to NN connection.

INTERCLUST

The TG is an intercluster (ICL) or intersubnet link (ISL) TG. These TGs are connections between border nodes or non-native nodes.

- The *cpval* value indicates whether this connection supports CP-CP sessions. Possible values are:

YES The connection supports CP-CP sessions. This is not an indication that a CP-CP session is active across the TG.

NO The connection does not support CP-CP sessions.

- The *weight* value represents the actual weight of TG *tgn* as calculated by VTAM using the TG, the TG profile, and the class of service (CoS) definitions. The value of 32767 is displayed when a TG is not operational or does not meet the CoS requirements specified by the APPNCOS parameter in the DISPLAY TOPO command.
 - The weight of TG *tgn* is a measure of the relative desirability of choosing that resource in the route selection process and is 0-255 or 32767.
 -

See the APPN transmission group profile and the APPN Class of Service definitions in *z/OS Communications Server: SNA Resource Definition Reference* for more information about coding TG profiles and APPN Class of Service definitions.

IST1302I, IST1303I

IST1299I

- This message subgroup displays TG characteristics for this TG. A description of the message subgroup follows:

IST1302I	CAPACITY	PDELAY	COSTTIME	COSTBYTE
IST1303I	capacity	pdelay	costtime	costbyte

- **IST1302I**

This is a header message for information displayed in message IST1303I.

- **IST1303I**

- The *capacity* value is a user-defined value that can be specified on the GROUP, LINE, PU, or TGP definition statements. This value represents the number of bits per second that the link will transmit. Possible values are:

nnnnK The valid range for *nnnn* is 1-1000 expressed in kilobits.

nnnnM The valid range for *nnnn* is 1-1000 expressed in megabits.

nnnnG The valid range for *nnnn* is 1-1000 expressed in gigabits.

See the information about the CAPACITY operand in z/OS Communications Server: SNA Resource Definition Reference.

- The *pdelay* value (propagation delay) is a user-defined value that can be specified on the GROUP, LINE, PU, or TGP definition statements. This value represents the time needed for a signal to travel from one end of the link to the other. Possible values are:

NEGLIGIB

Less than .48 milliseconds.

TERRESTR

Between .48 and 49.151 milliseconds

PACKET

Between 49.152 and 245.76 milliseconds.

LONG Greater than 245.76 milliseconds.

See the information about the PDELAY operand in z/OS Communications Server: SNA Resource Definition Reference.

- The *costtime* value is a user-defined value that can be specified on the GROUP, LINE, PU, or TGP definition statements. This value indicates the cost of the line or node per connect time.
 - Possible values are 0-255. Low values are less expensive than higher values.
 - See the information about the COSTTIME operand in z/OS Communications Server: SNA Resource Definition Reference.
- The *costbyte* value is a user-defined value that can be specified on the GROUP, LINE, PU, or TGP definition statements. This value indicates the cost of the line or node per byte sent.
 - Possible values are 0-255. Low values are less expensive than higher values.
 - See the information about the COSTBYTE operand in z/OS Communications Server: SNA Resource Definition Reference.

IST1304I, IST1305I

- This message subgroup displays additional TG characteristics for this TG. A description of the message subgroup follows:

IST1304I	SECURITY	UPARM1	UPARM2	UPARM3
IST1305I	security	uparm1	uparm2	uparm3

- **IST1304I**

This is a header message for information displayed in message IST1305I.

- **IST1305I**

- The *security* value is the user-specified value that can be specified on the GROUP, LINE, PU, or TGP definition statements. This value indicates the security level of the transmission group. Possible values are:

ENCRYPT

Link encryption used.

GUARDED

Guarded conduit, physical only.

PUBLIC

Public switched network.

SECURE

Secure conduit, not guarded.

SHIELDED

Guarded conduit, physical and radiation shielded.

UNSECURE

Not secure.

UNDERGRO

Underground cable, not guarded.

See the information about the SECURITY operand in z/OS Communications Server: SNA Resource Definition Reference.

- The *uparm1*, *uparm2*, and *uparm3* values are user-defined parameter values. The user determines the meaning of these values, and the valid range is 0-255.

See the information about the UPARM1 operand, the UPARM2 operand, and the UPARM3 operand in z/OS Communications Server: SNA Resource Definition Reference.

IST1736I, IST1737I

- This message subgroup displays the physical unit (PU) associated with this TG. A description of the message subgroup follows:

```
IST1736I          PU NAME
IST1737I          puname
```

- **IST1736I**

This is a header message for information displayed in message IST1737I.

- **IST1737I**

The *puname* value is the name of the physical unit.

IST1769I

This message identifies the date and time of the last topology database update (TDU) that was received for this node. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

The *adjacent_node* value is the network-qualified CP name of the adjacent node that sent the last TDU that was received.

IST1784I

This message is issued if no TDU about this resource was received.

IST2241I, IST1163I, IST1164I

- This message subgroup displays the resource sequence number (RSN), HPR status, time left, and ISL weight for this TG. A description of the message subgroup follows:

```
IST2241I          TIME  ISL
IST1163I          RSN      HPR      LEFT  WEIGHT
IST1164I          rsn      hpr      time  isl_wgt
```

- **IST1163I**

This is a header message for information displayed in message IST1164I.

- **IST1164I**

- The *rsn* value is the RSN of the transmission group (TG) *tgn* expressed in decimal. The *tgn* is displayed in message IST1301I.
 - Displaying the RSN for a resource provides information about VTAM's current knowledge of that resource.
 - For example, if a display of a resource from two different VTAMs indicates different RSNs for the same resource, one VTAM might have backlevel information. This mismatch might indicate a problem.

IST1299I

- The *hpr* value indicates whether the TG is allowed to use Rapid Transport Protocols (RTP). Possible values are:
 - YES** The TG is allowed to use RTP. This is not an indication that RTP is used across the TG.
 - NO** The TG is not allowed to use RTP.

For more information about the *hpr* value, see the description of message IST1482I.

- The *time* value is the number of days remaining until the TG is removed from the topology database (garbage collected), if the TG is either inoperative or has an odd-numbered *rsn* value. An operational TG with an even-numbered *rsn* value will not be removed from the database until the origin node is removed from the database, or until a topology database update (TDU) is received with an indication that the TG should be removed.
- The *isl_wgt* value represents the actual weight used in route calculation of the TG *tgn* value when the TG originates in a border node and the destination is an Enterprise Extender (EE) global virtual routing node (GVRN). This is the weight of the TG when it is used in a session route calculation and the PLU node calculating the route is in another subnet. When the PLU node is in another subnet, this TG is being used as an intersubnet link (ISL). The weight is calculated by z/OS Communications Server using the TG, the TG characteristics, and the class of service (CoS) definitions.
 - When the TG is used this way, a COSTBYTE value of 0 is temporarily changed to 1 to increase the weight of the TG, so the weight that is displayed in message IST1301I might be different than the ISL weight that is displayed in message IST1164I. If the existing COSTBYTE value that is assigned to the TG is not 0, no change is made, and the weight that is displayed in message IST1301I is the same as the ISL weight that is displayed in message IST1164I. When the TG is being used for routes that are calculated in the subnet that contains the TG, it is not being used as an ISL and the weight that is displayed in IST1301I is used. See the Route calculation and selection information in z/OS Communications Server: SNA Network Implementation Guide for more information about route calculation using EE global VRNs across network boundaries.
 - The weight of a TG is a measure of the relative desirability of choosing that resource in the route selection process. The *isl_wgt* value can be one of the following:
 - A value in the range of 0-255.
 - 32767 when a TG is not operational or does not meet the CoS requirements specified by the APPNCOS operand in the DISPLAY TOPO command.
 - *NA* when the APPNCOS operand is not specified on the DISPLAY TOPO command, or when the destination of the TG is not an EE GVRN.
- See the z/OS Communications Server: SNA Resource Definition Reference for more information about coding TG profiles and APPN Class of Service definitions.

• IST2275I

- This message contains the date and time when all the TDU information and TDU counters were reset. The TDU information and TDU counters for a TG are reset every 24 hours when garbage collection runs, or when one of the following commands is entered:
 - DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES
 - DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ORIG=*cpname*,DEST=*destcpname*,TGN=*tgn*,CLEAR=YES

See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

• IST2277I

This message indicates possible topology control vector corruption was detected for the TG. Because the topology control vectors contain the resource sequence number (RSN) for the TG, which determines how a TDU is processed, it is possible that control vector corruption could cause a TDU war. A TDU war is the endless exchange of TDUs in contention over the same topology resource, resulting in continuous performance degradation of the APPN network. Possible corruption is detected when the topology control vectors saved in the topology database for the TG being processed do not appear to be formatted correctly. The most probable cause of control vector corruption is a storage overlay.

IST2281I

This message identifies the date and time of the last topology database update (TDU) that was sent for this TG. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2282I, IST2352I, IST2353I, IST2354I

- This message subgroup displays topology database update (TDU) counts for this TG. A description of the message subgroup follows:

```
IST2282I TDU COUNTS:
IST2352I SENT = sent RECEIVED = received
IST2353I ACCEPTED = accepted REJECTED = rejected
IST2354I IGNORED = ignored
```

- IST2282I**

This is a header message for topology database update (TDU) counts for this TG.

- IST2352I**

This message displays counts of TDUs sent and received for this TG.

The *sent* value is the number of TDUs about the TG that were sent since the last time that the TDU counts were reset.

The *received* value is the number of TDUs about the TG that were received since the last time that the TDU counts were reset.

- IST2353I**

This message displays counts of TDUs accepted and rejected for this TG.

The *accepted* value is the number of TDUs about the TG that were accepted since the last time TDU counts were reset. The TDUs contain new information about the node and the topology database was updated.

The *rejected* value is the number of TDUs about the TG that were rejected since the last time that the TDU counts were reset. The TDUs were rejected because the TDUs contain outdated information about the node. TDUs that were built from the local topology database information for the TG were sent as corrections.

- IST2354I**

This message displays counts of TDUs ignored for this TG.

The *ignored* value is the number of TDUs about the TG that were ignored since the last time that the TDU counts were reset. The TDUs were discarded because the TDUs contained no new information.

IST2315I

This message is issued if no TDU about this resource was sent.

IST2355I

This message contains the date and time when the TDUDIAG threshold was reached for this resource. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference for more information about the TDUDIAG threshold. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

System action: Processing continues

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

Example: The following is an example of the display output from a DISPLAY TOPO,ORIG=SSCP1A,DEST=SSCP2A,TGN=21 command:

```
IST350I DISPLAY TYPE = TOPOLOGY
IST1299I TRANSMISSION GROUPS ORIGINATING AT CP NETA.SSCP1A
IST1357I
IST1300I DESTINATION CP TGN STATUS TGTYPE VALUE WEIGHT
IST1301I NETA.SSCP2A 21 OPER INTERM YES *NA*
IST1579I
IST2241I -----
IST1163I RSN HPR TIME ISL
IST1164I 26 YES 12 *NA*
IST1579I -----
IST1302I CAPACITY PDELAY COSTTIME COSTBYTE
IST1303I 32M TERRESTR 0 0
```

IST1300I • IST1304I

```
IST1579I -----
IST1304I SECURITY UPARAM1  UPARAM2  UPARAM3
IST1305I UNSECURE 128      128      128
IST1579I -----
IST1736I PU NAME
IST1737I P1234567
IST924I -----
IST2275I TDU INFORMATION SINCE LAST RESET ON 02/11/10 AT 10:48:52
IST1769I LAST TDU RECEIVED - 02/11/10 13:40:14 FROM NETA.SSCP1A
IST2281I LAST TDU SENT - 02/11/10 13:40:20
IST2282I TDU COUNTS:
IST2352I SENT      = 10          RECEIVED = 4
IST2353I ACCEPTED = 0          REJECTED = 2
IST2354I IGNORED  = 2
IST314I END
```

IST1300I DESTINATION CP TGN STATUS TGTYPE VALUE WEIGHT

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1301I *destcpname tgn status tgtype cpvalue weight*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1302I CAPACITY PDELAY COSTTIME COSTBYTE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1303I *capacity pdelay costtime costbyte*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1304I SECURITY UPARAM1 UPARAM2 UPARAM3

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1305I *security uparm1 uparm2 uparm3*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1306I **LAST CHECKPOINT ADJ NN EN SERVED EN CDSERVR ICN BN**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY,TOPO,LIST=SUMMARY command. A complete description of the message group follows the example.

```
IST350I  DISPLAY TYPE = TOPOLOGY
IST1306I  LAST CHECKPOINT  ADJ NN  EN  SERVED EN CDSERVR ICN BN
IST1307I  date      time      adj nn  en  served en cdservr icn bn
IST1781I  INITDB CHECKPOINT DATASET  LAST GARBAGE COLLECTION
IST1785I  initdb_date initdb_time      garbage_collect_date garbage_collect_time
[IST2360I  ROUTING TREES LAST CLEARED AT clear_date clear_time BY clear_process]
IST314I  END
```

IST350I

This message identifies the type of information shown in the display and is always **TOPOLOGY** for this message group.

IST1306I

This message is the header for information displayed in message IST1307I.

IST1307I

- *date* and *time* are displayed for **LAST CHECKPOINT**.

The *date* and *time* values indicate the date and time of the last topology data base checkpoint. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

adj is the number of nodes adjacent to the node issuing the command.

nn is the total number of network nodes known to the network.

en is the total number of end nodes with a direct APPN connection to this node.

served_en is the number of adjacent end nodes served by the node issuing the command.

cdrserv is the total number of directory servers known to the network.

icn is the total number of interchange nodes known to the network.

bn is the total number of border nodes known to the network.

IST1781I

This message is the header for information displayed in message IST1785I.

IST1785I

initdb_date and *initdb_time* are the creation date and time of the topology checkpoint data set that was successfully loaded when VTAM was started with start option INITDB=TOPO or INITDB=ALL. See "DATE and TIME formats" on page 6 for information about the date and time values.

garbage_collect_date and *garbage_collect_time* are the date and time of the last topology data base garbage collection. See "DATE and TIME formats" on page 6 for information about the date and time values.

IST1307I • IST1308I

IST2360I

- *clear_date* and *clear_time* are the date and time that the APPN routing trees were last cleared. See “DATE and TIME formats” on page 6 for information about the date and time values.
- *clear_process* is the process that cleared the routing trees. Possible values are:

MODIFY

The APPN routing trees were cleared with a MODIFY *procname*,TOPO,FUNCTION=CLRTREES command.

- **VRR** The APPN routing trees were cleared by the VTAM recovery routine for APPN route selection services. VTAM invokes this recovery routine when an abend occurs while APPN route selection services is calculating a session route.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

IST1307I *date time adj nn en served_en dirsrv icn bn*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY,TOPO,LIST=SUMMARY command. See IST1306I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1308I RESOURCE WAS NOT FOUND IN THE TOPOLOGY DATABASE

Explanation: VTAM issues this message as part of a group of messages when the resource specified or implied (NODE or TG) on the command cannot be found in the topology database.

If this message is the result of a MODIFY TOPO command, then the first message is IST1158. See the explanation of that message for a complete explanation.

If this message is the result of a DISPLAY TOPO command, a complete description of the message group follows the example.

```
IST350I  DISPLAY TYPE = TOPOLOGY
[IST1348I  VTAM STARTED AS nodetype]
[IST1805I  ONLY LOCAL TOPOLOGY INFORMATION IS AVAILABLE]
[IST1299I  TRANSMISSION GROUPS ORIGINATING AT CP cpname]
IST1308I  RESOURCE WAS NOT FOUND IN THE TOPOLOGY DATABASE
IST314I  END
```

IST1299I

- Message IST1299I is issued for the following commands:

- DISPLAY,TOPO,ORIG=*cpname*,DEST=*cpname*
- DISPLAY,TOPO,ORIG=*cpname*,TGN=*tgn*

Note: If the origin *cpname* is not valid, message IST1299I is not issued.

- *cpname* is the name of the resource specified on the ORIG operand of the command. If a network-qualified name was entered on the command, VTAM issues *cpname* in the form *netid.name*.

IST1308I

This message is issued when *nodename* or *tgnumber* cannot be found in the topology database.

IST1348I

- Message IST1348I is issued for the following commands entered from an end node or a migration data host:

- DISPLAY,TOPO,LIST=NN|EN|BN|ICN|VN|CDSERVR
- DISPLAY,TOPO,LIST=SUMMARY
- *nodetype* indicates the node type of this host and is determined by start options that are specified. Possible values are:
 - END NODE
 - MIGRATION DATA HOST

IST1805I

This message is displayed when a DISPLAY TOPO command is issued at an end node and the requested information is not available.

System action: Processing continues.

Operator response: Ensure that you entered the command correctly.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1309I START OPTION CURRENT VALUE ORIGINAL VALUE ORIGIN

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1310I *option current_value original_value origin*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1311A ENTER START OPTION OVERRIDES OR ENTER HALT TO EXIT VTAM

Explanation: VTAM issues this message in response to the following situations during start processing:

- VTAM encountered an error during processing of VTAM start options.
- The operator asked for additional prompting in response to message IST051A.

System action: VTAM waits for a reply to this message.

- If the LIST start option is entered, VTAM ignores it.
- If HALT is entered, start processing ends and VTAM is terminated.

Operator response:

- Enter start options to override current values, or enter a blank to indicate that you want default values. If you need another prompt for further overrides, follow the last option with a comma.
- Enter HALT to terminate VTAM.

System programmer response: None.

Routing code: 2

Descriptor code: 1

IST1312I NO START OPTIONS HAVE BEEN MODIFIED

Explanation: VTAM issues this message in response to a DISPLAY VTAMOPTS command when FORMAT=MODIFIED was specified and no start options have been modified since VTAM start.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1313I NO TRACES ACTIVE FOR *resourcename*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TRACES command when there are no active traces for *resourcename*.

resourcename is the name of the resource specified on the ID operand of the command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1314I TRLE = *trl_element* STATUS = *trle_status* CONTROL = *lnctl*

Explanation: VTAM issues this message as part of a message group in response to any of the following commands:

- A DISPLAY ID command for a PU that supports an APPN host-to-host connection.
- A DISPLAY ID command for a PU that supports an XCF connection.
- A DISPLAY TRL command when the TRLE operand is not specified.

trl_element is the name of an element in the active transport resource list (TRL).

When *lnctl* is TCP, the name of the TRLE element (TRLE) given by *trl_element* is dynamically generated by VTAM. The first three characters of the name are always **IUT** and the fourth character of the name indicates the device type according to the following list:

C	CDLC
H	Hyperchannel
L	LCS
S	Samehost
W	CLAW
X	CTC

When *lnctl* is ROCE, the name of the TRLE given by *trl_element* is dynamically generated by VTAM. The first three characters of the name are always **IUT**, the fourth character represents the port number (1 or 2), and the last four characters represent the Peripheral Component Interconnect Express (PCIe) function ID (PFID) used by the IBM 10 GbE RoCE Express feature represented by *trl_element*.

When *lnctl* is ISM, the name of the TRLE given by *trl_element* is dynamically generated by VTAM. The first four characters of the name are always **IUT0**, and the last four characters represent the PFID used by the internal shared memory (ISM) device represented by *trl_element*.

trle_status is the resource status code that indicates the current status of the TRL element. If *trle_status* is ****NA****, then the TRL major node with the TRLE named on the PU definition must be activated. See Resource Status Codes and Modifiers inz/OS Communications Server: IP and SNA Codes for a description of these status codes.

Inctl is the line control setting for *trl_element*, and can be one of the following:

- | **ISM**
- | internal shared memory
- MPC**
- multipath channel
- ROCE**
- RDMA (Remote Direct Memory Access) over Converged Ethernet
- TCP**
- transmission control protocol
- XCF**
- cross-system coupling facility
- System action:** Processing continues.
- Operator response:** None.
- System programmer response:** None.
- Routing code:** 2
- Descriptor code:** 5

IST1315I **DISPLAY TRUNCATED AT** *keyword = number*

Explanation: This message is part of several different message groups that VTAM issues in response to a DISPLAY command.

VTAM issues this message when the number of resources to be displayed exceeds the value specified for the MAX or NUM operand.

keyword is either MAX or NUM.

number is the value specified for the MAX or NUM operand.

This message can be issued for any of the following commands:

- DISPLAY ADJSSCPS
- DISPLAY APPLS
- DISPLAY AUTOLOG
- DISPLAY CDRMS
- DISPLAY CDRSCS
- DISPLAY CLSTRS
- DISPLAY CPCP
- DISPLAY DIRECTRY,ID=*.name
- DISPLAY EEDIAG
- DISPLAY EXIT
- DISPLAY GROUPS
- DISPLAY GRAFFIN
- DISPLAY LINES
- DISPLAY LUGROUPS,SCOPE=ALL
- DISPLAY MAJNODES
- DISPLAY PATHTAB
- DISPLAY PENDING
- DISPLAY RSCLIST

IST1316I • IST1317I

- DISPLAY SRCHINFO
- DISPLAY SESSIONS,LIST=ALL
- DISPLAY STATIONS
- DISPLAY STATS,TYPE=CFS
- DISPLAY STATS,TYPE=VTAM
- DISPLAY STORUSE
- DISPLAY TABLE,SCOPE=ALL
- DISPLAY TERMS
- DISPLAY TGPS
- DISPLAY TRL
- DISPLAY TOPO,LIST=UNRCHTIM
- DISPLAY USERVAR.

Routing code: 2

Descriptor code: 5

IST1316I PU NAME = *puname* STATUS = *status*TRLE = *trl_element*

Explanation: VTAM displays this message as part of a message group in response to a DISPLAY ID, SCOPE=ALL command for a local SNA major node which contains at least one PU that supports APPN host-to-host connections.

puname is the name of a PU that supports an APPN host-to-host connection.

status is the status of the PU. See the z/OS Communications Server: New Function Summary for status information.

trl_element is the name of an element in the active transport resource list (TRL). It identifies which element defining a multipath channel (MPC) group will be used as the supporting data link control (DLC) for this APPN host-to-host connection.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1317I DLCADDR SUBFIELDS FOR PID: *pid* [*instance*]

Explanation: This message is the first in a subgroup of messages that VTAM issues in response to the DISPLAY PATHS command.

This message subgroup is displayed in a message group headed by IST148I. A complete description of the message subgroup follows.

```
IST1317I DLCADDR SUBFIELDS FOR PID: pid [instance]  
IST1318I   parameter_value  
[IST1319I   parameter_value]  
:  
:  
[IST1318I   parameter_value]  
[IST1319I   parameter_value]  
:  
:
```

IST1317I

pid is the path identifier that was specified on the PATH definition statement.

instance indicates that *parameter_value* in the group of IST1318I messages that follow correspond to the *instance* instance of the message IST168I with a *pid* of 000. You must count the group of IST168I messages to find the *instance* instance of message IST168I with a *pid* of 000. *instance* is only displayed when *pid* is 000.

IST1318I

- *parameter_value* is the DLCADDR value specified in the PATH definition statement. The message will appear as follows:
IST1318I yy,N'parameter value'
- *N* is the value specified on the DLCADDR keyword.
- *yy* is the subfield ID.
- If the DLCADDR value was coded in hexadecimal or binary coded decimal (BCD), *parameter_value* is displayed with a blank separating every 8 characters of data. If an odd number of digits was coded for the DLCADDR value, *parameter_value* will be padded on the left with a 0.

IST1319I

This message is used to display overflow information from *parameter_value* in message IST1318I.

System action: Processing continues

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1318I *parameter_value*

Explanation: VTAM issues this message as part of a message group. The first message in the group is either IST149I, IST1317I, or IST1351I. See the explanation of those messages for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1319I *parameter_value*

Explanation: VTAM issues this message as part of a message group. The first message in the group is either IST149I, IST1317I, or IST1351I. See the explanation of those messages for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1320I *command IS ONLY VALID AT type*

Explanation: VTAM issues this message when *command* is not valid for the node.

command can be one of the following:

- D ADJCLUST
- D APPNTOSA
- D BNCOSMAP
- D GRPREFS
- D SAMAP
- D SATOAPPN

type can be one of the following:

- APPN NODE
- BORDER NODES
- NN
- SYSPLEX HOST

System action: Processing continues.

Operator response: Save the system log for problem determination.

IST1321I

System programmer response: To enter *command* from this node, define the node as a border node, an APPN node, a network node, or a sysplex host.

Routing code: 2

Descriptor code: 5

IST1321I TABLE FOR *tabletype* [*netid*]

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY BNCOSMAP, APPNTOSA, SATOAPPN, or SNSFILTR command. Possible message groups follow.

- If the display type is **BNCOSMAP**, the following message group is displayed.

```
IST350I DISPLAY TYPE = BNCOSMAP
IST1321I TABLE FOR BNCOSMAP netid
IST1322I NON-NATIVE NATIVE
IST1323I non-native native
      .
      .
IST314I END
```

- If the display type is **APPNTOSA**, the following message group is displayed.

```
IST350I DISPLAY TYPE = APPNTOSA
IST1321I TABLE FOR APPNTOSA
IST1431I APPN COS SUBAREA COS
IST1323I appn_cos subarea_cos [DEFAULT]
      .
      .
IST314I END
```

- If the display type is **SATOAPPN**, the following message group is displayed.

```
IST350I DISPLAY TYPE = SATOAPPN
IST1321I TABLE FOR SATOAPPN
IST1514I SUBAREA COS APPNCOS
IST1323I appn_cos subarea_cos [DEFAULT]
      .
      .
IST314I END
```

- If the display type is **SNSFILTR**, the following message group is displayed.

```
IST350I DISPLAY TYPE = SNSFILTR
IST1321I TABLE FOR SAW SENSE FILTER
IST1551I sense_1 sense_2 sense_3 sense_4 sense_5
      .
      .
IST314I END
```

- If the display type is **SAMAP**, the following message group is displayed.

```
IST350I DISPLAY TYPE = SAMAP
IST1321I TABLE FOR SAMAP
IST1671I subarea_number MAPSTO subarea_number
      .
      .
IST314I END
```

IST350I

This message identifies the type of information shown in the display.

type in this message group is either **BNCOSMAP**, **APPNTOSA**, **SATOAPPN**, **SNSFILTR**, or **SAMAP**. The display contains information about the specified user-defined tables that are active in VTAM.

IST1321I

- *tabletype* is either **BNCOSMAP**, **APPNTOSA**, **SATOAPPN**, **SAW SENSE FILTER**, or **SAMAP**.
- *netid* is displayed when *tabletype* is **BNCOSMAP** and represents the network ID that corresponds to the COS mappings.
 - *netid* is the name of the network that was specified on the NETWORK definition statement.
 - **DEFAULT_NETID** is displayed if no specific value for *netid* has been defined.

IST1322I, IST1431I, IST1514I

This message is a header for the information displayed in message IST1323I.

IST1323I

- If *tabletype* in message IST1321I is **BNCOSMAP**, this message shows the corresponding nonnative and native COS names.

nonnative is the name of the COS that is defined in an adjacent nonnative subnetwork.

native is the COS name to which the nonnative COS will map in the topology subnetwork of the issuing node.

- If *tabletype* in message IST1321I is **APPNTOSA**, this message shows the corresponding APPN and subarea COS mappings.

appn_cos is the COS name that is used for routing through the APPN network.

subarea_cos is the COS name that is used for routing through the subarea network.

DEFAULT is displayed if COSDEF=YES is specified on the MAPSTO entry of the VBUILD definition statement.

IST1431I

This message is a header for the information displayed in message IST1323I.

IST1514I

This message is issued in response to a DISPLAY SATOAPPN command.

IST1551I

sense is a user-specified sense code, used by VTAM to filter session awareness data concerning session setup failures for a CNM application.

IST1671I

subarea_number is the subarea number coded in the SAMAP table. The two subarea numbers represent the two subarea components in the composite network node (CNN) that are connected to each other.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1322I NON-NATIVE NATIVE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY COSMAP command. See the explanation of message IST1321I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1323I non-native native

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY COSMAP command. See the explanation of IST1321I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1324I VNNAME = vnname VNGROUP = vngroup vntype

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command when one of the following resources was specified on the ID operand of the command:

- Name of a line definition statement for a NCP major node

IST1326I • IST1328I

- Name of a port definition statement for a XCA major node.

VTAM also issues this message as part of several message groups in response to a DISPLAY EE command. These message groups begin with message IST2000I or IST2002I. See the explanations of those messages for a complete description.

vnname is the fully qualified virtual routing node name.

vngroup is the GROUP associated with the connection network definition. If *vngroup* is not coded when *vntype* is GLOBAL, then the value in *vngroup* will be a string of periods.

vntype indicates the type of HPR/IP (Enterprise Extender) connection network. Possible values are:

(LOCAL)

The connection network is being defined as a LOCAL Virtual Routing Node (the connection network cannot traverse network or subnetwork boundaries.) Either VNTYPE was not specified, or VNTYPE was specified as LOCAL on the definition of the HPR/IP (Enterprise Extender) virtual node.

(GLOBAL)

The connection network is being defined as a GLOBAL Virtual Routing Node (the connection network can traverse network or subnetwork boundaries.) VNTYPE was specified as GLOBAL on the definition of the HPR/IP (Enterprise Extender) virtual node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1326I CP NAME TYPE STATE STATUS SNVC

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ADJCLUST command. The first message in the group is IST2207I. See the explanation of message IST2207I for a complete description.

Routing code: 2

Descriptor code: 5

IST1327I cpname type state status snvc

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ADJCLUST command. The first message in the group is IST2207I. See the explanation of message IST2207I for a complete description.

Routing code: 2

Descriptor code: 5

IST1328I TRLE trl_element NOT FOUND

Explanation: VTAM issues this message in response to the following commands when the TRLE requested is not found in an active transport resource list (TRL):

- DISPLAY TRL,TRLE=*trl_element*
- MODIFY TNSTAT,TRLE=*trl_element*
- MODIFY NOTNSTAT,TRLE=*trl_element*
- MODIFY INOPDUMP=ON,TRLE=*trl_element*
- MODIFY INOPDUMP=OFF,TRLE=*trl_element*

trl_element is the name of an element that is not in an active TRL major node.

System action: Processing continues

Operator response: Activate the TRLE major node definition that contains the TRLE and reissue the command. If the message is displayed again, save the system log for problem determination.

System programmer response: If necessary, add a TRLE statement for the *trl_element* to a TRLE major node definition.

Routing code: 2

Descriptor code: 5

IST1329I *command resource* **FAILED – VIRTUAL NODE NOT DEFINED**

Explanation: VTAM issues this message in response to a MODIFY TGP command when a virtual node has not been defined for *resource*.

command is always **MODIFY TGP**.

resource is one of the following:

- The resource name that is specified on the ID operand of *command*
- The resource identified by the adjacent control point that is coded on the ID operand and the transmission group number that is coded on the TGN operand of *command*.

System action: Processing continues.

Operator response: Ensure that you entered *resource* correctly.

If VTAM continues to issue this message, save the system log for problem determination, and print the major node definition for *resource*.

System programmer response: Verify that *resource* has defined the virtual node by coding VNNAME and VNGROUP on:

- Port definition statement for an XCA major node
- Line or group definition statement for an NCP major node.

See to the z/OS Communications Server: SNA Resource Definition Reference for more information about these definition statements.

Routing code: 2

Descriptor code: 5

IST1330I *type* **CANNOT BE ACTIVATED FROM** *nodetype*

Explanation: VTAM issues this message in response to a VARY ACT command when *type* cannot be activated from this *nodetype*.

type can be one of the following:

APPNCOS

APPN Class of Service

ADJCP

Adjacent control point

ADJSSCP

Adjacent system services control point

CDRM

Cross domain resource manager

NCP

Network Control Program

NETSRVR

Network node server list

IST1331I • IST1332I

PATH

Path definition statement

PUTYPE4

Physical unit type 4

PUTYPE5

Physical unit type 5

TGP

Transmission group profile

nodetype represents the type of node from which the command was issued, and can be one of the following:

APPN NODE

The node is an APPN network node or APPN end node.

EN The node is an APPN end node.

MDH

The node is a migration data host and acts as both an APPN end node and a subarea node.

NN The node is an APPN network node.

SUBAREA NODE

The node is a subarea node. It uses network addresses for routing and maintains routing tables that reflect the configuration of a network.

Message IST072I or IST1264I follows this message and displays the name of the resource that was specified on the ID operand of the VARY ACT command.

System action: Processing continues.

Operator response: Ensure that you entered the command correctly. If problems persist, save the system log for problem determination.

System programmer response: Check your network configuration to determine which value (*type* or *nodetype*) is not correct.

Routing code: 2

Descriptor code: 5

IST1331I *resource* IS INACTIVE

Explanation: VTAM issues this message in response to a MODIFY VTAMOPTS,OSIMGMT=NO command when the command is completed successfully.

resource is always **CMIP SERVICES**.

System action: Processing continues.

Operator response: If you want to restart CMIP services, issue MODIFY VTAMOPTS,OSIMGMT=YES.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1332I **CMIP SERVICES LOAD FAILED FOR** *module* IN *library*

Explanation: VTAM issues this message when VTAM is unable to load the *module* from the *library* library. This module is needed for CMIP services to be active.

System action: Processing continues. VTAM CMIP services is inactive.

Operator response: Collect the system log for problem determination.

System programmer response: This problem is most probably a LINKEDIT failure. Ensure that the load module *module* resides in the *library* library.

Routing code: 2

Descriptor code: 5

IST1333I ADJLIST= *listname*

Explanation: This message is part of several groups of messages that VTAM issues in response to a DISPLAY ID command for a CDRSC when SCOPE=ALL and to a DISPLAY ADJSSCP, ADJLIST= *|*listname* command.

- If the first message is IST977I, IST831I, or IST611I, see the explanations of those messages for a complete description of the message group.
- If the first message is IST350I, a complete description of the message group follows the example.

```
IST350I DISPLAY TYPE = ADJACENT SSCP TABLE
IST1333I ADJLIST = listname
IST624I sscpname
:
IST314I END
```

This message group is issued when an ADJLIST and an ADJSSCP were specified on the command.

IST350I

This message identifies the type of information shown in the display. DISPLAY TYPE is always **ADJACENT SSCP TABLE** for this message group.

IST624I

VTAM issues this message for each SSCP *sscpname* in the adjacent SSCP table being displayed.

IST1333I

This message is displayed for each ADJLIST defined and activated. It will be followed by an IST624I message for each member in the adjacent SSCP list.

An ADJLIST definition statement must be active for this message to be displayed. *listname* is the name of an adjacent SSCP table as defined by an ADJLIST definition statement.

If an adjacent SSCP table was not specified for the CDRSC,

See the descriptions of the ADJLIST definition statement in the z/OS Communications Server: SNA Resource Definition Reference for more information on adjacent SSCP tables.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1334I TGN NOT AVAILABLE

Explanation: This message is part of a group messages that VTAM issues in response to a VARY ACT for a line when the activation of the logical connection to the virtual node fails. The first message in the group is IST1166I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1335I *statementname* HAS NO ADJCDRM STATEMENT FOR ADJLIST *listname*

Explanation: This message is the first in a group of messages that VTAM issues during configuration when the VBUILD TYPE=ADJSSCP definition has one or more null ADJLIST lists. The null ADJLIST lists are ignored. A complete description of the message group follows.

```
IST1335I statementname HAS NO ADJCDRM STATEMENT FOR ADJLIST listname
IST323I LABEL = label name - MACRO TYPE = macrotype - KEYWORD = keyword
```

IST1336I • IST1338I

statementname is the ADJSSCP statement.

listname is the name of the adjacent SSCP table as defined by an ADJLIST definition statement.

System action: Adjsscp activation fails.

Operator response: Save the system log and notify the system programmer.

System programmer response: Correct the null ADJLIST situation by doing one of the following:

- If the ADJLIST list is not needed, remove it from the definition.
- If the ADJLIST list is needed, add one or more ADJCDRM statements following the ADJLIST statements.

Routing code: 2

Descriptor code: 5

IST1336I *puname* ACTIVATION FAILED – CONFLICTING *operand* VALUES

Explanation: VTAM issues this message when a PU definition contains the NATIVE operand and the value conflicts with the value on the ADJCP definition.

puname is the name of the PU for which the activation failed.

operand is NATIVE.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Make sure that the values of the operand are the same on the ADJCP and PU definitions.

Routing code: 2

Descriptor code: 5

IST1337I *operand* ON *labelname* IGNORED – ONLY VALID FOR BN

Explanation: VTAM issues this message when

- The NATIVE operand was specified on a GROUP, LINE, PU, or ADJCP definition statement.
- The ALIASRCH, AUTHNETS, or RTPONLY operand was specified on an ADJCP definition statement, but this node is not a border node.

The operand is ignored.

operand is NATIVE, ALIASRCH, AUTHNETS, or RTPONLY.

labelname is the label of the definition statement specifying the operand.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Remove the NATIVE, ALIASRCH, AUTHNETS, or RTPONLY operand if this node is not supposed to be a border node. Otherwise the node must be brought down and then brought back up as a border node.

Routing code: 2

Descriptor code: 5

IST1338I *operand* VALUE ON *resourcename* IGNORED- VALUES CONFLICT

Explanation: VTAM issues this message when an ADJCP definition contains the NATIVE or NN operand and the value conflicts with the value in the existing ADJCP definition. The NATIVE/NN value specified is ignored in favor of the existing value.

operand is NATIVE or NN.

resourcename is the network-qualified name on the ADJCP statement in error. *resourcename* is in the form *netid.label*.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the value specified for NATIVE or NODETYPE in the dynamic ADJCP definition.

Routing code: 2

Descriptor code: 5

IST1342I DNSUFFIX = *dnsuffix*

Explanation: This message is part of a group of messages which VTAM issues when a DISPLAY ID command is entered for a TCP/IP major node. A complete description of the message group follows.

```

IST075I NAME = nodename, TYPE = TCP/IP MAJOR NODE
IST486I STATUS= currentstatus, DESIRED STATE= desiredstate
IST1342I DNSUFFIX = dnsuffix
[IST1343I dnsuffix_continuation]
IST1692I TCB = taskno TCP PORT = portno
IST1400I DGTIMER = dgtimer EXTIMER = extimer
IST1406I CONTIMER = contimer IATIMER = iatimer
IST654I I/O TRACE = {ON|OFF}, BUFFER TRACE = {ON|OFF} [- AMOUNT = value]
IST170I LINES:
IST232I linename, status, [CUA = device address]
IST314I END

```

IST075I

nodename is the name of the resource that was entered on the DISPLAY ID command.

Type is always **TCP/IP MAJOR NODE** for this display.

IST232I

linename is the name of a leased line defined for a type 5 physical unit, a switched line defined for a type 2 physical unit, or a VCNS line.

status is the condition or state of the channel-to-channel adapter or the token-ring sub-system.

device address is the hexadecimal channel unit address of *linename*. *device address* is only displayed for a communication adapter.

IST486I

currentstatus is the current status of the node.

desiredstate is the node state that is desired. If VTAM cannot determine the desired state, *desiredstate*

IST654I

- **AMOUNT** = *value* is displayed if **BUFFER TRACE** = **ON**. *value* represents the **AMOUNT** operand value specified on the TRACE start option or the MODIFY TRACE command, and indicates how much of the buffer's contents are traceable. *value* can be one of the following:

PARTIAL

The trace record has a maximum size of 256 bytes including header information.

FULL

All of the buffer's contents are traceable.

Note: If **AMOUNT** is not specified when the buffer contents trace is activated, the default *value* **PARTIAL** is displayed.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information.

IST1342I

dnsuffix is the domain name suffix which is the 1 to 237 character value specified on the DNSUFFIX operand of the VBUILD definition statement.

IST1343I

IST1343I • IST1345I

This message is used to display overflow information from *dnsuffix* in message IST1342I. *dnsuffix_continuation* is repeated until the complete domain name suffix is displayed.

IST1400I

dgtimer is the value of the DGTIMER operand specified in the VBUILD definition statement. The value is in the range of 1 - 65535 seconds.

extimer is the value of the EXTIMER operand specified in the VBUILD definition statement. The value is in the range of 1 - 65535 seconds.

IST1406I

contimer is the value of the CONTIMER operand specified in the VBUILD definition statement. The value is in the range of 1 - 65535 seconds.

iatimer is the value of the IATIMER operand specified in the VBUILD definition statement. The value is in the range of 1 - 65535 seconds.

IST1692I

taskno is the number of MVS tasks specified on the TCB operand of the VBUILD definition statement.

portno is the TCP port number specified on the PORT operand of the VBUILD definition statement.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1343I *dnsuffix_continuation*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1342I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1345I ID VALUE DESCRIPTION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY STATS,TYPE=VTAM command.

Notes:

1. The information in this display may be used to calculate storage requirements for VTAM. See the z/OS Communications Server: New Function Summary for information about storage requirements for VTAM.
2. For a description of the DISPLAY STATS command, see the z/OS Communications Server: SNA Operation.

A complete description of the message group follows the example.

```
IST350I DISPLAY TYPE = STATS,TYPE=VTAM
IST1349I COMPONENT ID IS dddd-ddddd-ddd
IST1345I ID VALUE DESCRIPTION
IST1227I dddd value = description
:
[IST1315I DISPLAY TRUNCATED AT keyword = number]
IST1454I count STATISTICS DISPLAYED
IST314I END
```

IST350I

This message identifies the type of information in the display and is always **STATS,TYPE=VTAM** for this message group.

IST1227I

- *dddd* is a storage estimates function ID number assigned by VTAM. It can be up to five digits in length and is displayed without leading zeros.
- Possible function ID numbers and their descriptions follow:
 - 2 value = VIT TABLE SIZE**
value represents the number of megabytes allocated for the VTAM internal trace table.
 - 5 value = CHANNEL-ATTACHED CONTROLLERS**
value represents the number of channel-attached communication controllers that are defined to and owned by this VTAM. *value* includes one resource internally defined by VTAM.
 - 6 value = MAXBFRU FOR CHANNEL-ATTACHED CONTROLLERS**
value represents the sum of the values coded for the MAXBFRU operands for all channel-attached communication controllers defined to this VTAM.
 - 7 value = INTERCONNECT CONTROLLERS FOR *major*node**
value represents the number of IBM 3172 Interconnect Controllers defined in this VTAM for *major*node.
 - 8 value = XCA MAJOR NODES *major*node**
value represents the number of external communication adapters defined in this VTAM with VBUILD, TYPE=XCA definition statements.
 - 9 value = 3172 CONNECTIONS FOR *major*node**
value represents the number of unique CUADDR operands specified on the PORT definition statements for external communication adapter (XCA) *major*node.
 - 10 value = TOTAL LINE STATEMENTS FOR XCA MAJOR NODES**
value represents the number of LINE statements for all external communication adapter (XCA) major nodes.
 - 11 value = CHANNEL-TO-CHANNEL ATTACHMENTS**
value represents the number of channel-to-channel (CTC) lines that are defined to VTAM with VBUILD,TYPE=CA definition statements and GROUP definition statements that specify LNCTL=CTCA. Multipath channel attached resources are included under **ID 120**.
 - 12 value = TOTAL MAXBFRU FOR CTC ATTACHMENTS**
value represents the sum of the values coded for all MAXBFRU operands for channel-to-channel (CTC) attachments defined in this VTAM.
 - 13 value = CTC TOTAL MAXBFRU CROSS DOMAIN**
value represents the sum of the values coded for all MAXBFRU operands for channel-to-channel (CTC) attachments to this VTAM but defined in other VTAMs.
 - 14 value = CA CLUSTER CONTROLLER TOTAL**
value represents the number of cluster controllers that are channel attached to this VTAM.
 - 15 value = SNA PU TOTAL MAXBFRU**
value is the sum of the values coded for all MAXBFRU operands for channel attached SNA PUs activated from this VTAM.
 - 16 value = LOCAL NON-SNA TERMINALS**
value represents the number of local non-SNA terminals that are defined on LOCAL definition statements that are part of local non-SNA major nodes.
 - 17 value = NETVIEW PIU TRACE BUFFER SIZE**
value represents the size of the NetView PIU trace buffers.
 - 18 value = NETVIEW PIU TRACE BUFFERS**
value represents the number of NetView PIU trace buffers.
 - 19 value = NETVIEW SAW BUFFER SIZE**
value represents the size of all NetView session awareness (SAW) buffers.
 - 20 value = NETVIEW SAW BUFFERS**
value represents the number of NetView session awareness (SAW) buffers.
 - 21 value = ICA DEVICES**
value represents the number of integrated communication-adapter (ICA) devices.

- 22 value = DESTINATION SUBAREAS**
value represents the number of unique type 4 and 5 nodes with which this VTAM will communicate. *value* always includes one resource internally defined by VTAM.
- 45 value = DEPENDENT LU TOTAL FOR *majornode***
value represents the total number of dependent LUs defined under *majornode* with VBUILD, TYPE=LOCAL coded.
- 46 value = INDEPENDENT LU TOTAL**
value represents the total number of independent LUs for which VTAM will provide boundary function services.
- 47 value = MAXIMUM SUBAREA**
value represents the maximum subarea number allowed in this SSCP.
- 48 value = DEFINED PU TOTAL**
value represents the total number of PUs that are defined in this VTAM.
- 49 value = ACTIVE PU TOTAL**
value represents the total number of PUs that are active in VTAM.
- 50 value = DEFINED LU TOTAL**
value represents the number of device type LUs defined in this VTAM.
- 51 value = ACTIVE LU TOTAL**
value represents the total number of LUs that are active in VTAM.
- 52 value = ACTIVE DEPENDENT LU TOTAL**
value represents the total number of dependent LUs that are active under a VBUILD TYPE=LOCAL major node.
- 53 value = LOCAL LU-LU SESSIONS**
value represents the number of sessions with one or both session partners defined to this VTAM under VBUILD,TYPE=LOCAL major nodes.
- 54 value = PERSISTENT LU-LU SESSIONS**
value represents the number of sessions that exist with persistent LU-LU session-capable applications owned by this VTAM.
- 55 value = LU TOTAL TSO SESSIONS**
value represents the number of sessions with a time-sharing option (TSO) application program running on this VTAM. This includes local, cross-domain, and cross-network resources.
- 56 value = TOTAL APPL SESSIONS**
value represents the number of sessions with application programs running on this VTAM. This includes local, cross-domain, and cross-network resources.
- 57 value = LU6.2 APPLICATIONS**
value represents LU 6.2 applications that will open an application control block (ACB) in this VTAM. If the node being displayed supports APPN, *value* always includes one resource internally defined for APPN.
- 58 value = LU6.2 SESSIONS**
value represents LU 6.2 sessions with application LUs that are owned by this VTAM.
- 60 value = ICSF ENCRYPTION SERVICES**
value represents the total number of LU-LU sessions as well as sessions between an application and another LU that will use ICSF encryption services. The ENCR operand on the APPL definition statement must be specified as REQD, COND, SEL, or OPT. The ENCR operand on the LU definition statement must be specified as REQD or OPT for encryption to be used.
- 61 value = SNA DATA COMPRESSION SESSIONS**
value represents the number of sessions that will use SNA data compression functions.
- 63 value = RECOVERABLE SESSIONS**
value represents the number of sessions to be recovered during a network failure. *value* includes all SSCP-LU and LU-LU sessions.

- 64** *value* = **CURRENT NUMBER OF SESSION PARTNERS**
value represents the total number of LUs, applications, and cross-domain resources that are currently in session.
- 65** *value* = **NUMBER OF LINES DEFINED**
value represents the number of lines defined on LINE statements that are owned by this VTAM. *value* includes all NCP lines owned by this SSCP as well as all lines defined under VTAM major nodes.
- 66** *value* = **SWNET STATEMENTS**
value represents the number of VBUILD statements for this VTAM that have TYPE=SWNET specified. *value* always includes one statement internally defined by VTAM.
- 67** *value* = **PU STATEMENTS UNDER SW LINES**
value represents the number of PU statements under all group statements that have DIAL=YES specified.
- 68** *value* = **MAXNO OPERAND**
value represents the sum of values coded for the MAXNO operand on all VBUILD TYPE=SWNET definition statements.
- 69** *value* = **MXGRP OPERAND**
value represents the sum of values coded for the MXGRP operand on all VBUILD TYPE=SWNET definition statements. VTAM adds 1 to *value* for each group statement in the major node.
- 70** *value* = **PATH STATEMENTS**
value represents all PATH definition statements under all PUs defined for switched major nodes.
- 71** *value* = **LU-APPL SESSIONS**
value represents the number of LUs owned by this VTAM in session with an application program owned by this VTAM (for example, a terminal logged on to CICS®). *value* includes all dynamically defined LUs.
- 73** *value* = **SAME NETWORK MULTI-NODE LU SESSIONS**
value represents the number of non-LU 6.2 sessions in which one LU is owned by this VTAM and the other LU is owned by another node or VTAM in the same network.
- 74** *value* = **CROSS NETWORK APPL SESSIONS**
value represents the number of cross-network sessions between an application program in this VTAM and a resource owned by a VTAM in another network.
- 77** *value* = **SAME DOMAIN LU6.2 SESSIONS**
value represents LU 6.2 sessions in which both LUs are owned by this VTAM.
- 78** *value* = **SAME NETWORK MULTI-NODE LU6.2 SESSIONS**
value represents the number of LU 6.2 sessions in which one LU is owned by this VTAM and the other LU is owned by another node or VTAM in the same network.
- 79** *value* = **CROSS NETWORK LU6.2 SESSIONS**
value represents the number of LU 6.2 sessions in which one LU is owned by this VTAM and the other LU is owned by a VTAM in another network.
- 80** *value* = **NETWORK INDEPENDENT LU TOTAL**
value represents the number of independent LUs either locally, remotely or CDRSC defined. All independent LUs will be represented as CDRSCs by VTAM.
- 81** *value* = **DYNAMICALLY DEFINED LU TOTAL**
value represents the number of dependent LUs which will be dynamically defined to PUs which are capable of receiving PSIDs (for example, 3174) when they are powered on.
- 99** *value* = **VTAM CONFIGURATION .**
value represents the node type in the VTAM start parameters. If the node type has not been specified, *value* will be SUBAREA.
- 100** *value* = **DYNAMIC DIRECTORY ENTRIES**
value represents the number of different LUs and CPs this VTAM needs to locate or access for session establishment or network management. If this VTAM is a central directory server, *value* also includes all resources that have been centrally registered with this VTAM.
- 101** *value* = **CENTRAL DIRECTORY SERVER SUPPORT**
value represents the value specified for CDSERVR in the VTAM start parameters.
 – If *value* represents CDSERVR=YES, this VTAM is a central directory server for the network.

– If *value* represents **CDSERVR=NO**, this VTAM is not a central directory server for the network.

102 value = REGISTERED DIRECTORY ENTRIES

value represents the number of different destination LUs and CPs of other nodes that are registered to this VTAM. If VTAM supports APPN, *value* always includes one resource internally defined for APPN.

103 value = SYSTEM DEFINED DIRECTORY ENTRIES

value represents the number of different destination LUs and CPs that are system defined in the VTAMLIST for this VTAM.

104 value = ADJACENT END NODES

value represents the number of end nodes that have established CP-CP sessions with this VTAM.

106 value = CENTRAL DIRECTORY SERVER

value represents the number of central directory servers which exist in this network.

107 value = ADJACENT NETWORK NODES

value represents the number of network nodes which have established CP-CP sessions with this VTAM.

108 value = APPN CLASS OF SERVICE

value represents the total number of APPN classes of service defined in this VTAM.

109 value = NETWORK NODES IN THE NETWORK

value represents the total number of network nodes known to this VTAM.

111 value = CONNECTION NETWORKS

value represents the total number of connection networks (virtual nodes) known to this VTAM.

112 value = SAME NETWORK MULTI-NODE APPL SESSIONS

value represents the number of non-LU 6.2 sessions between application programs in this VTAM and LUs owned by another node or VTAM in the same network (for example, CICS in session with a terminal owned by another VTAM).

113 value = PARALLEL SESSION PER LU

value represents the average number of sessions for each LU with applications owned by this VTAM.

116 value = INTERMEDIATE ROUTED SESSIONS

value represents the number of sessions that this VTAM handles or routes for which neither session partner is defined to this VTAM.

119 value = CROSS NETWORK LOGICAL UNIT SESSIONS

value represents the number of non-6.2 LUs owned by this VTAM in session with a resource owned by another node or VTAM in another network (for example, a terminal logged onto CICS in another network).

120 value = MULTIPATH CHANNEL MAJOR NODES

value represents the number of channel-attached major nodes with multipath channel (MPC) support. MPC major nodes contain VBUILD,TYPE=CA definition statements with GROUP,LNCTL=MPC in the definition statement.

121 value = MPC READ SUBCHANNEL ADDRESSES

value represents the number of subchannel addresses with READ= specified on the LINE definition statement defined for a channel-attached major node for MPC support.

122 value = MPC WRITE SUBCHANNEL ADDRESSES

value represents the number of subchannel addresses with WRITE= specified on the LINE definition statement defined for a channel-attached major node for MPC support.

123 value = MPC READ BUFFER

value represents MAXBFRU for all READ subchannels defined in this VTAM. The same MAXBFRU value should be used for all READ subchannels that are defined in the same MPC major node. The number entered indicates the number of pages VTAM allocates to receive data on the MPC CTC connection.

124 value = MPC WRITE BUFFER

value represents the sum of MAXBFRU for all WRITE subchannels defined in the adjacent VTAMs that are channel attached to this VTAM for MPC support. WRITE subchannel buffer size is dependent on the MAXBFRU value for READ subchannel on the other side of VTAM. The same MAXBFRU value should be used for all WRITE subchannels that are defined in the same MPC major node. The number entered indicates the number of pages VTAM allocates to send data on the MPC CTC connection.

- 125 value = APPLICATION SESSIONS**
value represents the number of sessions in which both session partners are applications defined to this VTAM.
- 140 value = MAXIMUM DIRECTORY SIZE**
value represents the value specified or defaulted for the DIRSIZE start option.
- 141 value = MAXIMUM TRS ROUTING TREES**
value represents the value specified or defaulted for the NUMTREES start option.
- 142 value = END NODE TRANSMISSION GROUPS**
value represents the number of APPN transmission groups between this node and attached end nodes.
- 143 value = NETWORK NODE TRANSMISSION GROUPS**
value represents the number of APPN transmission groups between this node and attached network nodes.
- 144 value = VIRTUAL NODE TRANSMISSION GROUPS**
value represents the number of APPN transmission groups between this node and attached virtual nodes.
- 151 value = DEPENDENT LU TOTAL FOR *majornode***
value represents the total number of dependent LUs defined in a PU type 4 or 5 major node.
- 152 value = ACTIVE DEPENDENT LU REQUESTERS**
value represents the number of dependent LU requesters currently being served by this VTAM dependent LU server.
- 153 value = ACTIVE DLUR SERVED PU TOTAL**
value represents the total number of physical units owned by the dependent LU requesters served by this VTAM dependent LU server.
- 154 value = ACTIVE DLUR SERVED LU TOTAL**
value represents the number of dependent logical units owned by the dependent LU requesters served by this VTAM dependent LU server.
- 155 value = VR-BASED TRANSMISSION GROUPS**
value represents the number of virtual-route-based transmission groups between this node and other VTAM CDRMs.
- 156 value = CONNECTION NETWORK DYNAMIC TGS**
value represents the number of dynamic transmission groups activated by this node for use with connection networks. VTAM will create these dynamic transmission groups when both of the following exist:
- A session is established between this VTAM and another node connected via the same virtual node.
 - There is no existing predefined line to the other node.
- 157 value = TRANSPORT RESOURCE LIST ENTRIES**
value represents the number of transport resource list entries (TRLEs) active in this VTAM.
- 159 value = ADJACENT CLUSTER TABLE CPNAME ENTRIES**
value represents the number of predefined or dynamic entries in the active adjacent cluster table. The adjacent cluster table is used by APPN Directory Services to select the sequence of nodes to search during border node search logic.
- 160 value = CP-CP SESSIONS**
value represents the number of CP-CP sessions between this node and other nodes.
- 161 value = HIGHEST ELEMENT ADDRESS ASSIGNED**
value represents the highest network address element number that has been assigned by VTAM. *value* is displayed in decimal. The maximum number of element addresses that can be assigned is 65 536 (X'0000' through X'FFFF').
- 162 value = HIGHEST EXTENDED ELEMENT ADDRESS ASSIGNED**
value represents the highest extended network address element number that has been assigned by VTAM. *value* is displayed in decimal. The maximum number of element addresses that can be assigned is 16 777 216. See the ENHADDDR start option information in z/OS Communications Server: SNA Resource Definition Reference for more information.
- 164 value = NUMBER OF NON-EXTENDED ELEMENT ADDRESSES IN USE**
value represents the number of network element addresses currently in use by VTAM. *value* is displayed in decimal. The maximum number of element addresses that can be assigned is 65 536.

IST1346I

165 *value* = NUMBER OF EXTENDED ELEMENT ADDRESSES IN USE

value represents the number of extended network element addresses currently in use by VTAM. *value* is displayed in decimal. The maximum number of element addresses that can be assigned is 16 777 216. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

170 *value* = IDS3270 TOTAL SESSIONS MONITORED

value represents the total number of sessions monitored by the 3270 Intrusion Detection Services. *value* is displayed in decimal.

171 *value* = IDS3270 CURRENT SESSIONS MONITORED

value represents the current number of sessions being monitored by the 3270 Intrusion Detection Services. *value* is displayed in decimal.

172 *value* = IDS3270 SESSIONS MONITORED SINCE ENABLE

value represents the total number of sessions monitored by the 3270 Intrusion Detection Services since the last time monitoring was enabled. *value* is displayed in decimal.

173 *value* = IDS3270 TOTAL INCIDENTS FOUND

value represents the total number of problems found by the 3270 Intrusion Detection Services. Message group IST2424I was issued to describe the problems. *value* is displayed in decimal.

174 *value* = IDS3270 TOTAL SUPPRESSED CONSOLE REPORTS

value represents the total number of times the 3270 Intrusion Detection Services suppressed the reporting of an incident by the IST2424I message group. However, a single message IST2424I is still written to the SYSLOG or console. *value* is displayed in decimal.

IST1315I

VTAM issues this message when the number of statistics to be displayed exceeds the value specified for the MAX or NUM operand.

keyword is either MAX or NUM.

number is the value specified for either the MAX or NUM operand.

IST1345I

This message is a header message for the information displayed in message IST1227I.

IST1349I

dddd-ddddd-ddd is the component identifier assigned by VTAM. This identifier is used by IBM for VTAM program maintenance.

See the explanation of opening and closing an application program in z/OS Communications Server: SNA Programming for a description of vector lists and more information about the component identifier.

IST1454I

count is the number of statistics displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1346I NCP DOES NOT SUPPORT CONNECTION NETWORK FUNCTION

Explanation: This message is part of a group of messages that VTAM issues in response to a VARY ACT for a line when the activation of the logical connection to the virtual node fails. The first message in the group is IST1166I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1347I **INSUFFICIENT STORAGE TO DELAY DISCONNECT OF** *puname*

Explanation: VTAM issues this message when there is insufficient storage to delay the disconnection of a physical unit that was defined as DISCNT=DELAY.

puname is the name of the physical unit being disconnected.

System action: VTAM will attempt to disconnect the physical unit without delay.

- If message IST169I is issued for the same physical unit, the disconnection without delay was successful.
- If message IST348I is issued for the same physical unit, there was insufficient storage to disconnect the physical unit even without delay.

Operator response:

- If message IST169I follows this message, no action is required.
- If message IST348I follows IST1347I, enter a VARY INACT, TYPE=FORCE command for *puname*.
- If you have frequent command failures because of insufficient storage:
 - Issue the DISPLAY BFRUSE command. Message IST981I displays total VTAM private storage information. Issue the DISPLAY STORUSE command to display storage usage for storage pools.
 - Save the system log and request a console dump for problem determination.

System programmer response: If insufficient storage is a recurring problem, you may need to increase storage as required.

See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on storage-related problems.

See the z/OS Communications Server: SNA Operation for more information.

Routing code: 2

Descriptor code: 5

IST1348I **VTAM STARTED AS** *nodetype*

Explanation: VTAM issues this message in the following situations:

- During VTAM initialization
- In response to the DISPLAY VTAMOPTS command

When this message is issued in response to a DISPLAY VTAMOPTS command, it is part of a message group headed by message IST1188I. See that message for a complete description of the group.

- In response to the DISPLAY TOPO command

This message is issued when the DISPLAY TOPO command is issued from an end node or a migration data host and a command keyword that is not valid because it does not specify a local topology database entry. The topology database entry specified must be the local node or a transmission group originated at the local node. See the z/OS Communications Server: SNA Operation for the limitations on the DISPLAY TOPO commands issued on end nodes and migration data hosts.

nodetype indicates the node type of this host and is determined by start options that are specified or defaulted. Possible values are:

- END NODE
- INTERCHANGE NODE
- MIGRATION DATA HOST
- NETWORK NODE
- SUBAREA NODE

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1349I COMPONENT ID IS *dddd-ddddd-ddd***Explanation:** VTAM issues this message in the following situations:

- During VTAM initialization
When this message is issued during VTAM initialization, it is preceded by message IST020I.
- In response to the DISPLAY VTAMOPTS command
When this message is issued in response to a DISPLAY VTAMOPTS command, it is part of a message group headed by message IST1188I. See that message for a complete description of the group.
- In response to the DISPLAY STATS,TYPE=VTAM command
When this message is issued in response to a DISPLAY STATS,TYPE=VTAM command, it is part of a message group headed by message IST1345I. See that message for a complete description of the group.

dddd-ddddd-ddd is the component identifier assigned by VTAM. This identifier is used by IBM for VTAM program maintenance.

See the z/OS Communications Server: SNA Programming for more information about vector lists and the component identifier.

System action: Processing continues.**Operator response:** None.**System programmer response:** None.**Routing code:** 2**Descriptor code:** 5

IST1350I DEFINITION ERROR: *reason***Explanation:** VTAM issues this message to provide additional information about definition errors that are displayed in messages IST322I and IST323I.

reason indicates the cause of the error and can be one of the following:

DATA LIMIT EXCEEDED AT DLCADDR ID *id*

The maximum number of bytes of data that can be specified for all the DLCADDRs on a PATH definition statement is 252 bytes. This includes two bytes of subvector headers for each DLCADDR that has been coded. The data limit was exceeded while VTAM was processing DLCADDR ID *id*. The entire definition statement containing this DLCADDR ID is not usable.

DELAY NOT VALID FOR PU OR VBUILD TYPE

DISCNT=DELAY was specified in the definition but the PU or VBUILD type is incorrect. When DELAY is specified, the PU type must be 2.0 or 2.1 and the VBUILD type must be MODEL or SWNET. The default value is used for the DISCNT parameter.

DLCADDR ID *id* – DATA IS NOT TYPE *type*

The data provided with DLCADDR subfield ID *id* is inconsistent with the specified data type. The entire definition statement containing this DLCADDR ID is not usable.

DLCADDR ID *id* – DATA TYPE IS NOT VALID

The DLCADDR data type must be D, C, X, A, or BCD. The entire definition statement containing this DLCADDR ID is not usable.

DLCADDR ID *id* IS NOT BETWEEN 1–96

The specified subfield ID must be a decimal in the range 1 - 96, inclusive. The entire definition statement containing this DLCADDR ID is not usable.

Note: If this message refers to the first DLCADDR coded in a PATH definition statement, the system will do a limited amount of checking on subsequent DLCADDRs encountered for the PATH.

DLCADDR [*id*] REQUIRES AT LEAST 3 VALUES

One DLCADDR on the PATH definition statement does not have all the required information specified. If the DLCADDR ID was specified, *id* is displayed. The entire definition statement containing this DLCADDR ID is not usable.

Note: If this message refers to the first DLCADDR coded in a PATH definition statement, the system will do a limited amount of checking on subsequent DLCADDRs encountered for the PATH.

DUPLICATE DLCADDR ID *id* IS IGNORED

Subfield ID *id* occurs more than once, and the specifications do not have a DLCADDR with a subfield ID of 1 between them. The second specification is ignored.

DYNTYPE VALID ONLY ON MODEL PU

DYNTYPE was specified on a PU definition but the VBUILD type is incorrect. When DYNTYPE is specified, the VBUILD type must be MODEL. The PU containing the DYNTYPE parameter and all subnodes associated with the PU are not usable.

FIRST DLCADDR ID MUST BE 1

The first DLCADDR on the definition statement does not have a subfield ID of 1. The entire definition statement containing this DLCADDR ID is not usable.

Note: Since this message refers to the first DLCADDR coded in a definition statement, the system will perform a limited amount of checking on subsequent DLCADDRs encountered.

HOSTNAME NOT VALID WITH IPADDR

When specified on a PATH statement as part of a switched major node definition, the HOSTNAME keyword is not valid if IPADDR is also specified on that PATH statement.

HPR NOT VALID WHEN HPR=NONE

The HPR keyword is not valid when the host node is configured as not HPR-capable (HPR=NONE, or HPR=(NONE,NONE)).

INVALID TO SPECIFY THIS HOST EN ON NETSRVR

It is not valid to specify the CP name of this host end node on a NETSRVR definition statement.

IPADDR NOT VALID WITH HOSTNAME

When specified on a GROUP statement as part of an XCA major node definition, the IPADDR keyword is not valid if HOSTNAME is also specified on that GROUP statement.

LINKNUM IGNORED DUE TO PORTNUM CONFLICT

The second operand, LINKNUM, specified on PORTNAME is only used for an OSA-Express port operating in QDIO mode customized for LAN emulation. The LINKNUM operand is mutually exclusive with the PORTNUM operand of the TRLE definition statement. The LINKNUM value is ignored.

LLERP NOT VALID FOR LOCAL SNA PUS

LLERP is not a valid keyword when coded on a PU statement in a local SNA definition deck.

LLERP NOT VALID WHEN HPR=NONE

LLERP is not a valid keyword for the GROUP, LINE, or PU statement if HPR=NONE was coded as a start option.

LLERP ONLY VALID WHEN HPR=YES

LLERP is not a valid keyword on the PU statement if HPR=NO was also coded on the PU statement.

LMI PU NOT VALID IN FRSESET

An attempt was made to use a local management interface (LMI) protocol PU in the FRSESET definition in message IST323I, and this is not valid. See the *NCP, SSP, and EP Resource Definition Reference* for information on the LMI keyword.

MNPS NOT SUPPORTED IN THIS ENVIRONMENT

PERSIST=MULTI is only valid if the VTAM on which it resides is running in an environment that supports multinode persistent sessions. The environmental requirements are:

- VTAM is running in a sysplex (non-local mode).
- The VTAM start parameter STRMNPS must specify a valid structure name, or the STRMNPS start option should not be specified.

IST1350I

- VTAM must be defined as an APPN node (NODETYPE=EN or NODETYPE=NN start option) that is a rapid transit protocol (RTP) level node (HPR=RTP start option).

Note: If PERSIST=MULTI is specified on a non-modeled application deck at a Network Node (NN), it is not supported. See the z/OS Communications Server: SNA Network Implementation Guide. Change the application deck to be a modeled application. For example change the last character in the name of the application to an * and it would now be a modeled application.

MORE THAN ONE EE PU MODEL DEFINED

Only the first EE PU model activated is used. This EE PU model activation is ignored because it is not the first.

MORE THAN ONE RTP PU MODEL DEFINED

Only the first RTP PU model activated is used. This RTP PU model activation is ignored because it is not the first.

MORE THAN ONE VN PU MODEL DEFINED

Only the first VN PU model activated is used. This VN PU model activation is ignored because it is not the first.

MORE THAN ONE XCF PU MODEL DEFINED

Only the first XCF PU model activated is used. This XCF PU model activation is ignored because it is not the first.

puname* ALREADY USED IN *frsesetname

puname cannot be used in the FRSESET definition in message IST323I because it has already been either statically or dynamically defined in FRSESET *frsesetname*.

***puname* DEFINED BUT NOT USED IN FRSESET**

puname is correctly defined in the NCP, but is not being used in the FRSESET definition in message IST323I.

***puname* NOT PREVIOUSLY DEFINED IN NCP**

- *puname* has been used in the FRSESET definition in message IST323I, but is not defined in the NCP.
- The OWNER= value in the FRSESET is different than the physical resource pointed to by the PHYSRSC operand.
- The NETID on the NCP build macro is different than the NETID on VTAM.

STATIC AND DYNAMIC NOT ALLOWED IN FRSESET

The FRSESET definition in message IST323I contains both statically and dynamically defined PUs. All PUs in a FRSESET must be either static or dynamic.

RTPONLY=YES REQUIRES START OPTION HPR=RTP

RTPONLY=YES was specified for an adjacent CP definition on a border node that did not specify RTP as the first operand on the HPR= start option. The use of RTPONLY=YES requires that HPR=RTP or HPR=(RTP,RTP|ANR|NONE) be specified for the HPR start option.

VRTG NOT VALID FOR CROSS-NET CDRM

The VRTG keyword is not valid when specified on a CDRM statement where the corresponding NETWORK statement NETID is not the same network as this node.

VRTG NOT VALID FOR HOST CDRM

The VRTG keyword is not valid when specified on the host CDRM (SUBAREA specified equals the subarea number of this node).

VRTG ONLY VALID FOR ICN OR MDH

The VRTG keyword is not valid when the node is configured as an APPN or a subarea node. It is valid only when the node is configured as an interchange network node or a migration data host.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Use the information in messages IST322I, IST323I, and this message to assist you in correcting the error.

See the z/OS Communications Server: SNA Resource Definition Reference for more information about VTAM definition statements. See the *NCP, SSP, and EP Resource Definition Reference* for more information about NCP definition statements.

Routing code: 2

Descriptor code: 5

IST1351I DLURNAME DIAL NUMBER PID GID CNT

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY PATHS command. A complete description of the message group follows.

```

IST1351I  DLURNAME          DIAL NUMBER          PID GID CNT
IST168I   dlurname        {phonenum|linename|blanks.}  pid gid cnt {AVA|NAV} {MAN|AUT|DIR}
[IST1575I DIALNO PID: pid[instance]]
[IST1318I parameter_value]
[IST1319I parameter_value]
:
IST314I  END

```

IST1351I

This message is a header message for the information displayed in message IST168I.

DLURNAME is the dependent LU requester (DLUR) name.

IST168I

dlurname is the dependent LU requester name.

phonenum is a telephone number (for non-X.21 lines).

linename is a line name (for X.21 lines).

pid is the path identifier (PID).

gid is the group identifier (GID) for a group of paths across all physical units.

cnt is the number of times the dial operation is to be tried again at the NCP.

AVA indicates that the path is available for use by VTAM.

NAV indicates that the path is not available for use by VTAM.

MAN indicates manual dial.

AUT indicates automatic dial for non-X.21 lines.

DIR indicates direct dial for X.21 lines.

IST1318I

parameter_value is the first 60 characters of the DIALNO value specified on the PATH definition statement, when the number of characters exceeds 32.

IST1319I

This message is used to display overflow information from *parameter_value* in message IST1318I.

IST1575I

- This message is issued when DIALNO operand specified on the PATH definition statement exceeds 32 characters and cannot be displayed in message IST168I.

pid is the path identifier specified on the PATH definition statement.

instance indicates that the *parameter_value* in messages IST1318I and IST1319I that follow correspond to the *instance* instance of the message IST168I with *pid* of 000. You must count the group of IST168I messages to find the *instance* instance of message IST168I with a *pid* of 000. *instance* is only displayed when *pid* is 000.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1352I DLUR NAME DLUS CONWINNER STATE DLUS CONLOSER STATE

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY DLURS command. The display lists the dependent LU requesters (DLURs) that are supported by the dependent LU server (DLUS). It also displays the CPSVRMGR session pipe status. The CPSVRMGR pipe consists of two LU 6.2 sessions, a contention winner (conwinner) and a contention loser (conloser). The states of both sessions are displayed.

```
IST350I  DISPLAY TYPE = DEPENDENT LU REQUESTER
IST1352I  DLUR NAME          DLUS CONWINNER STATE    DLUS CONLOSER STATE
IST1353I  dlurname          conwinner_state      conloser_state
IST314I  END
```

IST1352I

This message is a header message for the information displayed in message IST1353I.

IST1353I

- *dlurname* is the network-qualified CP name of the dependent LU requester in the form *netid.name*.
- *conwinner_state* is the status of the DLUS contention winner session to the specified DLUR. The DLUS sends data on the DLUS contention winner session.
- *conloser_state* is the status of the DLUS contention loser session to the specified DLUR. The DLUS receives data on the DLUS contention loser session.
- Possible values of *conwinner_state* and *conloser_state* are:
 - ACTIVE
 - INACTIVE
 - PENDING ACTIVE
 - PENDING INACTIVE
 - RESET

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1353I *dlurname conwinner_state conloser_state*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY DLURS command. The first message in the group is IST1352I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1354I DLUR NAME = *dlurname* MAJNODE = *majnode*

Explanation: This message is part of several message groups that VTAM issues:

- When a connection request for a DLUR served physical unit is rejected. The first message in that group is IST680I. See the explanation of that message for a complete description.
- In response to a DISPLAY ID=*dlur_pu* command.
 - dlurname* is the network-qualified CP name of the dependent LU requester (DLUR) in the form *netid.name*. *dlurname* is the DLUR associated with the physical unit specified on the ID operand of the command.
 - majnode* is the name of the switched major node of the physical unit specified on the ID operand of the command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1355I **PHYSICAL UNITS SUPPORTED BY DLUR** *dlurname*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY ID=*dlurname* command. It is a header message for IST089I, which contains information on the PUs that are supported by the DLUR specified on the DISPLAY command. A complete description of the message subgroup follows the example.

```
IST1355I PHYSICAL UNITS SUPPORTED BY DLUR dlurname
IST089I  nodename TYPE = nodetype, status
:
```

IST1355I

dlurname is the name of the CDRSC representing the DLUR that is supporting the physical units being displayed.
dlurname is the network-qualified CP name of the dependent LU requester (DLUR) in the form *netid.name*.

IST089I

nodename is the physical unit that is supported by *dlurname*.

nodetype is always PU.

status is the status of the physical unit. See the z/OS Communications Server: IP and SNA Codes for more information on *status*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1356I **NETWORK NODE DOES NOT PROVIDE REQUIRED SERVER FUNCTION**

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1110I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1357I **CPCP**

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,ID=*cp_name*,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=*orig_cp_name*,DEST=*dest_cp_name* or DISPLAY TOPO,ORIG=*orig_cp_name*,TGN=*tgn*. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1358I **NO QUALIFYING MATCHES** *for_name*

Explanation: VTAM issues this message when there are no resource names found that match the wildcard name specified on the ID operand of the DISPLAY command and other restrictions identified by keywords on the command (e.g. SCOPE, IDTYPE). It is issued for the following commands:

```
DISPLAY APPLS
DISPLAY CDRMS
DISPLAY CDRSCS
```

IST1359I

DISPLAY CLSTRS
DISPLAY EE
DISPLAY EEDIAG
DISPLAY GROUPS
DISPLAY GRAFFIN
DISPLAY LINES
DISPLAY MAJNODES
DISPLAY PENDING
DISPLAY RSCLIST
DISPLAY STATIONS
DISPLAY STATS,TYPE=CFS
DISPLAY SRCHINFO
DISPLAY TERMS
DISPLAY TGPS

for_name is the name specified on the ID operand of the DISPLAY command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1359I MEMBER NAME OWNING CP SELECTABLE APPC

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID=*generic_name* command. A complete description of the message group follows.

```
IST075I  NAME = generic_name, TYPE = GENERIC RESOURCE
IST1359I  MEMBER NAME          OWNING CP   SELECTABLE  APPC
IST1360I  member_name         owning_cp  selectable  appc
IST1360I  member_name         owning_cp  selectable  appc

:
IST2210I  GR PREFERENCE TABLE ENTRY = entryname
IST2202I  GREXIT   = grexit   WLM       = wlm     LOCLU   = loclu
IST2204I  LOCAPPL = locappl  PASSOLU   = passolu
[IST1393I  GENERIC RESOURCE NAME RESOLUTION EXIT IS exit_name]
IST314I  END
```

IST075I

This message identifies the type of information in the display. The type is always GENERIC RESOURCE for this message group.

The *generic_name* value is the name of the resource that is displayed. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for more information.

IST1360I

- The *member_name* value is the network-qualified name for the resource in the form *netid.name*. An application name registered under a generic name is called a member name.
- The *owning_cp* value is the name of the control point (CP) that owns the resource. It is in the same network as the *member_name* value.
- The *selectable* value can be one of the following:
 - YES** Indicates that the resource is available to be selected for resolution.

- NO** Indicates that the resource is not available to be selected for resolution because *owning_cp* is an end node that does not have CP-CP sessions with its network node server.
- DEL** Indicates that the application was deleted as a generic resource. The application ACB might still be open and maintaining generic resource affinities. If you want to fully delete the generic resource from VTAM and the generic resource coupling facility structure, the application ACB must be closed and the MODIFY GR DELETE command must be issued at every host in the sysplex. See the information about removing a generic resource in z/OS Communications Server: SNA Network Implementation Guide for more information.
- The *appc* value indicates whether the resource supports advanced program-to-program communication (APPC=YES on the APPL definition statement). Possible values are: YES and NO.

IST1393I

If exit resolution is performed, the *exit_name* value is used. If the user has specified that the exit should no longer be used, the message will no longer be displayed once the session has been attempted with the generic resource. VTAM will resolve the generic resource names until the user specifies another exit.

The *exit_name* value is the name of the generic resource exit.

IST2202I

- This message lists the generic resource preferences for GREXIT, WLM, and LOCLU.
- The *gredit* value indicates whether the Generic Resource exit is called during generic resource resolution. Valid values are:
 - YES** The Generic Resource exit is called during generic resource resolution.
 - NO** The Generic Resource exit is not called during generic resource resolution.
- The *wlm* value indicates whether the MVS Workload Manager is called during generic resource resolution. Valid values are:
 - YES** The MVS Workload Manager is called during generic resource resolution.
 - NO** The MVS Workload Manager is not called during generic resource resolution.
- The *loclu* value indicates whether generic resource resolution for sessions initiated from a local LU that is part of a local SNA or local non-SNA major node on this host prefers generic resource instances on this host. Valid values are:
 - YES** Generic resource resolution for sessions initiated from a local LU that is part of a local SNA or local non-SNA major node on this host prefers generic resource instances on this host.
 - NO** Generic resource resolution for sessions initiated from a local LU that is part of a local SNA or local non-SNA major node on this host does not prefer generic resource instances on this host.

IST2204I

- This message lists the generic resource preferences for LOCAPPL and PASSOLU.
- The *locappl* value indicates whether generic resource resolution for sessions initiated from an application on this host prefers generic resource instances on this host. Valid values are:
 - YES** Generic resource resolution for sessions initiated from an application on this host prefers generic resource instances on this host.
 - NO** Generic resource resolution for sessions initiated from an application on this host does not prefer generic resource instances on this host.
- The *passolu* value indicates whether generic resource resolution for third-party-initiated (CLSDST PASS) sessions prefers generic resource instances located on the OLU host. Valid values are:
 - YES** Generic resource resolution for third-party-initiated (CLSDST PASS) sessions prefers generic resource instances located on the OLU host.
 - NO** Generic resource resolution for third-party-initiated (CLSDST PASS) sessions does not prefer generic resource instances located on the OLU host.

IST2210I

IST1360I • IST1361I

- This message is the first line of a subgroup. This message is a header message for messages IST2202I and IST2204I. One subgroup is issued for either the VTAM or nameless default generic resource preferences and each named entry in the Generic Resource Preferences table.
- The *entryname* value is the name of the Generic Resource Preferences table entry that defines the subsequent GR preferences. Valid values are:

****DEFAULT****

The VTAM default generic resource preferences.

****NAMELESS****

The defined nameless Generic Resource Preferences table entry that identifies the default generic resource preferences.

entryname

The defined name of the Generic Resource Preferences table entry. This name also corresponds to the generic resource to which the generic resource preferences apply.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1360I *member_name owning_cp selectable appc*

Explanation: VTAM issues this message as part of a group of messages. The first message of this group is IST1359I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1361I *name FROM source IGNORED – NAME IS NOT VALID*

Explanation: VTAM issues this message when a request to resolve a generic resource name to a real name was made, but the resolved name was not a valid name.

name is the name that was returned because it was not valid.

source indicates the function that returned the name. Possible values are:

ISTEXCGR

The generic resource name resolution exit returned *name*, which is not a valid resource name.

WORKLOAD MANAGER

The WORKLOAD MANAGER selection exit returned *name*, which is not valid.

System action: VTAM will resolve the generic name to the real name with the least number of active sessions. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If *source* is **ISTEXCGR**, check the generic resource name resolution exit (ISTEXCGR) to ensure that it is passing back the correct information to VTAM. If message IST1366I is displayed, see "IST1366I" on page 569 for more information.

Routing code: 2

Descriptor code: 5

IST1363I **GENERIC RESOURCE NAME** *generic_name* **REPRESENTS** *resource*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID=*resource* command. The first message in the group is IST075I.

resource is the network-qualified name of the resource specified in the command and in message IST075I.

generic_name is the generic resource name given to *resource*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1364I *name* **IS A GENERIC RESOURCE NAME FOR:**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY SESSIONS command. The first message in the group is IST873I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1365I **CONNECTION ATTEMPT TO STRUCTURE** *structure_name* **FAILED**

Explanation: This message is the first of a group of messages VTAM issues in response to a connection failure to the coupling facility structure. The second message in the group gives the reason for the failure. A complete description of the message group follows.

IST1365I CONNECTION ATTEMPT TO *structure_name* FAILED

IST1366I MVS MACRO *macname* FAILED - RTN CODE= *returncode* - REASON CODE= *reasoncode*

IST314I END

IST1365I

structure_name is the name of the coupling facility structure.

IST1366I

- The connection failure was the result of a MVS macro failure.
- *macname* is the name of the MVS macro that returned the nonzero return code.
- *returncode* is the return code sent by the MVS macro.
- *reasoncode* is the reason code sent by the MVS macro.

See IST1366I for more information.

System action: See the description of message IST1366I.

Operator response: See the description of message IST1366I.

System programmer response: See the description of message IST1366I.

Routing code: 2

Descriptor code: 5

IST1366I **MVS MACRO** *macroname* **FAILED – RTN CODE=** *returncode* **– REASON CODE=***reasoncode*

Explanation: VTAM issues this message in response to a nonzero return code from an MVS macro. It can be issued alone or in a group of messages. The first message in the group is IST085I or IST1365I. See the descriptions of those messages for more information.

macroname is the name of the MVS macro which returned the nonzero return code. Possible values are:

IST1366I

ASASYMBM

The macro that performs symbolic substitution.

CSVDPYEX

The macro that provides dynamic exit services. This macro is invoked during initialization as part of setting up the interface to IBM Health Checker for z/OS.

ENFREQ

The macro that waits to connect to the coupling facility structure.

HSZCHECK

The macro that interfaces to IBM Health Checker for z/OS to manage checks. This macro is invoked during initialization as part of setting up the interface to IBM Health Checker for z/OS.

IWMGRREG

The macro that accepts information about a newly-registered instance of a generic resource.

IWMGRSEL

The macro that selects a specific real instance of a generic resource.

IXCARM

The macro that interfaces with the automatic restart manager.

IXCJOIN

The macro that places a coupling facility member in the activity state.

IXCQUERY

The macro that retrieves information about the coupling facility structure.

IXLCONN

The macro that makes the connection to the coupling facility structure.

IXLMG

The macro that collects statistics on the structure in response to a DISPLAY STATS command.

IXLREBLD

The macro that starts a rebuild for a coupling facility structure.

reasoncode and *returncode* provide additional information on the cause of the error. If *macroname* is **ENFREQ**, then *reasoncode* will always be *NA*. See the appropriate MVS manual for more information about *reasoncode* and *returncode*.

System action:

- The system action depends on the value for *macroname*:

ASASYMBM

VTAM initialization fails.

CSVDPYEX

VTAM initialization continues. VTAM checks for IBM Health Checker for z/OS are not initialized.

ENFREQ

VTAM initialization fails. In the case of APPN host-to-host channel dynamics, processing continues, but the APPN host-to-host channel dynamics function is not available for use.

HSZCHECK

VTAM initialization continues. VTAM checks for IBM Health Checker for z/OS are not initialized.

IWMGRREG

Processing continues.

IWMGRSEL

Processing continues.

IXCARM

Processing continues.

IXCQUERY

No connection to the structure is attempted.

IXLCONN

If the problem is corrected, the system attempts to reconnect with the coupling facility structure. Message IST1370I indicates that the structure has been reconnected.

IXLMG

Processing continues.

IXLREBLD

A rebuild was not started, processing continues.

Operator response:

- The operator response depends on the value for *macroname*:

ASASYMBM

Save the system log for problem determination.

CSVDYNEX

Contact the system programmer.

ENFREQ

Save the system log for problem determination.

HZSCHECK

Contact the system programmer.

IWMGRREG

None.

IWMGRSEL

None.

IXCARM

None.

IXCQUERY

Save the system log for problem determination.

IXLCONN

Save the system log for problem determination.

IXLMG

None.

IXLREBLD

None.

System programmer response:

- The programmer response depends on the value for *macroname*:

ASASYMBM

Correct the problem and restart VTAM.

CSVDYNEX

If you want VTAM checks for IBM Health Checker for z/OS to be enabled, use the return and reason codes to determine the cause of the problem, correct the problem, and restart VTAM.

ENFREQ

Correct the problem and restart VTAM.

HZSCHECK

If you want VTAM checks for IBM Health Checker for z/OS to be enabled, use the return and reason codes to determine the cause of the problem, correct the problem, and restart VTAM.

IWMGRREG

None.

IWMGRSEL

None.

IXCARM

None.

IST1367I

IXCQUERY

Correct the problem and restart VTAM.

IXLCONN

If the problem is corrected, the system will attempt to reconnect with the coupling facility structure. Message IST1370I indicates that the structure has been reconnected.

Note: If *returncode* is **08** and *reasoncode* is **xxxx081F**, the connection attempt failed because another node with the same SSCP name has connected to the same structure. A VTAM node uses its SSCP name to build a connection name which is specified on IXLCONN. Each connection to a given structure must have a unique connection name; therefore, each VTAM which connects to a given structure must have an SSCP name which is different from all other VTAM nodes connected to that structure.

IXLMG

None.

IXLREBLD

Restore connectivity from all systems in the sysplex that have lost connectivity to a coupling facility. Use D XCF,CF to display systems connected to a coupling facility. For more information about D XCF,CF see z/OS MVS System Commands.

For more information on MVS macros and the return and reason codes sent by the macros, see the following MVS documentation (the documentation must be for V5R1 or later):

ASASYMBM

z/OS MVS Programming: Assembler Services Reference ABE-HSP

CSVDYNEX

z/OS MVS Programming: Authorized Assembler Services Reference ALE-DYN

ENFREQ

z/OS MVS Programming: Authorized Assembler Services Reference EDT-IXG

HZSCHECK

IBM Health Checker for z/OS: User's Guide

IWM Prefix

z/OS MVS Programming: Workload Management Services

IXC Prefix

z/OS MVS Programming: Sysplex Services Reference

IXL Prefix

z/OS MVS Programming: Sysplex Services Reference

Routing code: 2

Descriptor code: 5

IST1367I COUPLING FACILITY STRUCTURE *structure* NOT AVAILABLE

Explanation: This message is the first of a group of messages that VTAM issues in response to a DISPLAY STATS,TYPE=CFS when the coupling facility structure cannot be accessed. A complete description of the message group follows the example.

```
IST350I  DISPLAY TYPE = STATS,TYPE=CFS
IST1367I  COUPLING FACILITY STRUCTURE structure NOT AVAILABLE
[IST1368I  CONNECTION IS PENDING]
[IST1726I  CONNECTION IS PENDING DUE TO STORAGE SHORTAGE]
IST314I  END
```

structure is the name of the coupling facility structure.

If IST1368I or IST1726I is displayed, VTAM is monitoring for changes in the coupling facility resources that would allow it to connect to *structure*. When a change occurs, VTAM will automatically attempt to connect to *structure*. If IST1368I is not displayed, VTAM is not monitoring for changes in coupling facility resources and the VARY NET,CFS,ACTION=CONNECT command will need to be issued to attempt a connection to *structure*.

System action: Processing continues.

Operator response: If IST1368I is not displayed, issue the VARY NET,CFS,ACTION=CONNECT command to attempt a connection to *structure*. Otherwise, save the system log for problem determination. See the z/OS Communications Server: SNA Operation for more information about the VARY CFS command.

System programmer response: If IST1368I or IST1726I is displayed, check the system log for previously issued messages IST1365I and IST1366I. In message IST1366I *returncode* and *reasoncode* will indicate why the connection could not be established. When the problem is corrected, VTAM will automatically attempt the connection again.

Routing code: 2

Descriptor code: 5

IST1368I CONNECTION IS PENDING

Explanation: This message is part of a message group VTAM issues to indicate that the connection to the coupling facility structure is defined and active in the coupling facility policy but VTAM currently does not have a connection. The first message in the group is IST1367I. See the explanation of that message for additional information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1369I *activity* IS IN PROGRESS

Explanation: This message is part of a message group VTAM issues in response to a DISPLAY STATS,TYPE=CF command. The first message in the group is IST1370I. See the explanation of that message for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1370I *cpname* IS CONNECTED TO STRUCTURE *structure*

Explanation: This message is issued when VTAM has successfully connected to the structure. It is also part of a group of messages that VTAM issues in response to a DISPLAY STATS, TYPE=CFS command. This message group displays the current statistics for the coupling facility structure. A complete description of the message group follows the example.

```

IST350I DISPLAY TYPE = STATS,TYPE=CFS
IST1370I cpname IS CONNECTED TO STRUCTURE structure
IST1797I STRUCTURE TYPE = type
[IST1517I LIST HEADERS = list_hdrs - LOCK HEADERS = lock_ents]
[IST1518I BASE STRUCTURE IS strname]
[IST1372I STRUCTURE structure IS BEING DUMPED]
[IST1369I activity IS IN PROGRESS]
[IST1796I SYSTEM-MANAGED DUPLEXING REBUILD IS IN PROGRESS]
IST1373I STORAGE ELEMENT SIZE = element_size
IST924I -----
IST1374I          CURRENT          MAXIMUM          PERCENT
IST1375I STRUCTURE SIZE          curr_size      max_size      percent
IST1376I STORAGE ELEMENTS      curr_elements max_elements  percent
IST1377I LIST ENTRIES          curr_entries  max_entries  percent
[IST1519I ALTERNATE STRUCTURES ARE:]
[IST1567I alt_structure alt_structure alt_structure]
[IST924I ----- ]

```

IST1370I

```
[IST2221I EXPLICITBINDPORTRANGE - START: begin_port  END: end_port]
[IST1823I LIST DVIPA SYSNAME  TCPNAME                # ASSIGNED PORTS]
[IST1824I list dvipa                                totalports]
[IST1825I          sysname tcpname                    numports]
[IST1826I          PORTS: port1 port2 port3 port4 port5 port6]
[IST1827I          port1 port2 port3 port4 port5 port6]
[IST1828I LIST listnum IS UNCLAIMED]
[IST1829I NO CLAIMED LISTS FOUND FOR THE SPECIFIED DVIPA]
[IST1830I NO CLAIMED LISTS FOUND]
[IST1834I LIST DVIPA SYSNAME TCPNAME      #ENTRIES   TGCCOUNT SEQNUMBER]
[IST1835I list dvipa]
[IST1836I          sysname tcpname      #entries   tgcount]
[IST1837I          sysname tcpname      #entries   seqnumber]
[IST1838I          LIST ENTRY KEYS:]
[IST1839I          list_entry_key]
[IST1315I DISPLAY TRUNCATED AT keyword = number]IST314I  END
```

IST1315I

This message is issued when the number of lines of sysplexports or sysplex wide security associations (SWSA) structure information to be displayed equals the value specified for the MAX or NUM operand.

keyword is either MAX or NUM.

number is the value specified for either the MAX or NUM operand.

IST1369I

- *activity* is:

REBUILD

The coupling facility structure is currently being rebuilt. Message IST1382I will be displayed later if the rebuild was terminated before it was completed. Message IST1383I will be displayed later when the rebuild is completed successfully.

IST1370I

cpname is the network-qualified name of the CP in the form *netid.name*.

structure is the name of the coupling facility structure.

IST1372I

This message is displayed if the structure is currently being dumped as the result of an MVS operator command.

structure is the name of the coupling facility structure.

IST1373I

This message shows storage element size.

element_size is the size, in bytes, of each storage element.

NA is displayed if *element_size* is temporarily unavailable.

IST1374I

This message is a header message for the information displayed in messages IST1375I, IST1376I, and IST1377I.

IST1375I

This message shows the structure size.

curr_size is the current size, in kilobytes, of the structure. This is the amount of storage currently allocated for the structure.

max_size is the maximum size, in kilobytes, of the structure. This is the value coded for the SIZE parameter on the structure definition in the CFRM policy.

percent — ***NA*** is displayed for this value.

NA is displayed if these statistics are temporarily unavailable.

IST1376I

This message shows the number of storage elements allocated for the structure.
curr_elements is the current number of storage elements allocated for the structure.
max_elements is the maximum number of elements that can be allocated for the structure at its current size.
percent is the fraction of elements in use.
 NA is displayed if these statistics are temporarily unavailable.

IST1377I

This message shows the number of list entries allocated for the structure.
curr_entries is the current number of list entries allocated for the structure.
max_entries is the maximum number of list entries that can be allocated for the structure at its current size.
percent is the fraction of entries in use.
 NA is displayed if these statistics are temporarily unavailable.

IST1517I

list_hdrs is the number of list headers currently allocated in the coupling facility structure.
lock_ents is the number of entries in the coupling facility structure's lock table. A value of zero indicates no lock table is being used.

IST1518I

This message indicates that the coupling facility structure is an alternate structure for a VTAM function that uses multiple structures.
strname is the name of the alternate structure's base structure.
 See z/OS Communications Server: SNA Network Implementation Guide for more information about base and alternate coupling facility structure.

IST1519I

This message indicates that the coupling facility structure is a base structure for a VTAM function that uses multiple structures and there are alternate structures defined. Message IST1567I follows listing all alternate structures associated with the base structure.
 See z/OS Communications Server: SNA Network Implementation Guide for more information about base and alternate coupling facility structure.

IST1567I

This message is a list of all the alternate structures associated with the base structure identified in message IST1518I.

IST1796I

The coupling facility structure is currently undergoing a duplexing rebuild. Message IXC577I will be issued when the structure reaches the duplexing established phase. See the z/OS MVS System Messages, Vol 10 (IXC-IZP) for a complete explanation of IXC557I.

IST1797I

This message shows the type of coupling facility structure.
type is the type of coupling facility structure. Possible values are: CACHE, LIST, or LOCK.

IST1823I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name and either the LIST or DVIPA keyword is specified. This message is a heading for a table showing the contents of the sysplexports CFS structure. The contents are displayed in messages IST1824I, IST1825I, IST1826I, and IST1827I.

IST1824I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name and either the LIST or DVIPA keyword is specified. This message shows

IST1370I

the list number, the dynamic virtual IP address (DVIPA) associated with the list, and the number of ephemeral ports currently assigned to SYSPLEXPORTS users of this DVIPA. If the list number is 0, this message displays EXPLICITBINDPORTRANGE in place of a DVIPA, and the number of ephemeral ports displayed is the number of ports from the explicit bind port range pool that have been allocated to TCP/IP stacks in the sysplex.

list is the list number in the sysplexports structure that contains the information described.

dvipa is the dynamic virtual IP address associated with this list number.

totalports is the number of ephemeral ports assigned to users of this DVIPA. The value is the total of all the values displayed in *numports* in the IST1825I messages for TCPIP stacks associated with this DVIPA.

IST1825I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name and either the LIST or DVIPA keyword is specified. This message shows the MVS system name and the TCPIP stack name for a TCPIP stack that is using the Coupling Facility to assign ephemeral ports for this DVIPA. It also shows the number of ephemeral ports currently assigned to that TCPIP stack.

sysname is the name of the MVS node on which the TCPIP stack is running.

tcpname is the job name of the TCPIP stack.

numports is the number of ephemeral ports assigned to users of this TCPIP stack for the DVIPA displayed in the preceding IST1824I message.

IST1826I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name, either the LIST or DVIPA keyword is specified, and SCOPE=ALL is specified. This message displays the first six ephemeral ports assigned to the users of the TCPIP stack displayed in the preceding IST1825I message. Any further assigned ports is displayed in message IST1827I.

IST1827I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name, either the LIST or DVIPA keyword is specified, and SCOPE=ALL is specified. This message displays the next six ephemeral ports assigned to the users of the TCPIP stack displayed in the preceding IST1825I message. This message is repeated as many times as necessary to display the remaining assigned ephemeral ports for this TCPIP stack.

IST1828I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name and the LIST keyword is specified. This message is displayed only if the list number specified on the LIST keyword is unclaimed. The term unclaimed means that no DVIPA is associated with that list number.

listnum is the input list number that was found to be unclaimed.

IST1829I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name and the DVIPA keyword is specified. This message is displayed only if no lists in the structure have been claimed for the specified DVIPA. The term claimed means that a DVIPA is associated with a list number.

IST1830I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name and LIST=ALL is specified. This message is displayed only if no claimed lists are found in the structure. The term claimed means that a DVIPA is associated with a list number.

IST1834I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a SWSA structure name and either the LIST or DVIPA keyword is specified. This message is a heading for a table showing the contents of the SWSA CFS structure. The contents are displayed in messages IST1835I, IST1836I, IST1837I, IST1838I, and IST1839I.

IST1835I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a SWSA structure name and either the LIST or DVIPA keyword is specified. This message shows the list number and the dynamic virtual IP address (DVIPA) associated with the list.

list is the list number in the SWSA structure containing the information described.

dvipa is the dynamic virtual IP address associated with this list number.

IST1836I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a SWSA structure name and either the LIST or DVIPA keyword is specified. This message shows the MVS system name and the TCPIP stack name for a TCPIP stack that is using the Coupling Facility to track security associations for this DVIPA. It also shows the number of security association entries currently associated with the DVIPA and the takeover/giveback count for the DVIPA.

sysname is the name of the MVS node on which the TCPIP stack is running.

tcpname is the job name of the TCPIP stack.

#entries is the number of security association entries currently associated with the DVIPA displayed in the preceding IST1835 message.

tgcount is the takeover/giveback count. It indicates the number of times the DVIPA has been taken over by another TCPIP stack or given back to the original owning stack.

IST1837I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a SWSA structure name and either the LIST or DVIPA keyword is specified. This message is displayed only for a list used to trace the outbound cryptographic distribution sequence number for a DVIPA. The message shows the MVS system name and the TCPIP stack name for a TCPIP stack that is using the Coupling Facility to track security associations for this DVIPA. It also shows the number of sequence number entries associated with the DVIPA for this list and the sequence number used for outbound cryptographic distribution for a tunnel over the DVIPA.

sysname is the name of the MVS node on which the TCPIP stack is running.

tcpname is the job name of the TCPIP stack.

#entries is the number of sequence number entries currently associated with the DVIPA displayed in the preceding IST1835 message. The value will always be 1.

seqnumber is the outbound cryptographic distribution sequence number for a tunnel over this DVIPA.

IST1838I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a SWSA structure name, SCOPE=ALL, and either the LIST or DVIPA keyword is specified. This message is a heading for a table showing the list entry keys of each entry on the list specified in the preceding IST1835I message. Each list entry key is displayed in an IST1839I message following this message.

IST1839I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a SWSA structure name, SCOPE=ALL, and either the LIST or DVIPA keyword is specified.

list_entry_key is the 32-byte list entry key (in hexadecimal format) of an entry on the list specified in the preceding IST1835I message.

IST2221I

This message is displayed if a D NET,STATS,TYPE=CFS command is issued with the STRNAME operand specifying a sysplexports structure name, and the structure has been initialized for explicit bind port range processing by a TCP/IP stack. It displays the explicit bind port range active for this structure.

The *begin_port* value is the first port in the explicit bind port range.

The *end_port* value is the last port in the explicit bind port range.

System action: Processing continues.

Operator response: ***NA*** is displayed for some statistics if the statistic is temporarily unavailable. This may

IST1372I • IST1376I

occur when the structure is being dumped (IST1372I is issued) or during the rebuild process (IST1369I is issued). If the structure is being dumped, reissue the command after the dump is complete. If a rebuild is in progress, reissue the command after the rebuild has completed.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1372I STRUCTURE *structure* IS BEING DUMPED

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. It will only be displayed if the structure is currently being dumped as the result of an MVS operator command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1373I STORAGE ELEMENT SIZE = *elementsiz*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1374I CURRENT MAXIMUM PERCENT

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1375I STRUCTURE SIZE *curr_size max_size percent*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. This message describes the size attributes, in kilobytes, of the structure. The first message in the group is IST1370I. See the explanation of this message for a complete description.

Routing code: 2

Descriptor code: 5

IST1376I STORAGE ELEMENTS *current_elements maximum_ elements percent*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1377I LIST ENTRIES *current_entries maximum_entries percent*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1378I *command* FAILED FOR *name* – GENERIC RESOURCE NAME EXISTS

Explanation: VTAM issues this message when *command* failed because the value specified for ID is already known to this node as a generic resource name. USERVARs and generic resource names cannot have the same name.

command is always F USERVAR.

name is the name specified for ID that is also a generic resource name.

System action: VTAM rejects the command.

Operator response: Reenter the command with a different USERVAR name specified on ID.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1380I DISCONNECTING FROM STRUCTURE *structure*

Explanation: VTAM issues this message when it is disconnecting from the coupling facility structure. This message is the first of a group of messages. A complete description of the message group follows.

```
IST1380I DISCONNECTING FROM STRUCTURE structure
[IST1119I FAILURE REASON - INSUFFICIENT STORAGE]
[IST2167I DISCONNECT REASON - OPERATOR COMMAND]
[IST2168I DISCONNECT REASON - NORMAL DISCONNECT]
[IST2169II FAILURE REASON - SUBTASK ABEND]
[IST2170I FAILURE REASON - VTAM HALTING]
[IST2171I FAILURE REASON - LOST CONNECTIVITY]
[IST2172I FAILURE REASON - INVALID STRUCTURE TYPE]
[IST2173I FAILURE REASON - INTERNAL COUPLING FACILITY FAILURE]
[IST2174I FAILURE REASON - INVALID CONNECTION NAME]
[IST2175I FAILURE REASON - PROCESS TIMED OUT]
[IST2176I FAILURE REASON - MVS EVENT]
[IST2177I FAILURE REASON - UNSUPPORTED COUPLING FACILITY LEVEL]
```

IST314I END

IST1119I

VTAM disconnected from the coupling facility structure because of insufficient storage in VTAM.

IST2167I

VTAM disconnected from the coupling facility structure in response to a VARY CFS operator command.

IST2168I

VTAM disconnected from the coupling facility structure because of a normal disconnect. VTAM no longer has any registered users of the coupling facility.

IST2169I

VTAM disconnected from the coupling facility structure because the connection subtask abended.

IST2170I

VTAM disconnected from the coupling facility structure because VTAM is terminating.

IST1380I

IST2171I

VTAM disconnected from the coupling facility structure because of a loss of connectivity.

IST2172I

VTAM disconnected from the coupling facility structure because a structure type was not valid.

IST2173I

VTAM disconnected from the coupling facility structure because of an internal CFS failure.

IST2174I

VTAM disconnected from the coupling facility structure because a connection nam was not valid.

IST2175I

VTAM disconnected from the coupling facility structure because a process timed out.

IST2176I

VTAM disconnected from the coupling facility structure because of an MVS event.

IST2177I

VTAM disconnected from the coupling facility structure because of an unsupported coupling facility level.

IST1380I

structure is the name of the coupling facility structure.

System action: The system does not attempt to reconnect to the coupling facility structure.

Operator response:

Message

Operator Response

IST1119I

1. Issue the DISPLAY BFRUSE command to display the storage used by the VTAM buffer pools and information about the common storage area. The total VTAM private storage information is also displayed.
2. Issue the DISPLAY STORUSE command to display storage usage for storage pools.
3. Save the system log and request a dump for problem determination.

See VTAM Operator commands in z/OS Communications Server: SNA Operation for a description of the DISPLAY BFRUSE and the DISPLAY STORUSE command. If you cannot resolve the problem, contact the system programmer.

IST2167I

None.

IST2168I

None.

IST2169I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2170I

None.

IST2171I

Use the DISPLAY XCF,CF MVS command to determine this system's connectivity to the coupling facility containing the structure. See Displaying cross system coupling facility (XCF) information in z/OS MVS System Commands for a description of the DISPLAY XCF command.

Re-establish connectivity to the coupling facility. Use the VARY NET,CFS,ACTION=CONNECT command to re-establish connectivity to the coupling facility. See VTAM Operator commands in z/OS Communications

Server: SNA Operation for a description of the VARY NET,CFS command. Save the system log for problem determination. If you can not resolve the problem, contact the system programmer.

IST2172I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2173I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2174I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2175I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2176I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2177I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

System programmer response:**Message****Programmer Response****IST1119I**

Increase storage as required. Restart VTAM to reconnect to the coupling facility structure.

See VTAM Operator commands in z/OS Communications Server: SNA Operation for a description of the DISPLAY BFRUSE and the DISPLAY STORUSE command.

See storage problem procedure in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about storage problems.

IST2167I

None.

IST2168I

None.

IST2169I

Review the system log to assist in problem determination. Contact the IBM software support center.

IST2170I

None.

IST2171I

Review the system log to assist in problem determination.

IST2172I

See Coupling facility structure attributes in z/OS Communications Server: SNA Network Implementation Guide for supported structure types. If FFST is enabled, a Probe dump ISTFSC0A will be produced.

IST2173I

Review the system log to assist in problem determination. Contact the IBM software support center.

IST2174I

Contact the IBM software support center. If FFST is enabled a Probe dump ISTFSC0B will be produced.

IST2175I

Contact the IBM software support center. If FFST is enabled a Probe dump ISTFSC11 will be produced.

IST2176I

Review the system log to assist in problem determination. Contact the IBM software support center.

IST1381I • IST1383I

IST2177I

See functions provided by VTAM in a sysplex in z/OS Communications Server: SNA Network Implementation Guide for the Coupling Facility Control Level (CFCC) needed for the VTAM function that is being implemented.

User response: Not applicable.

Problem determination: Not applicable.

Source: Not applicable.

Module: Not applicable.

Routing code: 2

Descriptor code: 5

Example: None.

IST1381I REBUILD STARTED FOR STRUCTURE *structure*

Explanation: VTAM issues this message when a rebuild has been initiated for the coupling facility structure.

structure is the name of the coupling facility structure.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1382I REBUILD HAS BEEN STOPPED FOR STRUCTURE *structure*

Explanation: VTAM issues this message to indicate that a rebuild has been stopped before it could complete. There are two reasons a rebuild will be stopped:

- The operator entered the MVS SETXCF STOP,REBUILD command.
- VTAM has determined that there is an insufficient number of connectors to the new structure to continue.
- A connector to the original structure may have a failed persistent connection and a connection may remain failed persistent if all affinities are not deleted.

structure is the name of the coupling facility structure.

System action: VTAM continues to use the old structure. Processing continues.

Operator response: If SETXCF STOP,REBUILD was not entered, save the system log for problem determination.

If the rebuild is stopped because of a failed persistent connection either reestablish the failed connection and allow the responsible application to purge the affinities or enter the MVS SETXCF FORCE, CONNECTION, CONNAME=conname, STRNAME=structure name command to force the failed persistent connection away.

System programmer response: If the operator did not enter the SETXCF STOP,REBUILD command, make sure all nodes in the sysplex have connectivity to the coupling facilities defined in the active coupling facility policy. A rebuild might be tried again by using the SETXCF START,REBUILD command.

Routing code: 2

Descriptor code: 5

IST1383I REBUILD COMPLETE FOR STRUCTURE *structure*

Explanation: VTAM issues this message to indicate that a rebuild has been completed.

structure is the name of the coupling facility structure that has been rebuilt.

System action: VTAM begins using the new structure. Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1385I ADJCLUST INFORMATION WAS IGNORED DUE TO INSUFFICIENT STORAGE

Explanation: VTAM issues this message when a border node receives adjacent cluster information, but insufficient storage was available to store the information. This is a private storage problem.

System action: Adjacent cluster routing will proceed as if the information had not been received.

Operator response: Issue the DISPLAY BFRUSE command. Message IST981I displays total VTAM private storage information.

Issue the DISPLAY STORUSE command to display storage usage for storage pools.

Save the system log and request a console dump for problem determination.

System programmer response: Increase storage as required. See the z/OS Communications Server: SNA Operation and the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on storage-related problems.

Routing code: 2

Descriptor code: 5

IST1386I DYNAMIC ALLOCATION FAILED FOR *device_address* CODE = *return_code* REASON = *reason_code*

Explanation: VTAM issues this message in response to a VARY ACT command for a channel-attached major node.

device_address is the hexadecimal address of the link station that failed.

return_code is the return code received from dynamic allocation SVC 99 and indicates the contents of Register 15.

reason_code is the reason code in the parameter list and provides information about the cause of the failure.

System action: VTAM deactivates the link station *device_address*.

Operator response:

- Verify that *device_address* is correct. Then, attempt to activate the link station again.
- If the command continues to fail, save the system log for problem determination.

System programmer response: Use the output provided and the explanation of *return_code* and *reason_code* to assist you in correcting the problem.

See the z/OS MVS Programming: Authorized Assembler Services Guide for a description of *return_code* and *reason_code*.

- If **REASON = 0214**, this indicates that the unit is not available because the device is already allocated.
- If **REASON = 0238**, this indicates that space is not available in the task input/output table (TIOT). Increase the size of the TIOT table.

If you cannot determine the reason for the failure, contact the IBM Software Support Center.

Routing code: 2

Descriptor code: 5

IST1391I DELAYED DISCONNECT OF *puname* FAILED DUE TO ABEND

Explanation: VTAM issues this message when there is an abnormal termination while attempting a delayed disconnection of a physical unit that is defined as DISCNT=DELAY. Messages IST413I, IST416I or IST931I are issued if the abnormal termination produced a dump and the system dump data set is usable at this time.

puname is the name of the physical unit which was not disconnected.

IST1392I • IST1394I

System action: The attempt to disconnect the physical unit is discontinued but other processing continues.

Operator response: Save the dump and the system log for problem determination.

If you want to disconnect this PU, enter a VARY INACT, TYPE=FORCE command for *puname*.

System programmer response: Review the dump of the abnormal termination, if available, and console log for problem determination.

Routing code: 2

Descriptor code: 5

IST1392I DISCNTIM = *seconds* DEFINED AT *source* FOR DISCONNECT

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID command for a PU type 2 or type 2.1. It is issued if the physical unit is defined as DISCNT= DELAY.

In the message text:

seconds

The value, in seconds, defined for DISCNTIM. DISCNTIM defines the length of time VTAM will delay disconnection of the PU after the last LU-LU session is terminated.

source

The source of the DISCNTIM definition. Values can be:

PU The time of delay was specified in the PU definition. It can be changed using the MODIFY RESOURCE or MODIFY DEFAULTS command with the DISCNTIM keyword.

HOST

The time of delay was specified in the host at VTAM start time in the DISCNTIM start option or by allowing it to default. It can be changed by using the MODIFY VTAMOPTS command with the DISCNTIM keyword.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1393I GENERIC RESOURCE NAME RESOLUTION EXIT IS *exit_name*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID=*generic_name* command. See the explanation of IST1359I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1394I CPNAME = *cpname* STATION ID = *stationid*

Explanation: VTAM issues this message as part of a group of messages in the following situations:

- When a connection request for resource *nodename* in message IST680I has been rejected. Either message IST081I or IST352I follows this message with more information on resources.
- When a connection request for resource *puname* in message IST1452I has been successful.

See the description of IST680I for more information.

Routing code: 8

Descriptor code: 4

IST1395I **FLDTAB = *fldname* FILTER = *filtername***

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY ID=ISTNOP command. Message IST977I is the first message in the subgroup. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1396I **DISK I/O INITIALIZATION FAILED FOR CMIP SERVICES**

Explanation: VTAM issues this message when when the OSIMGMT=YES start option or the MODIFY VTAMOPTS command has been specified and one of the following error occurs:

- Physical disk I/O failed or data that was not valid was read during VTAM CMIP services initialization.
- CMIP services is recovering from an abend that occurred while processing datasets.
- The directory definition file might be incorrect. If this is the case, message IST1444I is also issued.

System action: Processing continues. VTAM CMIP services is inactive.

Operator response: To restart CMIP services, issue the MODIFY VTAMOPTS, OSIMGMT=YES command.

System programmer response: The ASN.1 or GDMO files might not have been loaded correctly from the installation tape. Reinstall these files before restarting VTAM CMIP services.

If reloading the files from tape is unsuccessful, collect documentation for IBM service to use.

If message IST1444I is issued, see the programmer response for that message.

Routing code: 2

Descriptor code: 5

IST1397I **INITIALIZATION FAILED FOR CMIP SERVICES**

Explanation: VTAM issues this message when a subcomponent of VTAM CMIP services failed to initialize.

System action: Processing continues. VTAM CMIP services is inactive.

Operator response: Collect the system log and request a dump for problem determination. To restart CMIP services, issue the MODIFY VTAMOPTS, OSIMGMT=YES command. If the VIT trace was active, VIT records can be used to determine the cause.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the new start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1398I ALL ATTEMPTS TO RESTART CMIP SERVICES WERE UNSUCCESSFUL

Explanation: VTAM issues this message when CMIP services attempted to restart but was unsuccessful.

CMIP services did not restart after an ABEND because of the frequency of ABENDs. If CMIP services is experiencing frequent ABENDs, it no longer restarts automatically. You must specify OSIMGMT=YES on the MODIFY VTAMOPTS command to restart CMIP services.

System action: Processing continues. VTAM CMIP services is inactive. Data might have been lost.

Operator response: Collect the system log and request a dump for problem determination. To restart CMIP services, issue the MODIFY VTAMOPTS, OSIMGMT=YES command. If the VIT trace was active, VIT records can be used to determine the cause.

System programmer response: Verify that the operator entered the buffer pool or CSA start options as specified in the start procedures.

Increase storage as required. For insufficient storage errors, you might want to redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, you must modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the new start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1399I ATTEMPTING TO RESTART CMIP SERVICES

Explanation: VTAM issues this message when a subcomponent of VTAM CMIP services has abended, and VTAM is attempting to restart CMIP services.

System action: Processing continues. VTAM CMIP services is inactive.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1400I DGTIMER = *dgtimer* EXTIMER = *extimer*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a TCP/IP major node. The first message in the group is IST1342I. See the description of that message for more information.

Routing code: 8

Descriptor code: 5

IST1401I RESOURCE NOT FOUND-RETRY IN *time* SEC(S) OR *number* REQUEST(S)

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID or DISPLAY DIRECTORY command.

- VTAM issues this message when the SRCHRED start option is ON, and the resource being displayed represents a search reduction entry. Searches will be limited for this resource as indicated by the *time* and *number* fields. See the z/OS Communications Server: SNA Network Implementation Guide for more information on the processing of a search reduction entry.

- *time* is the remaining number of seconds that VTAM will limit searches for the resource it previously was unable to locate. Once the specified number of seconds expire, subsequent searches for the resource will not be limited.
- *number* indicates the amount of requests necessary before VTAM will search for the resource with no search reduction limitations.
 - If **NEXT** is displayed, VTAM will not limit the next search request for the resource.
 - Otherwise, VTAM will limit the search until *number* requests have been received. For example, if *number* is 2, VTAM will limit the first request received, but will not limit the second request received.
- A value of ***NA*** for *time* or *number* means **Not applicable**. . This value will appear when the timer or counter has been set to 0.
- The SRTIMER and SRCOUNT threshold values being used for this resource are displayed in message IST1402I.

For more information on the SRCHRED, SRCOUNT, and SRTIMER start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1402I **SRTIMER = *srtimer* SRCOUNT = *srcount***

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID or DISPLAY DIRECTORY command.

- VTAM issues this message when the SRCHRED start option is ON. The SRCOUNT and SRTIMER values that are being used for the displayed resource are shown.

srtimer is the amount of time in seconds that VTAM will limit searching for a resource that it previously was unable to locate.

srcount is the number of requests that VTAM limit searching for the resource that it was previously unable to locate.

For more information on the SRCHRED, SRCOUNT, and SRTIMER start options, see the z/OS Communications Server: SNA Resource Definition Reference. You can change the value of start options with the MODIFY VTAMOPTS. See the z/OS Communications Server: SNA Operation for more information on that command.

The values of SRTIMER and SRCOUNT can be modified with the MODIFY RESOURCE command. See the z/OS Communications Server: SNA Operation for more information.

The values of SRTIMER and SRCOUNT may also be specified for a specific resource through the CDRSC and GROUP definition statements in a CDRSC major node. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

Routing code: 2

Descriptor code: 5

IST1403I **MODIFY QUERY REPLY FROM *ncpname***

Explanation: This message is the first in a group of messages that VTAM issues when a reply is received in response to a MODIFY QUERY command. A complete description of the message group follows.

```
IST1403I  MODIFY QUERY REPLY FROM ncpname
IST1404I  id data
```

```
⋮
```

```
[IST1405I  data]
```

```
⋮
```

```
IST314I  END
```

IST1403I

ncpname is the name of the NCP that was specified on the ID operand of the MODIFY QUERY command.

IST1404I • IST1408I

IST1404I

id is the subfield ID of the vector specified on the command.

data is the information that was requested from *ncpname*.

IST1405I

This message is used to display overflow *data* from IST1404I.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1404I *id data*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1403I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1405I *data*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is either IST1282I or IST1403I. See the explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1406I **CONTIMER = *contimer* IATIMER = *iatimer***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a TCP/IP major node. The first message in the group is IST1342I. See the description of that message for more information.

Routing code: 8

Descriptor code: 5

IST1408I **MODIFY TGP NOT APPLICABLE FOR** *resource_type resource_name*

Explanation: VTAM issues this message when a MODIFY TGP command fails because both of the following conditions exist:

- The PU used in the connection was created dynamically.
- The topology reporting status for the connection is one of the following when the DISPLAY ADJCP command is issued:

AC/N Active, but not reported to APPN topology and routing services.

AO/N Active with override but not reported to APPN topology and routing services.

AQ/N Quiesced, but not reported to APPN topology and routing services.

IN/N Inactive, but not reported to APPN topology and routing services.

NEV Never reported to APPN topology and routing services.

resource_type indicates the type of resource and can be either **CP** or **PU**.

resource_name is the name of the resource.

- If *resource_type* is **CP**, then *resource_name* is the resource identified by the adjacent control point that is coded on the ID operand and the transmission group number that is coded on the TGN operand of MODIFY TGP.
- If *resource_type* is **PU**, then *resource_name* is the dynamic PU name that is specified on the ID operand of MODIFY TGP.

For more information about the MODIFY TGP command, see the z/OS Communications Server: SNA Operation.

System action: Processing continues.

Operator response: Issue a DISPLAY ADJCP command to check the status for the connection. For more information about the DISPLAY ADJCP command, see the z/OS Communications Server: SNA Operation.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1409I *luname ASSOC = associatedlu ETYPE = entrytype*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY LMTBL,TYPE=LUNAME,SCOPE=ALL command. See the explanation of message IST1006I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1410I **QUERY** *status resource*

Explanation: VTAM issues this message to report the status of a MODIFY QUERY command.

resource is the target of the query.

status is the status of this command and can be one of the following:

SENT TO

This command or series of commands has been sent to *resource* as specified on the MODIFY QUERY command.

QUEUED FOR

This command is part of a series of MODIFY QUERY commands. It will be queued for *resource* until the complete series is received.

RESET FOR

This series of commands queued for *resource* will be purged. This occurs when the program operator application (POA) specified CONTINUE=RESET on the MODIFY QUERY command or when an error occurs in processing the command.

System action: The action taken by VTAM depends on the *status* reported:

- If *status* is **RESET FOR**, the series of MODIFY QUERY commands for this *resource* will be purged by VTAM.
- If *status* is **SENT TO**, this command or series of commands will be sent to the *resource*.
- If *status* is **QUEUED FOR**, this command will be queued for *resource* until all commands in the series have been received.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1411I

IST1411I INOP GENERATED FOR *resourcename*

Explanation: This message is the first in a group of messages that VTAM issues when an error condition has been detected for external communications adapter (XCA) node *resourcename*.

Possible message groups follow.

- If the XCA resource is for a local area network (LAN), and the LAN operation has been identified, VTAM issues the following messages:
IST1411I INOP GENERATED FOR *resourcename*
IST1412I *lan_operation* action – RETURN CODE *return_code*
IST314I END
- If the XCA resource is for a local area network (LAN) and the LAN operation is not identified, or if the XCA resource is for an Asynchronous Transfer Mode (ATM) or an Enterprise Extender (HPR/IP) resource, VTAM issues the following messages:
IST1411I INOP GENERATED FOR *resourcename*
IST1430I REASON FOR INOP IS *reason*
IST314I END

IST1411I

resourcename is the name of the XCA resource where the INOP condition occurred.

IST1412I

- *lan_operation* is the name of the LAN operation that failed. This name is used by the IBM Software Support Center if additional problem determination assistance is needed.
- *action* is one of the following:

FAILED

lan_operation is a LAN operation for which a negative response was returned.

RECEIVED

lan_operation is a LAN operation that was received and reported a change in connectivity.

- *return_code*, if displayed, is a 4-digit hexadecimal code issued by *resourcename* and provides information about the cause of the problem. See the LAN channel station error return codes information in z/OS Communications Server: IP and SNA Codes for a description of *return_code*. If no return code is available, *NA* is displayed. This code is used by the IBM Software Support Center if additional problem determination assistance is needed.

IST1430I

- *reason* is one of the following:

APPN CONNECTION ENDED BY ACTIVATION XID

An APPN connection across an ATM network is being terminated because a new activation XID request has been received over a connection that has already been established.

APPN CONNECTION ENDED DUE TO INACTIVITY

An APPN connection over an ATM switched virtual circuit (SVC) or over Enterprise Extender (HPR/IP) is being terminated because no HPR session traffic has been detected for the DISCNT time period specified on the PU statement representing this connection.

APPN CONNECTION FAILED – LIVENESS TIMEOUT

An APPN connection is being terminated over an ATM PVC. The remote end of the PVC is not responding to liveness messages.

APPN CONNECTION FAILED – STORAGE FAILURE

An APPN connection across an ATM network is being terminated because a storage failure occurred during connection establishment or liveness processing.

EE HEALTH VERIFICATION FAILURE

During the activation of the EE Connection, VTAM sent Logical Data Link Control (LDLC) probes to the remote partner to determine if all five ports are accessible. VTAM did not receive a successful response to all of the LDLC probe requests. VTAM terminated the activation of the EE connection due to the failure of the EE health verification.

INBOUND PIU COULD NOT BE ROUTED

Possible causes for the INOP include:

- An ABEND occurred while processing the PIU. Message IST1037I is also issued and provides additional information.
- A PIU segment was received out of sequence.
- A PIU was lost. A segment was received that did not complete a PIU before the start of a new PIU.
- The segment size was too large. An inbound PIU was received and the segment size exceeded the maximum frame size or the maximum PIU size.
- The PIU was not valid for one of the following reasons:
 - The PIU was not a FID4.
 - The inner PIU was not a FID0 or FID2.
 - The PIU length is too short to include an RH on a VR pacing response.
 - The data count field in the PIU exceeded the PIU size.

Note: If the INOPDUMP start option is ON, then an SVC dump was requested by ISTTSCPD.

LDLC COMMAND ERROR

An LDLC command was received that is not recognized or was received out of order for an APPN connection across an ATM network.

MACADDR OR SAPADDR IN USE

The remote MACADDR or SAPADDR for this connection duplicates a remote MACADDR or SAPADDR that is in use.

TCP/IP JOB *jobname* IS NOT AVAILABLE

The TCP/IP job *jobname* is no longer available.

TIMEOUT OCCURRED – PORT TIMER EXPIRED

The time period specified on the PORT definition statement of the XCA major node expired, and no response to a request had been received.

UNRECOGNIZED OPERATION

The reason for the INOP could not be determined by the module issuing this message group.

XID ERROR

An XID received during the establishment of an APPN connection across an ATM network contained an error.

XID OR LDLC COMMAND TIMEOUT

An XID or LDLC COMMAND to establish an APPN connection across an ATM or Enterprise Extender (HPR\IP) network did not receive a response after transmission and multiple retries.

System action: Error recovery will be attempted for *resourcename*, and subsequent VTAM messages will indicate the results of the error recovery. Processing continues.

Operator response: Enter a DISPLAY ID=*resourcename*,SCOPE=ALL command to determine the status of the resource. Save the system log for problem determination. Also:

- If *reason* is **XID OR LDLC COMMAND TIMEOUT**, re-attempt the activation of the APPN connection.
- If *reason* is **TCP/IP JOB *jobname* IS NOT AVAILABLE**, issue the DISPLAY TCPIP command, which lists each TCP/IP job and its version. See z/OS Communications Server: IP User's Guide and Commands for a complete description of the DISPLAY TCPIP command.

System programmer response:

- If message IST1412I is issued, use the system log and the description of *return_code* to assist you in correcting the problem.
 - If *lan_operation* is **CLOSE_STATION_INDICATION**, *action* is **RECEIVED**, and *return_code* is *NA*, VTAM has been informed that the station, previously opened or in the process of being opened, has closed.
- If message IST1430I is issued, the value of *reason* determines the actions to be taken:

APPN CONNECTION ENDED BY ACTIVATION XID

An effort to activate a new APPN connection has been received over an already active connection. The existing

IST1411I

APPN connection and ATM SVC or PVC will be terminated and automatically restarted. When the new APPN connection attempt is tried again, the SVC or PVC should be re-established.

APPN CONNECTION ENDED DUE TO INACTIVITY

No HPR traffic has been detected for the DISCNT time period specified on the PU statement representing this connection. The ATM switched virtual circuit (SVC) will be terminated. This is a normal condition when session traffic has ceased to use this connection. The next session request will cause activation of another ATM SVC.

APPN CONNECTION FAILED – LIVENESS TIMEOUT

An APPN connection is being terminated over an ATM PVC because the remote end of the PVC is not responding to liveness messages. The PVC and the APPN connection over it will be terminated and automatically restarted. If no response is then received, the APPN connection will remain open pending activation of the PVC from the remote node.

APPN CONNECTION FAILED – STORAGE FAILURE

During APPN connection establishment, either an XID or an LDLC COMMAND could not be transmitted to the remote node because no storage was available. The APPN connection and the ATM SVC or PVC will be terminated. When the storage failure condition is relieved, this connection can be tried again.

EE HEALTH VERIFICATION FAILURE

Issue D NET,EEDIAG,ID=*resourcename*,TEST=YES to test the EE connection. See the information about understanding the EE connectivity test output in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to interpret the output from the EEDIAG command.

INBOUND PIU COULD NOT BE ROUTED

- An ABEND occurred while processing the PIU. See IST1037I for recommended actions.
- A PIU was received out of sequence.

The TG sequence number in the FID4 TH of the inbound PIU did not match the next sequence number that VTAM expected to receive. If VTAM internal trace was running, then PIU discard trace entries were written. Look for a DSCD entry that contains discard reason code 0001 and a module ID in the DSC2 trace record of LS6I. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for the format and content of the DSCD and DSC2 trace entries.

- A PIU was lost.

A segment was received that did not complete a PIU before the start of a new PIU. If VTAM internal trace was running, then PIU discard trace entries were written. Look for DSCD entries that contain discard reason codes 0001 and 0004 and the module ID in the trace record of LS6Z. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for the format and content of the DSCD trace entry.

- The segment size was too large.

An inbound PIU was received and the segment size exceeded the maximum frame size and the maximum PIU size. The maximum segment size for inbound PIUs is determined by the maximum PIU or frame size passed in the XID. If VTAM internal trace was running, then PIU discard trace entries were written. Look for DSCD entries that contain discard reason codes 0003 and 0004 and a module ID in the DSC2 trace record of LS6Z. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for the format and content of the DSCD and DSC2 trace entries.

- The PIU was not valid.

If the INOPDUMP start option is ON, then an SVC DUMP was attempted by ISTTSCPD, whose name will appear in the title of the dump. Use the system log and dump to assist you in determining the reason for the INOP. See z/OS Communications Server: SNA Resource Definition Reference for more information on the INOPDUMP start option. If VTAM internal trace was running, then PIU discard trace entries were written. Look for a DSCD entry that contains discard reason code 0002 and a module ID in the DSC2 trace record of LS6I. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for the format and content of the DSCD and DSC2 trace entries.

LDLC COMMAND ERROR

The XID Done LDLC command establishing the primary end of the connection was received before XID negotiation completed. The remote node did not properly complete XID negotiation.

MACADDR OR SAPADDR IN USE

Verify that the MACADDR and SAPADDR for this connection is a unique pair. See z/OS Communications Server: SNA Resource Definition Reference for additional information on specifying MACADDR and SAPADDR in the XCA major node.

TCP/IP JOB *jobname* IS NOT AVAILABLE

The Enterprise Extender (HPR/IP) connection to TCP/IP was established, but due to a change in the TCP/IP job to which VTAM was attached, the connection cannot continue. The TCP/IP job name can be supplied to VTAM using the VTAM start option TCPNAME, which is modifiable using the MODIFY VTAMOPTS command. If the Enterprise Extender is active, a change in the TCPNAME value will not be detected. The TCPNAME value is used only when the Enterprise Extender is started. If the TCPNAME option is not used, the Enterprise Extender selects any TCP/IP job that is active.

TIMEOUT OCCURRED – PORT TIMER EXPIRED

Verify that the TIMER value on the PORT definition statement is high enough. See z/OS Communications Server: SNA Resource Definition Reference for additional information.

UNRECOGNIZED OPERATION

The reason for the INOP could not be determined. Contact the IBM support center.

XID ERROR

Either a non format 3 XID or an XID with an appended Control Vector 22 was received. If VTAM internal trace was running with the LCS option, then an LCSX trace entry will contain the XID in error sent from the remote end of the connection. The format of the XID or control vector 22 can be used to determine what part of the XID is not valid.

XID OR LDLC COMMAND TIMEOUT

During APPN connection establishment, either an XID or an LDLC COMMAND was sent to the remote node. No response was received. The XID or LDLC command was retransmitted multiple times without response.

ATM: The SVC or PVC is still active, but the remote node is not responding. The ATM SVC or PVC will be cleared to attempt to reset the error condition on the remote node.

Enterprise Extender (HPR\IP): Try the connection again by reissuing the dial. If failure persists, determine if the failure is a result of a system definition error or a network error. If the failure is a result of a system definition error, correct the error. If the failure is a result of a network error, contact the IP network provider.

Routing code: 8

Descriptor code: 4

IST1412I *lan_operation action* – **RETURN CODE** *return_code*

Explanation: This message is part of a group of messages. The first message in the group is IST1411I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1413I *error_type* – **REDIAL ATTEMPTED FOR** *puname*

Explanation: VTAM issues this message if a redial for physical resource *puname* has been attempted.

error_type can be one of the following:

PROTOCOL VIOLATION

A CV X'51' was not found on the ACTPU response or REQACTPU for the first PU activated for this dependent LU requester.

SESSION OUTAGE

One of the CPSVRMGR sessions between VTAM and the dependent LU requester was terminated by methods other than a VARY INACT command.

TDU ERROR

A topology database update (TDU) error has occurred. The end node dependent LU requester attempted to register its topology with its network node server and has received a negative response.

IST1414I

puname is the name of the physical resource.

System action: Redial is attempted. If the redial for *puname* completes successfully, message IST093I will be issued. If the redial does not complete successfully, message IST619I or IST1416I will be issued.

Operator response: Save the system log for problem determination.

- When *error_type* is **PROTOCOL VIOLATION**, First Failure Support Technology™ (FFST) probe ISTCSC13 is triggered. For more information on this probe, see the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT.
- When *error_type* is **SESSION OUTAGE**, a buffer contents trace can provide additional information. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information.
- When *error_type* is **TDU ERROR**, First Failure Support Technology (FFST) probe ISTCSC14 is triggered. For more information on this probe, see the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT.

System programmer response:

- When *error_type* is **PROTOCOL VIOLATION**, locate the ACTPU response (if doing a VARY DIAL) or locate the REQACTPU (if doing DLUR-initiated CPSVRMGR pipe activation) for the first PU activated on this CPSVRMGR pipe. Verify that the RU is formatted correctly and that it contains all the required control vectors.
- When *error_type* is **SESSION OUTAGE**, verify that all links to the dependent LU requester (DLUR) are still available for use and that the DLUR is still active.
- When *error_type* is **TDU ERROR**, locate the failed TDU RU in the dump and verify that the RU is formatted correctly.

Routing code: 2

Descriptor code: 5

IST1414I *error_type* – **REDIAL NOT ATTEMPTED FOR** *puname*

Explanation: VTAM issues this message if a redial for physical resource *puname* will not be attempted.

error_type can be one of the following:

PROTOCOL VIOLATION

A CV51 was not found on the ACTPU response or REQACTPU for the first PU activated for this dependent LU requester.

SESSION OUTAGE

One of the CPSVRMGR sessions between VTAM and the dependent LU requester was terminated by methods other than a VARY INACT command.

TDU ERROR

A topology database update (TDU) error has occurred. The end node dependent LU requester attempted to register its topology with its network node server and has received a negative response.

puname is the name of the physical resource.

System action: A redial for *puname* is not attempted.

Operator response: Save the system log for problem determination.

- When *error_type* is **PROTOCOL VIOLATION**, First Failure Support Technology (FFST) probe ISTCSC13 is triggered. For more information on this probe, see the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT.
- When *error_type* is **SESSION OUTAGE**, a buffer contents trace can provide additional information. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.
- When *error_type* is **TDU ERROR**, First Failure Support Technology (FFST) probe ISTCSC14 is triggered. For more information on this probe, see the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT.

System programmer response:

- When *error_type* is **PROTOCOL VIOLATION**, locate the ACTPU response (if doing a VARY DIAL) or locate the REQACTPU (if doing DLUR-initiated CPSVRMGR pipe activation) for the first PU activated on this CPSVRMGR pipe. Verify that the RU is formatted correctly and that it contains all the required control vectors.

- When *error_type* is **SESSION OUTAGE**, verify that all links to the dependent LU requester (DLUR) are still available for use and that the DLUR is still active.
- When *error_type* is **TDU ERROR**, locate the failed TDU RU in the dump and verify that the RU is formatted correctly.

Routing code: 2

Descriptor code: 5

IST1415I *resource_name* **CONFLICTS WITH A GENERIC RESOURCE NAME**

Explanation: VTAM issues this message in response to a DISPLAY ID=*resource_name* command, when IDTYPE is specified and both of the following conditions exist:

- *resource_name* is both a generic name and a real resource.
- The value of IDTYPE= is not **GENERIC**.

System action: VTAM displays information for the real resource name rather than the generic name. Processing continues.

If the generic resource resolution is suspended due to unavailability of the coupling facility (that is, rebuild of the coupling facility is in progress), a dynamic CDRSC will be temporarily created to represent the generic resource. This message is generated for informational purposes only; it is not an error message.

Operator response: To display generic name information, specify IDTYPE=GENERIC on the DISPLAY ID command.

System programmer response: One of the duplicate names should be renamed. As long as the duplicate names exist, the real resource is blocked from having sessions with another resource. Also, searches will always find the generic name.

Routing code: 2

Descriptor code: 5

IST1416I ID = *nodename* **FAILED — RECOVERY IN PROGRESS**

Explanation: VTAM recognized a failure condition for node *nodename* and is attempting to recover the node. See subsequent messages for the results of that recovery attempt.

If the network where the node resides is known to VTAM, *nodename* is a network-qualified name in the form *netid.name*.

System action: Users of *nodename* or devices attached to *nodename* may be notified of the failure. VTAM attempts to recover *nodename*.

Operator response: Wait for additional messages indicating the success or failure of the recovery attempt.

System programmer response: None.

Routing code: 2, 8

Descriptor code: 4

IST1417I **NETID NAME STATUS NODETYPE MAJNODE**

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY RSCLIST command. A complete description of the message group follows.

```
IST350I  DISPLAY TYPE = RSCLIST
IST1417I NETID   NAME     STATUS   NODETYPE   MAJNODE
IST1418I netid   name     status   nodetype   majnode
```

⋮

```
[IST924I  -----]
[IST1203I VALUE resourcename FOR operand IS UNKNOWN RESOURCE ]
[IST924I  -----]
[IST1358I NO QUALIFYING MATCHES FOR id]
```

IST1418I

```
[IST924I -----]
[IST1417I NETID   NAME     STATUS   NODETYPE  MAJNODE]
[IST1418I netid   name     status   nodetype  majnode]
IST314I  END
```

IST350I

This message identifies the type of information in the display and is always RSCLIST for this message group.

IST1203I

This message is displayed when the value *resourcename* of *operand* is a resource that is syntactically correct but is not defined to VTAM.

resourcename is the name of the resource that is not defined to VTAM.

operand is the operand on the DISPLAY RSCLIST command.

IST1358I

This message is issued when there are no resource names found that match the wildcard name specified on the ID operand of the DISPLAY RSCLIST command and other restrictions identified by keywords on the command (for example: SCOPE, IDTYPE).

id is the name specified on the ID operand of the DISPLAY RSCLIST command.

IST1417I

This message is a header message for the information displayed in message IST1418I.

IST1418I

- IST1418I will occur as many times as is necessary to meet the specification of the ID keyword. If ID is a single value, IST1418I will occur once; if ID is a wildcard specification, IST1418I may occur multiple times.
- If multiple values are specified for the ID keyword (for example: ID=(A,B*,C)), each grouping will be separated by IST924I.

netid is the network identifier of the resource being displayed. An asterisk symbol (*) indicates that VTAM has not learned the *netid* of the resource or no longer has information about the *netid* for this resource.

name is the name of the resource being displayed. Only resources matching the pattern specified by the ID keyword will be displayed.

status is the current status of *name*. See Resource Status Codes and Modifiers in z/OS Communications Server: IP and SNA Codes for potential values.

nodetype is the resource type of the major or minor node. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

majnode is the name of the major node containing *netid.name*.

- See the z/OS Communications Server: SNA Operation for more information.
- See the information about removing a generic resource in z/OS Communications Server: SNA Network Implementation Guide for more information about node type GENERIC USERVAR.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST1418I *netid name status nodetype majnode*

Explanation: This message is part of a group of messages. The first message in the group is IST1417I. See the explanation of that message for a full description.

Routing code: 2

Descriptor code: 5

IST1419I **DUPLICATE SESSION INFORMATION REPORTED FOR** *luname*

Explanation: This message is the first in a group of messages that VTAM issues after the completion of a VARY ACT command when a BFSESSINFO request unit (RU) is received during SSCP takeover processing. This message group indicates that VTAM now owns two type 2.1 link stations in the direction of the same logical unit *luname* for one or more of the sessions described by the BFSESSINFO RU. A complete description of the message group follows.

```

IST1419I DUPLICATE SESSION INFORMATION REPORTED FOR luname
IST1420I UNABLE TO ASSOCIATE THE FOLLOWING SESSION(S) WITH puname
IST873I      PLU          SLU          SID          STATUS
IST874I netid.pluname   netid.sluname   sessionid   status
[IST874I netid.pluname   netid.sluname   sessionid   status]
IST314I END

```

IST1419I

luname is the network-qualified name of the independent logical unit.

IST1420I

puname is the name of the type 2.1 link station (takeover physical unit) that is associated with the BFSESSINFO RU.

IST873I

This message is a header message for the information displayed in message IST874I.

IST874I

pluname is the network-qualified primary session partner name.

sluname is the network-qualified secondary session partner name.

sessionid is the session identifier. For additional information on the session, enter a DISPLAY SESSIONS,SID=*sessionid* command.

status is the session status. See the z/OS Communications Server: IP and SNA Codes for a description of possible session initiation and termination states.

Status modifiers will not display in the *status* field of this message group. Enter a DISPLAY SESSIONS,SID=*sessionid* command to obtain this information.

System action: Subsequent messages will be issued if errors are encountered while processing the BFSESSINFO RU. If no errors are encountered during BFSESSINFO RU processing, session states are not changed. However, certain session and problem determination information will not be available until the link that was taken over is given back to the original owning SSCP.

Operator response: Save the system log for problem determination.

Since certain session and problem determination information will not be available until the link that was taken over is given back to the original owning SSCP, information such as *luname*, *puname*, and *sessionids* of the affected sessions should be saved. This information may be useful if, for example, *puname* is about to be deactivated because system information indicates that no logical units are currently using it.

Entering a DISPLAY command for *puname* may not show all of the logical units that are currently using the PU. Therefore, saving the information in this message group will enable you to DISPLAY specific logical units and/or sessions to determine whether the PU is currently in use.

Notes:

1. When a DISPLAY ID=*luname* command is entered with SCOPE=ALL, all sessions involving *luname* are displayed. Sessions that use type 2.1 adjacent link stations are displayed in groups, following message IST1081I indicating the adjacent link station (PU) being used for those sessions.
However, sessions that were listed in the IST1419I message group during an SSCP takeover will not be displayed following message IST1081I for *puname* in message IST1420I.
2. When a DISPLAY ID=*puname* command is entered with SCOPE=ALL, a list of logical units that are currently using that PU are displayed following message IST355I.

IST1420I • IST1423I

However, some of the logical units that are using *puname* may not be displayed, if the only sessions using *puname* are sessions that were displayed in the IST1419I message group during an SSCP takeover.

For an explanation of SSCP takeover, see the z/OS Communications Server: SNA Network Implementation Guide.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1420I UNABLE TO ASSOCIATE THE FOLLOWING SESSION(S) WITH *puname*

Explanation: This message is part of a group of messages that VTAM issues during SSCP takeover processing. The first message in the group is IST1419I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1421I *nodetype resourcename* HAS DUPLICATE ADDRESS

Explanation: This message is part of a message group. The first message in the group is either IST718I or IST1693I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1422I SAVED TRACE REQUESTS FOR *value*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY TRACES command. See the explanation of message IST1041I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1423I *rscname* REJECTED BECAUSE DSPLYWLD = *option*

Explanation: The *rscname* value for an ID keyword of a DISPLAY command included a wildcard specification (* or ?). Wildcards are not permitted on this DISPLAY command because the current value of the DSPLYWLD start option is *option*. Potential values for *option* are:

NOWILD

Wildcards are not permitted in any DISPLAY commands.

OPERONLY

Wildcards are permitted in DISPLAY commands from the network operator, but not from Program Operator Applications.

POAONLY

Wildcards are permitted in DISPLAY commands from Program Operator Applications, but not from the network operator.

System action: Processing continues with the remaining ID keyword values in the DISPLAY command.

Operator response: Use the MODIFY VTAMOPTS command to change the DSPLYWLD value and reissue the DISPLAY command.

System programmer response: If wildcards should be permitted from either the network operator or Program Operator Applications, update the value of the DSPLYWLD start option in the VTAM start list (ATCSTRxx) to DSPLYWLD=FULLWILD.

Routing code: 2

Descriptor code: 5

IST1424I APPLICATIONS DEFINED USING THIS MODEL:

Explanation: VTAM issues this message as part of a subgroup in response to a DISPLAY ID command when the resource identified by ID is a model application program. A complete description of the message subgroup follows.

```
IST1424I APPLICATIONS DEFINED USING THIS MODEL:
IST080I  nodename1 status1 nodename2 status2 nodename3 status3
:
```

IST080I

This message lists the dynamic application programs that have been defined using this model.

nodename is the name of the dynamic application program.

See Resource Status Codes and Modifiers inz/OS Communications Server: IP and SNA Codes for a description of these status codes.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1425I DEFINED USING MODEL *model_name*

Explanation: VTAM issues this message in response to a DISPLAY ID command when the resource identified by ID is a dynamic application program or a clone CDRSC. If the ID is a dynamic application program, it identifies the model application program from which this dynamic application program was built; it will not be network qualified. If the ID is a clone CDRSC, it identifies the model CDRSC from which this clone CDRSC was built. The model CDRSC name will be network qualified if it is not an alias model CDRSC; if it is an alias model CDRSC, it will not be network qualified.

model_name is the name of the model resource definition. If ID specifies a CDRSC, the *model_name* can be a network-qualified name in the form *netid.name*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1426I NO APPLICATIONS DEFINED USING THIS MODEL

Explanation: VTAM issues this message in response to a DISPLAY ID command when the resource identified by ID is a model application program and no dynamic application programs have been defined using this model.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1427I NAME = *resource_name* FOUND TYPE = *found_type*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY DIRECTORY command when SCOPE=NSEARCH is specified. A complete description of the message group follows.

- If the resource name specified on the command is not found, the following message group is displayed.

IST1427I

```
IST350I DISPLAY TYPE = NETWORK SEARCH
IST1427I NAME = resource_name FOUND TYPE = found_type
IST314I END
```

- If one instance of the resource name specified on the command is found, the following message group is displayed.

```
IST350I DISPLAY TYPE = NETWORK SEARCH
IST1427I NAME = resource_name FOUND TYPE = found_type
IST1184I CPNAME = cpname - NETSRVR = network_node_server
IST314I END
```

- If duplicate instances of the resource name specified on the command are found, the following message group is displayed.

```
IST350I DISPLAY TYPE = NETWORK SEARCH
IST1427I NAME = resource_name FOUND TYPE = found_type
IST1184I CPNAME = cpname - NETSRVR = network_node_server
IST924I -----
IST1427I NAME = resource_name FOUND TYPE = found_type
IST1184I CPNAME = cpname - NETSRVR = network_node_server
:
:
IST314I END
```

Following are some of the situations in which all instances of *resource_name* might not be returned.

- The resource is not registered to its network node server and the end node does not allow searching on a domain broadcast.
- A response is not returned in the time allotted for a Locate, as determined by the IOPURGE start option.
- Subarea searching is restricted due to the SSEARCH start option.
- The SNVC start option limit has been exceeded, preventing a border node from searching nonnative subnetworks.
- The search request is restricted by search reduction entries at nodes from which the command is **not** issued. Search reduction entries are ignored at the node from which the command is issued.
- An exit is restricting searches.
- Due to current network topology, the resource is unreachable via Locate flows (for example, an outage has occurred in the network).

IST350I

This message identifies the type of information in the display and is always **NETWORK SEARCH** for this message group.

IST1184I

cpname is the network-qualified name of the owning control point in the form *netid.name*.

network_node_server is the network-qualified name of the network node server in the form *netid.name*.

IST1427I

- *resource_name* is the name of the resource specified on the command.

Note: If the resource specified is a generic resource name or USERVAR, the name can be translated by nodes from which the command is **not** issued. In this case, *resource_name* will be the actual network name of the resource rather than the name specified.

- *found_type* is determined by the start options that are specified or defaulted. Possible values are:

NONE

The resource was not found.

OWNER

The resource was found, and this response is from the actual owner of the resource.

SURROGATE

The resource was found, and this response is from a node connected to the resource by a LEN connection and is providing network services for the resource.

WILDCARD

The resource was found, but is only used if other responses are not received. This response is returned by a node that has either:

- A generic definition for a connection to a network that might contain the target resource
 - A backup resource definition for the specified resource. VTAM uses this for connectable application programs and inactive LUs.
- Resources of *found_type* **OWNER** will be issued first, followed by *found_type* **SURROGATE** and *found_type* **WILDCARD**.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1430I REASON FOR INOP IS *reason*

Explanation: VTAM issues this message as part of a group of messages when an error condition has been detected for an External Communications Adapter (XCA) node. The first message in the group is IST1411I. See the description of that message for more information.

Routing code: 4

Descriptor code: 8

IST1431I APPN COS SUBAREA COS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY COSMAP command. See the explanation of IST1321I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1432I DYNLU AND CDRSC VALUES FOR *cpname* CONFLICT

Explanation: VTAM issues this message when the value of the DYNLU operand or DYNLU start option does not match the value of the CDRSC operand on the CDRM definition statement. These values determine whether dynamic CDRSC definitions are allowed.

cpname is the network-qualified name of the adjacent control point in the form *netid.name*.

System action: Even though session traffic may continue to flow, this conflict may result in intermittent session failures. Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: To correct the conflict, ensure that the values for DYNLU and CDRSC match.

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the DYNLU and CDRSC operands and the DYNLU start option.

Routing code: 8

Descriptor code: 5

IST1433I *rsname* REJECTED - DSPLYWLD = NO FOR APPL *applname*

Explanation: The *rsname* value for an ID keyword of a DISPLAY command issued by Program Operator Application *applname* included a wildcard specification (* or ?). Wildcards are not permitted on DISPLAY commands from *applname* because the application's definition statement specifies DSPLYWLD=NO.

System action: Processing continues with the remaining ID keyword values in the DISPLAY command.

IST1434I • IST1435I

Operator response: No action is required unless wildcards are to be permitted in DISPLAY commands from this application.

System programmer response: If wildcards should be permitted, update the value of the DSPLYWLD keyword on the APPL definition statement for *applname* to DSPLYWLD=YES.

Routing code: 5

Descriptor code: 2

IST1434I DLUR ANS SUPPORT CONFLICT FOR PU *puname* – SET TO ANS=STOP

Explanation: VTAM issues this message when a dependent LU server PU has the ANS (Automatic Network Shutdown) keyword coded as CONT and the dependent LU requester (DLUR) is only capable of supporting ANS=STOP.

puname is the name of the dependent LU server PU.

System action: VTAM changes the ANS value coded on the PU to the default (ANS=STOP).

Operator response: Save the system log for problem determination.

System programmer response: The DLUR being used with the DLUS does not have ANS=CONT support. To prevent the message from being issued, either allow ANS to default or code ANS=STOP for those DLUS PUs in the switched major nodes which have this DLUR coded for the DLURNAME parameter on the PU's PATH statements.

Routing code: 2

Descriptor code: 5

IST1435I LEVEL INPUT OUTPUT

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY STATS command when TYPE=COMPRESS is specified.

A complete description of the message group follows the example.

```
IST350I DISPLAY TYPE = STATS,TYPE=COMPRESS
IST1435I LEVEL INPUT OUTPUT
IST1176I BASIC FROZEN
IST1177I 0 input basic **NA**
IST1177I 1 input basic **NA**
IST1177I 2 input basic frozen
IST1177I 3 input basic frozen
IST1177I 4 input basic frozen
IST314I END
```

IST350I

This message identifies the type of information shown in the display. For this message group, type is always STATS,TYPE=COMPRESS.

IST1176I

This message is a header message for message IST1177I.

BASIC and FROZEN are OUTPUT values indicating the number of half-sessions using a given compression level for outgoing data.

For more information, see the description of message IST1177I.

IST1177I

- This message is issued once for each possible data compression level.
- *level* is 0, 1, 2, 3, or 4.
 - Level 0 indicates that no data compression is used. This is the default compression level.
 - Level 1 indicates that VTAM uses run length encoding (RLE) compression. This type of compression simply replaces strings of identical characters with one or two bytes, without using a compression dictionary.

- Levels 2, 3, and 4 indicate that VTAM uses an adaptive compression algorithm. This type of compression replaces strings of data with codes of 9, 10, and 12 bits for levels 2, 3, and 4, respectively. Codes identify entries in dictionaries of data strings.

In BASIC mode, which is always the initial mode, VTAM continuously updates the dictionaries so that they reflect the most recently compressed data.

In FROZEN mode, VTAM stops updating (freezes) the dictionaries to speed up compression processing. In this mode, VTAM can take advantage of the ESA/390 data compression facility, if it is available on the CPU.

Compression periodically switches from FROZEN mode to BASIC mode to resume updating of the dictionaries. It switches back to FROZEN when the dictionaries again reflect the most recently compressed data.

See the z/OS Communications Server: SNA Network Implementation Guide for more information on the RLE and adaptive compression algorithms.

- The **INPUT** value *input* represents the number of half-sessions using a given compression level for incoming data.
 - When a session is established, *input* is incremented by one at the input compression level used by the corresponding half-session in this host.
 - When a session ends, *input* is decremented by one at the input compression level used by the corresponding half-session in this host.
- The **OUTPUT** values *basic* and *frozen* represent the number of half-sessions using a given compression level for outgoing data.
 - When a session is established, *basic* is incremented by one at the output compression level used by the corresponding half-session in this host.
 - Each time VTAM freezes the compression dictionaries for a half-session on output, *basic* for that half-session is decremented by one, and *frozen* at the same level is incremented by one.
 - Each time VTAM resumes updating the compression dictionaries for a half-session on output, *frozen* for that half-session is decremented by one, and *basic* at the same level is incremented by one.
 - When a session ends, *basic* or *frozen* (depending on the compression state at the time) is decremented by one at the output compression level used by the corresponding half-session in this host.

Note: A session with both half-sessions in the same host is prevented from using compression. Each of its two half-sessions is counted separately for **INPUT** and **OUTPUT** on level 0.

IST1435I

- This message serves as a header for message IST1177I.
 - LEVEL indicates the data compression level.
 - INPUT indicates the number of half-sessions (one end of a session) using a given compression level for incoming data.
 - OUTPUT indicates the number of half-sessions using a given compression level for outgoing data. Values are *basic* and *frozen*.
- For more information, see the description of message IST1177I.

System action: Processing continues.

Operator response: None.

System programmer response: You can use the information in this display to monitor the distribution of sessions for different compression levels. This distribution can be altered by using any of the following:

- MODIFY COMPRESS command
- MODIFY VTAMOPTS,CMPMIPS=*cmpmips* command
- CMPVTAM start option
- CMPMIPS start option
- APPL definition statement by CMPAPPLO or CMPAPPLI.

Use the DISPLAY SESSIONS,SID=*sid* command to monitor the compression performance of individual sessions. See the explanation of message IST879I for a description of the information in this display.

IST1436I

See z/OS Communications Server: SNA Operation for more information on commands. See the z/OS Communications Server: SNA Resource Definition Reference.

See the z/OS Communications Server: SNA Network Implementation Guide for more information about Data Compression.

Routing code: 2

Descriptor code: 5

IST1436I RU PENDING:

Explanation: This message is the first in a group of messages that VTAM issues when the request unit (RU) *runame* has been pending on the node *fornodename* for a period of time without receipt of a corresponding response unit. A complete description of the message group follows.

```
IST1436I RU PENDING:
IST1278I runame FROM fromnetid TO tonetid FOR fornodename
[IST531I FROM SUBAREA = subarea, ELEMENT = element]
[IST531I TO SUBAREA = subarea, ELEMENT = element]
IST1051I EVENT CODE = code
IST1062I EVENT ID = eventid
```

Note: If *runame* remains outstanding for subsequent intervals, these messages will be repeated at such intervals until *runame* is received or until the request unit is purged.

IST531I

VTAM will not issue this message if both **FROM** network name *fromnetid* and **TO** network name *tonetid* are displayed in this message.

VTAM will display this message once if one of the network names is unknown and twice if both of the network names are unknown.

If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

IST1051I

code is an event code that identifies which format of event ID is being displayed.

See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

IST1062I

eventid is an internal VTAM identifier of the pending request.

See the z/OS Communications Server: IP and SNA Codes for a description of *eventid*.

IST1278I

- *runame* is the request unit (RU) that is pending. See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *runame*.
- The origin and destination of *runame* are identified by one of the following:
 - Network names (*fromnetid* and *tonetid*) as displayed in this message.
 - Network addresses (subarea number *subarea* and element number *element*) as displayed in message IST531I.

Note: VTAM will not issue message IST531I if both **FROM** network name *fromnetid* and **TO** network name *tonetid* are displayed in this message. VTAM will display message IST531I once if one of the network names is unknown and twice if both of the network names are unknown. If the subarea and element addresses are unknown, VTAM issues either 0 or *NA* in place of the address.

- *fornodename* is the name of the node with the pending RU. If *fornodename* is session-capable, VTAM issues *fornodename* as a network-qualified name in the form *netid.name*.

IST1436I

This is the header message for message IST1278I.

System action: Processing continues, awaiting the corresponding response unit.

Operator response: This message group indicates that a problem **may** exist. The longer an RU remains outstanding (that is, the more often these messages reappear for the same RU), the more probable it is that a problem exists.

If a particular RU remains outstanding for an extended period of time, display the node for which the I/O is pending, and save the system log for problem determination.

- If *runame* is **CD DSEARCH**, this message group may indicate one of the following problems:
 - A low IOINT value and no ADJSSCP table values were coded.
 - The DYNASSCP start option and the ADJSSCP table are not properly tuned.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about these DSRLST problems.

- If *runame* is **CHAR CODED**, this message group indicates that VTAM sent a USSMSG to the LU and is waiting for a response. This is usually a device problem. A frequent cause of this error is when a user powers off the terminal without logging off first. To correct the situation, enter a VARY INACT command for the resource *fornodename* and then enter a VARY ACT for the same resource.
- If *runame* is **NMVT**, this message group may indicate that the device is not real-time-monitor-capable. This means that the device did not process the response and return the requested information properly to the NetView program for most devices, or to the RS/6000 network management program for RS/6000 devices. A microcode change is needed to permanently resolve this problem.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about this problem.

System programmer response: You can use the MODIFY IOPD command to change the time-out interval controlling the display of this message. See the z/OS Communications Server: SNA Operation for additional information.

See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information on the wait procedure.

Routing code: 8

Descriptor code: 4

IST1438I LOGMODE *logmode* UNKNOWN IN THIS DOMAIN, DEFAULT IS ISTCOSDF

Explanation: This message is part of a message group that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message in the group is IST879I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1439I *percent* PERCENT OF *storage_type* USED FOR STRUCTURE *structure*

Explanation: VTAM has detected a possible storage shortage problem in a coupling facility structure. You can issue D NET,STATS,TYPE=CFS,STRNAME=*structure* to get the storage utilization for the structure.

This message is issued for each storage type that exceeds 80% storage being used.

This message will remain on the screen until the problem has been corrected.

- *percent* is the percentage in use for *storage_type*.
- *storage_type* identifies the type of storage shortage. Possible values are:

ELEMENTS

The storage shortage pertains to list elements in a coupling facility list structure.

ENTRIES

The storage shortage pertains to list entries in a coupling facility list structure.

- *structure* is the name of the coupling facility structure.

System action:

- If *percent* is greater than 90 and *storage_type* is either ENTRIES or ELEMENTS, then VTAM automatically attempts to alter the ratio of ENTRIES and ELEMENTS.
- If *percent* is greater than 90 for *storage_type* ENTRIES and ELEMENTS, then VTAM automatically attempts to alter the size to the SIZE value coded in CFRM policy.

IST1440I • IST1441I

- If the alter attempts fail to relieve the storage problem or *percent* is 100, VTAM attempts a rebuild of the structure to change the number of entries or elements available.
- If *percent* is 100 and *storage_type* is ENTRIES or ELEMENTS, attempts to register generic resources or attempts to log on to generic resources might fail.

Operator response: Issue D NET,STATS,TYPE=CFS,STRNAME=*structure* and perform the following based on the structure size indicated in message IST1375I:

- If the current size is smaller than the maximum size, rebuild the structure into a facility with space that will allow the maximum size to be allocated.
- If the current size and maximum size are the same, update the size of the structure in the active CFRM policy and start a rebuild.

Note: See the z/OS Communications Server: SNA Network Implementation Guide for information on estimating coupling facility structure storage.

If *storage_type* is ENTRIES or ELEMENTS and the percentage is less than 100, a rebuild could be started using the SETXCF START,REBUILD command. This will cause VTAM to adjust the number of entries and elements available in the structure. If a rebuild is not started by operator, VTAM automatically attempts a rebuild in the case when the storage is totally exhausted (*percent* is 100).

System programmer response: None.

Routing code: 2

Descriptor code: 11

IST1440I **USE =** *text*

Explanation: VTAM issues this message in response to a DISPLAY ID command, when the resource being displayed is a line in an NCP major node.

text identifies the usage of the line

EP, DEFINED RESOURCE, CANNOT BE REDEFINED

indicates that the line is in EP mode, is a defined line and cannot be redefined.

NCP, DEFINED RESOURCE, CANNOT BE REDEFINED

indicates that the line is in NCP mode, is a defined line and cannot be redefined.

NCP, DEFINED RESOURCE, CAN BE REDEFINED

indicates that the line is in NCP mode, is a defined line and can be redefined.

NCP, SPARE RESOURCE, CAN BE REDEFINED

indicates that the line is in NCP mode, is a spare line and can be redefined.

System action: Processing continues

Operator response: None

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1441I **VARY ACT FOR** *linename* **FAILED, USE=SPARE**

Explanation: VTAM issues this message in response to a VARY ACT command, when the resource being activated is a spare line.

linename identifies the name of the line.

System action: Processing continues

Operator response: If the line should be DEFINED, issue the MODIFY LINEDEF command, specifying USE=DEFINED.

System programmer response: None

Routing code: 2

Descriptor code: 5

IST1442I MODIFY LINEDEF FAILED, *linename* CANNOT BE REDEFINED

Explanation: VTAM issues this message in response to a MODIFY LINEDEF command, when the line cannot be redefined.

linename identifies the name of the line.

System action: Processing continues.

Operator response: Display the line to ensure the correct line is being used.

Save the system log for problem determination.

System programmer response: Ensure that the line has been defined correctly.

Routing code: 2

Descriptor code: 5

IST1443I ACYDDF LOADED – NO ACCESS AUTHORITY CHECKING

Explanation: VTAM issues this message when the ACYDDF directory definition file was successfully loaded but no valid security records were found.

System action: No additional authorization checking is performed on association requests from remote CMIP services. Processing continues.

Operator response: None.

System programmer response: If no association security checking is desired, no action is required.

Verify that the proper associationKey entry is present in ACYDDF, then issue another MODIFY TABLE command. If this message continues to be displayed, restart CMIP services.

Routing code: 2

Descriptor code: 5

IST1444I *filename* NOT LOADED – *reason*

Explanation: VTAM issues this message when a CMIP services directory definition file (DDF) was not loaded successfully.

filename is the name of the directory definition file (ACYDDF).

reason displays the reason for the unsuccessful load. *reason* can be the following values:

DUPLICATE ATTRIBUTE AT RECORD *record*

The same attribute keyword was used more than once with a given value for "name".

record indicates the record number (line number) in the directory definition file for the last line of the attribute where the error is found.

ERROR READING FILE

A DASD or other error was encountered while reading ACYDDF.

FILE NOT FOUND

The file in the start procedure containing the ISTMIP DD statement was not found.

INSUFFICIENT STORAGE

There is not enough internal table storage available for the number of entries in the directory definition file.

LINE EXCEEDS 2080 AT RECORD *record*

Continuation lines caused the total line length to exceed 2080.

record indicates the record number (line number) in the directory definition file for the last line of the attribute where the error is found.

IST1444I

LRECL EXCEEDS 2080

The logical record length of the file in the start procedure containing the ISTMIP DD statement exceeded 2080.

NAME MISSING BEFORE RECORD *record*

record was something other than a "name" record. The prior "class" record needs a "name" record before any attributes can be defined.

record indicates the record number (line number) in the directory definition file for the last line of the attribute where the error is found.

NAME VALUE NOT VALID AT RECORD *record*

The value given for a "name" entry is not a valid CMIP distinguished name.

record indicates the record number (line number) in the directory definition file for the last line of the attribute where the error is found.

NO CLASS SPECIFIED

The first non-comment record of the directory definition file was a "name" record which had an unknown "class". The first non-comment record of the directory definition file must contain a "class" record to identify the class of subsequent entries.

SYNTAX ERROR AT RECORD *record*

A syntax error was detected in the *record* record of the directory definition file. The error might have been caused by one of the following:

- There is only one word on the line
- A quoted string exists that has not been terminated with another quote before the end of the line, including any valid continuation lines.
- The keyword was "class" and the following value was neither "aetitle" nor "managed" (object).
- The conversion of a distinguished name to a standard internal representation failed because the name had both kinds of quotes in it.
- The conversion of a distinguished name to a standard internal representation failed because the name had bad syntax.
- The key value for associationKey in a DDF entry is not one of the three special values (*' '-' '!') and is not exactly 16 hexadecimal digits.
- The value for timeSync is too large (greater than 86,400).
- The value for timeSync is not numeric.
- The attribute keyword (first word of the line) was not recognized as a valid one. (This might be due to a mistake in spelling or capitalization.)

record indicates the record number (line number) in the directory definition file for the last line of the attribute where the error is found.

System action: Processing continues. If CMIP services is just being started, initialization will not complete successfully. If CMIP services was started earlier with a valid directory definition file, it will continue to run with the previous definitions.

Operator response: Save the system log for problem determination.

System programmer response: Action depends on the value for *reason*:

DUPLICATE ATTRIBUTE AT RECORD *record*

Remove one of the duplicate attributes, then issue the MODIFY TABLE command or restart CMIP services.

ERROR READING FILE

Correct the problem, then issue the MODIFY TABLE command or restart CMIP services.

FILE NOT FOUND

Verify that the name of the directory definition file has the correct name, then issue the MODIFY TABLE command or restart CMIP services.

INSUFFICIENT STORAGE

Wait until enough storage has been made available, then issue the MODIFY TABLE command or restart CMIP services. Halting and restarting CMIP services could free up the current copy of the DDF table, which might

allow the new table to be read. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information on how to correct storage problems.

LINE EXCEEDS 2080 AT RECORD *record*

Shorten the line, then issue the MODIFY TABLE command or restart CMIP services.

LRECL EXCEEDS 2080

Create a version of the directory definition file with a logical record length less than 2080 (using line continuation as required), then issue the MODIFY TABLE command or restart CMIP services.

NAME MISSING BEFORE RECORD *record*

Correct the problem, then issue the MODIFY TABLE command or restart CMIP services.

NAME VALUE NOT VALID AT RECORD *record*

Correct the problem, then issue the MODIFY TABLE command. If the problem persists, restart CMIP services.

NO CLASS SPECIFIED

Add the proper "class" record before the first "name" record, then issue the MODIFY TABLE command or restart CMIP services.

SYNTAX ERROR AT RECORD *record*

Correct the problem, then issue the MODIFY TABLE command or restart CMIP services.

Routing code: 2

Descriptor code: 5

IST1445I RESOURCE *value* **FOR USERVAR** *uservar* **NOT FOUND**

Explanation: VTAM issues this message in response to a DISPLAY ID=*uservar*,IDTYPE=USERVAR when the application program, *value*, that is associated with USERVAR, *uservar*, is not defined to VTAM.

value is the VALUE of the USERVAR. *value* is an application program that is displayed as a network-qualified name in the form *netid.name*, if *value* was a network-qualified name on the MODIFY USERVAR command.

uservar is the name of the USERVAR.

System action: VTAM rejects the command.

Operator response: Activate the application major node containing *value* and reenter the command.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1446I SYMBOLIC SUBSTITUTION NOT AVAILABLE IN THIS RELEASE OF MVS

Explanation: VTAM issues this message when an ampersand (&) is encountered in an input record in a member of VTAMLST and VTAM is running on a release of MVS that does not support symbolic substitution. Symbolic substitution is available on MVS V5R2 and later releases.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the VTAM definition library member by removing the ampersand or symbolic variable.

Routing code: 2

Descriptor code: 5

IST1447I REGISTRATION TYPE = *registration_type*

Explanation: This message is issued with a group of messages in response to the DISPLAY ID command. It displays the registration type for the resource, if applicable.

registration_type can have the following values:

IST1449I • IST1450I

NO Resource registration type is none.

NETSRVR

Resource registration type is network node server.

CDSERVR

Resource registration type is central directory server.

The value for *resource_type* is determined by resource definition unless it has been changed by the MODIFY RESOURCE command. See the z/OS Communications Server: SNA Network Implementation Guide for more information about resource registration.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1449I DEFAULTS WILL BE USED IF NO OVERRIDE IS SPECIFIED

Explanation: VTAM issues this message during START processing when a start option is specified with a value that is not valid or when a syntax error is detected in the START command. After issuing IST1449I, VTAM will issue IST1311A to prompt the operator to reenter the start options. If the operator does not enter overriding values, VTAM will use default values for the start options in error.

System action: Processing will be halted while VTAM waits for a reply to IST1311A.

- If the LIST start option is entered, VTAM ignores it.
- If HALT is entered, start processing ends and VTAM is terminated.

Operator response:

- Enter start options to override current values, or enter a blank to indicate that you want default values. If you need another prompt for further overrides, follow the last option with a comma.
- Enter HALT to terminate VTAM.

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST1450I GLOBAL TNSTAT = *status* CNSL = *console* TIME = *interval*

Explanation: VTAM issues this message as part of the response to the DISPLAY TNSTAT or MODIFY TNSTAT commands.

When *status* is ACTIVE, that indicates that all non-TRLE devices are recording, and recording will be initiated automatically for newly activated devices. When *status* is INACTIVE, that indicates that recording is not in effect for non-TRLE controlled devices, nor will recording be initiated automatically for newly activated devices.

When *console* is YES, that indicates that tuning statistics reports are displayed at the system console. When *console* is NO, that indicates that tuning statistics reports are not displayed at the system console.

interval is the number of minutes in the tuning statistics reporting interval.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1451I TRLE = *trlename* TNSTAT = *status*

Explanation: VTAM issues this message as part of the response to the DISPLAY TNSTAT, MODIFY TNSTAT and MODIFY NOTNSTAT commands.

trlename is the name of the TRLE for which status is being reported.

status indicates the results of the MODIFY command or the status of tuning statistics recording for *trlename*.

- When *status* is ACTIVE, tuning statistics are currently being recorded for the devices in the TRLE.
- When *status* is INACTIVE, tuning statistics are not currently being recorded for the devices in the TRLE.
- When *status* is FAILED, VTAM does not support collection of tuning statistics for the TRLE specified as *trlename* on the MODIFY command. See Gathering tuning statistics in z/OS Communications Server: SNA Network Implementation Guide for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1452I *type* MISMATCH IGNORED FOR *puname*

Explanation: VTAM issues this message as part of a group of messages when a connection for the switched physical unit *puname* was established, but the CP name or the station ID of *puname* did not match the CP name or station ID that was passed in the XID request. A complete description of the message group follows.

```
IST1452I  type MISMATCH IGNORED FOR puname
IST1394I  CPNAME = cpname  STATION ID = stationid
IST314I   END
```

IST1452I

puname is the name of the PU.

type is the type of mismatch that occurred. Possible values are: CPNAME or STATION ID.

IST1394I

cpname is the network-qualified name of the control point (CP) that was passed in the XID from the node attempting the connection. VTAM displays *cpname* in the form *netid.name*.

stationid is the station identifier expressed in hexadecimal. For more information on station identifier formats, see the descriptions of the IDBLK and IDNUM operands in the z/OS Communications Server: SNA Resource Definition Reference.

System action: The connection will be established. Processing continues.

Operator response: Enter a DISPLAY ID on *puname* and save the system log for problem determination.

System programmer response: Perform one of the following:

- Reinitialize the physical unit with the correct station identifier or CP name.
- Check for a CP name or station ID mismatch between the PU and the switched major node and revise as needed.

Routing code: 2

Descriptor code: 3

IST1453I VARY INACT FOR *resourcename* FAILED - FRSESET PU ACTIVE

Explanation: VTAM issues this message when a VARY NET,INACT,ID=*resourcename* was attempted for a frame relay LMI PU and at least one FRESESET PU associated with that LMI PU is still active. The deactivation attempt is ignored.

System action: Processing continues. The deactivation attempt is ignored.

Operator response: All of the FRSESET PUs must be deactivated before deactivation of the LMI PU. To determine

IST1454I

the FRESESET PUs defined under the LMI PU you want to deactivate, perform the following steps:

1. Issue a DISPLAY ID for the LMI PU you want to deactivate to get the corresponding line name.
2. Issue a DISPLAY LINE (with SCOPE=ALL) to obtain the names for the FRSESET PUs defined under the line.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1454I *count type* DISPLAYED [FOR ID = *rscname* | FOR LU = *rscname*]

Explanation: IST1454I is issued once for every ID value (*rscname*) specified on the DISPLAY command and indicates how many (*count*) resources matched the command specifications (for example ID, EXCLUDE, SCOPE, IDTYPE). This message was issued in response to one of the following commands.

- DISPLAY ADJSSCPS
- DISPLAY APPLS
- DISPLAY CDRMS
- DISPLAY CDRSCS
- DISPLAY CPCP
- DISPLAY CLSTRS
- DISPLAY EXIT
- DISPLAY GRAFFIN
- DISPLAY GROUPS
- DISPLAY LINES
- DISPLAY LUGROUPS,SCOPE=ALL
- DISPLAY MAJNODES
- DISPLAY PATHTAB
- DISPLAY PENDING
- DISPLAY RSCLIST
- DISPLAY SRCHINFO
- DISPLAY STATIONS
- DISPLAY STATS,TYPE=VTAM
- DISPLAY STORUSE
- DISPLAY TABLE,SCOPE=ALL
- DISPLAY TERMS
- DISPLAY TGPS
- DISPLAY TOPO,LIST=TDUINFO
- DISPLAY TRL
- DISPLAY USERVAR.

rscname is network-qualified only if the corresponding ID keyword was network-qualified on the DISPLAY command. FOR ID=*rscname* is not present if ID was not coded on the command.

IST1454I is issued even if the specified MAX limit is reached for the command.

type is based on the command issued, as follows:

Display Command
type

DISPLAY ADJSSCPS
RESOURCE(S)

DISPLAY APPLS
RESOURCE(S)

DISPLAY CDRMS
RESOURCE(S)

DISPLAY CDRSCS
RESOURCE(S)

DISPLAY CLSTRS
RESOURCE(S)

DISPLAY CPCP
ADJCP(S)

DISPLAY EXIT
EXIT(S)

DISPLAY GRAFFIN
AFFINITY, AFFINITIES

DISPLAY GROUPS
RESOURCE(S)

DISPLAY LINES
RESOURCE(S)

DISPLAY LUGROUPS
RESOURCE(S)

DISPLAY MAJNODES
RESOURCE(S)

DISPLAY PATHTAB
PATH(S)

DISPLAY PENDING
RESOURCE(S)

DISPLAY RSCLIST
RESOURCE(S)

DISPLAY SRCHINFO,LIST=ALL
PAIR(S)

DISPLAY SRCHINFO,LIST=SUMMARY
CP NAME(S), SSCP(S)

DISPLAY SRCHINFO,SID
ADJSSCP(S)

DISPLAY STATIONS
STATION(S)

DISPLAY STATS,TYPE=VTAM
STATISTICS

DISPLAY STORUSE,APPL
APPL(S)

DISPLAY STORUSE,DSPNAME
DSPNAME(S)

DISPLAY STORUSE,JOBNAME
JOBNAME(S)

DISPLAY STORUSE,POOL
POOL(S)

DISPLAY TABLE
RESOURCE(S)

DISPLAY TERMS
RESOURCE(S)

IST1455I

DISPLAY TOPO,LIST=TDUINFO
TDUINFO(S)

DISPLAY TGPS
TGP(S)

DISPLAY TRL
TRLE(S)

DISPLAY USERVAR
USERVAR(S)

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1455I ERROR DETECTED BY EXIT SERVICES FOR *exitname* IN *modulename*

Explanation: This message is the first in a group of messages issued by VTAM exit services when an error has been detected while processing a request from a user-written exit. A complete description of the message group follows.

IST1455I ERROR DETECTED BY EXIT SERVICES FOR *exitname* IN *modulename*
IST1456I FUNCTION *function* - REASON: *reason*
IST314I END

IST1455I

exitname is the CSECT name of the exit.

modulename is the name of the load module that contains *exitname*.

IST1456I

- *function* is the function being performed by VTAM exit services and can be one of the following:

*UNKNOWN

The function requested could not be determined.

MESSAGE

The exit *exitname* requested the message function.

- *reason* is the reason for the error and can be one of the following:

EXSPL POINTER IS ZERO

The pointer to the EXSPL (passed by the exit in register 1) is zero.

INPUT PARMLIST POINTER IS ZERO

The pointer to the input parameter list in the EXSPL is zero.

MESSAGE LENGTH IS NOT VALID

The message text length specified in the EXMPL is not valid. Message text length must be greater than 0 and less than or equal to 4096 (decimal).

MESSAGE TEXT POINTER IS ZERO

The pointer to the message text in the EXMPL is zero.

REQUESTED FUNCTION IS NOT VALID

The function code specified in the EXSPL is not defined to (nor supported by) the current level of VTAM exit services.

VTAM MESSAGE MACRO FAILED

The macro used by VTAM to send a message to the system console returned a nonzero return code to exit services.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: Correct the error in *exitname*. See z/OS Communications Server: SNA Customization for more information on *exitname*.

Routing code: 2

Descriptor code: 4

IST1456I **FUNCTION** *function* — **REASON:** *reason*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST1455I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1457I **VTAM APING VERSION** *apver* (**PARTNER TP VERSION** *partver*)

Explanation: This message is the first in a group of messages that VTAM APING transaction program (TP) issues in response to the DISPLAY APING command. This group of messages provides information about the exchange of data between the APING TP and its partner TP. A complete description of the message group issued for a normal, non-exception APING transaction on the APING side follows.

The following is an example of messages that could be issued in the message group.

```

IST1457I VTAM APING VERSION apver (PARTNER TP VERSION partver)
IST1490I DLU=dluname SID=sid
IST1462I ECHO IS [ON|OFF|FORCED]
IST1463I ALLOCATION DURATION: time MILLISECONDS
IST1464I PROGRAM STARTUP AND VERSION EXCHANGE: time MILLISECONDS
[IST1465I      DURATION      DATA SENT      DATA RATE      DATA RATE]
[IST1466I      (MILLISECONDS) (BYTES)      (KBYTE/SEC)  (MBIT/SEC)]
[IST1467I      dur          dsnt          drkb          drmb]
[IST1467I      dur          dsnt          drkb          drmb]
[IST1468I TOTALS:  durt          dsntt          drkbt          drmbt]
[IST1469I DURATION STATISTICS:]
[IST1470I MINIMUM = min  AVERAGE = avg  MAXIMUM = max]
IST314I END

```

IST1457I

apver identifies the VTAM version of APING.

partver identifies the APING version of the partner TP.

IST1462I

- This message displays the value of ECHO. Possible values are:

NO The partner TP does not echo back to APING.

YES

The partner TP does echo back to APING.

FORCED

The issuer has specified ECHO=NO, but the partner TP cannot support ECHO=NO. In this case, ECHO=YES will be used.

IST1463I

This message displays the time it takes to perform the conversation allocation between APING and its partner TP.

IST1464I

This message displays the time it takes to perform the version exchange between APING and its partner TP. The time starts when the data is sent and timer stops when the partner's version has been received.

IST1465I

This message is a header message for information displayed in message IST1467I.

IST1466I

This message is a header message for information displayed in message IST1467I.

IST1458I • IST1459I

IST1467I

dur is the time it takes to send the data and receive the echo (or confirm for one way transactions).

dsnt is the count of sent and received bytes. If message IST1462I indicates that ECHO IS OFF, the total is (SIZE * CONSEC) from the D NET,APING command. Otherwise, the total is (2 * SIZE * CONSEC).

drkb is the data rate in KB.

drmb is the data rate in MB.

Decimal values are not displayed in the message. If a decimal results from data rate calculations, the number is truncated to the whole number. If the decimal value is less than one, zero is displayed.

IST1468I

durt is the total of the duration time in all IST1467I messages.

dsntt is the total of the data sent for all IST1467I messages.

drkbt is the data rate in KB calculated from all of the data rates in message IST1467I.

drmbt is the data rate in MB calculated from all of the data rates in message IST1467I.

Decimal values are not displayed in the message. If a decimal results from data rate calculations, the number is truncated to the whole number. If the decimal value is less than one, zero is displayed.

IST1469I

This message states that message IST1470I is going to display duration statistics.

IST1470I

min is the minimum duration displayed in all IST1467I messages.

avg is the average of all the duration times displayed in message IST1467I messages.

max is the maximum duration displayed in all IST1467I messages.

IST1490I

dluname is the name of the destination logical unit (DLU) with which the APING transaction occurs.

sid is the session identifier (SID) that is used to identify the session over which the APING transaction occurs. The value ***NA*** will be displayed if the session identifier was not currently available to VTAM.

If VTAM allocates a session to transmit the APING data, a message group with IST1489I as the first message is also issued. The name of the DLU in the two message groups might not match if any name translation has occurred on the route between the LUs.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1458I ORIGIN ADJSUB VR TP ER REVERSE ER

Explanation: This message is part of a message group. Please see the explanation for message IST1489I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1459I originsa destsa vr tp er re

Explanation: This message is part of a message group. Please see the explanation for message IST1489I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1460I TGN CPNAME TG TYPE HPR

Explanation: This message is part of a message group. The first message is either IST879I, IST1476I, IST1489I, IST1494I, IST2102I, IST2103I, or IST2104I. See the explanation of those messages for a full description.

Routing code: 2

Descriptor code: 5

IST1461I tgn cpname tgtype hpr

Explanation: This message is part of a group of messages. The first message is either IST879I, IST1476I, IST1489I, IST1494I, IST2102I, IST2103I, or IST2104I. See the explanation of those messages for a full description.

Routing code: 2

Descriptor code: 5

IST1462I ECHO IS *echotype*

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1463I ALLOCATION DURATION: *time* MILLISECONDS

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1464I PROGRAM STARTUP AND VERSION EXCHANGE: *time* MILLISECONDS

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1465I DURATION DATA SENT DATA RATE DATA RATE

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1466I (MILLISECONDS) (BYTES) (KBYTE/SEC) (MBIT/SEC)

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1467I *dur dsnt drkb drmb*

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1468I **TOTALS:** *dur dsnt drkb drmb*

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1469I **DURATION STATISTICS:**

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1470I **MINIMUM = min AVERAGE = avg MAXIMUM = max**

Explanation: This message is part of a message group. Please see the explanation for message IST1457I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1471I **SESSION UNAVAILABLE FOR APING**

Explanation: This message is a single line message issued in response to a DISPLAY APING command when VTAM is unable to start an APING transaction because no sessions are available for the specified partner and logmode.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1472I **APING *errtype* ERROR**

Explanation: This message is the first in a group of messages that VTAM issues when an error case occurs in processing the DISPLAY APING command. The group can be issued a significant amount of time after the DISPLAY APING command has been issued.

- The following is an example of the message group:

```
IST1472I APING TRANSACTION ERROR
IST1219I RTNCD=rtncd, FDB2=fdb2
IST1002I RCPRI=rcpri, RCSEC=rcsec
IST1473I SENSE = sense_code
IST314I END
```

IST1002I

rcpri is the value of the primary return code issued by VTAM.

rcses is the value of the secondary return code issued by VTAM.

IST1219I

rtncd is the error field RPLRTNCD. It is a hexadecimal value returned by the SETLOGON macro.

fdb2 is the feedback field RPLFDB2. It is a hexadecimal value returned by the SETLOGON macro.

IST1472I

This message states that an APING transaction error has occurred.

errtype states what type of APING error has occurred. If the APING error is due to a protocol violation of APINGD, *errtype* is PROTOCOL. Otherwise, *errtype* is TRANSACTION.

IST1473I

This message provides sense code information.

System action: Processing stops.

Operator response: Try the DISPLAY APING command again. If the command still fails, save the system log for problem determination.

System programmer response: Use the system log and return code information to assist you in correcting the problem.

Routing code: 2

Descriptor code: 5

IST1473I SENSE = *sense_code*

Explanation: This message is part of a message group. See IST1472I for a detailed explanation of this message.

Routing code: 2

Descriptor code: 5

IST1474I *tpname* TP CONCURRENT INSTANCE LIMIT = *value*

Explanation: This message is issued in response to the DISPLAY APINGDTP or DISPLAY APINGTP command and displays the number of APINGD or APING transaction programs that are allowed to run concurrently.

tpname is either APING or APINGD.

value shows the number of instances of the APING or APINGD transaction program allowed to run concurrently. *value* can be either a numeric value or UNLIMITED. UNLIMITED indicates that there is no limit to the number of instances of this transaction program allowed to run concurrently.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1475I EXIT *exitname* INVOKED: RE-ENTER FORCE COMMAND

Explanation: VTAM issues this message in response to the MODIFY EXIT OPTION=FORCE command when the exit to be forced inactive is currently being invoked.

- *exitname* is displayed in the form *routine_name.instance_name* where:

routine_name is the name of the installation-wide exit routine.

instance_name is the instance name of the exit routine. When issued for the base exit, *instance_name* is blank.

System action: Inactivation continues. Under certain circumstances, however, the exit might “hang” in a pending inactive state.

Operator response: Wait a short period, then enter D NET, EXIT to display the exit being forced. If the state is still PENDING INACTIVE, reissue the command. Otherwise, no further action is necessary.

IST1476I

System programmer response: None.

Routing code: 2

Descriptor code: 3

IST1476I TCID X'tcid' - REMOTE TCID X'remote_tcid'

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a type 2.1 node representing a Rapid Transport Protocol (RTP) route. This message is the first in a group of messages and the full description of the message group follows.

- If the DISPLAY ID command was issued without HPRDIAG=YES specified, the following message group is displayed:

```
IST1476I      TCID X'tcid' - REMOTE TCID X'remote_tcid'
IST1481I      DESTINATION CP nodename - NCE X'nceid'
IST1587I      ORIGIN NCE X'nceid'
[IST1966I      ACTIVATED AS ACTIVE ON date AT time]
[IST1967I      ACTIVATED AS PASSIVE ON date AT time]
[IST2237I      puname CURRENTLY REPRESENTS A LIMITED RESOURCE]
IST1477I      ALLOWED DATA FLOW RATE = allowed units
IST1516I      INITIAL DATA FLOW RATE = initial units
IST1841I      ACTUAL DATA FLOW RATE = actual units
IST1511I      MAXIMUM NETWORK LAYER PACKET SIZE = size BYTES
IST1478I      NUMBER OF UNACKNOWLEDGED BUFFERS = buffers
IST1479I      RTP CONNECTION STATE = state - MNPS = mnps
[IST1959I      DATA FLOW STATE: NORMAL]
[IST1961I      DATA FLOW STATE: STALLED]
IST1855I      NUMBER OF SESSIONS USING RTP = sessions
[IST1697I      RTP PACING ALGORITHM = ARB RESPONSIVE MODE]
[IST2267I      RTP PACING ALGORITHM = ARB PROGRESSIVE MODE]
[IST2395I      RTP PACING ALGORITHM = ARB BASE MODE]
[IST1480I      RTP END TO END ROUTE - RSCV PATH]
[IST1460I      TGN      CPNAME          TG TYPE      HPR]
[IST1461I      tgn      cpname        tgtype      hpr]
[IST875I      ALSNAME TOWARDS adjacent_resource_type = resource_name]
[IST1738I      ANR LABEL          TP          ER NUMBER]
[IST1739I      anr_label        tp          er_number]
[IST1588I      RTP END TO END ROUTE - COMPUTED SESSION PATH]
[IST1460I      TGN      CPNAME          TG TYPE      HPR ]
[IST1461I      tgn      cpname        tgtype      hpr ]
[IST875I      ALSNAME TOWARDS adjacent_resource_type = resource_name]
[IST1738I      ANR LABEL          TP          ER NUMBER]
[IST1739I      anr_label        tp          er_number]
```

- If the DISPLAY ID command was issued with HPRDIAG=YES specified, the following message group is displayed:

```
IST1476I      TCID X'tcid' - REMOTE TCID X'remote_tcid'
IST1481I      DESTINATION CP nodename - NCE X'nceid'
IST1587I      ORIGIN NCE X'nceid'
[IST1966I      ACTIVATED AS ACTIVE ON date AT time]
[IST1967I      ACTIVATED AS PASSIVE ON date AT time]
[IST2237I      puname CURRENTLY REPRESENTS A LIMITED RESOURCE]
IST1479I      RTP CONNECTION STATE = state - MNPS = mnps
[IST1959I      DATA FLOW STATE: NORMAL]
[IST1961I      DATA FLOW STATE: STALLED]
IST1855I      NUMBER OF SESSIONS USING RTP = sessions
[IST1480I      RTP END TO END ROUTE - RSCV PATH]
[IST1460I      TGN      CPNAME          TG TYPE      HPR]
[IST1461I      tgn      cpname        tgtype      hpr]
[IST875I      ALSNAME TOWARDS adjacent_resource_type = resource_name]
[IST1738I      ANR LABEL          TP          ER NUMBER]
[IST1739I      anr_label        tp          er_number]
[IST1588I      RTP END TO END ROUTE - COMPUTED SESSION PATH]
[IST1460I      TGN      CPNAME          TG TYPE      HPR]
[IST1461I      tgn      cpname        tgtype      hpr]
[IST875I      ALSNAME TOWARDS adjacent_resource_type = resource_name]
```

[IST1738I	ANR LABEL	TP	ER NUMBER]
[IST1739I	anr_label	tp	er_number]
IST924I	-----		

The remainder of this display is described under IST1968I. See that message for more information.

IST875I

This message displays information about the adjacent link station (**ALSNAME**), which is the physical connection to the adjacent node.

adjacent_resource_type will always be RTP, which means that the ALSNAME is used in the direction of the other endpoint of the RTP pipe.

resource_name is the name of the adjacent link station (ALS).

IST924I

This message is used as a separator message to group together messages IST1857I, IST1858I, and IST1859I in the display.

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- The route selection control vector (RSCV) is displayed for the route to the destination node of the partner transaction program. Multiple IST1461I messages might be needed to display the full route.
- *tn* is the transmission group number.
- *cpname* is the destination CP name for the transmission group.

Tip: The *cpname* for a composite node might not always be correct. When an SSCP takeover occurs for an NCP in a composite node and the *cpname* was changed, the new *cpname* is not reflected in the display of the RTP end-to-end route.

- *tgtype* is the transmission group type. The values for *tgtype* can be one of the following:

APPN Indicates that this TG is an APPN-based TG.

INTERCHANGE

Indicates that this TG represents a TG from an interchange node to a subarea node.

VRTG Indicates that this TG is a virtual-route-based TG.

ISL Indicates that this TG is an intersubnet TG.

- *hpr* corresponds with the HPR start option. The values for *hpr* can be:

RTP indicates this VTAM provides RTP-level HPR support.

ANR indicates this VTAM provides ANR-level HPR support.

NA indicates this VTAM provides no HPR support.

IST1476I

tcid is a transport connection identifier, assigned by this node, that uniquely identifies the session endpoint.

remote_tcid is a transport connection identifier, assigned by the RTP partner node, that uniquely identifies the session endpoint.

IST1477I

allowed is the allowed rate at which data can be sent over the RTP connection at the time this message is displayed.

units is the unit of measure for the rate and is displayed in bits, kilobits, megabits, or gigabits per second (BITS/SEC, KBITS/SEC, MBITS/SEC, or GBITS/SEC).

The data flow rate is updated approximately every second while data is flowing.

IST1478I

IST1476I

buffers is the number of I/O buffers, containing outbound data, that have been sent to the partner without an acknowledgment since the HPR PU was activated.

IST1479I

- *state* is the connection state of the RTP. The values for *state* can be:

INITIAL

Initial state at startup time.

ALS_PENDING

Waiting for adjacent link station processing.

ALS_ASSIGNED

Adjacent link station processing is complete.

OPENED

Initial state for active partner after startup.

CALLING

Active partner sending connection setup to the partner.

CALLING/PATHSWITCH

RTP path switch is in progress while in CALLING state.

CONNECTED

RTP is active.

CONNECTED/BACKPRESSURE

RTP backpressure is currently being applied.

CONNECTED/PATHSWITCH

RTP path switch is in progress.

DISCONNECT

Doing disconnect processing.

DISCONNECTED

Disconnect processing is complete and last message has been sent.

LISTENING

Initial state for passive partner after startup.

LISTENING/PATHSWITCH

RTP path switch is in progress while in LISTENING state.

PENDING_ACT

Waiting for activation to complete.

PENDING_INACT

Waiting for deactivation to complete.

PENDING TAKEOVR

Multinode persistent session planned takeover is in progress.

RECOVERY

Multinode persistent session recovery in progress.

mnps indicates if the RTP end-to-end route is being used by an MNPS application. The values for *mnps* can be:

YES The RTP is being used by an MNPS application.

NO The RTP is not being used by an MNPS application.

IST1480I

This message informs users that the messages that follow describe the RSCV end-to-end path of the RTP route. The RSCV path represents the route used to send data from the origin CP to the destination CP. This message group will not be displayed if the RTP is processing a path switch or the RSCV is not available.

IST1481I

nodename is the network-qualified name of destination partner's CP in the form *netid.name* for this RTP route.

nccid is the destination partner's network connection endpoint (NCE) ID for this RTP route.

IST1511I

size is the maximum size of a network layer packet (NLP) that can be sent over this Rapid Transport Protocol (RTP) connection in bytes.

IST1516I

initial is the initial data flow rate for this Rapid Transport Protocol (RTP) connection.

units is the unit of measure for the rate and is displayed in bits, kilobits, megabits, or gigabits per second (BITS/SEC, KBITS/SEC, MBITS/SEC, or GBITS/SEC).

IST1587I

nccid is this node's network connection endpoint (NCE) ID for the Rapid Transport Protocol (RTP) connection.

IST1588I

This message informs users that the messages that follow describe the computed end-to-end path of the Rapid Transport Protocol (RTP) route. This message is displayed if the physical path is different from the computed path. The physical and computed session paths can be different when one of the RTP endpoints is associated with a multiple node persistent session (MNPS) application program.

See the z/OS Communications Server: SNA Network Implementation Guide for additional information when the computed path is different from the physical path.

IST1697I

This message indicates that the responsive-mode adaptive rate-based (ARB) pacing algorithm is being used.

IST1738I

This message is a header message for information displayed in message IST1739I.

IST1739I

anr_label is an identifier for a unidirectional transmission link between two nodes. A node will use this routing label internally to correctly forward HPR network layer packet (NLP) data along a given Rapid Transport Protocol (RTP) connection.

tp is the subarea transmission priority. When *anr_label* represents a subarea transmission link, *tp* identifies the priority of data flowing over an explicit route during a session.

er_number is the explicit route number. When *anr_label* represents a subarea transmission link, *er_number* represents the underlying subarea explicit route used for the HPR NLP traffic.

IST1841I

This message shows the actual data flow rate for this Rapid Transport Protocol (RTP). It should be compared with the allowed data rate displayed by message IST1477I, and the initial data rate displayed by IST1516I.

actual is the actual rate at which data is being sent over the RTP connection at the time this message is displayed.

units is the unit of measure for the rate and is displayed in bits, kilobits, megabits, or gigabits per second (BITS/SEC, KBITS/SEC, MBITS/SEC, or GBITS/SEC).

The data flow rate is updated approximately every second while data is flowing.

IST1855I

sessions is the number of fully active sessions that are currently using this Rapid Transport Protocol (RTP).

IST1959I

This message indicates that data is flowing on the RTP pipe.

IST1961I

- This message indicates that data is not flowing on the RTP pipe. The data flow is stalled for one of the following reasons:

IST1477I • IST1478I

- The RTP partner requests retransmission of at least one NLP, but the request cannot be honored.
- The RTP partner repeatedly requests the retransmission of the same NLP. In this case, VTAM honors the request by retransmitting the NLP, but the partner does not receive this NLP.
- A stalled RTP pipe causes all the sessions using the pipe to stall. A persistent STALLED state might require forced inactivation of the HPR PU. If you want VTAM to automatically deactivate stalled RTP pipes after a specified amount of time, use the HPRSTALL start option. See the HPRSTALL start option information in z/OS Communications Server: SNA Resource Definition Reference.

IST1966I

This message shows when the RTP pipe was activated. It is issued only if the PU is the active end of the pipe.

The *date* and *time* values specify the date and time of the activation. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST1967I

This message shows when the RTP pipe was activated. It is issued only if the PU is the passive end of the pipe.

The *date* and *time* values specify the date and time of the activation. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2237I

This message indicates that a DISCNT value was coded on the physical link of the underlying DLC.

puname is the name of the Rapid Transport Protocol (RTP) PU being displayed.

IST2267I

This message indicates that the progressive-mode adaptive rate-based (ARB) pacing algorithm is being used.

IST2395I

This message indicates that the base-mode adaptive rate-based (ARB) pacing algorithm is being used.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1477I ALLOWED DATA FLOW RATE = *allowed units*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route.

The first message in the group is either IST1476I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1478I NUMBER OF UNACKNOWLEDGED BUFFERS = *buffers*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is either IST1476I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1479I RTP CONNECTION STATE = *state* - MNPS = *mnps*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1480I RTP END TO END ROUTE - RSCV PATH

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command or a MODIFY RTP command.

- If DISPLAY ID is issued for a type 2.1 node representing a Rapid Transport Protocol (RTP) route, the first message is IST1476I. See the description of that message for more information.
- If MODIFY RTP is issued, the first message is IST1494I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1481I DESTINATION CP *nodename* – NCE *nceid*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1482I HPR = *hpr* – OVERRIDE =*override* – CONNECTION =*connection*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a APPN capable PU type 2.1.

hpr, *override*, and *connection* indicates whether this PU or CDRM is capable of using Rapid Transport Protocols (RTP).

hpr can be RTP, ANR, or NONE.

override and *connection* can be YES or NO.

HPR corresponds with the HPR operand on the group, line, PU, or CDRM definition statement and the HPR start option.

HPR start option	HPR operand coded on the group, line, or PU definition statement		
	Default	No coded	Yes coded
None, None	None	None	None
ANR, None	None	None	ANR
RTP, None	None	None	RTP
ANR, ANR	ANR	None	ANR
RTP, ANR	ANR	None	RTP
RTP, RTP	RTP	None	RTP

The HPR capability of the PU or CDRM can be overridden by the *hpr* operand on the V ACT command for other than NONE coded on the HPR start option.

IST1483I • IST1484I

The HPR value for the CDRM is only valid when the CDRM is active, otherwise it reflects the value for the last time the CDRM was active or if never active, it will be none.

OVERRIDE is the value of the HPR operand on the V ACT command or N/A if not coded.

Link activation can change the HPR capability of the PU or CDRM for each activation of the link.

CONNECTION is the HPR capability of the PU or CDRM after the connection becomes active or N/A if no connection.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1483I DTEAD = *dteaddr* VNREVCCHG = ACCEPT|REJECT

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command when a line was specified on the ID operand of the command.

A complete description of the message group follows the example.

```
IST1484I      vnnetid.vname      vngroup
IST1483I DTEAD = dteaddr      VNREVCCHG = ACCEPT|REJECT
```

IST1484I

vnname is the network-qualified name in the form *netid.name*.

IST1483I

dteaddr is the DTE address that was specified on the DTEAD operand of the LINE definition statement for the NCP major node.

VNREVCCHG specifies whether a node will accept or reject call request packets that indicate the destination node is to pay for the call.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1484I *vnnetid.vnname vngroup*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command when a line was specified on the ID operand of the command.

This message will be issued when multiple connection networks have been defined and will immediately follow message IST1324I.

A complete description of the message group follows the example.

```
IST1324I VNNAME = vnname      VNGROUP = vngroup
IST1484I      vnnetid.vname      vngroup
```

IST1324I

vnname is the connection network CP name that was specified on subfield 1 of the DLCADDR keyword of the LINE definition statement for the NCP major node.

*vn*group is the name of the logical group that was specified on subfield 1 of the DLCADDR keyword operand of the LINE definition statement for the NCP major node. This group will be used to establish the link between the NCP major node and other adjacent nodes in the connection network.

IST1484I

*vn*name is the network-qualified name in the form *vn*netid.name.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1485I DLCADDR SUBFIELDS FOR *name*

Explanation: VTAM issues this message as a header for a group of IST1318I messages in response to one of the following commands:

- A DISPLAY ADJCP command when the ID operand specifies the name of a X.25 virtual node and SCOPE=ALL is specified
- A DISPLAY ID command for an XCA major node group that defines a transmission group (TG) to an ATM native connection network.

A complete description of the message group follows the example.

```
IST1485I DLCADDR SUBFIELDS FOR name
IST1318I parameter_value
IST1318I parameter_value
[IST1319I parameter_value]
```

```
⋮
```

```
IST314I END
```

IST1318I

- *parameter_value* is the DLCADDR value specified on the LINE or GROUP definition statement. The message will appear as follows:
IST1318I yy,N'*parameter_value*'
- *N* is the value specified on the DLCADDR keyword.
- *yy* is the subfield ID.
- If the DLCADDR value was coded in hexadecimal or binary coded decimal (BCD), *parameter_value* is displayed with a blank separating every 8 characters of data. If an odd number of digits was coded for the DLCADDR value, *parameter_value* will be padded on the left with a zero.

IST1319I

This message is used to display overflow information from *parameter_value* in message IST1318I.

IST1485I

name identifies LINE or GROUP definition statement where the DLCADDR statements are coded.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1486I

IST1486I RTP NAME STATE DESTINATION CP MNPS TYPE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ADJCP ID= command for an adjacent control point (ADJCP) that has a Rapid Transport Protocol (RTP) connected to it or in response to a DISPLAY ID= command where ID is the name of the RTP major node.

This message is the first in a group of messages and the full description of the message group follows the example.

```
IST1486I RTP NAME STATE DESTINATION CP MNPS TYPE
IST1487I puname state nodename mnps type
:
```

IST1486I

This message is a header message for the information displayed in message IST1487I.

IST1487I

puname is the RTP PU NAME of the adjacent link station (RTP ALS).

state is the connection state of the RTP and can be one of the following:

INITIAL

Initial state at startup time

ALS_PENDING

Waiting for adjacent link station processing

ALS_ASSIGNED

Adjacent link station processing is complete

OPENED

Initial state for active partner after startup

CALLING

Active partner sending connection setup to the passive partner

LISTENING

Initial state for passive partner after startup

CONNECTED

RTP is active

DISCONNECTED

Disconnect processing is complete and last message has been sent

DISCONNECT

Disconnect processing is in progress

PENDING_ACT

Waiting for activation to complete

PENDING_INACT

Waiting for inactivation to complete

PENDING_INACT

Waiting for inactivation to complete

PENDING TAKEOVR

Multinode persistent session application program planned takeover is in progress

RECOVERY

Multi-node persistent session application program recovery in progress

nodename is the destination partner's name in the form of *netid.name* for this RTP.

mnps indicates if the RTP connection is being used by an MNPS application and can be one of the following:

YES The RTP connection is being used by an MNPS application.

NO The RTP connection is not being used by an MNPS application.

type indicates the type of RTP connection and can be one of the following:

CPCP CP_CP RTP

RSTP Route_Setup RTP

LULU LU_LU RTP

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1487I puname state nodename mnps type

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ADJCP ID command for an adjacent control point (ADJCP) that has a Rapid Transport Protocol (RTP) connected to it or in response to a DISPLAY ID= command where ID is the name of the RTP major node.

The first message in the group is IST1486I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1488I action OF RTP puname AS role TO cpnetid.cpname

Explanation: Depending on the value of the HPRITMSG start option, this message might be issued alone or as the first message in a group of messages when a Rapid Transport Protocol (RTP) is activated or deactivated.

If the HPRITMSG start option is the value BASE (default):

- When an RTP pipe is activating, VTAM issues the following IST1488I message:
IST1488I ACTIVATION OF RTP puname AS role TO cpnetid.cpname
- When an RTP pipe is deactivating, VTAM issues the following IST1488I message:
IST1488I INACTIVATION OF RTP puname AS role TO cpnetid.cpname

If the HPRITMSG start option is the value ENHANCED:

- When an RTP pipe is activating, VTAM issues the following IST1488I message group:
IST1488I ACTIVATION OF RTP puname AS role TO cpnetid.cpname
[IST1962I APPNCOS = appncos_name- PRIORITY = NETWORK]
[IST1963I APPNCOS = appncos_name- PRIORITY = HIGH]
[IST1964I APPNCOS = appncos_name- PRIORITY = MEDIUM]
[IST1965I APPNCOS = appncos_name- PRIORITY = LOW]
[IST1480I RTP END TO END ROUTE - RSCV PATH]
[IST1460I TGN CPNAME TG TYPE HPR]
[IST1461I tgn cpname tgtype hpr]
[
:
:]
IST314I END
- When an RTP pipe is deactivating, VTAM issues the following IST1488I message group:
IST1488I INACTIVATION OF RTP puname AS role TO cpnetid.cpname
[IST1962I APPNCOS = appncos_name- PRIORITY = NETWORK]
[IST1963I APPNCOS = appncos_name- PRIORITY = HIGH]
[IST1964I APPNCOS = appncos_name- PRIORITY = MEDIUM]
[IST1965I APPNCOS = appncos_name- PRIORITY = LOW]
IST314I END

IST1488I

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- In the message text:

tgn

The transmission group number.

cpname

The destination CP name for the transmission group.

tgtype

The the transmission group type. Possible values are:

- APPN
- INTERCHANGE
- VRTG
- ISL

hpr

Corresponds with the HPR start option. Possible values are:

RTP Indicates that this VTAM provides RTP-level HPR support.

ANR Indicates that this VTAM provides ANR-level HPR support.

NA Indicate that the link to the next node is not HPR capable.

- When a link in a particular route is not HPR capable, then the HPR capability for the next node cannot be determined.

IST1480I

This message informs the operator that the messages that follow describe the RSCV end-to-end path of the RTP route. The RSCV path represents the route used to send data from the origin CP to the destination CP.

IST1488I

- In the message text:

action

Indicates the process that caused this message to be issued. Possible values are:

ACTIVATION

The RTP activation has been completed.

INACTIVATION

The RTP inactivation has been completed.

puname

The RTP PU name by which VTAM knows the RTP adjacent link station (ALS).

role

The role of this partner in the RTP connection. Possible values are:

ACTIVE

This partner initiated the activation of the RTP.

PASSIVE

This partner did not initiate the activation of the RTP.

cpnetid.cpname

The network-qualified cp name of the RTP partner.

IST1962I

- This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **network**.
- In the message text:

appncos_name

The APPNCOS name associated with this RTP pipe.

IST1963I

- This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **high**.
- In the message text:

appncos_name

The APPNCOS name associated with this RTP pipe.

IST1964I

- This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **medium**.
- In the message text:

appncos_name

The APPNCOS name associated with this RTP pipe.

IST1965I

- This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **low**.
- In the message text:

appncos_name

The APPNCOS name associated with this RTP pipe.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1489I APING SESSION INFORMATION

Explanation: This message is the first in a group of messages that VTAM issues in response to a session startup due to the DISPLAY APING command. A complete description of the message group follows the example.

The following is an example of messages that could be issued in the message group.

```
IST1489I APING SESSION INFORMATION
IST1490I DLU=d\uname SID=sid
IST933I LOGMODE = logmode, COS = cosentry
IST875I APPNCOS TOWARDS SLU = resource_name
IST1458I ORIGIN  ADJSUB  VR      TP      ER      REVERSE ER
IST1459I originsa destsa  vr      tp      er      rev_er
IST1460I TGN     CPNAME          TG TYPE      HPR
IST1461I tgn    cpname          tgtype     hpr
IST314I END
```

IST875I

resource_name is the APPN class of service (CoS) name.

IST933

This message is part of message group IST879I or IST1489I.

IST1458I

This message is a header message for information displayed in message IST1459I.

IST1459I

originsa is the originating subarea number.

IST1489I

destsa is the destination subarea number.

vr is the virtual route number.

tp is the transmission priority of the virtual route.

er is the number of the explicit route from APING to its partner TP.

rev_er is the number of the explicit route from APINGD to its partner TP.

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- The route selection control vector (RSCV) is displayed for the route to the destination node of the partner TP. Multiple IST1461I messages might be needed to display the full route. There are cases where the entire route is not displayed to the node named on the ID operand of the DISPLAY APING command (when border nodes, interchange nodes, and LEN connections are on the session path). In these cases, IST1461I displays as much of the RSCV as is available.
- *tgn* is the transmission group number.
- *cpname* is the destination cpname for the transmission group.

Note: The *cpname* for a composite node might not always be correct. When an SSCP takeover occurs for an NCP in a composite node and the *cpname* was changed, the new *cpname* is not reflected in the display of the RTP end-to-end route.

- *tgtype* is the transmission group type. The values for *tgtype* can be one of the following:

APPN Indicates that this TG is an APPN-based TG.

INTERCHANGE

Indicates that this TG represents a TG from an interchange node to a subarea node.

VRTG Indicates that this TG is a virtual-route-based TG.

ISL Indicates that this TG is an intersubnet TG.

- *hpr* corresponds with the HPR start option. The values for *hpr* are:

RTP indicates this VTAM provides RTP-level HPR support

ANR indicates this VTAM provides ANR-level HPR support

NA indicates the link to the next node is not HPR capable

Note: When a link in a particular route is not HPR capable, then the HPR capability for the next node cannot be determined.

IST1489I

This message is the first in a group of messages that display information about the newly activated VTAM APING session.

IST1490I

dluname is the name of the destination logical unit (DLU) with which the APING transaction occurs.

sid is the session identifier (SID) used to identify the session over which the APING transaction occurs. The value *****NA***** is displayed if the session identifier is not currently available to VTAM.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1490I DLU=*dluname* SID=*sid*

Explanation: VTAM issues this message in response to a valid D NET,APING command to display the results of that command. It is part of two groups of messages.

The first messages in the groups are IST1457I and IST1489I. See the explanations of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1493I RTP SUMMARY FOR *adjcpname* COUNT = *count* RTPONLY = *value*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID= command where ID is the name of an adjacent control point (ADJCP) major node or in response to a DISPLAY ADJCP,ID= command.

adjcpname is the name of the adjacent control point. If the network where the resource resides is known to VTAM, *adjcpname* is issued as a network-qualified name in the form netid.name.

count is the number of Rapid Transport Protocols (RTPs) connected to this ADJCP. If no RTPs are active to this ADJCP, *count* will be zero.

value is the value of the RTPONLY operand for this adjacent node. Possible values are: YES, NO, and NA (not applicable). NA is used whenever this message is displayed by a node that is not defined as a border node (the BN=NO start option was specified or defaulted), or when the node identified by *adjcpname* is a native network node or end node.

Note: The destination CP of the RTP is considered an ADJCP to this VTAM while there is at least one active RTP to it.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1494I PATH SWITCH *status* FOR RTP *puname* TO *cpname*

Explanation: This message is the first in a group of messages that VTAM issues in response to an RTP path switch.

- If *status* is **COMPLETED**, the following message group is displayed:

```
IST1494I PATH SWITCH status FOR RTP puname TO cpname
IST1480I RTP END TO END ROUTE - RSCV PATH
IST1460I TGN CPNAME TG TYPE HPR
IST1461I tgn cpname tgtype hpr
      .
      .
IST314I END
```

- If *status* is **FAILED**, the following message group is displayed:

```
IST1494I PATH SWITCH status FOR RTP puname TO cpname
IST1495I NO ALTERNATE ROUTE AVAILABLE
IST314I END
```

- If *status* is **OVERRIDDEN**, the following message group is displayed:

```
IST1494I PATH SWITCH status FOR RTP puname TO cpname
IST1937I PATH SWITCH REASON: INITIATED BY REMOTE PARTNER
IST314I END
```

- If *status* is **STARTED**, the following message group is displayed:

```
IST1494I PATH SWITCH status FOR RTP puname TO cpname
[IST1817I PATH SWITCH REASON: RTP CONNECTION UNAVAILABLE]
[IST1818I PATH SWITCH REASON: SHORT REQUEST RETRY LIMIT EXHAUSTED]
[IST1819I PATH SWITCH REASON: TG INOP]
```

IST1494I

```
[IST1820I PATH SWITCH REASON: MODIFY RTP COMMAND ISSUED]
[IST1821I PATH SWITCH REASON: AUTO PATH SWITCH FOR PSRETRY]
[IST1822I PATH SWITCH REASON: UNKNOWN]
[IST1937I PATH SWITCH REASON: INITIATED BY REMOTE PARTNER]
[IST2239I PATH SWITCH REASON: MNPS ENDPOINT RECOVERY]
[IST2335I PATH SWITCH REASON: XMIT STALL RECOVERY]
IST314I   END
```

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- *tgn* is the transmission group number.
- *cpname* is the destination CP name for the transmission group.
- *tgtype* is the transmission group type. The values for *tgtype* can be one of the following:

APPN Indicates that this TG is an APPN-based TG.

INTERCHANGE

Indicates that this TG represents a TG from an interchange node to a subarea node.

VRTG Indicates that this TG is a virtual-route-based TG.

ISL Indicates that this TG is an intersubnet TG.

- *hpr* corresponds with the HPR start option. The values for *hpr* can be:

RTP indicates this VTAM provides RTP-level HPR support

ANR indicates this VTAM provides ANR-level HPR support

NA indicates the link to the next node is not HPR capable

Note: When a link in a particular route is not HPR capable, then the HPR capability for the next node cannot be determined.

IST1480I

This message informs the operator that the messages that follow describe the RSCV end-to-end path of the RTP route. The RSCV path represents the route used to send data from the origin CP to the destination CP.

IST1494I

- *status* is the outcome of VTAM attempting to do a path switch for this specific RTP.

COMPLETED

VTAM was able to complete the path switch for this specific RTP.

FAILED

VTAM was not able to complete the path switch for this specific RTP.

OVERRIDDEN

VTAM and the partner RTP endpoint have both initiated a path switch for this specific RTP at the same time. The partner RTP endpoint's path switch is accepted by VTAM (this RTP endpoint). This message is issued to indicate the path switch initiated by this RTP endpoint has been overridden by the partner.

STARTED

VTAM has begun the path switch for this specific RTP.

- *puname* is the RTP PU NAME of the adjacent link station (RTP ALS).
- *cpname* is the CP name of the remote partner.

IST1495I

No alternate route could be established for the RTP, therefore, no path switch took place. The current RTP remains active.

IST1817I

The underlying physical connection or the RTP itself is not in a state suitable for RTP traffic.

IST1818I

The RTP partner is not responding to status requests initiated by this RTP endpoint. Each time a status request is sent to the partner a short request timer is set to timeout the transaction. If the short request timer expires and no response is received from the partner, the process is repeated. This process will repeat until the retry limit for the RTP pipe is exhausted. When the retry limit is met, a path switch is requested to try to restore communications with the RTP partner.

The short request timer is an internally calculated value. It is based on the observed response time of the RTP pipe. This timer cannot be specified externally.

Tip: HPRPSDLY can be used to add a delay to the path switch when there are network or node constraints with partners. See the HPRPSDLY start option in z/OS Communications Server: SNA Resource Definition Reference.

IST1819I

The physical connection that the RTP pipe traverses has suffered an INOP condition.

IST1820I

An operator has issued an F RTP command to force an RTP path switch.

IST1821I

The PSRETRY start option value is forcing an automatic path switch for this RTP connection.

IST1822I

The reason for the RTP path switch is unavailable.

IST1937I

The path switch was initiated by the remote partner.

IST2239I

The path switch is initiated for the recovery of an MNPS application.

IST2335I

The path switch is initiated when a transmission (XMIT) stall recovery is attempted. A transmission stall condition occurs after VTAM retransmits an NLP for the sixth time and at least 10 seconds has elapsed since the NLP was first retransmitted. VTAM attempts recovery by initiating an HPR path switch.

System action: Processing continues.

Operator response: If *status* is **FAILED**, save the system log for problem determination and provide the files used for system definition.

System programmer response: Use the output and system definition files provided to assist in determining the cause of the problem. (You might need to work with system programmers in other networks to determine the adjacent SSCP tables used in another network to define the system.)

Routing code: 2

Descriptor code: 5

IST1495I NO ALTERNATE ROUTE AVAILABLE

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch.

The first message in the group is IST1494I. See the description of that message for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1496I **DISPLAY APING FAILED - PRIOR APING IS EXECUTING**

Explanation: VTAM cannot execute a DISPLAY APING command because a prior DISPLAY APING request is still executing. VTAM only allows one DISPLAY APING command to execute at a time.

System action: VTAM rejects the command.

Operator response: Reenter the command once the prior APING completes execution. See the z/OS Communications Server: SNA Network Implementation Guide for instructions on terminating the currently executing APING, should that become necessary.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1498I **LOADING NCP FROM** *source*

Explanation: VTAM issues this message as a result of a DISPLAY ID command for an NCP that is in PLOAD (Pending Load) status.

source indicates if the NCP is being loaded from the host or from the 3720 or 3745 Communication Controller external disk.

This message follows IST247I when the NCP is in the PLOAD state.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 2. 8

IST1499I **AHHC SUBCHANNEL** *address state*

Explanation: This message is issued when the MVS status of a subchannel changes.

address is the subchannel address.

state is the subchannel address state, and can be one of the following:

ONLINE

An MVS VARY ONLINE command is issued for a subchannel and VTAM successfully completes activation for the subchannel.

OFFLINE.PENDING

An MVS VARY OFFLINE command is issued for a subchannel and VTAM and MVS are in the process of completing deallocation for the subchannel.

OFFLINE

Deactivation processing has completed and MVS acknowledges that the subchannel is OFFLINE.

REACCESSIBLE

An INOP situation occurs and MVS deactivates and then reactivates a subchannel without operator intervention.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST1500I STATE TRACE = *status*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY ID command for a traceable node. It indicates whether the state of the resource specified on the ID parameter is being traced.

status will be ON or OFF. For more information, see the z/OS Communications Server: SNA Operation.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1501I XCF TOKEN = *token*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID=VTAM command or when a cross-system coupling facility (XCF) path to an adjacent node is no longer active. If message IST1504I precedes this message, see the description of IST1504I for a description of the message group.

This message is issued to inform the operator of the XCF token that MVS has assigned to VTAM. An XCF token identifies each VTAM in the MVS sysplex under XCF connectivity. Support personnel will use this message to correlate VTAM diagnostic information with MVS diagnostic information.

A complete description of the message group follows the example.

```
IST075I NAME = nodename, TYPE = nodetype
IST1501I XCF TOKEN = token
```

IST075I

nodename is the name of the resource or ID type that is displayed.

IST1501I

token is the XCF token MVS assigned to the adjacent VTAM.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1502I ADJACENT CP = *CP_name_of_other_side*

Explanation: This message is part of a message subgroup. The first message in the subgroup is IST1503I. See the explanation of that message for a complete description of the subgroup.

IST1503I XCF TOKEN = *token* STATUS = *status*

Explanation: VTAM issues this message in response to the DISPLAY TRLE, TRLE=*trl_entry_name* or a DISPLAY ID=*trl_entry_name* command when *trl_name* is the name of the dynamically created TRLE that defines the XCF connection between two VTAMs. This message is also issued in response to a DISPLAY TRLE, XCFCP=*cp_name* command.

When MPC connectivity exists, message IST1221I is normally displayed. XCF TRLE's do not have device addresses as MPC TRLEs have and thus, only the XCF token and the status of the XCF TRLE are displayed. Message IST1503I will be issued instead of message IST1221I to display XCF connection status. A complete description of the message group follows the example.

```
IST075I NAME=name, TYPE=type
IST486I STATUS=currentstatus, DESIRED STATE=desiredstate
IST087I TYPE = line_type, CONTROL = line_control, HPDT = hpdvalue
IST1503I XCF TOKEN = token STATUS = status
IST1502I ADJACENT CP = CP_name_of_other_side
IST314I END
```

IST1504I

IST075I

name is the name of the resource or ID type that is displayed.

See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *type*. **IST087I**

- This message is part of several different message groups that VTAM issues in response to DISPLAY commands.
- *line_type* is **LEASED**.
- *line_control* is **XCF**.
- *hpdvalue* can be one of the following:

YES

Indicates the connection is capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NO Indicates the connection is not capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.

NA

Is displayed when *line_control* is not MPC or when the connection is not active.

IST486I

This message displays the status of the XCF TRLE entered on the DISPLAY command.

currentstatus is the current status of the node. See the z/OS Communications Server: IP and SNA Codes for a description of *currentstatus*.

desiredstate is the node state that is desired. See the z/OS Communications Server: IP and SNA Codes for a description of *desiredstate*. If VTAM cannot determine the desired state, *desiredstate* will be

IST1502I

CP_name_of_other_side identifies the CP name of the VTAM on the other side of this XCF connection which is represented by the TRLE in message IST075I.

IST1503I

- *token* is the XCF token MVS assigned to the adjacent VTAM.
- *status* is the condition or state of the XCF connection.
- Valid values for the *status* are:

ACTIVE

Connection is active.

INOP Connection is inoperative.

RESET Connection is not ready.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1504I XCF CONNECTION WITH *cp_name* IS INOPERATIVE

Explanation: This message is the first message in a group of two messages that VTAM issues when a cross-system coupling facility (XCF) READ/WRITE path to an adjacent node is no longer active. This message provides information about a potential problem and can be used to correlate VTAM diagnostic information with MVS diagnostic information. This message can be issued prior to the deactivation of an XCF local SNA PU, prior to an XCF group exit, or prior to the deactivation of a dynamic local SNA major node indicating that XCF connectivity has been terminated for that CP.

A complete description of the message group follows the example.

```
IST1504I XCF CONNECTION WITH cp_name IS INOPERATIVE
IST1501I XCF TOKEN = token
```

IST1504I

cp_name is the network qualified CP name of the adjacent VTAM.

IST1501I

token is the XCF token MVS assigned to the adjacent VTAM.

System action: Processing continues.

Operator response:

You may want to reactivate the dynamic XCF local SNA PU or the dynamic local SNA major node (ISTLSXCF). Otherwise, no action is necessary.

You may want to save the system log for problem determination if the inoperative connection is critical to the network.

System programmer response: None.

IST1505I **TYPE =** *type* **TOKEN =** *token*

Explanation: VTAM issues this message as part of a group of messages that display tuning statistics for XCF connections.

A complete description of the message group follows the example.

```

IST1230I TIME      = time      DATE      = date      ID = id
IST1231I IPDU      = ipdu      OPDU       = opdu
IST1232I TSWEEEP   = tsweep    QSWEEEP   = qsweep
IST924I  -----
IST1505I TYPE      = type      TOKEN     = token
IST1234I BSIZE     = bsize     MAXBYTES = maxbytes
IST1236I BYTECNTO  = bytecnto  BYTECNT  = bytecnt  DIR  = direction
IST1236I BYTECNTO  = bytecnto  BYTECNT  = bytecnt  DIR  = direction
:
:
IST314I  END

```

IST1230I

- *time* is in the format hh:mm:ss:pp, where:
 - *hh* is the hour
 - *mm* is the minutes
 - *ss* is the seconds
 - *pp* is hundredths of a second.
- The *date* value specifies the date that the record was reported.

IST1231I

ipdu is the total number of inbound PDU's received.

opdu is the total number of outbound PDU's sent.

IST1232I

tsweep is the number of sweeps initiated during a time-out.

qsweep is the number of sweeps initiated due to excessive receive queue depth.

IST1234I

bsize is the maximum buffer size supported by the device.

maxbytes is number of bytes used in the largest channel program.

IST1236I

bytecnto is the byte count overflow.

bytecnt is the byte count.

direction is the direction of data flow over this device. *direction* can be either SENT or RECEIVED.

IST1505I

type is XCF.

token is the XCF token MVS assigned to the adjacent VTAM.

System action: Processing continues.

IST1506I • IST1510I

Operator response: To discontinue statistic recording, enter the MODIFY NOTNSTAT command.

System programmer response: For additional information on tuning and analyzing tuning statistics, see the z/OS Communications Server: SNA Network Implementation Guide.

IST1506I *command* FAILED FOR *nodename* - MEMBER LEAVING GROUP

Explanation: An operator issues a VARY ACT to activate the local SNA PU. A deactivation request is received. VTAM issues this message to indicate the activation of the local SNA PU has failed because a deactivation request was received. The VTAM represented by the PU leaves the XCF group.

command is always **VARY ACT**.

nodename is the name specified for ID that is always a dynamic local SNA PU.

System action: VTAM rejects the command.

Operator response: None

System programmer response: None.

IST1507I VR-BASED TG NOT SUPPORTED

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1110I. See the explanation of that message for a complete description.

IST1508I CP-CP SESSIONS ON VR-BASED TG NOT SUPPORTED

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1110I. See the explanation of that message for a complete description.

IST1509I *new_dlogmod* UNKNOWN BUT ACCEPTED -- PREVIOUS VALUE WAS *old_dlogmod*

Explanation: VTAM issues this message in response to a MODIFY DEFAULTS command and a MODIFY RESOURCE command which has successfully associated the *new_dlogmod* with the resource specified in the MODIFY command even though the *new_dlogmod* is not known to VTAM.

new_dlogmod is the new DLOGMOD value that is assigned to the resource.

old_dlogmod is the previous DLOGMOD value for the resource. *old_dlogmod* might not be known; it is only the previous value assigned to the resource.

System action: None.

Operator response: Verify that the value specified for DLOGMOD is valid. You might need to modify the logon mode table (MODETAB) to include the new logon mode entry (DLOGMOD).

The previous value for DLOGMOD can be used to reset the resource's DLOGMOD value. Be aware that the previous DLOGMOD value might be known. Since MODIFY DEFAULTS and MODIFY RESOURCE changes the value regardless of whether the new DLOGMOD is known, the value could be from a previous command. Also, no verification of the DLOGMOD value is performed during system definition.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1510I LLERP = *llerp* - RECEIVED = *received*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an HPR-capable PU.

LLERP (link level error recovery procedure) is the LLERP capability of this PU as sent in the XID when the connection was established.

RECEIVED is the LLERP capability of the adjacent node's PU as received on the XID when the connection was established.

The values for *llerp* are:

required

llerp is required

notpref *llerp* is not preferred but will be used if partner requires it.

The values for *received* are:

required

llerp is required

notpref *llerp* is not preferred, but will be used if a partner requires it.

notallow

llerp is not allowed on this connection.

HPR start option	LLERP operand coded on the PU statement		
	default	notpref	required
NONE	LLERP is not valid		
ANR	notpref	notpref	required
RTP	required	required	required

The HPR capability of the PU will be forced to NO if **REQUIRED** is specified for *llerp* and **NOTALLOW** is specified for *received*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1511I **MAXIMUM NETWORK LAYER PACKET SIZE = *size* BYTES**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is either IST1476I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1512I *lan_operation* **FAILED - CODE X'*return_code* - CUA *channel_unit_address***

Explanation: VTAM issues this message when an error condition has been detected for local area network (LAN).

lan_operation is the name of the LAN operation that failed.

return_code is a 4-digit hexadecimal code. See the z/OS Communications Server: IP and SNA Codes for a description of *return_code*.

channel_unit_address is the channel device address of the port in error.

System action: VTAM does not perform the request.

Operator response: Enter a DISPLAY NET,ID=*name*,E to display the xca major node and its resources. Save the system log for problem determination.

System programmer response: See the z/OS Communications Server: IP and SNA Codes.

IST1513I • IST1517I

Note: If *lan_operation* is `ACTIVATE_SAP_CONFIRM`, and *return_code* is 763A or 7658, verify that no XCA PORT definition statement includes too many lines. These lines can be explicitly defined by either the LINE definition statements or by the AUTOGEN parameter on the GROUP definition statement. The total number of lines under a PORT cannot exceed 255; or if OF/2 is being used in the D/T3172 IBM Interconnect Controller, then the total number of lines cannot exceed 245. If multiple GROUP definition statements are defined under a PORT definition statement, then the total number of lines is the sum of the number of lines defined explicitly or by the AUTOGEN parameters on the GROUP definition statements.

IST1513I *lan_operation* FAILED – *reason*

Explanation: VTAM issues this message when an error condition has been detected for a local area network (LAN).

- *lan_operation* is the abbreviated name of the LAN operation that failed.
- *reason* indicates the cause of the error and can be:

PORT TIMER LESS THAN LLC REPLY TIMER

The TIMER value on the PORT definition statement in the XCA major node is less than the result of the REPLY TIMER (T1) times the (maximum number of transmissions (N2)+1), specified on the system parameters of the IBM 3172 Interconnect Controller.

System action: VTAM does not perform the request.

Operator response: Save the system log for problem determination.

System programmer response: Adjust timer value on the port statement in the XCA major node to be greater than the T1 reply time defined in the IBM 3172 Interconnect Controller.

IST1514I SUBAREA COS APPNCOS

Explanation: This message is part of a group that VTAM issues in response to a DISPLAY SATOAPPN command. See the explanation of message IST1321I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1515I *tracetype* TRACE ACTIVE

Explanation: VTAM issues this message when a buffer, I/O, module, resource state, or QDIOSYNC trace is activated. If message IST199I follows this message, see the explanation of that message for a complete description of the group.

If message IST199I does not follow this message, *tracetype* is either **BUFFER**, **IO**, or **QDIOSYNC**.

Routing code: 2

Descriptor code: 5

IST1516I INITIAL DATA FLOW RATE = *initial units*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is either IST1476I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1517I LIST HEADERS = *list_hdrs* – LOCK HEADERS = *lock_ents*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1518I BASE STRUCTURE IS *strname*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1519I ALTERNATE STRUCTURES ARE:

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1520I SUBAREA SEARCH INFORMATION:

Explanation: This message is part of several subgroups of messages that VTAM issues in response to a DISPLAY SRCHINFO command. See the explanation of messages IST1521I, IST1523I, or IST1531I for a complete description of the message subgroups.

Routing code: 2

Descriptor code: 5

IST1521I *sscp_dir* NAME CDINIT DSRLST IOCD INTOTH TOTAL

Explanation: This message is the first of a subgroup of messages issued in response to a DISPLAY SRCHINFO,LIST=SUMMARY command. The OLU, DLU, LU1, LU2, FROMCP, FROMSSCP, TOCP, and TOSSCP operands might have been used to limit the output displayed in the subgroup. A complete description of the message subgroup follows the example.

```

IST350I  DISPLAY TYPE = SRCHINFO
IST1520I SUBAREA SEARCH INFORMATION:
IST1521I  sscp_dir NAME          CDINIT  DSRLST  IOCD  INTOTH  TOTAL
IST1522I  sscpname              cdinit  dsrlst  iocd  intoth  total
:
:
IST1525I  TOTAL NUMBER OF OUTSTANDING SEARCHES = srchcnt
IST1454I  count SSCPNAME(S) DISPLAYED
IST924I  -----
IST1526I  APPN SEARCH INFORMATION:
IST1527I  cp_dir NAME          TYPE STATUS BROADCAST DIRECTED  TOTAL
IST1528I  cpname              type status broadcast directed  total
:
:
IST1525I  TOTAL NUMBER OF OUTSTANDING SEARCHES = srchcnt
IST1454I  count CPNAMES(S) DISPLAYED
IST314I  END

```

IST1454I

- The value for *count* can be:
 - The sum of CP names displayed in message IST1528I messages for the APPN message subgroup.
 - The sum of SSCP names displayed in message IST1522I messages for the subarea message subgroup.

IST1520I

This message is a header message for the subarea messages that follow. Subarea information is only provided if TYPE=SUBAREA or TYPE=ALL was specified on the DISPLAY SRCHINFO command.

IST1521I

IST1521I

- This message is a header message for the information displayed in message IST1522I.
- The value for *sscp_dir* can be:

FROMSSCP

The FROMSSCP operand was specified on the DISPLAY SRCHINFO command.

TOSSCP

The TOSSCP operand was specified, or neither FROMSSCP nor TOSSCP was specified, on the DISPLAY SRCHINFO command.

IST1522I

One IST1522I message will be issued for each unique SSCP with an outstanding CDINIT, DSRLST, Init_Other CD, or Init_Other RU.

A DISPLAY SRCHINFO,LIST=ALL command can provide additional information about the outstanding RUs.

sccpname is the originating SSCP of the search request if FROMSSCP was specified, the name of the destination SSCP if TOSSCP was specified.

cdinit is the decimal number of outstanding CDINIT RUs.

dsrlst is the decimal number of outstanding DSRLST RUs.

iocd is the decimal number of outstanding Init_Other CD RUs.

intoth is the decimal number of outstanding Init_Other RUs.

total is the total in decimal of the *cdinit*, *dsrlst*, *iocd* and *intoth* columns.

IST1525I

In the subarea message subgroup, *srchcnt* is the decimal total of the *total* columns in all of the IST1522I messages for SSCPs.

In the APPN message subgroup, *srchcnt* is the decimal total of the *total* columns in all of the IST1528I messages for CPs.

This message is not displayed if the MAX operand value from the DISPLAY SRCHINFO command was exceeded.

IST1526I

This message is a header message for the APPN messages that follow. APPN information is only provided if TYPE=APPN or TYPE=ALL was specified on the DISPLAY SRCHINFO command.

IST1527I

- This message is a header message for the information displayed in message IST1528I.
- The value for *cp_dir* can be:

FROMMCP

The FROMMCP operand was specified on the DISPLAY SRCHINFO command.

TOCP The TOCP was specified, or neither the FROMMCP nor TOCP operand was specified, on the DISPLAY SRCHINFO command.

IST1528I

- One IST1528I message will be issued for each CP with at least one outstanding search request.
- A DISPLAY SRCHINFO,LIST=ALL command can provide additional information about the outstanding searches.
- *cpname* is the network-qualified name of a CP with an outstanding search request. If TOCP is specified, *cpname* is the destination of the search request. If FROMMCP is specified, *cpname* is the origin of the search request.
- *type* is the node type for the adjacent CP. The values for *type* can be:
 - EN *cpname* is an end node.
 - NN *cpname* is a network node.
- *status* is the current congestion status of the adjacent CP. The values for *status* can be:
 - OPEN APPN Locates are being sent to this *cpname*.
 - HELD APPN Locate searches are not being sent to this *cpname*.
- *broadcast* is the decimal number of broadcast locates (for example, INN, EN, NN) outstanding for this adjacent CP.

- *directed* is the decimal number of directed locates outstanding for this adjacent CP.
- *total* is the decimal number of locates outstanding for this adjacent CP, including directed, broadcast, and other types of locates.

Operator response: Issue the DISPLAY SRCHINFO command multiple times. If there is no change in the number of searches outstanding to a particular node, or if the count only increases, the node not be responding to search requests. Issue a DISPLAY SRCHINFO,LIST=ALL,TOCP=xxxxxxx,TOSSCP=xxxxxxx command where:

xxxxxxx is the *sscpname* in message IST1522I or the *cpname* in message IST1528I.

Routing code: 2

Descriptor code: 5

IST1522I *sscpname cdinit dsrlst iocd intoth total*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,LIST=SUMMARY command. The first message of the subgroup is IST1521I. See the explanation of that message for a complete description of the message subgroup.

Routing code: 2

Descriptor code: 5

IST1523I **OLU DLU SID RU**

Explanation: This message is the first of a subgroup of messages issued in response to a DISPLAY SRCHINFO,LIST=ALL command. The OLU, DLU, LU1, LU2, FROMCP, FROMSSCP, TOCP, and TOSSCP operands might have been used to limit the output displayed in the subgroup. A complete description of the message subgroup follows.

```

IST350I  DISPLAY TYPE = SRCHINFO
IST1520I SUBAREA SEARCH INFORMATION:
IST1523I      OLU          DLU          SID      RU
IST1524I      olu          dlu          sid      rutype
:
:
IST1454I count REQUEST(S) DISPLAYED
IST924I  -----
IST1526I APPN SEARCH INFORMATION:
IST1529I      OLU          DLU          SID      LOCATE
IST1530I      olu          dlu          sid      locates
:
:
IST1525I TOTAL NUMBER OF OUTSTANDING SEARCHES = srchcnt
IST1454I count REQUEST(S) DISPLAYED
IST314I  END

```

IST1454I

One message is displayed for each outstanding search request.

In the subarea message subgroup, *count* is the decimal number of IST1524I messages displayed.

In the APPN message subgroup, *count* is the decimal number of IST1530I messages displayed.

IST1520I

This message is a header message for the subarea messages that follow. Subarea information is only provided if TYPE=SUBAREA or TYPE=ALL was specified on the DISPLAY SRCHINFO command.

IST1523I

This message is a header message for the information displayed in message IST1524I.

IST1524I

- *olu* is the network-qualified name of the LU originating the search request.
 - If *rutype* is IOCD, *olu* is the name of the secondary LU.

IST1523I

- In mixed configurations involving both subarea and APPN nodes, *olu* might be the name of a host as the search request is transferred between the subarea and APPN components of the various VTAMs.
- *dlu* is the network-qualified name of the LU that is the destination of the search request.
 - If the search request for the DLU was forwarded to ISTAPNCP or to another internal component of VTAM, the DLU name will be that of the host on which the DISPLAY SRCHINFO command was issued. In such a case, multiple IST1524I messages might be displayed — one for the OLU to the host and another for the OLU to the DLU.
 - If *rutype* is IOCD, *dlu* is name of the primary LU.
- *sid* is the session identifier (SID) for the search request. The SID is also known as the procedure correlation identification (PCID). If the PCID is unavailable, the value for *sid* is ****NA****. For example, if an INQUIRE APPSTAT is issued, the DSRLST shown represents an internal flow between two VTAM components, with the second component assigning the PCID.
- *rutype* is the type of request unit represented by the search request. The value for *rutype* can be:

CDINIT

Cross-domain Initiate

DSRLST

Directed Search List

IOCD Init_Other CD

INTOTH

Init_Other

NA

This search is concentrated behind another search request. Information about the other search can be found by issuing a DISPLAY SRCHINFO,SID=*sid* command.

Note that the Init_Other CD RU is called “CDINIT OTH” in message IST530I messages and “IOCD” in message IST1524I messages.

- The *sid* value can be used in a DISPLAY SRCHINFO,SID=*sid* command to obtain additional information about a particular search.

IST1525I

srchcnt is the total of the *locates* column in all of the IST1530I messages, expressed as a decimal number.

This message is **not** displayed if the MAX operand value on the DISPLAY SRCHINFO command was exceeded.

IST1526I

This message is a header message for the APPN messages that follow. APPN information is only provided if TYPE=APPN or TYPE=ALL was specified on the DISPLAY SRCHINFO command.

IST1529I

This message is a header message for the information displayed in message IST1530I.

IST1530I

One message is displayed for each outstanding search request. The searches displayed by IST1530I are ordered from the newest to the oldest request.

olu is the network-qualified name of the LU originating the search request. *olu* is ****NA**** for an intermediate network node (INN) on a directed search.

dlu is the network-qualified name of the LU that is the destination of the search request. *dlu* is ****NA**** for an INN on a directed search.

sid is the session ID (SID) for the search request. The SID is also known as the procedure correlation identification (PCID).

locates is the decimal number of locates pending for the session. A value of 0 for *locates* indicates that the search request is concentrated behind another search for the same destination LU, initiated by the host CP.

The *sid* value can be used in a DISPLAY SRCHINFO,SID=*sid* command to obtain additional information about a particular search.

Operator response: If initiation of a specific session is stalling, issue DISPLAY SRCHINFO,PCID and DISPLAY ID=name,E for the specific session. A VARY TERM command might be needed to terminate the stalling session.

If multiple searches are pending to a specific adjacent node, perform diagnosis on that node to determine the reason the searches are not being processed. If that adjacent node is VTAM, DISPLAY SRCHINFO,LIST=ALL and DISPLAY SRCHINFO,PCID commands can be issued from that host to determine the cause of the stall. If the adjacent node is not a VTAM, consult the product specific documentation. VARY TERM,SID can be issued to session request

Routing code: 2

Descriptor code: 5

IST1524I `olu dlu sid rutype`

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,LIST=ALL command. The first message of the subgroup is IST1523I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1525I **TOTAL NUMBER OF OUTSTANDING SEARCHES = *srchcnt***

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO command. The first message of the subgroup is either IST1521I or IST1523I. See the explanation of those messages for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1526I **APPN SEARCH INFORMATION:**

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO command. The first message of the subgroup is IST1521I, IST1523I, or IST1531I. See the explanation of those messages for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1527I `cp_dir` **NAME TYPE STATUS BROADCAST DIRECTED TOTAL**

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,LIST=SUMMARY command. The first message of the subgroup is IST1521I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1528I `cpname type status broadcast directed total`

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,LIST=SUMMARY command. The first message of the subgroup is IST1521I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1529I **OLU DLU SID LOCATE**

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,LIST=ALL command. The first message of the subgroup is IST1523I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1530I *olu dlu sid locates*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,LIST=ALL command. The first message of the subgroup is IST1523I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1531I **SID = sid CP(OLU) = origcp**

Explanation: This message is the first of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command.

Possible message subgroups follow. Note that the group will be displayed if the SID can be located, even if no search is outstanding. This means this group will be displayed if DISPLAY SRCHINFO,SID is issued using a SID for an active session, for example.

- If search information can be found in the subarea network, VTAM issues the following messages:

```

IST350I  DISPLAY TYPE = SRCHINFO
IST1520I  SUBAREA SEARCH INFORMATION:
IST1531I  SID = sid                               CP(OLU) = origcp
IST1532I  OLU = oluname                           DLU = dluname
IST1540I  SEARCH STATUS = status                 SSCP(OLU) = sscpolu
[IST1539I  PCID MODIFIER = pcidmod]
IST1534I  SSCP/CP IN OLU DIRECTION = dirolu
IST1533I  SEARCH CONCENTRATED = conc            RDS = rds
[IST1536I  CONCENTRATED BEHIND conc_pcid conc_mod]
[IST1543I  REQUESTS CONCENTRATED BEHIND THIS SEARCH = nbr_conc]
[IST1705I  sc_option = sc_value FROM START OPTION]
[IST1704I  sc_option = sc_value FROM ADJACENT SSCP TABLE]
[IST894I  ADJSSCPS TRIED FAILURE SENSE ADJSSCPS TRIED FAILURE SENSE
IST895I  sscpname          sense          sscpname          sense
:
:
IST1454I  count ADJSSCPS DISPLAYED]
[IST1537I  AWAITING REPLY FROM THE FOLLOWING NODE(S):
IST1538I  name          name          name]
```

- If search information can be found in the subarea network, but no adjacent SSCP routing information is available, VTAM issues the following messages:

```

IST350I  DISPLAY TYPE = SRCHINFO
IST1520I  SUBAREA SEARCH INFORMATION:
IST1531I  SID = sid                               CP(OLU) = origcp
IST1532I  OLU = oluname                           DLU = dluname
IST1540I  SEARCH STATUS = status                 SSCP(OLU) = sscpolu
[IST1539I  PCID MODIFIER = pcidmod]
IST1534I  SSCP/CP IN OLU DIRECTION = dirolu
IST1533I  SEARCH CONCENTRATED = conc            RDS = rds
[IST1536I  CONCENTRATED BEHIND conc_pcid conc_mod]
[IST1543I  REQUESTS CONCENTRATED BEHIND THIS SEARCH = nbr_conc]
IST1542I  NO ADJSSCP ROUTING INFORMATION AVAILABLE
[IST1537I  AWAITING REPLY FROM THE FOLLOWING NODE(S):
IST1538I  name          name          name]
```

- If search information can be found in the APPN network, VTAM issues the following messages alone or following the subarea message subgroup with an IST924I separator message.

```

IST1526I APPN SEARCH INFORMATION:
IST1531I   SID = sid                               CP(OLU) = origcp
IST1532I   OLU = oluname                           DLU = dluname
IST1539I   PCID MODIFIER = pcidmod
IST1545I   NODE ROLE VECTOR = role
IST1541I   LOCATES PENDING = locates               CURRENT TASK = task
IST1533I   SEARCH CONCENTRATED = conc              RDS = rds
[IST1548I BROADCAST = bdcst      DIRECTED = drctd]
IST1534I   SSCP/CP IN OLU DIRECTION = dirolu
IST1535I   REPLY RETURNED TO ORIGINATING CP = reply
[IST1536I CONCENTRATED BEHIND conc_pcid conc_mod]
[IST1543I REQUESTS CONCENTRATED BEHIND THIS SEARCH = nbr_conc]
[IST1537I AWAITING REPLY FROM THE FOLLOWING NODE(S):
IST1538I   name                name                name
:
:
IST1454I node_cnt NODE(S) DISPLAYED]

```

IST894I

This message is a header for the information displayed in message IST895I.

IST895I

This message is issued when adjacent SSCP routing is in progress. An IST895I message is issued for each SSCP, in the order it was tried, until all adjacent SSCP routing information has been displayed or until the MAX operand value on the DISPLAY SRCHINFO command has been reached.

sscpname is the adjacent SSCP through which trial-and-error routing was attempted.

sense is the sense code indicating the cause of failure.

IST1454I

- The value for *count* can be:
 - The total number of adjacent SSCPs, in decimal, displayed in the IST895I messages.
 - The total number of adjacent CPs, in decimal, displayed in the IST1538I messages.

IST1520I

This message is a header for the subarea messages that follow. Subarea information is provided if TYPE=SUBAREA or TYPE=ALL was specified on the DISPLAY SRCHINFO command.

IST1526I

This message is a header for the APPN messages that follow. APPN information is provided if TYPE=APPN or TYPE=ALL was specified on the DISPLAY SRCHINFO command.

IST1531I

sid is the session ID (SID) for the session. The session ID, also known as the procedure correlation ID (PCID), is applicable to both APPN and subarea searches.

origcp is the name of the control point for the LU that originated the search request. If *origcp* is ISTAPNCP, the search request was passed from the APPN component of this host to the subarea component. In mixed environments involving both subarea and APPN nodes, *origcp* could be the name of a host involved in transferring the search request between APPN and subarea (for example, in a subarea search initiated by a central directory server (CDS)).

IST1532I

oluname is the network-qualified name of the LU that is originating the search request. If known, the OLU's real name is shown. Otherwise, ***NA*** is shown.

dluname is the network-qualified name of the LU that is the destination of the session request. If known, the DLU's real name is shown. Otherwise, the DLU alias name is shown.

IST1533I

IST1531I

- The values for *conc* can be:
 - YES** Search is concentrated behind a scout search, attempting to locate a specific resource.
 - NO** Search is not concentrated behind a scout search, attempting to locate a specific resource.
- The values for *rds* can be:
 - YES** This is a resource discovery search (RDS), a type of scout search.
 - NO** This is not a resource discovery search (RDS).

IST1534I

This message gives the name of the adjacent CP or SSCP (*dirolu*) in the direction of the originating LU (OLU).

IST1535I

- The values for *reply* can be:
 - YES** If a positive reply was returned towards the parent CP.
 - NO** If a positive reply was not returned towards the parent CP.

IST1536I

This message is issued only if CONCENTRATED=YES in message IST1533I.

conc_pcid is the procedure correlation ID (PCID) of the scout search behind which this search is concentrated.

conc_mod is the PCID modifier of the scout search behind which this search is concentrated.

IST1537I

This message is issued only if CONCENTRATED = NO in message IST1533I. It is a header message for the information displayed in message IST1538I.

IST1538I

- In the subarea message subgroup:
 - name* is the network-qualified name of an SSCP from which this search is awaiting a reply. If the name is ISTAPNCP, the host is awaiting a response from a search of the APPN network.
- In the APPN message subgroup:
 - name* is the network-qualified name of a control point from which this search is awaiting a reply. If a host appears to be awaiting a reply from itself, as shown by *name* in message IST1538I, the host is awaiting a response from a search of the subarea network.

IST1539I

pcidmod is the procedure correlation ID (PCID) modifier to the PCID in message IST1531I.

IST1540I

status is the status of the search request. See in the z/OS Communications Server: IP and SNA Codes for list of *status* values.

sscpolu is the name of the SSCP originating the search request. Note that this might not be the CP(OLU) if the network consists of both subarea and APPN nodes.

IST1541I

- *locates* is the number of Locates outstanding for this PCID.
- *task* is the current task being performed on behalf of the search. The value for *task* can be:

Value	Meaning
X'00'	Null task
X'01'	Directory Services Management Exit
X'02'	Directory services database query
X'03'	Topology and routing services database query

X'04'	Forward to network node server
X'05'	One hop if directory services database is found (i.e. a directed search to an End Node)
X'06'	One hop if control vector X'0E' is received for request
X'07'	Non-Verify attempt
X'08'	Directed due to network node destination LU hierarchy received on a search request
X'09'	Directed if directory services database is found
X'0A'	Directed if the topology and routing services valid route selection CV is returned
X'0B'	Directed if information is learned from scout search
X'0C'	Directed to a directory server
X'0D'	Directed to a higher function directory server
X'0E'	Directed to a directory server retry
X'0F'	Directed to a gateway node
X'10'	Sequential directed search to alternate directory servers
X'11'	Sequential directed search to interchange node
X'12'	Subarea symbol resolution table (SRT) cache search
X'13'	Subarea search after a positive cache search
X'14'	Subarea search after a positive directory services directory entry database query
X'15'	Subarea search after a negative or no cache search
X'16'	Domain Broadcast search
X'17'	Originate network broadcast search
X'18'	Forward network broadcast not originated by this node
X'19'	One-hop search request due to end node destination LU hierarchy received on a search request
X'1A'	A cross-subnetwork directed search due to information received on the original request
X'1B'	A cross-network directed search due to information found in the directory services database
X'1C'	A directed search due to information found in the topology and routing services database
X'1D'	Sequential directed search with the intent of finding the resource cross-subnetwork
X'1E'	Generic cache search
X'1F'	A subarea search due to a SESS_INIT_INFO_RPY interprocess signal
X'20'	A directed search due to a SEARCH_RPY interprocess signal following a positive CACHE_SEARCH_RPY interprocess signal
X'21'	Directed search due to a SEARCH_RPY interprocess signal following a positive directory services database query
X'22'	Directory services database query after resource discovery search found
X'23'	Directed to Resource Selector Node (RSN)
X'3F'	Post processing.

IST1542I

This message is issued when no adjacent SSCP routing information is available.

IST1543I

This message is issued when CONCENTRATED = NO appears in message IST1533I and when the number of searches concentrated behind this search is nonzero.

nbr_conc is the number of other searches concentrated behind this scout search.

IST1532I

IST1545I

- *role* is a hexadecimal representation of the node role vector for this search. More than one bit can be on.

Code	Description
------	-------------

X'8000'	CP originating LU
---------	-------------------

X'4000'	CP destination LU
---------	-------------------

X'2000'	NN originating LU
---------	-------------------

X'1000'	NN destination LU
---------	-------------------

X'0800'	Owning directory server
---------	-------------------------

X'0400'	Alternate directory server
---------	----------------------------

X'0200'	Intermediate network server
---------	-----------------------------

X'0100'	Intermediate network node (INN) directed.
---------	---

X'0080'	Intermediate network node (INN) broadcast.
---------	--

X'0040'	Intermediate network node (INN) on a request that requires border node processing.
---------	--

IST1548I

- The values for *bdcst* can be:

YES	A broadcast search is in progress.
NO	A broadcast search is not in progress.
- The values for *drctd* can be:

YES	A directed search is in progress.
NO	A directed search is not in progress.

Note: Both *bdcst* and *drctd* can be YES at the same time (for example, a directed search from an end node that is turned into a broadcast search by the network node server (NNS)).

- This message is only issued if CONCENTRATE = NO in message IST1533I.

IST1704I or IST1705I

sc_option indicates a search control option associated with the search being displayed. Possible values are: SORDER and SSCPORD. When VTAM is enabled for APPN, both search control options will be displayed with SORDER being first. When VTAM is not enabled for APPN, SSCPORD will be the only search control option displayed. Either IST1704I or IST1705I will be issued for each search control option displayed.

sc_value indicates the value of the search control option associated with the search being displayed. If *sc_value* is ADJLIST, the adjacent SSCP table associated with the search being displayed is for a resource that specified an adjacent CDRM list (ADJLIST); therefore, the SORDER and SSCPORD search control options do not apply.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1532I OLU = *oluname* DLU = *dluname*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1533I SEARCH CONCENTRATED = *conc* RDS = *rds*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1534I SSCP/CP IN OLU DIRECTION = *dirolu*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1535I REPLY RETURNED TO ORIGINATING CP = *reply*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1536I CONCENTRATED BEHIND *conc_pcid conc_mod*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1537I AWAITING REPLY FROM THE FOLLOWING NODE(S):

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1538I *name name name*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1539I PCID MODIFIER = *pcidmod*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

IST1540I • IST1545I

Routing code: 2

Descriptor code: 5

IST1540I **SEARCH STATUS = *status* SSCP(OLU) = *sscpolu***

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1541I **LOCATES PENDING = *locates* CURRENT TASK = *task***

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1542I **NO ADJSSCP ROUTING INFORMATION AVAILABLE**

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1543I **REQUESTS CONCENTRATED BEHIND THIS SEARCH = *nbr_conc***

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1544I **DIAL OUT PURGE IN PROGRESS - ID = *nodename***

Explanation: VTAM issues this message as part of a group of messages when a call collision occurs. Call collision occurs when a dial in and a dial out attempt to use the same line at the same time. The first message in the group is either IST680I or IST690I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 4

IST1545I **NODE ROLE VECTOR = *role***

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the subgroup is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1546I CDRM STATUS SUBAREA ELEMENT NETID SSCPID

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY command concerning the cross-domain resource manager (CDRM). This message is the result of one of the following:

- A DISPLAY ID command for a cross-domain resource manager major node
- A DISPLAY CDRMS command requesting information about cross-domain resource managers (CDRMS) defined to this domain.

```
IST1546I CDRM    STATUS    SUBAREA ELEMENT NETID    SSCPID
IST1547I cdrmname status    subarea element cdrmetid sscpid
:
```

IST1546I

This message is a header for IST1547I.

IST1547I

This message is issued for each cross-domain resource.

cdrmname is the CDRM name.

status is the resource status.

subarea is the subarea address of the CDRM in decimal. If the subarea address is not available, *subarea* will be N/A.

element is the element address of the CDRM in decimal. If the element address is not available, *element* will be N/A.

cdrmetid is the network ID of *cdrmname*.

sscpid is the SSCP identifier of the CDRM. *sscpid* will be displayed for a host CDRM and for an external CDRM with an SSCP-SSCP session with this host. *sscpid* is not available for a CDRM without an SSCP-SSCP session with this host and will be displayed as N/A.

Routing code: 2

Descriptor code: 5

```
IST1547I cdrmname status subarea element cdrmetid sscpid
```

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY CDRMS or DISPLAY ID=cdrm_major_node command. See the description of IST1546I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1548I BROADCAST = *bdcst* DIRECTED = *drctd*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SRCHINFO,SID command. The first message of the group is IST1531I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1549I OWNER = *owning_VTAM* MNPS STATE = *state*

Explanation: VTAM issues this message in response to a DISPLAY ID command when a multinode persistent application is specified and the application is not defined to the VTAM on which the command is issued, but is found in the multinode persistent session coupling facility structure.

owning_VTAM is the VTAM where the multinode persistent application last opened its ACB.

The application can be in one of the following states:

IST1549I

CLEANUP

The data related to this application is being cleaned up in the multinode persistent coupling facility structure.

DISABLED

The application OPENed its ACB and specified PERSIST=YES, but has not yet issued SETLOGON OPTCD=PERSIST. Data for the application is stored in the coupling facility structure in case the application chooses to enable persistence. However, sessions are not restored in the event of a failure.

ENABLED

The application issued SETLOGON OPTCD=PERSIST. Multinode persistent sessions will be restored in the event of a failure.

RECOVERY PENDING

A failure of the VTAM owning the application was detected. Wait for the application to recover.

SNPS RECOVERY PENDING

The application failed, or issued CLOSE, while it was enabled for persistence. The application is now waiting for recovery on its owning VTAM or some other VTAM. In the event of subsequent failure of the owning VTAM, the sessions will be maintained and thus can be restored.

SUSPECT

The data associated with this application might be invalid; in the event of failure, the application's sessions will not be recovered. This might be caused by the following:

- The multinode persistent coupling facility structure containing the application's data is currently being rebuilt.
- The *owning_VTAM* lost connectivity to the multinode persistent session structure containing the application's data.

TAKEOVER ACKNOWLEDGED

The application received a forced takeover request, asking the application to move from its current owning node to a different node in the sysplex. The application is in the process of completing its persistent CLOSE ACB processing prior to moving to the new owning node. The owning VTAM is the CP where the application is undergoing persistent CLOSE processing, and not the VTAM to which the application is expected to eventually move.

TAKEOVER IN PROGRESS

The application is moving from one VTAM to another VTAM. The owning VTAM is the CP where the application is expected to end up. If the owning CP were to fail, sessions in this state would be maintained and could be recovered.

TERMINATE

The application CLOSEd its ACB, in a non-persistent manner, on its owning VTAM, but not all the multinode persistent sessions or RTP connections have been terminated yet.

UNKNOWN STATE

The application is MNPS capable, but there is currently no local application status block (ASB) available for this VTAM to use to determine the MNPS state of the application. This will most probably occur when the application is attempting to move from one VTAM to this VTAM, but the ownership of the application has not yet been transferred between the VTAMs.

Operators can display the current application state from other VTAMs in the sysplex that are connected to the MNPS structure.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1550I MNPS STATE = *state*

Explanation: VTAM issues this message in response to a DISPLAY ID command when a multinode persistent (MNPS) application is specified, and the application is found on the VTAM on which the command is issued.

The application can be in one of the following states:

CLEANUP

The data related to this application is being cleaned up in the MNPS coupling facility structure.

DEFINED

The application was defined with PERSIST=M on the application definition statement, but VTAM is not in the proper environment to perform the MNPS function. See the z/OS Communications Server: SNA Network Implementation Guide for a description of the MNPS environment.

DISABLED

The application OPENed its ACB and specified PERSIST=YES, but has not yet issued SETLOGON OPTCD=PERSIST. Data for the application is stored in the coupling facility structure in case the application chooses to enable persistence. However, sessions are not restored in the event of a failure.

ENABLED

The application issued SETLOGON OPTCD=PERSIST. Sessions will be restored in the event of a failure.

RECOVERY PENDING

A failure of the VTAM owning the application was detected. Wait for the application to recover.

SNPS RECOVERY PENDING

The application failed, or issued CLOSE, while it was enabled for persistence. The application is now waiting for recovery on its owning VTAM or some other VTAM. In the event of subsequent failure of the owning VTAM, the sessions will be maintained and thus can be restored.

SUSPECT

The data associated with this application might be invalid; in the event of failure, the application's sessions will not be recovered. This might be caused by the current rebuilding of MNPS structure that contains the application's data.

TAKEOVER ACKNOWLEDGED

The application received a forced takeover request, asking the application to move from its current owning node to a different node in the sysplex. The application is in the process of completing its persistent CLOSE ACB processing prior to moving to the new owning node. The owning VTAM is the CP where the application is undergoing persistent CLOSE processing, and not the VTAM to which the application is expected to eventually move.

TAKEOVER IN PROGRESS

The application is moving from one VTAM to another VTAM. The owning VTAM is the CP where the application is expected to end up. If the owning CP were to fail, sessions in this state would be maintained and could be recovered.

TERMINATE

The application CLOSEd, in a non-persistent manner, on its owning VTAM, but not all the sessions or RTP connections have been terminated yet.

UNKNOWN STATE

The application is MNPS capable, but there is currently no local application status block (ASB) available for this VTAM to use to determine the MNPS state of the application. This will most probably occur when the application is attempting to move from one VTAM to this VTAM, but the ownership of the application has not yet been transferred between the VTAMs.

Operators can display the current application state from other VTAMs in the sysplex that are connected to the MNPS structure.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

IST1551I • IST1555I

Descriptor code: 5

IST1551I *sense_1 sense_2 sense_3 sense_4 sense_5*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY SNSFILTR command. See the explanation of IST1321I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1552I **MAC =** *mac_level* **MACTYPE =** *mac_type*.

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID, DISPLAY MODEL, or DISPLAY LUGROUPS command. The first message in the group is IST228I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1553I *atm_address address_type address_format*

Explanation: This message is part of a group of messages. See the explanation of message IST1559I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1554I **PVCNAME =** *pvc_name*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an ATM native permanent virtual channel (PVC).

pvc_name is the name of the PVC, as defined on the PVCNAME operand on the LINE definition statement in the external communication adapter (XCA) major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1555I **VPCI/VCI =** *vpci_vci*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a remote PU connected through an ATM native switched virtual channel (SVC) or a permanent virtual channel (PVC).

The virtual path connection identifier (VPCI) is represented by the first two hexadecimal digits in *vpci_vci*.

The virtual channel identifier (VCI) is represented by the last four hexadecimal digits in *vpci_vci*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1556I *ATM connection_type FAILURE: ID = node_name STATUS = status_code*

Explanation: This message is the first message in a group of messages that VTAM issues in response to a failed inactivation or activation request for an ATM native permanent virtual channel (PVC) or switched virtual channel (SVC) connection. VTAM issues the same group of messages when an existing native ATM PVC or SVC connection fails.

A complete description of the message group follows the example.

```
IST1556I ATM connection_type FAILURE: ID = node_name STATUS = status_code
[IST1562I CAUSE = cause_code]
[IST1558I DIAG = diagnostic_code]
[IST1558I DIAG = diagnostic_code]
[IST1562I CAUSE = cause_code]
[IST1558I DIAG = diagnostic_code]
[IST1558I DIAG = diagnostic_code]
IST314I  END
```

IST1556I

- *connection_type* can be one of the following:

CALL Indicates the failure of an activation or inactivation request for an ATM native PVC or SVC connection.

DISABLE

Indicates the failure of an inactivation request for an incoming call filter for an ATM native port on the IBM Open Systems Adapter.

ENABLE

Indicates the failure of an activation request for an incoming call filter for an ATM native port on the IBM Open Systems Adapter.

PORT Indicates the failure of an activation or inactivation request for an ATM native port on the IBM Open Systems Adapter.

- If *connection_type* is DISABLE, ENABLE, or PORT, *node_name* is the name of an external communication adapter (XCA) major node that defines an ATM native port.
- If *connection_type* is CALL, *node_name* is the name of the PU definition statement that represents the remote PU that is connected through an ATM native SVC.
- *status_code* indicates the cause of a failure detected by the IBM Open Systems Adapter. See the z/OS Communications Server: IP and SNA Codes for an explanation of what the status code means.

IST1562I

- *cause_code* indicates the cause of a failure detected by the ATM network. See the z/OS Communications Server: IP and SNA Codes for an explanation of what the cause code means.

Note: This message might be repeated if there are multiple cause codes associated with the failure.

IST1558I

- *diagnostic_code* indicates additional information about the cause of a failure detected by the ATM network. See the z/OS Communications Server: IP and SNA Codes for an explanation of what the diagnostic code means.

Note: This message might be repeated to accommodate diagnostic codes that are longer than 24 bytes.

System action: For call failures, the dial or activation of the PU fails. For enable and disable failures, no incoming calls can be accepted from the ATM native port. For port failures, all lines and PUs for the port will be deactivated.

Operator response: If *status_code*, *cause_code*, or *diagnostic_code* indicates that the failure is a result of a temporary condition, reactivate the PU.

System programmer response: If failure persists after reactivation attempts, examine *status_code*, *cause_code*, or *diagnostic_code* to determine whether the failure is a result of a system definition error or a network error. If the failure is a result of a system definition error, correct the error. If the failure is a result of a network error, contact the ATM network provider.

Routing code: 2

Descriptor code: 5

IST1557I MEDIUM = *medium*, PORT NAME = *port_name*

Explanation: VTAM issues this message when a DISPLAY ID command is entered for an external communication adapter (XCA) major node that defines an ATM native connection.

medium is the type of shared access transport facility (SATF) represented by the XCA major node. ATM is the only valid value for an ATM native connection.

port_name is the name of the port on the IBM Open Systems Adapter through which the ATM native connection is made.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1558I DIAG = *diagnostic_code*

Explanation: This message is part of a group of messages. See the explanation of message IST1556I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1559I ATM ADDRESS TYPE FORMAT

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for:

- An external communication adapter (XCA) major node that defines an ATM native port.
- A remote node connected through an ATM native switched virtual channel (SVC).

A complete description of the message group follows the example.

IST1559I	ATM ADDRESS	TYPE	FORMAT
IST1553I	atm_address	address_type	address_format

IST1559I

Message IST1559I is a header line identifying information in subsequent occurrences of message IST1553I.

IST1553I

- For an XCA major node, *address_type* can be LOCAL or GATEWAY.
 - LOCAL *atm_address* is the address, in hexadecimal, of a local IBM Open Systems Adapter port defined by the XCA major node.
 - GATEWAY *atm_address* is the public E164 address, in decimal, through which a local IBM Open Systems Adapter port can be reached.
- For a remote node connected through an ATM native SVC, *address_type* can be LOCAL or REMOTE.
 - LOCAL *atm_address* is the address, in decimal, of the local IBM Open Systems Adapter port through which the remote node is connected.
 - REMOTE *atm_address* is the address, in decimal, of the remote node.
- *address_format* can be one of the following:
 - E164** Indicates that the address is in a public ATM network and is in the native E164 address format.
 - NSAP** Indicates that the address is in a private ATM network and is in the International Organization for Standardization (ISO) network service access point (NSAP) address format.

Note: An *NA* in all three fields of the message indicates that an address is not available, most probably because a line defined in the XCA major node was not activated.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1560I VARY ACT *statement_name* CHANGE FAILED

Explanation: This message is the first in a group of messages that VTAM issues to indicate the failure of a dynamic change to a TRL major node. The failure resulted from a VARY ACT command.

A complete description of the message group follows the example.

```
IST1560I VARY ACT statement_name CHANGE FAILED
IST1561I PORTNAME ON TRLE NOT VALID
IST314I  END
```

IST1560I

statement_name is the major node name that was specified on the ID operand of the VARY ACT command.

IST1561I

PORTNAME ON TRLE NOT VALID

An attempt was made to add or modify a TRLE definition statement that specified an invalid name on the PORTNAME operand. A probable cause is that the name specified on the PORTNAME operand is not unique in this node or is already active.

System action: The remaining definition statements are processed.

Operator response: Enter a DISPLAY command for ISTTRL. Save the system log for problem determination.

System programmer response: Use the output from the operator to correct the TRLE definition statement in error.

Routing code: 2

Descriptor code: 5

IST1561I PORTNAME ON TRLE NOT VALID

Explanation: This message is issued either as part of a group of messages or as a single message. If the message is issued as part of a group of messages, see the explanation of message IST1560I for a complete description of the group.

If message IST1560I does not precede IST1561I, see the explanations of the messages that follow IST1561I for more information.

Routing code: 2

Descriptor code: 5

IST1562I CAUSE = *cause_code*

Explanation: This message is part of a group of messages. See the explanation of message IST1556I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1563I • IST1569I

IST1563I CKEYNAME = *ckeyname* CKEY = *ckey_value* CERTIFY = *certify_value*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID, DISPLAY MODEL, or DISPLAY LUGROUPS command. The first message in the group is IST228I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1564I TSO NOT ACTIVE

Explanation: VTAM issues this message when DISPLAY TSOUSER command is entered for a given user ID, but there is no TSO active.

System action: Processing continues.

Operator response: Start TSO and try the command again.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1565I *type* MODULES = *currentK*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY BFRUSE or a DISPLAY STORUSE command. For a DISPLAY BFRUSE command, the first message in the group is IST449I. For a DISPLAY STORUSE command, the first message in the group is IST1242I. See the explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1567I *alt_structure alt_structure alt_structure*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1568I INLP = *inlp* ONLP = *onlp* BFNLPL = *bfnlpl*

Explanation: VTAM issues this message as part of a message group. The first message in the group is IST440I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1569I INLP = *inlp* ONLP = *onlp*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1570I NBYTECTO = *nbytect* NBYTECT = *nbytect*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 4

IST1571I *module_name* ENTRY POINT IS *address* LEVEL IS *svc_level*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY VTAMSTOR,MODULE command. A complete description of the message group follows the example.

```
IST1571I module_name ENTRY POINT IS address LEVEL IS svc_level
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST314I END
```

IST1571I

- *module_name* is the module name provided in the DISPLAY VTAMSTOR command.
- *address* is the hexadecimal storage address of the module's entry point.
- *svc_level* is the service level of the module. This will usually contain a PTF number or a Julian date; if this is not available, the field will contain **NA**. The Julian date will be of the format *yy.ddd*, where *yy* is the year and *ddd* is the day.
- There are two special values that might appear in this field.
 - **REPLACD** is stored in the service level when a module or table is replaced. For example, if a MODIFY EXIT command replaced ISTECAA, the service level for ISTECAA would be REPLACD. Because ISTIECDM is only loaded to support ISTECAA, it will also be replaced when ISTECAA is replaced. Therefore, REPLACD will also be stored in the service level of ISTIECDM or the supporting module for the EXIT being loaded.
 - **LM NAME** is stored in the service level when a module is loaded and the module name cannot be found at the beginning of the module. LM NAME indicates that name of the module was retrieved from the load module name.

IST1574I

This message displays storage beginning at the *address* indicated in message IST1571I. This message is issued twice to display a total of 32 bytes beginning with *address*.

offset is the hexadecimal offset of the storage from the *address* in message IST1571I.

hexdata_1, *hexdata_2*, *hexdata_3*, and *hexdata_4* each display four bytes of the storage in hexadecimal format.

EBCDIC_data displays sixteen bytes of the storage in EBCDIC format.

For some modules, the entry point address does not point to the beginning of the modules. Processing for the DISPLAY VTAMSTOR,MODULE command will display up to 32 bytes prior to the entry point address. This will be displayed as a negative offset. Less than 32 bytes might be displayed if the beginning of the module is found.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1572I MODULE *module_name* CANNOT BE LOCATED

Explanation: VTAM issues this message in response to a DISPLAY VTAMSTOR command when the value specified on the MODULE parameter (*module_name*) cannot be located in storage. For the value on the MODULE parameter to be found, it must be the name in the eyecatcher of the module.

IST1573I • IST1575I

This message does not indicate that the module or CSECT is not loaded in storage; it just indicates that the defined searching algorithms cannot locate it.

System action: Processing continues.

Operator response: Verify that the name is a valid VTAM module name.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1573I *type* STORAGE DISPLAY BEGINS AT LOCATION *address*

Explanation: VTAM issues this message as the first of a group of messages in response to a DISPLAY VTAMSTOR,RESOURCE or DISPLAY VTAMSTOR,NETADDR command or as part of the IST1863I message group. See the description of that message when IST1573I is not the first message in the group.

The following is a complete description of the IST1573I message group:

```
IST1573I type STORAGE DISPLAY BEGINS AT LOCATION address
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
:
:
IST314I END
```

IST1573I

type indicates the type of storage being displayed. The values for *type* are RDTE or RDTE PROFILE.
address indicates the hexadecimal storage address for the beginning of the display.

IST1574I

This message displays storage beginning at the *address* indicated in message IST1573I. This message is issued as many times as necessary to display the entire RDTE or RDTE profile.

offset is the hexadecimal offset of the storage from the *address* in message IST1571I.

hexdata_1, *hexdata_2*, *hexdata_3*, and *hexdata_4* each display four bytes of the storage in hexadecimal format.

EBCDIC_data displays sixteen bytes of the storage in EBCDIC format.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1574I *offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I, IST1571I, IST1573I, IST1650I, IST1658I, or IST1863I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1575I DIALNO FOR PID: *pid(instance)*

Explanation: VTAM issues this message as part of a message group. The first message in the group is either IST149I or IST1351I. See the explanation of those messages for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1576I DYNAMIC SWITCHED MAJOR NODE *nodename* CREATED

Explanation: VTAM issues this message to indicate that a new dynamic switched major node, *nodename*, was created as part of processing to create a dynamic PU or LU.

System action: Major node *nodename* is created.

Operator response: None. DISPLAY commands can now be issued for *nodename*.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1577I HEADER SIZE = *hpsize* DATA SIZE = *dsize* STORAGE = *storage*

Explanation: VTAM issues this message as part of a message subgroup. See “IST1221I” on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST1578I *inoptype* INOP DETECTED FOR *trlename* BY *modname* CODE=*code*

Explanation: A module detected an inoperative condition for a resource. This message follows message IST1222I, IST1501I, or IST1717I.

inoptype is the type of inoperative condition and can be one of the following:

DEVICE

One of the following conditions has occurred:

- A device in a multipath channel (MPC) group is inoperative.
- A 10 GbE RoCE Express interface for a TCP/IP stack is inoperative. The TCP/IP stack is identified by the ULPID value in the preceding message IST1717I.

HARD The entire MPC group is inoperative, and is not expected to recover without intervention.

SOFT The entire MPC group is inoperative; however, recovery of the connection is possible.

trlename is the name of the TRLE definition statement in the TRL major node that defines the MPC connection, or the system-generated TRLE that represents the 10 GbE RoCE Express interface.

modname is the name of the module that detected the inoperative condition.

code identifies the point in *modname* where the inoperative condition was detected. *code* also categorizes the inoperative condition into the following:

Code Category

1–99 VTAM internal error

The inoperative condition was issued because of a VTAM internal logic error.

100–199

Probable hardware error

The inoperative condition was probably generated due to unexpected channel status presented to VTAM from the hardware.

200–255

Should not occur condition

This condition could not be categorized into either a software or hardware error.

IST1579I

VTAM provides the ability to take a diagnostic dump when an inoperative condition is detected. The INOPDUMP and INOPCODE start options and commands are used to enable the dump function for specific resources, modules, and codes. See z/OS Communications Server: SNA Operation for information about the INOPDUMP command and the INOPCODE command.

If *modname* is ISTTSC8W and *code* is 200, this indicates a failure when VTAM is trying to send data to another node in a sysplex via the Cross-system Coupling Facility (XCF). If this message is preceded by MVS message IXC409D, an XCF signaling path between the two nodes was lost. The resource, *trlename*, is the name of the dynamic XCF TRLE used by VTAM for connectivity between the two nodes. A display of the corresponding dynamic XCF PU will show the CP name of the other node. The VTAM in this other node might not be aware of the inoperative condition. The loss of the XCF signaling path might be transient or permanent. When the signaling path is restored, the VTAM in the other node will be informed of the inoperative condition of this connection, and the corresponding PU in that node will go inoperative. Connectivity can be restored at that time by reactivating one of the PUs.

System action: If *inoptype* is DEVICE and *trlename* represents an MPC connection, the channel listed in the preceding message is deactivated. The device might be dynamically added back to the active group without disruption using APPN host-to-host channel dynamics.

If *inoptype* is DEVICE and *trlename* represents a 10 GbE RoCE Express interface, the 10 GbE RoCE Express interface listed in the preceding message is deactivated. The TCP/IP stack might attempt recovery of the 10 GbE RoCE Express interface.

If *inoptype* is HARD, resource *trlename* is deactivated and all service access points (SAPs) for *trlename* are notified of the condition.

If *inoptype* is SOFT, resource *trlename* is deactivated and all service access points (SAP) for *trlename* are notified of the condition. VTAM attempts to reactivate *trlename*.

Operator response: If *inoptype* is DEVICE and *trlename* represents an MPC connection, no further action is required.

If *inoptype* is DEVICE and *trlename* represents a 10 GbE RoCE Express interface, no further action is required. If recovery fails, save the system log for problem determination.

If *inoptype* is HARD, reactivate resource *trlename*. If the activation fails, and the MPC group is critical to your network, save the system log for problem determination.

If *inoptype* is SOFT, and this is the first occurrence of the message, no further action is required. If *inoptype* is SOFT, and this is not the first occurrence of the message, attempt to reactivate *trlename*. If the activation fails, and the MPC group is critical to your network, save the system log for problem determination.

System programmer response: For *code* values in the "VTAM internal error" or "should not occur condition" categories, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms.
- If no applicable matches are found, or if you do not have access to IBMLink, obtain a diagnostic dump for this error and report the problem to IBM. If you have access to IBMLink, the problem can be reported to IBM using the Electronic Technical Report (ETR) option on IBMLink.

For *code* values in the "probable hardware error" category, contact the appropriate hardware support organization to analyze this error.

Routing code: 2

Descriptor code: 5

IST1579I -----

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1580I XID RECEIVED BY VTAM:

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I or IST1658I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1582I CONTROL VECTOR X'22' ANALYSIS

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I or IST1658I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1583I BYTE OFFSET OF FIRST BYTE IN ERROR = *byteoffset*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I or IST1658I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1584I BIT OFFSET OF FIRST BIT IN ERROR = *bitoffset*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I or IST1658I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1585I SENSE CODE = *sense*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1586I XID SENT BY VTAM:

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST467I or IST1658I. See the explanation of those messages for a complete description.

Routing code: 8

Descriptor code: 5

IST1587I ORIGIN NCE X'*nccid*'

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1588I RTP END TO END ROUTE - COMPUTED SESSION PATH

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a type 2.1 node representing a Rapid Transport Protocol (RTP) route.

The first message in the group is IST1476I. See the description of that message for more information.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1589I XNETALS = *xnetalsvalue*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a type 2.1 PU.

xnetalsvalue is the value of the XNETALS operand defined for the PU specified on the DISPLAY ID command. *xnetalsvalue* can be one of the following:

YES Nonnative NETIDs are allowed.

NO The native NETID is to used.

System action: Processing continues

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 9

IST1590I PU NETID DIFFERENT THAN HOST AND CONTACTED REQUEST

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I ERROR FOR ID = nodename - text1 : text2
IST1590I PU NETID DIFFERENT THAN HOST AND CONTACTED REQUEST
IST314I END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1590I

One of the following occurred:

- The PU is being reactivated. The NETID was not specified on the PU definition statement, and the NETID received in the CONTACTED request is not the same as the NETID received on a previous activation of this PU.
- NETID=(,NOXNETLS) was coded on the PU definition statement and the CONTACTED RU contained a NETID that does not match this VTAM NETID.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- Verify that the network ID passed in the contacted RU matches the network ID specified in the PU definition statement.

- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Enter a MODIFY TRACE, ID=*ncpname* command, where *ncpname* is the name of the NCP major node that contains the peripheral PU or link station *nodename* (as opposed to the NCP major node adjacent to the link station *nodename*).

Routing code: 2

Descriptor code: 5

IST1591I NCP NOT LOADED

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1591I  NCP NOT LOADED
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1591I

The CONTACTED request from the NCP indicates that LOAD is required.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- If the node should be activated, reactivate it, specifying LOAD=YES on the command.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.
Enter a MODIFY TRACE, ID=*ncpname* command, where *ncpname* is the name of the NCP major node that contains the peripheral PU or link station *nodename* (as opposed to the node adjacent to the link station *nodename*).

Routing code: 2

Descriptor code: 5

IST1592I NETID IN XID DID NOT MATCH NETID OF PU

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1592I  NETID IN XID DID NOT MATCH NETID OF PU
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1592I

The NETID received in the XID is not the same as the NETID defined on the PU definition statement, or a nonnative NETID is not allowed for this PU.

IST1593I • IST1594I

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- Verify that the network ID passed in the contacted RU matches the network ID specified in the PU definition statement.
- If this connection is to be allowed, then correct the NETID defined on the PU or correct the NETID configured in the device being contacted.

Routing code: 2

Descriptor code: 5

IST1593I RESOURCE TYPE NOT VALID

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1593I  RESOURCE TYPE NOT VALID
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1593I

The *nodename* received in the CONTACTED request is already defined to VTAM and is not an adjacent CP, PU, or link station or RNAME.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- If the node should be activated, then the duplicate name condition must be resolved. Correct the VTAM definition that defines *nodename*, or determine the reason that the connecting node is sending in the conflicting information.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Enter a MODIFY TRACE, ID=*ncpname* command, where *ncpname* is the name of the NCP major node that contains the peripheral PU or link station *nodename* (as opposed to the NCP major node adjacent to the link station *nodename*).

Routing code: 2

Descriptor code: 5

IST1594I CPNAME IN CONTACTED REQUEST SAME AS SSCPNAME

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1594I  CPNAME IN CONTACTED REQUEST SAME AS SSCPNAME
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1594I

The CPNAME received in control vector (CV) X'0E' appended to the XID is the same as this host's SSCPNAME start parameter.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- If the node should be activated, then the CPNAME must be corrected before the reactivation can succeed. The cpname is most probably configured or defined in the node *nodename* that is being contacted.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Enter a MODIFY TRACE, ID=*ncpname* command, where *ncpname* is the name of the NCP major node that contains the peripheral PU or link station *nodename* (as opposed to the NCP major node adjacent to the link station *nodename*).

Routing code: 2

Descriptor code: 5

IST1595I LINK STATION NOT ASSOCIATED WITH AN NCP

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1595I LINK STATION NOT ASSOCIATED WITH AN NCP
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1595I

A **CONTACTED** request was received for a link station indicating that an adjacent communication controller was not loaded. There are three possible situations:

- The link station *nodename* was being activated as a result of a VARY ACT command directed at the link station itself (direct or indirect activation of the link station). VTAM expected to find the adjacent communication controller already loaded with an NCP, but it was not. The link station activation fails because VTAM does not perform load operations when only a link station is activated.
- The link-station *nodename* was being activated as a result of error recovery to an NCP adjacent to *nodename* (automatic activation of the link station).
- The link station *nodename* was being activated as a result of a VARY ACT command to an NCP adjacent to *nodename*. The NCP is not loaded because LOAD=NO was specified on the VARY ACT command.

System action: *nodename* is deactivated, and the adjacent NCP remains pending awaiting the successful activation of one or more other adjacent link stations.

Operator response: After first ensuring that the NCP is inactive, the communication controller adjacent to link station *nodename* needs to be loaded by activating an NCP for this communication controller.

The link station *nodename* can be reactivated:

- Automatically, as part of the NCP activation
- Directly or indirectly (for example, by using a VARY ACT command after the NCP is successfully activated).

If the NCP repeatedly abends after being loaded, dump the failing NCP for further troubleshooting.

System programmer response: No further recommended response.

IST1596I • IST1597I

Routing code: 2

Descriptor code: 5

IST1596I SWITCHED LINK STATION STATE PCTD2 NOT VALID FOR LOAD

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1596I  SWITCHED LINK STATION STATE PCTD2 NOT VALID FOR LOAD
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1596I

The activation cannot proceed due to the current NCP state of PCTD2.

System action: *nodename* is deactivated, and the adjacent NCP remains pending awaiting the successful activation of one or more other adjacent link stations.

Operator response: After ensuring that the NCP is inactive, the communication controller adjacent to link station *nodename* needs to be loaded by activating an NCP for this communication controller.

The link station *nodename* can be reactivated:

- Automatically, as part of the NCP activation
- Directly or indirectly (for example, by using a VARY ACT command after the NCP is successfully activated).

If the NCP repeatedly abends after being loaded, dump the failing NCP for further troubleshooting.

System programmer response: No further recommended response.

Routing code: 2

Descriptor code: 5

IST1597I SWITCHED CALL=IN NCP NOT VALID

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1597I  SWITCHED CALL=IN NCP NOT VALID
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1597I

A switched connection to an NCP must be defined with a CALL=OUT PATH definition.

System action: *nodename* is deactivated, and the adjacent NCP remains pending awaiting the successful activation of one or more other adjacent link stations.

Operator response: After ensuring that the NCP is inactive, the communication controller adjacent to link station *nodename* needs to be loaded by activating an NCP for this communication controller.

The link station *nodename* can be reactivated:

- Automatically, as part of the NCP activation
- Directly or indirectly (for example, by using a VARY ACT command after the NCP is successfully activated).

If the NCP repeatedly abends after being loaded, dump the failing NCP for further troubleshooting.

System programmer response: No further recommended response.

Routing code: 2

Descriptor code: 5

IST1598I LEASED LINK STATION STATE PCTD2 NOT VALID FOR LOAD

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1598I  LEASED LINK STATION STATE PCTD2 NOT VALID FOR LOAD
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1598I

The NCP was in a PCTD2 state when the NCP indicated that a LOAD was required. NCP must be in a CONTACTED state to perform a load.

System action: *nodename* is deactivated, and the adjacent NCP remains pending awaiting the successful activation of one or more other adjacent link stations.

Operator response: After ensuring that the NCP is inactive, the communication controller adjacent to link station *nodename* needs to be loaded by activating an NCP for this communication controller.

The link station *nodename* can be reactivated:

- Automatically, as part of the NCP activation
- Directly or indirectly (for example, by using a VARY ACT command after the NCP is successfully activated).

If the NCP repeatedly abends after being loaded, dump the failing NCP for further troubleshooting.

System programmer response: No further recommended response.

Routing code: 2

Descriptor code: 5

IST1599I NCP INDICATES LOAD REQUIRED BUT LOAD=NO

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1599I  NCP INDICATES LOAD REQUIRED BUT LOAD=NO
IST314I  END
```

IST605I

A request from *nodename* failed.

text1 : *text2* specifies the RU in error, and is **REQUEST : CONTACTED** for this message group.

IST1599I

The CONTACTED request received from the NCP indicates that the NCP needs to be loaded, but the VARY ACT command was issued with the LOAD parameter defaulted to or specified LOAD=NO.

System action: *nodename* is deactivated, and the adjacent NCP remains pending awaiting the successful activation of one or more other adjacent link stations.

Operator response: After first ensuring that the NCP is inactive, the communication controller adjacent to link station *nodename* needs to be loaded by activating an NCP for this communication controller.

The link station *nodename* can be reactivated:

- Automatically, as part of the NCP activation
- Directly or indirectly (for example, by using a VARY ACT command after the NCP is successfully activated).

If the NCP repeatedly abends after being loaded, dump the failing NCP for further troubleshooting.

System programmer response: No further recommended response.

Routing code: 2

Descriptor code: 5

Chapter 9. IST messages for VTAM network operators

IST1600I – IST1999I

This chapter lists the VTAM messages beginning with IST in the range of IST1600I through IST1999I. These messages can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

Note: Messages that begin with the prefix **ISTF** are issued by the VTAM dump analysis tool and the VTAM internal trace (VIT) analysis tool. Help information is available as a part of each tool by pressing F1. Therefore, **ISTF** messages are not documented in z/OS Communications Server: SNA Messages. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

IST1600I LOAD MODULE MISMATCH – LOAD=NO

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename – text1 : text2
IST1600I  LOAD MODULE MISMATCH – LOAD=NO
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1600I

The NCP load module name received in an ACTPU response does not match the NCP load module name in the VTAM definition. LOAD=NO was defaulted to or specified on the VARY ACT command.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- If the node should be activated, reactivate it.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Routing code: 2

Descriptor code: 5

IST1601I APPN SEARCHES TO *cp_name* ARE *status*

Explanation: VTAM issues this message when the sending of APPN search requests to an adjacent control point (CP) has been suspended or resumed.

cp_name is the name of the adjacent CP.

status can be either SUSPENDED or RESUMED.

When *status* is SUSPENDED, severe network congestion has occurred.

IST1602I

VTAM suspends sending of APPN search requests to an adjacent CP when the maximum congestion threshold reaches the value specified by the MAXLOCAT start option.

VTAM resumes sending APPN search requests to an adjacent CP when a minimum congestion threshold is reached.

For information on the minimum and maximum congestion thresholds, see the description of the MAXLOCAT start option in the z/OS Communications Server: SNA Resource Definition Reference.

System action: When the maximum congestion threshold is reached, VTAM stops sending new APPN search requests to the adjacent CP.

When the minimum congestion threshold is reached, VTAM resumes sending APPN search requests to the adjacent CP.

Operator response: If *status* is RESUMED, no action is required.

If *status* is SUSPENDED, issue a DISPLAY STORUSE command to ensure that VTAM has enough private storage with which to operate. If storage is critical, issue a VARY INACT,ID=*cp_name*,TYPE=FORCE command to terminate CP-CP sessions with the adjacent CP.

Termination of CP-CP sessions with the adjacent CP clears the outbound data queue, and frees storage. However, the adjacent CP might be able to recover and allow VTAM to resume sending APPN search requests.

Notify the system programmer of the *cp_name*. New LU-LU sessions fail if APPN search requests are required to pass through *cp_name*.

System programmer response: Determine the severity of the problem based on the network configuration and the status of VTAM private storage. Termination of CP-CP sessions with the adjacent CP clears the outbound data queue, and frees storage. However, the adjacent CP might be able to recover and allow VTAM to resume sending APPN search requests.

Determine that the maximum threshold value is appropriate for the network. If the value needs to be adjusted, change the value of the MAXLOCAT start option.

Routing code: 2

Descriptor code: 3

IST1602I **RU ERROR: EXTRA CV X'xx'**

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1602I  RU ERROR: EXTRA CV X'xx'
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1602I

Multiple Control Vectors X'09', X'0B', X'11', or X'FE' were returned with the ACTPU response from the NCP.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your

operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1603I RU ERROR: INVALID POSITIVE RESPONSE

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1603I  RU ERROR: INVALID POSITIVE RESPONSE
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE** : **ACTPU** for this message group.

IST1603I One of the following has occurred:

- Reserved bits are nonzero.
- The ACTPU response length is incorrect.
- The ACTPU response is not format 1 or format 2.
- The ACTPU response type is not ERP or COLD.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1604I RU ERROR: LENGTH, FORMAT, OR TYPE NOT VALID

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1604I  RU ERROR: LENGTH, FORMAT, OR TYPE NOT VALID
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE** : **ACTPU** for this message group.

IST1604I

One of the following has occurred:

- Reserved bits are nonzero.

IST1605I • IST1606I

The ACTPU response length is incorrect.

The ACTPU response is not format 0 or format 3.

The ACTPU response type is not ERP or COLD.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1605I RU ERROR: MISSING CV X'0B'

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1605I  RU ERROR: MISSING CV X'0B'
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE :** ACTPU for this message group.

IST1605I

A format 3 ACTPU response was received, but did not include an SSCP-PU capabilities vector, CV X'0B', which is required.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1606I DIAL RETRY FAILED

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1606I  DIAL RETRY FAILED
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1606I

Consecutive dial attempts have failed for this *nodename*. This may be due to line problems.

System action: VTAM rejects the command. Other processing continues.

Operator response: Try the command again. If the condition persists, save the system log for problem determination.

System programmer response:

- If the node should be activated, reactivate it.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Routing code: 2

Descriptor code: 5

IST1607I RU ERROR: RESPONSE TOO LONG

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename - text1 : text2
IST1607I  RU ERROR: RESPONSE TOO LONG
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1607I

The ACTPU response received from the NCP is too long.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1608I RU ERROR: RESPONSE TOO SHORT

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I ERROR FOR ID = nodename - text1 : text2
IST1608I RU ERROR: RESPONSE TOO SHORT
IST314I END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1608I

The ACTPU response received from the NCP is too short. This includes the length of the ACTPU response and its vectors.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1609I CV X'0B' INDICATES ADJACENT LINK STATION NOT SUPPORTED

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I ERROR FOR ID = nodename - text1 : text2
IST1609I CV X'0B' INDICATES ADJACENT LINK STATION NOT SUPPORTED
IST314I END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1609I

A required indicator for Adjacent Link Station Address support is not present in the control vector (CV) X'0B'.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

Run your operating system service aid program to determine whether MDR/OBR information has been recorded. See the *EREP User's Guide and Reference* for more information on using EREP. If you use a network management application such as NetView, check to determine whether an alert was recorded for this problem.

A buffer trace can provide additional information regarding the cause of the error.

System programmer response: If you cannot determine the cause of the problem from the output provided or need additional assistance, contact the IBM support center. If available, provide the MDR/OBR information from your operating system service aid program or the alert information recorded by your network management application.

Routing code: 2

Descriptor code: 5

IST1610I CORRELATOR MISMATCH – LOAD=NO

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename – text1 : text2
IST1610I CORRELATOR MISMATCH – LOAD=NO
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1610I

The VARY ACT command defaulted to or specified LOAD=NO, and the generated correlator did not match the correlator loaded in the communications controller.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

System programmer response:

- If the node should be activated, reactivate it.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Enter a MODIFY TRACE, ID=*nodename* command.

Routing code: 2

Descriptor code: 5

IST1611I CORRELATOR MISMATCH – NCP ACQUIRED BEFORE ACTIVATION

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I  ERROR FOR ID = nodename – text1 : text2
IST1611I CORRELATOR MISMATCH – NCP ACQUIRED BEFORE ACTIVATION
IST314I  END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU, ID in error, and is **RESPONSE : ACTPU** for this message group.

IST1611I

The VARY ACT command defaulted to or specified LOAD=NO, and the generated correlator did not match the correlator loaded in the communications controller.

System action: *nodename* is deactivated.

Operator response: Save the system log for problem determination.

IST1612I • IST1613I

System programmer response:

- If the node should be activated, reactivate it.
- If the problem persists, try to create the problem again while an I/O trace or buffer trace is running for the affected *nodename*. If *nodename* is link-attached, run a line trace for the affected line.

Enter a MODIFY TRACE, ID=*nodename* command.

Routing code: 2

Descriptor code: 5

IST1612I LOAD MODULE MISMATCH - EXPECTED *loadmod1* FOUND *loadmod2*

Explanation: This message is issued in a message group with message IST605I. A complete description of the message group follows the example.

```
IST605I ERROR FOR ID = nodename - text1 : text2
IST1612I LOAD MODULE MISMATCH - EXPECTED loadmod1 FOUND loadmod2
IST314I END
```

IST605I

A response sent by *nodename* contained invalid data.

text1 : *text2* specifies the RU in error, and is **RESPONSE : ACTPU** for this message group.

IST1612I

The NCP load module name, *loadmod1*, received in the ACTPU response did not match the NCP load module name, *loadmod2*, found in the VTAM definition.

System action: *nodename* is deactivated.

Operator response: Enter a VARY ACT,LOAD=NO command to activate the NCP with the load module used during IPL.

System programmer response: No further recommended response.

Routing code: 2

Descriptor code: 5

IST1613I TYPE = *type* ATTN = *attn*

Explanation: This message is the first in a subgroup of messages that displays tuning statistics for a TCP/IP connection. A complete description of the message groups follow.

This message group displays tuning statistics for a TCP/IP channel-to-channel (CTC), LAN channel station (LCS), or HyperChannel connection.

```
IST1230I TIME      = time      DATE      = date      ID      = id
IST1613I TYPE      = type      ATTN       = attn
IST1614I READSIO   = readsio   PACKET     = packet   BYT     = byt
IST1615I ARPACKET = arpacket  ARBYTE    = arbyte  MAX     = max
IST1616I WRITESIO = writesio  PACKET     = packet   BYT     = byt
IST1617I AWPACKET = awpacket  AWBYTE    = awbyte  MAX     = max
IST314I  END
```

This message group displays tuning statistics for a TCP/IP Common Link Access to Workstation (CLAW) connection.

```
IST1230I TIME      = time      DATE      = date      ID      = id
IST1613I TYPE      = type      ATTN       = attn
IST1614I READSIO   = readsio   PACKET     = packet   BYT     = byt
IST1615I ARPACKET = arpacket  ARBYTE    = arbyte  MAX     = max
IST1616I WRITESIO = writesio  PACKET     = packet   BYT     = byt
```

```

IST1617I AWPACKET = awpacket  AWBYTE  = awbyte  MAX = max
IST1618I READCCW  = readccw   PCICNT  = pcicnt
IST1619I WRITECCW = writeccw  APPEND  = append]
IST314I  END

```

This message group displays tuning statistics for a TCP/IP channel data link control (CDLC) connection.

```

IST1230I TIME      = time      DATE      = date      ID = id
IST1613I TYPE      = type      ATTN       = attn
IST1653I RWSIO     = rwsio     WCH       = wch      RCH = rch
IST1654I INPACKET = inpacket  INBYTE   = inbyte  MAX = max
IST1655I OTPACKET = otpacket  OTBYTE   = otbyte  MAX = max
IST314I  END

```

IST1230I

The *time* and *date* values specify when the record was reported. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

id is the name of the link for which tuning statistics are being recorded, and is the name specified on the LINE definition statement in the associated channel-attached major node.

IST1613I

- *type* is the TCP/IP resource type, which can be one of the following:

```

CDLC  Channel data link control
CLAW  Common Link Access to Workstation
CTC   Channel-to-channel
HYP   Hyperchannel
LCS   LAN channel station

```

- *attn* is the number of unsolicited attention interrupts received.

IST1614I

This message is issued for CLAW, CTC, and LCS resources only.

readsio is the number of READ start I/Os issued.

packet is the number of inbound TCP/IP packets received.

byt is the number of inbound TCP/IP bytes received.

IST1615I

This message is issued for CLAW, CTC, and LCS resources only.

arpacket is the average number of TCP/IP packets received.

arbyte is the average number of TCP/IP bytes received.

max is the largest TCP/IP packet received.

IST1616I

This message is issued for CLAW, CTC, and LCS resources only.

writesio is the number of WRITE start I/Os issued.

packet is the number of outbound TCP/IP packets sent.

byt is the number of outbound TCP/IP bytes sent.

IST1617I

This message is issued for CLAW, CTC, and LCS resources only.

awpacket is the average number of TCP/IP packets sent.

awbyte is the average number of TCP/IP bytes sent.

IST1614I • IST1615I

max is the largest TCP/IP packet sent.

IST1618I

This message is issued for CLAW resources only.

readccw is the number of READ CCWs used.

picnt is the number of PCI interrupts received.

IST1619I

This message is issued for CLAW resources only.

writeccw is the number of WRITE CCWs issued.

append is the number of WRITE appends done.

IST1653I

This message is issued for CDLC resources only.

rwsio is the number of read/write SIOs issued.

wch is the total number of write channel programs issued.

rch is the total number of read channel programs issued.

IST1654I

This message is issued for CDLC resources only.

inpacket is the number of inbound TCP/IP packets received.

inbyte is the number of inbound TCP/IP bytes received.

max is the largest TCP/IP packet received.

IST1655I

This message is issued for CDLC resources only.

otpacket is the number of outbound TCP/IP packets sent.

otbyte is the number of outbound TCP/IP bytes sent.

max is the largest TCP/IP packet sent.

System action: Processing continues

Operator response: None

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST1614I **READSIO** = *readsio* **PACKET** = *packet* **BYT** = *byt*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1615I **ARPACKET** = *arpacket* **ARBYTE** = *arbyte* **MAX** = *max*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1616I WRITESIO = *writesio* PACKET = *packet* BYT = *byt*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1617I AWPACKET = *awpacket* AWBYTE = *awbyte* MAX = *max*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1618I READCCW = *readccw* PCICNT = *pcicnt*

Explanation: VTAM issues this message as part of a message subgroup and is only issued for TCP/IP resource type CLAW. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1619I WRITECCW = *writeccw* APPEND = *append*

Explanation: VTAM issues this message as part of a message subgroup and is only issued for TCP/IP resource type CLAW. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1621I DUPLICATE CP NAME: *cpname* FOR ID = *puname*

Explanation: VTAM issues this message in response to VARY ACT of a PU (or major node containing the PU) when the network-qualified name of this node and the network-qualified name of the remote node are found to be the same. This message is followed by message IST259I.

cpname is the network-qualified name of the node that the PU represents.

puname is the name of the PU being activated.

System action: Processing continues, but the specified PU is in an INOP condition.

Operator response: Save the system log for problem determination.

System programmer response: Determine which remote node has the same fully qualified network name as this node, and change one of the names.

Routing code: 2

Descriptor code: 5

IST1622I DLCADDR SUBFIELD *subfield_id* NOT VALID - *subfield_description*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1166I. See the explanation of that message for a complete description.

Routing code: 2

IST1623I • IST1626I

Descriptor code: 5

IST1623I **DUPLICATE DLCADDR SUBFIELD** *subfield_id* - *subfield_description*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1166I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1624I **DLCADDR SUBFIELD** *subfield_id* **NOT SPECIFIED** - *subfield_description*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1166I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1625I **STORAGE ADDRESS** *address* **IS UNAVAILABLE**

Explanation: This message is issued in response to a DISPLAY VTAMSTOR,ADDRESS command. *address* points to storage which would result in a protection exception if accessed.

This message may be issued at two different points during processing of the command. If the address of the storage for the length specified has any protection exceptions, this message will be issued in response to the command. If processing for the command begun issuing messages, this message will be issued following IST1574I and then the message group will be terminated with IST314I.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1626I **ALL DATA IN** *structure_name* **FOR** *appl_name* **REMOVED**

Explanation: This message is the first of a group of messages VTAM issues when data owned by a multi-node persistent session (MNPS) application program is deleted from a MNPS coupling facility structure after a VTAM failure. The second message in the group gives the reason the data was deleted. A complete description of the message group follows.

```
IST1626I ALL DATA IN structure_name FOR appl_name REMOVED
[IST1627I MULTI-NODE PERSISTENT SESSION TIMER EXPIRED]
[IST1628I DATA WAS IN AN UNRECOVERABLE STATE - state]
IST314I END
```

IST1626I

structure_name is the coupling facility structure from which the data was deleted.

appl_name is the network-qualified name of the application program that owned the deleted data.

IST1627I

The MNPS application program was not recovered in the time specified by the persistent timer. The persistent timer is set using the PSTIMER option on SETLOGON OPTCD=PERSIST.

IST1628I

state can be one of the following:

Cleanup

Another VTAM cleaned up the data when it failed.

Disabled

At the time of the VTAM failure, the application had not issued SETLOGON OPTCD=PERSIST.

Suspect

At the time of the VTAM failure either the structure was being rebuilt or the VTAM did not have connectivity to the structure.

Terminate

The application had closed its ACB, in a non-persistent manner, but not all the MNPS sessions or connections were terminated when the VTAM failed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1627I MULTI-NODE PERSISTENT SESSION TIMER EXPIRED

Explanation: This message is part of a subgroup of messages that VTAM issues in when data has been deleted from the multi-node persistent session coupling facility structure. See the explanation of message IST1626I for a complete description of the message subgroup.

Routing code: 2

Descriptor code: 5

IST1628I DATA WAS IN AN UNRECOVERABLE STATE - *state*

Explanation: This message is part of a subgroup of messages that VTAM issues in when data has been deleted from the multi-node persistent session coupling facility structure. See the explanation of message IST1626I for a complete description of the message subgroup.

Routing code: 2

Descriptor code: 5

IST1629I MODSRCH = *modsrch_value*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a model application program or a dynamic application program. *modsrch_value* specifies the current value of the MODSRCH operand, and can be FIRST, LAST, or NEVER. See z/OS Communications Server: SNA Resource Definition Reference for more information about the MODSRCH operand for the application program major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1630I *name* ACTIVATION FAILED - HPR=RTP REQUIRED WITH HPDT MPC

Explanation: VTAM issues this message in response to VARY ACT of a PU or a major node when VTAM or the local PU is not configured for HPR RTP support, and the MPC group that the PU or major node will be using for connectivity provides HPDT support. If the activation failure is for a PU, this message is followed by IST259I.

name is the name of the PU or major node for which the activation failed.

IST1631I

System action: Processing continues. If the activation failure is for a PU, the specified PU is in an INOP condition.

Operator response: Reconfigure VTAM or the PU to support HPR=RTP, or reconfigure the TRLE that the PU references to specify MPCLEVEL=NOHPDT. The VARY ACT command may then be entered again.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1631I *resource* SUBCHANNEL *cua* status

Explanation: This message is issued when the status of a subchannel that uses multipath channel (MPC) changes.

resource is the name of the TRLE or MPC subarea line that contains the subchannel.

cua is the subchannel address.

status is the subchannel address status, and can be one of the following:

DEVICE ALREADY ALLOCATED

The subchannel is already in use.

DEVICE NOT FOUND

The subchannel was not found by MVS.

INVALID DEVICE TYPE

The subchannel device type does not match the characteristics of the *resource* value.

INVALID QDIO PORT NUMBER

The port number (PORTNUM) specified on the QDIO TRLE definition exceeds the number of physical ports available on the OSA-Express3 or later CHPID.

IQDIO CULA UNAVAILABLE

The data subchannel for HiperSockets (IQDIO) is missing the control unit logical address (CULA).

NO PATH AVAILABLE

There is no path available to the subchannel.

NO STORAGE TO ALLOCATE

There is insufficient storage available to activate the subchannel.

NOT ADDED TO VIRTUAL NET

An ensemble virtual network does not include this host and this OSA-Express interface.

NOT AN ENSEMBLE MEMBER

Either the central processing complex (CPC) is not configured as a member of an ensemble, or this specific z/OS image is not included as a member of the ensemble because the VTAM start option ENSEMBLE is set to the value NO. z/OS Communications Server will not permit connectivity to either the intraensemble data network or the intranode management network. z/OS Communications Server denies this connectivity by denying the activation of OSX and OSM interfaces.

OFFLINE

Deactivation processing has completed and MVS acknowledges that the subchannel is off line.

OFFLINE.PENDING

An MVS VARY OFFLINE command is issued for a subchannel and VTAM and MVS are in the process of completing deallocation for the subchannel.

ONLINE

An MVS VARY ONLINE command is issued for a subchannel and VTAM successfully completes activation for the subchannel.

OPEN FOR DEVICE FAILED

The attempt to activate the subchannel failed.

QDIO CULA UNAVAILABLE

The data subchannel for an OSA-Express adapter is missing the Control Unit Logical Address (CULA).

QDIO DEVICE NOT FOUND

The data subchannel for an OSA-Express adapter was not found by MVS.

QDIO DEVICE PATH INVALID

The subchannel for an OSE-Express adapter, or iQDIO device has a path that is not valid, or is not online to MVS.

QDIO DEVICE TYPE NOT OSD

The subchannel for an OSA-Express adapter is not of type OSD.

QDIO DEVICE TYPE NOT OSM

The subchannel for an OSA-Express adapter is not an OSM subchannel.

QDIO DEVICE TYPE NOT OSX

The subchannel for an OSA-Express adapter is not an OSX subchannel.

QDIO INVALID SUBCHANNEL

There was a channel subsystem call (CHSC) failure for a QDIO device.

QDIO PNET SERVICE FAILED

The service to access the physical network ID for the OSA-Express adapter represented by the *resource* value failed.

QDIO UCBINFO UNAVAILABLE

The subchannel for an OSA-Express adapter has a path that is not valid.

REACCESSIBLE

An INOP situation occurs and MVS deactivates and then reactivates a subchannel without operator intervention.

System action: None.

Operator response: Depending on the value of *status*, take the following action:

NO PATH AVAILABLE

Ensure that all devices are on line and have PATHs available.

OFFLINE

Issue an MVS VARY ONLINE command to use this subchannel for this device.

If activation succeeded or is pending for this resource, no further response is needed. The subchannel will be dynamically made available to the resource when it comes online. If activation failed, attempt reactivation after making the previously described adjustments.

System programmer response: Depending on the value of *status*, take the following action:

DEVICE ALREADY ALLOCATED

Ensure that the same subchannel is not used for multiple devices.

DEVICE NOT FOUND

Ensure that the subchannel address indicated has been defined to MVS.

INVALID DEVICE TYPE

Ensure that the subchannel address indicated was defined to MVS with a type that matches the *resource* value containing this subchannel. For example, if the *resource* value is a transport resource list element (TRLE) with LNCTL=MPC, ensure that the type of the subchannel is for a channel-to-channel adapter connection.

INVALID QDIO PORT NUMBER

Issue the D NET,TRL,TRLE=*trlename* command. Locate message IST2263I in the display output. Ensure that the displayed PORTNUM value does not exceed the number of physical ports available with OSA-Express3 or later. For instance, if OSA-Express3 or later supports 2 physical ports, the only valid PORTNUM values are 0 and 1.

IQDIO CULA UNAVAILABLE

Contact the IBM Software Support Center.

NO STORAGE TO ALLOCATE

A storage shortage unrelated to this device activation has occurred. Attempt to determine the reason for the storage shortage.

IST1632I

NOT ADDED TO VIRTUAL NET

Use the network virtualization function to perform the following steps:

1. Create a virtual network.
2. Add this z/OS image as a host to that virtual network.
3. Specify the OSA-Express OSX interface corresponding to the TRLE in this message as a network interface.
4. Ensure that the VLANID parameter for the TCP/IP interface that is being activated is the VLAN ID of the virtual network that you created.

OPEN FOR DEVICE FAILED

Contact the IBM Software Support Center.

QDIO CULA UNAVAILABLE

Contact the IBM Software Support Center.

QDIO DEVICE NOT FOUND

Ensure that the subchannel address indicated has been defined to MVS.

QDIO DEVICE PATH INVALID

Ensure that the subchannels on the TRLE for an OSA-Express or HiperSockets adapter have been correctly defined. For an OSA-Express device, the subchannels should be type OSD, OSX, or OSM. For a HiperSockets device, the subchannels should be type IQD. Also ensure that the failing *cua* has not been redefined since the device was last activated on this system.

QDIO DEVICE TYPE NOT OSD

The subchannel is not connected to an OSA-Express adapter that is configured in QDIO mode. Ensure that the READ, WRITE, and DATAPATH subchannels that are associated with the TRLE are defined as type OSD.

QDIO DEVICE TYPE NOT OSM

The subchannel is not connected to the intranode management network. Ensure that the CHPID that is defined has an OSM channel type of OSM.

QDIO DEVICE TYPE NOT OSX

An OSX INTERFACE is being activated by TCP/IP, but the subchannel address is not connected to the intraensemble data network. If the OSXCHPID parameter is defined on the INTERFACE, ensure that the CHPID that is defined has a channel type of OSX. If the OSXPORTNAME parameter is defined on the INTERFACE statement, ensure that the subchannel addresses on the TRLE that match the PORTNAME are of type OSX.

QDIO INVALID SUBCHANNEL

Contact the IBM Software Support Center.

QDIO PNET SERVICE FAILED

Contact the IBM Software Support Center.

QDIO UCBINFO UNAVAILABLE

Ensure that the specified subchannel address was defined to MVS with a type that matches the QDIO TRLE that contains this subchannel. For example, if the subchannel is to an OSA adapter, ensure that the subchannel type is OSD, OSX, or OSM.

Routing code: 2

Descriptor code: 5

IST1632I VPACING = *value*

Explanation: This message is issued in response to a DISPLAY ID command for an application program.

value is the VPACING value coded on the APPL definition statement.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1633I ASRCVLM = *asrcvlm*

Explanation: This message is issued in response to a DISPLAY ID command for an application program. *asrcvlm* is the ASRCVLM value coded on the APPL definition statement.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1634I DATA SPACE USAGE: CURRENT = *dscurrent* MAXIMUM = *dsmax*

Explanation: This message is issued in response to a DISPLAY ID command for an application program.

dscurrent is the number of bytes currently being used in the application's data space. If multiple ACBs are opened in the address space, *dscurrent* represents the total usage for all ACBs.

dsmax is a maximum number of bytes used by the application's data space.

System action: Processing continues.

Operator response: None.

System programmer response: The value of *dsmax* can be used to tune the ASRCVLM operand on the APPL definition statement.

Routing code: 2

Descriptor code: 5

IST1635I {PLU|SLU} HSCB TYPE: *hscbtype* LOCATED AT ADDRESS X'*hscbaddr*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1636I PACING STAGE(S) AND VALUES:

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1637I PLU--STAGE 1--SLU

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1638I *stage: PRIMARY TO SECONDARY DIRECTION - pacingtype*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1639I **PRIMARY SEND: CURRENT = *pscur* NEXT = *psnext***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1640I **SECONDARY RECEIVE = *srcvcnt***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1641I *stage: SECONDARY TO PRIMARY DIRECTION - pacingtype*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1642I **SECONDARY SEND: CURRENT = *sscur* NEXT = *ssnext***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1643I **PRIMARY RECEIVE = *prvcnt***

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1644I **PLU--STAGE 1-----|-----STAGE 2--SLU**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1645I PLU--STAGE 1-----|-----STAGE 2-----|-----STAGE 3--SLU

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1649I ORIGIN = *origin* TARGET = *target* STATUS = *status*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY TRL command for an active TRL entry using TCP/IP SAMEHOST DLC connections.

A complete description of the message group follows the example.

```
IST075I NAME = nodename, TYPE = type
IST087I TYPE = line_type, CONTROL = line_control, HPDT = hpdtvalue
IST486I STATUS = currentstatus, DESIRED STATE = desiredstate
IST1649I ORIGIN = origin TARGET = target STATUS = status
IST314I END
```

IST075I

nodename is the name of the TRLE that was entered on the DISPLAY TRL command.

Node type is always **TRLE** for this message group.

IST087I

line_type is always **LEASED** for this message group.

line_control is always **TCP** for this message group.

hpdtvalue is always ***NA*** for this message group.

IST486I

currentstatus is the current status of the node. See the z/OS Communications Server: IP and SNA Codes for status information.

desiredstate is the node state that is desired. See the z/OS Communications Server: IP and SNA Codes for status information. If VTAM cannot determine the desired state, *desiredstate* is *****NA*****.

IST1649I

- *origin* is the name of the origin address space.
- *target* is the name of the target address space.
- *status* is the condition or state of the connection that is displayed. Possible values are:

ACTIVE

Connection is active.

INOP

Connection path is inoperative.

RESET

Connection path is not ready.

SLOWDN

Connection path is in slowdown.

ACTPEND

Connection is in the process of activation.

INACTPEND

Connection is in the process of deactivation.

System action: Processing continues.

IST1650I

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1650I **IDX INITIALIZATION FAILED FOR** *trlename* **DEVICE** *device_number* **CODE** *code*

Explanation: This message is the first in a group of messages that VTAM issues when an identification exchange (IDX) device failed to initialize. A complete description of the message group follows.

```
IST1650I     IDX INITIALIZATION FAILED FOR trlename DEVICE device_number CODE code
IST1651I     IDX RECEIVED BY VTAM:
IST1574I     offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
.
.
IST1574I     offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST1652I     IDX SENT BY VTAM:
IST1574I     offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
.
.
IST1574I     offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST314I     END
```

IST1650I

VTAM issues this message while processing an OPENPATH request unit when initializing an identification exchange (IDX) with a device, such as the IBM S/390® Open Systems Adapter or a HiperSockets (iQDIO) adapter.

- The *trlename* value is the name of the device, as defined on the TRLE definition statement in the TRL major node or dynamically created in the ISTTRL major node.
- The *device_number* value is the hexadecimal address of the WRITE or READ subchannel, as defined on the WRITE or READ operand on the TRLE definition statement in the TRL major node.
- The *code* value is a 1-byte hexadecimal value that indicates the reason that the device failed to initialize. The *code* value is one of the following:
 - If the *code* value is less than X'80', it is a code that is generated by the OSA or the HiperSockets adapter. See the OSA IDX failure return codes information in zEnterprise System and System z10 OSA-Express Customer's Guide and Reference for a description of the failures generated by the OSA. Contact the IBM Software Support Center for failures generated by the HiperSocket adapter.
 - If the *code* value is greater than or equal to X'80', then that code is byte 3 of a data link control (DLC) status code that describes the error. Byte 2 of the DLC status code that describes this type of error is X'40'. Together, bytes 2 and 3 of a DLC status code form the completion code. For example, if code is X'80', this error is documented as completion code X'4080'. See the completion code information in z/OS Communications Server: IP and SNA Codes for a description of the completion code.

IST1574I

This message displays the IDX received from (if preceded by message IST1651I) or sent to (if preceded by message IST1652I) the IDX device.

offset is the hexadecimal offset in the IDX.

hexdata_1, *hexdata_2*, *hexdata_3* and *hexdata_4* each display 4 bytes of the IDX in hexadecimal format.

EBCDIC_data displays 16 bytes of the IDX in EBCDIC format. Unprintable characters are represented by periods.

IST1651I

This message is a header for the information displayed in message IST1574I for the IDX received from the IDX device.

IST1652I

This message is a header for the information displayed in message IST1574I for the IDX sent by VTAM to the IDX device.

System action: The IDX connection is not established.

Operator response: Save the system log and print the TRL major node definition for problem determination.

For *code 8B* (insufficient storage), wait a short time and reenter the command. If VTAM continues to issue this message, enter the DISPLAY STORUSE and DISPLAY CSM commands. Save the system log and dump for problem determination.

System programmer response: For *code 82*, verify that the subchannel address in the I/O generation and in the TRL major node are correct.

For *code 8B* (insufficient storage):

- See the z/OS Communications Server: New Function Summary for help to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See the z/OS Communications Server: SNA Operation for information about the DISPLAY STORUSE command, the DISPLAY CSM command, the MODIFY CSM command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps or about analyzing storage using the VIT analysis tool if external trace is active.

For *code 8C*, verify that the TRL major node name is configured correctly in the IDX device.

For an apparent software problem, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no applicable matches are found, report the problem to IBM using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Routing code: 8

Descriptor code: 5

IST1651I **IDX RECEIVED BY VTAM:**

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1650I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1652I **IDX SENT BY VTAM:**

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1650I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST1653I **RWSIO = *rwsio* WCH = *wch* RCH = *rch***

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613L. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1654I **INPACKET = *inpacket* INBYTE = *inbyte* MAX = *max***

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613L. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1655I **OTPACKET** = *otpacket* **OTBYTE** = *otbyte* **MAX** = *max*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is IST1613I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 4

IST1656I **VTAMTOPO** = *value*, **NODE REPORTED** - *status*

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY ID, DISPLAY MODELS, or a MODIFY RESOURCE command for an NCP, XCA, switched, or model major node, or for a LINE or PU defined in one of those major nodes.

This message is the first message in the subgroup. A full description of the message subgroup follows the example.

```
..IST075I      NAME = name, TYPE = type
.:
..IST1656I    VTAMTOPO = value, NODE REPORTED - status
[IST1657I     MAJOR NODE VTAMTOPO = value]
```

IST075I

name is the name of the resource or ID type that is displayed.

See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *type*.

IST1656I

- This message indicates the current VTAMTOPO value for the displayed major or minor node and whether the node is reported to a network management application as part of the SNA local topology.
- *value* is the current reporting designation for *name* in message IST075I and can be one of the following:
 - IGNORE
 - INCLUDE
 - NOSWPUS
 - NOLLINES
 - REPORT
 - NOREPORT.
- *status* specifies whether *name* is reported as part of SNA local topology, and can be either YES or NO.

IST1657I

- This message is issued when *name* in message IST075I is a LINE or PU defined in an NCP, XCA, or switched major node, and *status* in message IST1656I may be determined by the VTAMTOPO value of the major node.
- *value* is the current VTAMTOPO value for the major node and can be one of the following:
 - IGNORE
 - INCLUDE
 - NOSWPUS
 - NOLLINES
 - REPORT
 - NOREPORT.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1657I MAJOR NODE VTAMTOPO = value

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY ID or a MODIFY RESOURCE command for a PU or a LINE defined in an NCP, XCA, or switched major node.

The first message in the group is IST1656I. See the description of that message for a complete description of the subgroup.

Routing code: 8

Descriptor code: 5

IST1658I XID3 NEGOTIATION ERROR - DEVICE devicename - SENSE = code

Explanation: This message is the first of a group of messages that VTAM issues when it detects an XID3 negotiation error during activation of a TCP/IP over CDLC connection. A complete description of the message group follows the example.

```

IST1658I XID3 NEGOTIATION ERROR - DEVICE devicename - SENSE = code
IST1580I XID RECEIVED BY VTAM:
IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
:
:
IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
[IST1583I  BYTE OFFSET OF FIRST BYTE IN ERROR = byteoffset
IST1584I  BIT OFFSET OF FIRST BIT IN ERROR = bitoffset]
[IST1582I  CONTROL VECTOR X'22' ANALYSIS:
IST1583I  BYTE OFFSET OF FIRST BYTE IN ERROR = byteoffset
IST1584I  BIT OFFSET OF FIRST BIT IN ERROR = bitoffset]
[IST1586I  XID SENT BY VTAM:
IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
:
:
IST1574I  offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data]
IST314I  END

```

IST1658I

- An XID3 negotiation error has been detected by VTAM during activation of a TCP/IP over CDLC connection with CDLC device *devicename*.

code is the sense code and indicates the reason for the failure. See the z/OS Communications Server: IP and SNA Codes for a description of *code*.

IST1580I

This message is a header for the information displayed in messages IST1574I and IST1582I through IST1586I for the XID3 received from the CDLC device.

IST1574I

This message displays the XID3 received from (if preceded by message IST1651I) or sent to (if preceded by message IST1652I) the CDLC device.

offset is the hexadecimal offset in the XID3.

hexdata_1, *hexdata_2*, *hexdata_3* and *hexdata_4* each display 4 bytes of the XID3 in hexadecimal format.

EBCDIC_data displays 16 bytes of the XID3 in EBCDIC format. Unprintable characters are represented by periods.

IST1582I

This message is a header for the information displayed in messages IST1583I and IST1584I. Messages IST1582I through IST1584I are present only if CV X'22' is present in the XID3.

IST1583I

byteoffset is the hexadecimal offset of the byte containing the error, as determined by the CDLC device. Offsets are from byte 0 in the XID3.

IST1584I

IST1660A • IST1661I

bitoffset is the hexadecimal offset of the bit containing the error, as determined by the CDLC device. Offsets are from bit 0 in the XID3.

IST1586I

This message is a header for the information displayed in message IST1574I for the XID3 sent by VTAM to the CDLC device. This message is issued only if the host either detected a mismatch between the sent XID3 and the received XID3, or if a CV X'22' is present in the received XID3.

System action: Activation of the TCP/IP over CDLC connection halts. TCP/IP continues.

Operator response: Notify system programmer.

System programmer response: This is normally a configuration problem, probably caused by an incompatibility between the definitions in the PROFILE.TCPIP and the definitions in the NCP generation. The sense code indicates the reason for the failure. Correct the problem and restart the TCP/IP over CDLC connection.

The received XID3 may contain a CV X'22' (See *System Network Architecture Formats, GA27-3136*). Presence of the CV X'22' indicates that the CDLC device rejected the XID3 sent from the host. The CV X'22' contains an offset (from the start of the XID3 sent by VTAM) to the unacceptable field.

Routing code: 8

Descriptor code: 5

IST1660A ENTER PASSWORD FOR *command cmdtype*

Explanation: VTAM issues this message when the DISPLAY APING command is entered with the PASSWORD parameter. The operator must reply with the 1-8 character password for LU6.2 conversation level security.

command is the operator command entered.

cmdtype is the operator command type entered.

System action: VTAM processing continues. Message IST1660A remains outstanding and the DISPLAY APING command does not complete until the operator replies with the password.

Operator response: Reply with the 1-8 character password.

System programmer response: None.

Routing code: 2, 9

Descriptor code: 3

IST1661I *parameter* PARAMETER NOT VALID FROM PROGRAM OPERATOR

Explanation: This message is the first in a group of messages that VTAM issues when a DISPLAY APING command is entered with the PASSWORD parameter from a Program Operator Application (POA). Since there is no capability to suppress the password from displaying via the Program Operator Interface, the command is failed. A complete description of the message group follows.

```
IST1661I parameter PARAMETER NOT VALID FROM PROGRAM OPERATOR
IST1663I command cmdtype COMMAND FAILED - reason
IST314I END
```

IST1661I

parameter is the parameter entered on the command.

IST1663I

- *command* is the operator command entered.
- *cmdtype* is the operator command type entered.
- *reason* is one of the following values:

SECURITY VIOLATION

Processing the DISPLAY APING command as entered would allow the password to be displayed in the Program Operator Application log, which is a security exposure.

System action: VTAM rejects the command.

Operator response: Reenter the command without the PASSWORD parameter or enter the command with the PASSWORD parameter from an MVS console.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1662I *parameter* **PARAMETER VALUE NOT ALLOWED**

Explanation: This message is the first in a group of messages that VTAM issues when a DISPLAY APING command is entered from the MVS console with a value specified on the PASSWORD parameter (i.e. PASSWORD=xxxxx). Since entering the password value on the command causes it to be displayed on the console and in the system log, which is a security exposure, the command is failed. A full explanation of the message group follows.

```
IST1662I parameter PARAMETER VALUE NOT ALLOWED
IST1663I command cmdtype COMMAND FAILED - reason
IST314I END
```

IST1662I

parameter is the parameter entered on the command.

IST1663I

- *command* is the operator command entered.
- *cmdtype* is the operator command type entered.
- *reason* is one of the following values:

SECURITY VIOLATION

Processing the DISPLAY APING command as entered would allow the password to be displayed in the system log, which is a security exposure.

System action: VTAM rejects the command.

Operator response: Reenter the command from an MVS console without a value specified on the PASSWORD parameter.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1663I *command cmdtype* **COMMAND FAILED - reason**

Explanation: VTAM issues this message when a DISPLAY APING command is entered with the PASSWORD parameter and the command is rejected. When it is issued as part of a message group the first message in the group is either IST1661I, IST1662I, or IST1664I. See the explanation of those messages for a complete description. A full description of the message when it is issued alone follows.

- *command* is the operator command entered.
- *cmdtype* is the operator command type entered.
- *reason* is one of the following values:

WTOR FAILURE

An internal VTAM failure occurred attempting to issue WTOR message IST1660A.

System action: VTAM rejects the command.

Operator response: Reenter the command. If the command continues to fail with this reason, save the system log for problem determination and contact the system programmer.

System programmer response: If the command fails repeatedly, contact the IBM Software Support Center.

Routing code: 2

Descriptor code: 5

IST1664I PASSWORD MUST BE 1-8 CHARACTERS

Explanation: This message is the first in a group of messages that VTAM issues when a blank password for DISPLAY APING is entered in reply to message IST1660A. A full explanation of the message group follows.

```
IST1664I PASSWORD MUST BE 1-8 CHARACTERS
IST1663I command cmdtype COMMAND FAILED - reason
IST314I END
```

IST1664I

The DISPLAY APING password entered was blank. It must be 1-8 characters in length.

IST1663I

- *command* is the operator command entered.
- *cmdtype* is the operator command type entered.
- *reason* is one of the following values:

PASSWORD NOT VALID

The blank password entered for DISPLAY APING is not valid. It must be 1-8 characters in length.

System action: VTAM rejects the command.

Operator response: Reenter the command and respond to message IST1660A with a valid password.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1665I CSALIMIT VALUE *value* EXCEEDS SYSTEM CSA LIMIT

Explanation: This message is the first in a group of messages that VTAM issues during start processing or in response to a Modify VTAMOPTS,CSALIMIT or Modify CSALIMIT command when the value specified for CSALIMIT is above the system CSA limit. See the z/OS Communications Server: SNA Resource Definition Reference for more information about the system CSA limit. A complete description of the message follows:

Note: The SYSTEM CSA LIMIT in messages IST1665I and IST1666I refers to the 90% of the total system CSA that VTAM is allowed to use.

```
IST1665I CSALIMIT VALUE value EXCEEDS SYSTEM CSA LIMIT
IST1666I SYSTEM CSA LIMIT WILL BE USED FOR CSALIMIT
IST495I type HAS BEEN SET TO value
```

IST495I

type is CSALIMIT.

value is the value to be used for CSALIMIT, expressed in kilobytes.

IST1665I

value is the value specified (but rejected) for the CSALIMIT.

System action: Processing continues with CSALIMIT set to the system CSA limit.

Operator response: Save the system log for problem determination.

System programmer response: Check the value specified for CSALIMIT in the start list, on the start command, or the Modify command. Use the D NET,BFRUSE command to see what the system CSA limit is.

IST1666I SYSTEM CSA LIMIT WILL BE USED FOR CSALIMIT

Explanation: There are two ways this message can be issued:

This message is part of a group of messages that VTAM issues during start processing or in response to a Modify VTAMOPTS, CSALIMIT or Modify CSALIMIT command when the value specified for CSALIMIT is above the

system CSA limit. The first message in the group is IST1665I. See the explanation of that message for a full description.

This message is the first in a group of messages that VTAM issues in response to a Modify VTAMOPTS,CSALIMIT or Modify CSALIMIT command when the value specified for CSALIMIT is 0. See the z/OS Communications Server: SNA Resource Definition Reference for more information about the system CSA limit. A complete description of the message follows:

Note: The SYSTEM CSA LIMIT in messages IST1665I and IST1666I refers to the 90% of the total system CSA that VTAM is allowed to use.

```
IST1666I SYSTEM CSA LIMIT WILL BE USED FOR CSALIMIT
IST495I type HAS BEEN SET TO value
```

IST495I

type is CSALIMIT.

value is the value to be used for CSALIMIT, expressed in kilobytes.

System action: Processing continues with CSALIMIT set to the system CSA limit.

Operator response: None.

System programmer response: None.

IST1667I SYSTEM CSA LIMIT = *sys_csa_limit*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the group is IST449I. See the explanation of that message for a full description.

IST1668I LUNAME IPADDR..PORT

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ID,IDTYPE=IPADDR command when multiple LUs are associated with the specified TN3270 client IP address. A complete description of the message group follows.

```
IST1668I LUNAME          IPADDR..PORT
IST1670I netid.luname    ipaddr..portno
:
:
IST314I END
```

IST1668I

Message IST1668I is a column header for IST1670I.

IST1670I

Message IST1670I is issued for each LU associated with the specified TN3270 client IP address.

netid.luname is the network-qualified name of the LU.

ipaddr is the specified TN3270 client IP address.

portno is the port number associated with this IP address. The IP address and port number identify the remote TN3270 client.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1669I IPADDR..PORT *ipaddr..portno*

Explanation: This message is part of a group of messages that VTAM issues for one of the following reasons:

- In response to a DISPLAY ID command for a TN3270-connected application, CDRSC, or LU resource.
- In response to a DISPLAY ID,IDTYPE=IPADDR command when only one TN3270 client application, CDRSC, or LU is associated with the specified TN3270 client IP address.
- In response to a DISPLAY TSouser command for a TN3270-connected application, CDRSC, or LU resource.
- When a session setup fails as part of message group IST663I and the resource is a TN3270-connected application, CDRSC, or LU resource.

Note: The saving and displaying of the IP Information for TELNET 3270 Clients is controlled by the IPINFO Start Option. See the z/OS Communications Server: SNA Resource Definition Reference for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1670I *netid.luname ipaddr..portno*

Explanation: This message is issued as part of a group of messages that VTAM issues in response to a DISPLAY ID TYPE=IPADDR command when multiple LUs are associated with the specified TN3270 client IP address.

The first message in the group is IST1668I. See the description of that message for a detailed explanation.

Routing code: 2

Descriptor code: 5

IST1671I *subarea_number* MAPSTO *subarea_number*

Explanation: This message is part of a group that VTAM issues in response to a DISPLAY SAMAP command. See the explanation of message IST1321I for a complete description of the message group.

System action: Processing Continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1672I CURRENT NETWORK NODE SERVER NOT FOUND IN ACTIVE NETSRVR LIST

Explanation: VTAM issues this message as part of a group of messages, or as a stand-alone message. The first message in the group is IST1252I. See the explanation of that message for a complete description of the group. There are two cases when VTAM issues this message alone.

- This message is issued when a NETSRVR list is activated and the active NETSRVR list does not include an explicit entry for the current network node server and also does not include a nameless entry.
- This message is issued when the operator enters a MODIFY VTAMOPTS,NNSPREF=NONE command and the current NNS is the former preferred NNS, the former preferred NNS is not found in the active NETSRVR list, and the active NETSRVR list does not include a nameless entry.

System action: Processing continues.

Operator response: If the current network node server is the one desired, activate a network node server list that includes the current network node server. If no network node server list member includes the current network node server, contact the system programmer to code the current network node server in a network node server list member. Then activate that list.

If the current network node server is not the one desired, deactivate the CP-CP session with the current network node server. The new network node server will be selected from the candidates specified in the active network node server list.

System programmer response: If requested by the operator, code the name of the current network node server in a network node server list member.

Routing code: 2

Descriptor code: 4

IST1673I SWITCH TO PREFERRED NETWORK NODE SERVER IS COMPLETE

Explanation: VTAM issues this message as part of a group of messages issued at an end node when the end node establishes CP-CP sessions with a network node server. The first message in the group is IST1096I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1674I PREFERRED NETWORK NODE SERVER = {nodename|NONE}

Explanation: VTAM issues this message in response to a MODIFY VTAMOPTS,NNSPREF command entered at a VTAM end node. If the command was entered with the name of an adjacent network node, the message identifies that network node as the preferred network node server for this end node. If the command was entered with the value NONE, the message indicates that no preferred network node server is currently defined for this end node.

System action: Processing continues

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST1675I ACTIVE NETSRVR LIST AND PREFERRED NN SERVER ARE MERGED

Explanation: VTAM issues this message in response to either the activation of a network node server list at an end node or the entry at an end node of a MODIFY VTAMOPTS,NNSPREF=nodename command. In the first case, the message is displayed when the network node server list being activated does not contain an explicit entry for the current preferred network node server. In the second case, the message is displayed when the network node being defined as this end node's preferred network node server is not explicitly defined in the currently active network node server list.

In both cases, the message indicates that the preferred network node server and the contents of the network node server list member have been merged into a single list.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST1676I SWITCH TO PREFERRED NETWORK NODE SERVER FAILED - CODE = *code*

Explanation: This message is issued when this end node has attempted but failed to switch CP-CP sessions from its current network node server to its preferred network node server. When it is issued as part of a message group the first message in the group is IST1110I. See the explanation of that message for a complete description of the message group. The following is a full description of the message when it is issued alone.

IST1677I • IST1679I

code is the code associated with the failure:

- 4 There is no active CP-capable link to the preferred server.
- 8 See the sense code in message IST1280I to determine the reason for the failure.
- 12 The switch to the preferred network node server specified by the MODIFY VTAMOPTS,NNSPREF command currently being processed has been terminated because a later MODIFY VTAMOPTS,NNSPREF command has superseded it.
- 16 The switch of CP-CP sessions to the adjacent CP specified on the NNSPREF start option failed because the adjacent CP is actually an end node. CP-CP sessions between adjacent end nodes (EN) are not allowed.

System action: Processing continues.

Operator response: The operator response is determined by the error code:

- 4 Activate a CP-capable link from the EN to the preferred network node server.
- 8 Save the console output and contact system programmer to determine causes for failure of CP-CP session activation attempt.
- 12 No action is necessary.
- 16 Contact the system programmer to help determine the correct value for the NNSPREF start option.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST1677I PREFERRED NETWORK NODE SERVER

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY NETSRVR command. The first message in the group is IST1252I. See the explanation of that message for a complete description.

System action: None.

Operator response: None.

System programmer response: None.

IST1678I FFST NOT AVAILABLE

Explanation: This message will be issued at the end of VTAM initialization if VTAM detects that the FFST product has not been installed and activated. VTAM also issues this message in response to a DISPLAY VTAMOPTS,OPTION=* command.

System action: Processing continues.

Operator response: None.

System programmer response: Although it is not required, VTAM Service highly recommends that the FFST product be installed and activated to speed the resolution of VTAM problems.

IST1679I MEDIUM = *medium*

Explanation: VTAM issues this message as part of a group when a DISPLAY ID command is entered for an external communication adapter (XCA) major node that defines an Enterprise Extender (HPR/IP) connection.

medium is the type of shared access transport facility (SATF) represented by the XCA major node. HPRIP is the only valid value for an Enterprise Extender (HPR/IP) connection.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1680I *type* IP ADDRESS *ip_address*

Explanation: VTAM issues this message in response to the following:

- The first VARY ACTIVATE command for an Enterprise Extender (HPR/IP) link.
- A DISPLAY PATHS command for a PATH statement that represents a connection to an Enterprise Extender node. See the explanation of IST149I for a complete description.
- The TCP/IP stack cannot find a route to a specified static VIPA address, or in response to an XID or LDLC command timeout failure during APPN connection establishment across an Enterprise Extender network. See the explanation of IST1892I for a complete description.
- A DISPLAY ID for the following:
 - An external communication adapter (XCA) major node that defines an Enterprise Extender (HPR/IP) port.
 - A remote node connected through Enterprise Extender (HPR/IP).
- The activation of an Enterprise Extender (HPR/IP) connection fails because the remote IP address is not in the same IP address family as the local IP address. See IST1891I for a complete description of this message group.
- The same VNNAME is defined more than once in the Enterprise Extender XCA major node but the IPADDR value, or HOSTNAME value, or IP address resolved from the HOSTNAME value associated with each VNNAME definition is not unique. See IST1899I for a complete description of this message group.
- A DISPLAY EE command. The DISPLAY EE command issues one of several message groups, depending on the format of the command. These message groups begin with message IST2000I, IST2001I, IST2002I, IST2119I, or IST2145I. See the explanation of these messages for a complete description.
- A DISPLAY EEDIAG command. The DISPLAY EEDIAG command issues one of several message groups, depending on the format of the command. These message groups begin with message IST2065I, IST2066I, IST2119I, IST2130I or IST2145I. See the explanation of those messages for a complete description.
- An Enterprise Extender predefined connection request fails because the local and remote IP addresses are not unique. This message group begins with message IST2123I. See the explanation of IST2123I for a complete description.
- An Enterprise Extender connection request across a connection network fails because an existing connection across a different connection network has the same local and remote IP addresses. This message group begins with message IST2387I. See the explanation of IST2387I for a complete description.
- The activation of an EE XCA major node group that experienced problems associated with the LDLC timer operands. This message is issued as part of a message group headed by IST2188I. See the explanation of that message for a complete description.

type is either LOCAL or REMOTE, indicating which IP address is being displayed.

ip_address is the IP address. An ****NA**** in this field indicates that the value is not available because a line defined in the XCA major node has not been activated, or the name-to-address resolution of the HOSTNAME associated with this PATH definition has not completed or was unsuccessful.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1681I LOCAL SAP = *local_sap* REMOTE SAP = *remote_sap*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY ID for

- An external communication adapter (XCA) major node that defines an Enterprise Extender (HPR/IP) port.
- A remote node connected through Enterprise Extender (HPR/IP).

local_sap is the decimal value of the service access point of the local node.

IST1682I • IST1683I

remote_sap is the decimal value of the service access point of the remote node.

The SAPs, along with the *ip_address* in message IST1680I, uniquely identify a link. An ******NA****** in either the *local_sap* or the *remote_sap* indicates that the value is not available because a line defined in the XCA major node has not been activated.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1682I HPR/IP *call_type* FAILURE: ID = *node_name*

Explanation: This message is the first message in a group of messages that VTAM issues in response to a failed activation request for an Enterprise Extender (HPR/IP) connection.

A complete description of the message group follows the example.

```
IST1682I HPR/IP call_type FAILURE: ID = node_name
IST1684I RETURN CODE = return_value REASON CODE = errno
IST314I  END
```

IST1682I

- *call_type* is:

GETIBMOP

Indicates the failure of the TCP/IP API call *getibmopt()*, which returns the list of TCP/IP jobs that are running.

- *node_name* is the name of an external communication adapter (XCA) major node that defines an HPR/IP (Enterprise Extender) port.

IST1684I

return_value will always be -1, indicating an error.

errno is the Sockets Extended Return Code. See the z/OS Communications Server: IP and SNA Codes for the Sockets Extended Return Code table.

System action: The XCA major node is deactivated.

Operator response: If *return_value* or *errno* indicates that the failure is a result of a temporary condition, reactivate the PU.

System programmer response: If failure persists after reactivation attempts, examine *return_value* and *errno* to determine whether the failure is a result of a system definition error or a network error. If the failure is a result of a system definition error, correct the error. If the failure is a result of a network error, contact the IP network provider.

Routing code: 2

Descriptor code: 5

IST1683I HPR/IP *connection_type* FAILURE: ID = *node_name* STATUS = *status_code*

Explanation: VTAM issues this message in response to a failed activation or inactivation request for an HPR/IP (Enterprise Extender) connection.

- *connection_type* can be one of the following:

CALL Indicates the failure of an activation or inactivation request for an HPR/IP (Enterprise Extender) connection.

ENABLE

Indicates the failure of an activation request for an incoming call over an HPR/IP (Enterprise Extender) connection.

PORT Indicates the failure of an activation or inactivation request for an HPR/IP (Enterprise Extender) connection.

- *node_name* is the name of an external communication adapter (XCA) major node that defines an HPR/IP (Enterprise Extender) port.
- *status_code* is the DLC status code and it indicates the cause of a failure detected by the connection manager. See z/OS Communications Server: IP and SNA Codes for a description of the DLC status codes.

System action: For call failures, the dial or activation of the PU fails. For enable and disable failures, no incoming calls can be accepted from the HPR/IP (Enterprise Extender) connection. For port failures, all lines and PUs for the port will be deactivated.

Operator response: If *status_code* indicates that the failure is a result of a temporary condition, reactivate the PU.

System programmer response: If failure persists after reactivation attempts, examine *status_code* to determine whether the failure is a result of a system definition error or a network error. If the failure is a result of a system definition error, correct the error. If the failure is a result of a network error, contact the IP network provider.

Routing code: 2

Descriptor code: 5

IST1684I **RETURN CODE = *return_value* REASON CODE = *errno***

Explanation: This message is part of several groups of messages. See the explanation of message IST1682I, IST2187I, IST2390I, or IST2391I for complete descriptions of the message groups.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1685I **TCP/IP JOB NAME = *jobname***

Explanation: VTAM issues this message in response to the first VARY ACTIVATE command for an Enterprise Extender (HPR/IP) link or in response to a DISPLAY ID command for an external communication adapter (XCA) major node that defines an Enterprise Extender (HPR/IP) connection.

VTAM also issues this message as part a message group in response to a DISPLAY EE command. This message group begins with message IST2000I. See the explanation of that message for a complete description.

jobname is the 1-8 character TCP/IP job name used to start the TCP/IP address space. When using HPR over IP, VTAM acts as a TCP/IP application. Consequently, VTAM must know the job name of TCP/IP. See the z/OS Communications Server: IP Configuration Guide for information about the TCP/IP job name.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1686I **NO USABLE TCP/IP JOB AVAILABLE FOR HPR/IP**

Explanation: VTAM issues this message in response to a failed activation request for an HPR/IP (Enterprise Extender) connection because no usable TCP/IP job is running.

When using HPR over IP, VTAM acts as a TCP/IP application. Consequently, VTAM must know the job name of TCP/IP.

If the TCPNAME start or modify option was specified, this message is issued when the TCP/IP job specified as a start or modify option is not running, has the wrong version, or has the wrong status.

IST1687I • IST1688I

If the TCPNAME start or modify option was not specified, VTAM issues this message when it was unable to find an executing TCP/IP job with an acceptable version and status.

The job name is specified on the TCPIPJOBNAME statement in the TCP/IP data file. See the z/OS Communications Server: IP Configuration Guide for information about the TCPIPJOBNAME statement.

System action: The HPR/IP (Enterprise Extender) port will not be activated.

Operator response: Check the status of the TCP/IP jobs by issuing the DISPLAY TCPIP command. Issue the MODIFY VTAMOPTS command to change the TCP/IP job name that will be used. Then repeat the activation command for the Enterprise Extender. See the z/OS Communications Server: IP Configuration Guide for more information about the DISPLAY TCPIP command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1687I HPR/IP PORT NOT AVAILABLE

Explanation: VTAM issues this message in response to a failed activation request for an HPR/IP (Enterprise Extender) connection because one or more of the five ports required for HPR/IP (Enterprise Extender) are not available.

The ports reserved for use by HPR/IP (Enterprise Extender) are decimal port numbers:

- 12000 LDLC signal traffic
- 12001 Network-priority data
- 12002 High-priority data
- 12003 Medium-priority data
- 12004 Low-priority data

System action: The HPR/IP (Enterprise Extender) port will not be activated.

Operator response: Issue the TCP/IP command NETSTAT SOCKETS to display the TCP/IP applications and the ports they are using. Stop the TCP/IP applications that are using any of the HPR/IP (Enterprise Extender) ports. Then repeat the activation command for the Enterprise Extender. See the z/OS Communications Server: IP Configuration Guide for more information about the NETSTAT command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1688I EXCESSIVE TIME *elapsed* DETECTED FOR STRUCTURE *structure_name*

Explanation: A coupling facility related process has not completed in *elapsed* minutes.

elapsed is the number of minutes since the process began.

structure_name is the name of the coupling facility structure to which the process is related.

The process may be one of the following:

- Connecting to *structure_name* and repopulating the data in *structure_name*
- Rebuilding *structure_name*
- Performing peer recovery for another VTAM which has failed or disconnected from *structure_name*

If VTAM has been waiting longer than 9999 minutes, *NA* is displayed for the value of *elapsed*. This message may be issued as a single message or as part of the IST1370I message group in response to DISPLAY NET,STATS,TYPE=CFS.

System action: Processing continues.

Operator response: This message is issued as a warning that the process might be stalled. VTAM will wait at least three minutes for the process to complete before issuing this message for the first time. Usually, three minutes is

enough time to complete any of the processes listed above. However, in certain circumstances, these processes might legitimately require longer than three minutes to complete. These circumstances include: performing a rebuild of multiple coupling facility structures, multiple VTAMs connecting to the structure at the same time, multiple VTAMs disconnecting from the structure at the same time, or performing multiple back-to-back rebuilds. Allow extra time in these circumstances for the processes to complete before attempting to determine whether a stall situation has occurred.

Stall situations might occur for the following reasons: a VTAM failed to give a response during a rebuild, a VTAM failed to confirm a user sync point, or a VTAM failed to free a structure lock and other VTAMs are waiting to obtain the lock.

to determine whether there is a stall:

1. Issue `D XCF,STRNAME=structure_name`. Examine the output to determine whether any connectors have outstanding responses or if there is an outstanding user sync point. See *z/OS UNIX System Services Command Reference* for information about the `DISPLAY XCF` command.
2. For documentation purposes, obtain dumps of all VTAMs in the sysplex and also dump the coupling facility structure *structure_name*. If the connection process is attempted again, activate the CFS VIT option before obtaining the dumps.
3. Issue the `VARY NET,CFS,ACTION=DISCONNECT` command on the systems with outstanding responses. After all the systems have disconnected, you may issue `V NET,CFS,ACTION=CONNECT` to have them reconnect to *structure_name*. See *z/OS Communications Server: SNA Operation* for information about the `VARY CFS` command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1689I *command_name* **FAILED - NOT CONNECTED TO** *structure_name*

Explanation: The command, *command_name*, failed for *structure_name* because VTAM is not currently connected to *structure_name*.

command_name is the name of the command that failed.

structure_name is the name of the coupling facility structure specified on *command_name*.

System action: Processing continues.

Operator response: Issue `DISPLAY NET,STATS,TYPE=CFS` to determine the coupling facility structures to which VTAM is connected.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1690I **VARY CFS FAILED - ALREADY CONNECTED TO** *structure_name*

Explanation: The `VARY CFS,ACTION=CONNECT` command failed because there is already an active connection to *structure_name*.

structure_name is the name of the coupling facility structure specified on the `VARY CFS` command.

System action: Processing continues.

Operator response: Issue `DISPLAY NET,STATS,TYPE=CFS` to determine the coupling facility structures to which VTAM is connected.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1691I VARY CFS FAILED - *structure_name* IS NOT AVAILABLE

Explanation: The VARY CFS, ACTION=CONNECT command failed because the *structure_name* is not defined in the CFRM policy or a VTAM start option (i.e. STRGR=NONE) indicated not to connect to the structure.

structure_name is the name of the coupling facility structure specified on the VARY CFS command.

System action: Processing continues.

Operator response: Issue DISPLAY XCF,STR to view a list of structures defined in the active CFRM policy. If *structure_name* is not listed, the structure must be defined before VTAM is able to connect. If *structure_name* is listed, issue DISPLAY NET,VTAMOPTS and find the structure's start option values (STRGR). If the value is NONE, VTAM must be restarted and the start option value must be set to *structure_name*.

See z/OS UNIX System Services Command Reference for more information on the DISPLAY XCF command. See z/OS Communications Server: SNA Operation for more information on the DISPLAY VTAMOPTS command.

System programmer response: If *structure_name* is not defined in the CFRM policy, define the structure in the policy and reactivate it, then restart VTAM. See z/OS MVS Setting Up a Sysplex for information on updating and activating the CFRM policy. If the structure's start option has a value of NONE, change the value in the start list to *structure_name*. See z/OS Communications Server: SNA Resource Definition Reference for more information about VTAM start options.

Routing code: 2

Descriptor code: 5

IST1692I TCB = *taskno* TCP PORT = *portno*

Explanation: VTAM issues this message as part of a group of messages. The first message in the group is IST1342I. See the explanation of that message for complete description.

System action: The command failed. Other processing continues.

Operator response:

- Reenter the MODIFY command with the required network-qualified name specified as *netid.majnode*.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1693I NETWORK ADDRESS RECEIVED FOR *resourcename* IN USE

Explanation: This message is the first in a group of messages. This message is issued during cross domain or cross network LU-to-LU session setup when the network address for the specified *resourcename* could not be defined. VTAM detected another resource using the network address returned by the gateway NCP for *resourcename*. A complete description of the message group follows.

```
IST1693I NETWORK ADDRESS RECEIVED FOR resourcename IN USE
IST1421I nodetype dupresource HAS DUPLICATE ADDRESS
IST314I END
```

IST1693I

resourcename is the name of the specified resource. It is in the form of *net id.name*.

IST1421I

nodetype is the node type of *dupresource*. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *nodetype*.

dupresource is the name of the resource that is currently defined to the address in question. The form of *dupresource* is *netid.name*.

System action: Processing continues.

Operator response: Issue the DISPLAY ID=*dupresource*,E command to display information about the duplicate resource. Save the system log for problem determination.

System programmer response: Check your network address assignments.

See the section about non-VTAM problems in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional problem determination actions.

Routing code: 8

Descriptor code: 5

IST1694I REASON = SEQUENCE NUMBER ERROR

Explanation: This message is part of a message group. The first message in the group is IST520I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1695I PU NAME CP NAME COSNAME SWITCH CONGEST STALL SESS

Explanation: This message is the first of a subgroup of messages issued in response to a DISPLAY RTPS command. The output might have been filtered by other keywords on the DISPLAY RTPS command (such as CPNAME, APPNCOS, SWITCH, CONGEST, STALL, or ID). A complete description of the message subgroup follows the example.

```

IST350I  DISPLAY TYPE = RTPS
IST1695I  PU NAME      CP NAME      COSNAME SWITCH CONGEST STALL SESS
IST1960I  puname      cpname      appncos switch congest stall sess
:
:
[IST1786I HPR ROUTE TEST INITIATED FOR RTP PU]
[IST1793I HPR ROUTE TEST NOT INITIATED - RTP PU NOT IN PROPER STATE]
[IST1794I HPR ROUTE TEST NOT INITIATED - TEST ALREADY IN PROGRESS]
[IST1795I HPR ROUTE TEST NOT INITIATED - INSUFFICIENT STORAGE]
[IST1809I HPR ROUTE TEST NOT INITIATED - INSUFFICIENT PATH INFORMATION]
IST2084I  count OF total MATCHING RTP PIPES DISPLAYED
[IST2248I ALL DIAGNOSTIC COUNTERS CLEARED FOR number RTP PIPES]
IST314I  END

```

IST350I

This message identifies the type of information in the display and is always **RTPS** for this message group.

IST1695I

This message is a header message for the information displayed in message IST1960I.

IST1786I

This message is displayed when TEST=YES is included on the DISPLAY RTPS command and Route Test for the specified RTP was successfully initiated. When the Route Test results become available, they will be displayed using the IST1787I message group.

IST1793I

This message is displayed when TEST=YES is included on the DISPLAY RTPS command and Route Test for the specified RTP could not be initiated because the RTP PU was not in the CONNECTED state or a pathswitch was in progress.

IST1794I

This message is displayed when TEST=YES is included on the DISPLAY RTPS command and Route Test for the specified RTP could not be initiated because a Route Test was already in progress.

IST1795I

This message is displayed when TEST=YES is included on the DISPLAY RTPS command and Route Test for the specified RTP could not be initiated because of insufficient storage.

IST1695I

IST1809I

This message is displayed when TEST=YES is included on the DISPLAY RTPS command and Route Test for the specified RTP could not be initiated because one or more virtual routing nodes exist on the HPR path, and the HPR endpoint issuing this message does not have all the path information necessary to perform a Route Test.

IST1960I

- One IST1960I message will be issued for each RTP that matches the criteria specified on the DISPLAY RTPS command.
- *puname* is the name of the RTP pipe.
- *cpname* is the name of the CP at the other end of the pipe.
- *appncos* is the name of the class of service (CoS) used for the pipe.
- *switch* indicates whether a path switch is in progress. Valid values are:
 - Yes** Indicates that a path switch is in progress.
 - No** Indicates that a path switch is not in progress.
- *congest* indicates whether the pipe is currently congested. Valid values are:
 - Yes** Indicates that the pipe is currently congested.
 - No** Indicates that the pipe is not currently congested.
- *stall* indicates whether data flow is stalled. Valid values are:
 - Yes** Indicates that data flow is stalled.
 - No** Indicates that data flow is normal.
- *sess* indicates the number of active and pending active sessions using the pipe. The display output may show a pipe using the RSETUP (route setup) Class of Service. This pipe will be present between a pair of CPs that support RTP control flows. The value will always be 0 on this pipe.

A maximum of five digits are reserved to display the number of sessions using the pipe. *sess* will display 99999 when the count exceeds 99 998 sessions.

IST2084I

count is the number of matching RTP pipes displayed in the output.

total is the total number of RTP pipes that match the parameters specified on the DISPLAY RTPS command. The total might be larger than the displayed count because the number of RTP pipes displayed is governed by the MAX parameter.

IST2248I

This message is issued if CLEAR=ALL was specified.

The *number* value is the total number of RTP pipes whose diagnostic counters are cleared.

System action: For IST1786I, the system will wait for the HPR Route Test to complete and subsequently issue the IST1787I message group to display the results.

For IST1793I, IST1794I, IST1795I, and IST1809I no further action is taken for the TEST=YES operand specification.

Operator response: For IST1786I, wait for the IST1787I message group.

For IST1793I, wait for the RTP PU to reach the CONNECTED state or for pathswitch completion and reissue the DISPLAY RTPS command.

For IST1794I, wait for the previous route test for this RTP PU to complete and attempt to re-issue the DISPLAY RTPS command.

For IST1795I, enter the DISPLAY BFRUSE command to display storage used by VTAM buffer pools and information about the common service area (CSA). Total VTAM private storage information is also displayed in message IST981I. Issue the DISPLAY STORUSE command to display storage usage for storage pools. Save the system log and request a dump for problem determination.

For IST1809I, if the HPR route test function is supported by the other HPR endpoint, issue an HPR route test command from that node. To do this, you must be able to identify the RTP PU name or TCID used by the remote partner RTP node to represent this same RTP connection. This can be accomplished by using the DISPLAY

ID=*rtp_pu_name* on the local node to obtain the REMOTE TCID for the RTP, which is shown on the end of message IST1476I in the output of this command. Then from the remote partner RTP node (shown on the IST1481I message in the prior display), you can issue DISPLAY RTPS,TEST=YES,TCID=*tcid_value* (where *tcid_value* is the REMOTE TCID obtained from the prior display).

System programmer response: For IST1795I, verify that the operator entered the buffer pool or CSA start options as specified in the start procedures. Increase storage as required. For insufficient storage errors, you can redefine your buffer pool or CSA limits. If the start option cannot be modified using the MODIFY VTAMOPTS command, modify the VTAM start options file (ATCSTRxx) and restart VTAM to use the start option.

- See the z/OS Communications Server: New Function Summary to determine the storage requirements for VTAM.
- See the z/OS Communications Server: SNA Resource Definition Reference for a description of VTAM start options.
- See the z/OS Communications Server: SNA Operation for information about the DISPLAY BFRUSE command, the DISPLAY STORUSE command, and the MODIFY VTAMOPTS command.
- See the z/OS Communications Server: SNA Network Implementation Guide for an explanation and description of buffer pools and for general information on buffer pool specification and allocation.
- See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

Routing code: 2

Descriptor code: 5

IST1696I *puname cpname appncos switch congest sessions*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1697I RTP PACING ALGORITHM = ARB RESPONSIVE MODE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route.

The first message in the group is either IST1476I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1698I PROBE *probname* ATTEMPTED - FFST NOT AVAILABLE

Explanation: VTAM encountered an anomaly and attempted to execute the FFST probe. FFST was not active or available to service the probe request. VTAM handled the request by furnishing the identification of the probe.

probname is the name of the probe.

System action: VTAM processing continues.

Operator response: Save the System Log for problem determination.

System programmer response: Determine why FFST was not active or available, then start FFST. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to determine the anomaly encountered.

Routing code: 2

Descriptor code: 5

IST1700I *attribute* CONFLICTS WITH *rtype rname*

Explanation: VTAM issues this message along with IST489I or IST1272I to indicate what type of definition error has occurred.

attribute indicates the type of definition name that was duplicated. The values that can be displayed in *attribute* are:

- NAME
- NET ADDR
- LUALIAS
- STATIONID (STATIONID refers to the IDBLOCK and IDNUM values.)
- ACBNAME
- CPNAME

rtype indicates the type of resource that has the duplicate *attribute*.

rname indicates the name of the resource that has the duplicate *attribute*.

System action: Processing of *command* in messages IST489I or IST1272I continues. However, VTAM cannot use the resource indicated in message IST1272I.

Operator response: This is a definition error. Save the system log for problem determination.

This message may be issued during session takeover processing. See the section about common APPN problems in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for a description of session takeover problems.

System programmer response: If there are duplicate operands on NCP and VTAM definition statements, you must change one or both of the duplicate statements if you want both resources to be defined at the same time. See the section about common APPN problems in the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about this problem.

This message can also be issued if *rname* for this resource has also been specified as the CUADDR operand value on the LOCAL statement in a local non-SNA major node. VTAM creates an internal resource definition using the name specified on the CUADDR operand when such a channel-attached device is activated. Change the name of the resource identified in this message to a name that does not conflict with that CUADDR value

Routing code: 2

Descriptor code: 5

IST1701I CP NAME LOCATE SIZE

Explanation: VTAM issues this message in response to a DISPLAY TOPO command when LOCSIZE is specified. This message is a header message for information displayed in message IST1702I.

This message group is issued in response to the DISPLAY,TOPO,LIST=NN,LOCSIZE=*locate size* command.

```
IST350I  DISPLAY TYPE = TOPOLOGY
  IST1701I  CP NAME          LOCATE SIZE
  IST1702I  cpname          locate message size
  :
IST314I  END
```

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1702I *cpname locatemessagesize*

Explanation: VTAM issues this message in response to a DISPLAY TOPO command when LOCSIZE is specified.

cpname is the name of the control point (CP) which supports the APPN Locate message size specified on the command and is a network_qualified name in the form *netid.name*.

locatemessagesize is the maximum size of APPN locate messages that *cpname* is able to support. The valid range is 1 - 128 kilobytes.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1703I **DESIRED LOCATE SIZE = *desiredlocatesize* LAST LOCATE SIZE = *lastlocatesize***

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY DIRECTRY or DISPLAY ID command and the resource being displayed is a logical unit. The first message in the subgroup is IST1186I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1704I *sc_option = sc_value* FROM ADJACENT SSCP TABLE

Explanation: This message is displayed as part of several message groups. These message groups begin with message IST611I, IST623I, IST663I, or IST1531I. See the explanations of these messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1705I *sc_option = sc_value* FROM START OPTION

Explanation: This message is displayed as part of several message groups. These message groups begin with message IST611I, IST623I, IST663I, or IST1531I. See the explanations of these messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1706I **PARTNER NAME GENERIC RESOURCE MEMBER ATTRIBUTES**

Explanation: This message is the first in a group of messages that VTAM issues in response to DISPLAY GRAFFIN command. A complete description of the message group follows.

```
IST350I DISPLAY TYPE = GENERIC AFFINITY
IST1706I PARTNER NAME      GENERIC RESOURCE  MEMBER  ATTRIBUTES
IST1707I partner_name     generic_name  appl_name  attributes
.
```

IST314I END

IST1706I

This message is a header message for information displayed in message IST1707I.

IST1707I

IST1706I

- *partner_name* is the network qualified partner LU name.
- *generic_name* is the generic resource name of *appl_name*.
- *appl_name* is the application to which the partner LU has an affinity.
- *attributes* describes the attributes of the session the affinity represents. *attributes* is an eight-byte character string that has the following meaning:
 1. The first character is either **P** to indicate that the generic name has been resolved but the session is pending activation, or a hyphen (-) otherwise.
 2. The second character is either **V** to indicate that the affinity will be cleaned up by VTAM when the session is terminated, or **A** to indicate that the application is responsible for deleting the affinity. Application owned affinities might not be deleted when the session is terminated. An application owned affinity will also be deleted when the application is terminated, if the affinity is not persistent (see the fourth attribute character)
 3. The third character is either **G** to indicate that the session was started using the generic name, or **A** to indicate that the session was started using the application name.
 4. The fourth character is either **6** to indicate the affinity will persist after application termination, or a hyphen (-) otherwise. If the affinity will persist it is the responsibility of the application to delete the affinity. An affinity can persist for one of the following reasons:
 - This is an LU6.1 session.
 - This is an LU6.2 SYNCPT session.
 - The application used the SETLOGON GNAMEADD AFFIN=APPL API command to request ownership of all affinities.
 - The application used the LUAFFIN=APPL parameter on the appropriate RAPI or APPCCMD API command to request ownership of this affinity. LUAFFIN=NOTAPPL will override the other three reasons.
 5. The fifth character is either **M** to indicate that the generic resource application also supports MNPS, or a hyphen (-) otherwise. This affinity will not be deleted in a MNPS recovery scenario unless the recovery does not occur before the PSTIMER expires. See the z/OS Communications Server: SNA Network Implementation Guide for more information about MNPS.
 6. The sixth character indicates who created the affinity. The value will be one of the following:
 - V** to indicate that VTAM resolved the generic name to an application name based on session count or by setting up a session directly to a member of a generic resource group.
 - W** to indicate that the WorkLoad Manager resolved the generic name to an application name based on system workload.
 - X** to indicate that the Generic Resource Resolution Exit resolved the generic name to an application name.
 - S** to indicate that the original resolver of the name is not known. This is most probably caused by a previous search request that did not cause an affinity to be created at the time of resolution. This may also occur due to such things as VTAM losing connectivity to the coupling facility, VTAM being re-IPL'ed, a structure failure of the generic resource coupling facility structure, or following an MNPS recovery.
 7. The seventh character is either **L** to indicate that this affinity will be used for up to 10 minutes after the last session between the session partners ended, or a hyphen (-) otherwise. An affinity might be used for this extended time if either of the following is true:
 - An LU6.2 session is established without SYNCPT or Limited Resource.
 - An LU6.2 session is established, but the application specified LUAFFIN=NOTAPPL on the NIB for the OPNDST or OPNSEC.
 8. The eighth character is not used and is always a hyphen (-).

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1707I *partner_name generic_name appl_name attributes*

Explanation: This message is part of a message group that VTAM issues in response to a DISPLAY GRAFFIN command. The first message in the group is IST1706I. See the explanation of that message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1708I *command* **FAILED - GENERIC RESOURCES NOT AVAILABLE**

Explanation: This message is issued when *command* fails because the generic resource function is not available. This may be due to one of the following:

- VTAM is not in a parallel sysplex.
- The generic resource coupling facility structure is not defined in the active CFRM policy. Issue DISPLAY XCF,STR to display the structures defined in the CFRM policy.
- The STRGR start option was set to NONE. Issue DISPLAY VTAMOPTS to verify the value of the STRGR start option.

System action: Processing continues.

Operator response: If the generic resource function should be active, contact the system programmer.

System programmer response: If the generic resource function is not active, see z/OS Communications Server: SNA Network Implementation Guide for information on how to set up generic resources.

Routing code: 2

Descriptor code: 5

IST1709I *command_name* **FAILED - NOT CONNECTED TO** *structure_name*

Explanation: The command, *command_name*, failed for *structure_name* because VTAM is not currently connected to *structure_name*.

command_name is the name of the command that failed.

structure_name is the name of the coupling facility structure specified on *command_name*.

System action: Processing continues. If *command_name* is MODIFY GR then generic resource data local to this host might have been deleted.

Operator response: Issue DISPLAY NET,STATS,TYPE=CFS to determine the coupling facility structures to which VTAM is connected.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1710I **RSCV FROM PLU SAVED AT SESSION ACTIVATION**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID=sid,PATHINFO=YES command when the session has RSCV information for the PLU. See the explanation of message IST879I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1711I RSCV TOWARDS SLU SAVED AT SESSION ACTIVATION

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID=sid,PATHINFO=YES command when the session has RSCV information for the SLU. See the explanation of message IST879I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1713I RTP RSCV IN THE DIRECTION OF THE *session_partner*

Explanation: This message is displayed in response to a DISPLAY SESSIONS,SID=sid,PATHINFO=YES command for an HPR session. It displays the RSCV for the RTP pipe. See the explanation of message IST879I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1714I NO PATH INFORMATION EXISTS

Explanation: This message is displayed in response to a DISPLAY SESSIONS,SID=sid,PATHINFO=YES command but no path information exists to be displayed. See the explanation of message IST879I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1715I MPCLEVEL = *mpc_level* MPCUSAGE = *mpc_usage*

Explanation: This message is part of several message groups that VTAM issues in response to DISPLAY ID or DISPLAY TRL commands.

mpc_level indicates the level of MPC connection, and can be one of the following:

- HPDT indicates that the connection is capable of performing channel I/O directly to or from communications storage manager (CSM) buffers.
- NOHPDT indicates that the connection is not capable of performing channel I/O directly to or from CSM buffers.
- QDIO (Queued Direct I/O) indicates that the connection performs channel I/O operations using direct I/O instead of CCW channel operations. An MPCLEVEL of QDIO implies that the connection is also HPDT capable, and can perform the direct I/O to or from CSM buffers.

mpc_usage indicates whether the MPC connection can be used exclusively by only one upper-layer protocol (ULP), or shared by multiple ULPs. It can be one of the following:

- If *mpclevel* is QDIO or HPDT, *mpc_usage* is:
 - SHARE indicates that the connection can be shared by multiple ULPs.
 - EXCLUSIVE indicates that the connection can only be used by the first ULP that requests usage of the MPC connection.
- If *mpclevel* is NOHPDT, *mpc_usage* is *****NA*****.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1716I PORTNAME = *port_name* LINKNUM = *link_num* OSA CODE LEVEL = *code_level*

Explanation: This message is part of several message groups that VTAM issues in response to DISPLAY ID or DISPLAY TRL commands. This message will appear if the TRLE being displayed represents an IBM OSA-Express Adapter, or an IBM Open Systems Adapter used for native access to an ATM network.

When the TRLE represents an OSA device:

- *port_name* is the port name to be assigned to the port on the IBM Open Systems Adapter. Each IBM Open Systems Adapter has one *port_name* that is represented by one TRLE.
- *link_num* indicates the relative adapter number of the OSA-Express Adapter port represented by this TRLE. For an IBM Open Systems Adapter used for native access to an ATM network, *link_num* will be N/A.
- *code_level* indicates the OSA processor code level of the OSA-Express. For some versions of OSA-Express, *code_level* will be *NA*.

When the TRLE represents the IQDIO device IUTIQDIO:

- *port_name* is a reserved name of IUTIQDxx where xx = the hexadecimal IQD CHPID in use.
- *link_num* is not applicable and will be displayed as 0.
- *code_level* will be *NA*.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

System action: Processing continues.

Operator response: None.

System programmer response: If the *code_level* value is *NA*, contact your hardware support personnel for code level information.

Routing code: 8

Descriptor code: 5

IST1717I ULPID = *ulp_id* ULP INTERFACE = *ulp_interface*

Explanation: This message is issued in these different situations:

- As part of several message groups that VTAM issues in response to DISPLAY ID or DISPLAY TRL commands.
- As the first message in a message group that is issued when an IBM 10 GbE RoCE Express interface or internal shared memory (ISM) interface becomes inoperative.
- As part of a message group that VTAM issues when it detects the failure of a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link.
- As part of a message group that VTAM issues when it detects the failure of a Shared Memory Communications - Direct Memory Access (SMC-D) link.
- As part of a message group that VTAM issues when an overdue adapter interrupt is detected (AIMON support) for a QDIO or an iQDIO interface.

When this message is issued in response to a DISPLAY command, this message is displayed for all TRLEs that are currently being used by at least one Upper-layer Protocol (ULP). A separate message IST1717I will be displayed for each ULP using this TRLE.

- For a dynamic TCP TRLE, or an exclusively owned TRLE, only one message with ULPID is issued, because there can only be one ULP using each of these TRLEs.
 - For an OSA-Express Adapter, one message with ULPID is issued for each Datapath channel address in use by a ULP.
 - For other TRLEs, more than one message with ULPID might be issued, depending on how many upper-layer protocols are using the TRLE.
- When this message is issued in response to a 10 GbE RoCE Express interface or ISM interface becoming inoperative, it is the first message in this message group:

IST1717I

IST1717I ULPID = *ulp_id* ULP INTERFACE = *ulp_interface*
IST1578I *inoptype* INOP DETECTED FOR *trlename* BY *modname* CODE = *code*

When this message is issued in response to an SMC-R link failure, this message is displayed to identify the TCP/IP stack associated with the failing SMC-R link. See message "IST2406I" on page 1033 for an explanation of the message group.

| When this message is issued in response to an SMC-D link failure, this message is displayed to identify the TCP/IP
| stack associated with the failing SMC-D link. See message "IST2421I" on page 1045 for an explanation of the message
| group.

| When this message is issued for a QDIO or an iQDIO link which is missing an adapter interrupt (detected by
| AIMON support), this message is displayed to identify the TCP/IP stack associated with the missing interrupt. See
| message IST2419I for an explanation of the message group.

IST1717I

This message provides ULP information.

ulp_id

| Specifies the name of a z/OS Communications Server ULP that is using the TRLE, the SMC-R link, the SMC-D
| link, one of the datapath channels of an OSA-Express TRLE, or one of the iQDIO datapath devices.

- For TCP/IP ULPs, the *ulp_id* is the job name.
- For ANNC ULPs, the *ulp_id* is the SNA PU name.
- For ATM or EE ULPs, the *ulp_id* is the XCA major node name.

ulp_interface

| Specifies the name of either the interface or the device that is using the TRLE, the SMC-R link, the SMC-D link,
| or one of the datapath channels of an OSA-Express or iQDIO TRLE.

- For TRLEs with MPCLEVEL=QDIO, *ulp_interface* is the name of the interface dedicated to this datapath channel address of the OSA-Express TRLE.
- For TRLEs with CONTROL=ROCE, *ulp_interface* is the name of the interface dedicated to the 10 GbE RoCE Express TRLE.
- For TRLEs with CONTROL=ISM, *ulp_interface* is the name of the interface dedicated to the ISM TRLE.
- For all other TRLEs, *ulp_interface* is *NA*.
- For SMC-R links, *ulp_interface* is the name of the 10 GbE RoCE Express interface that was being used by the failing link.
- For SMC-D links, *ulp_interface* is the name of the ISM interface that was being used by the failing link.
- For iQDIO links, *ulp_interface* is the name of the iQDIO interface for which a missing interrupt was detected (AIMON support).
- For QDIO links, *ulp_interface* is the name of the QDIO interface for which a missing interrupt was detected (AIMON support).

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

IST1578I

| This message provides information about the inoperative condition for a 10 GbE RoCE Express interface or ISM
| interface for the TCP/IP stack represented by *ulp_id*.

inoptype

Specifies the type of inoperative condition. In this message group, the only possible value is DEVICE.

trlename

| Specifies the name of the system-generated TRLE that represents the 10 GbE RoCE Express interface or ISM
| interface.

modname

Specifies the name of the module that detected the inoperative condition.

code

Identifies the point in *modname* where the inoperative condition was detected.

See message IST1578I for more details.

System action:

- When this message is issued in response to a DISPLAY command, processing continues.
- | • When this message is issued in response to a 10 GbE RoCE Express interface or ISM interface becoming inoperative, the interface is deactivated. The TCP/IP stack might attempt recovery of the interface.
- | • When this message is issued in response to an SMC-R link failure, processing continues. See message "IST2406I" on page 1033 for more details.
- | • When this message is issued in response to an SMC-D link failure, processing continues. See message "IST2421I" on page 1045 for more details.
- | • When this message is issued in response to a missing QDIO or iQDIO interrupt (AIMON support), a virtual interrupt is generated and processing continues. See message IST2419I for more details.

Operator response:

- When this message is issued in response to a DISPLAY command, none.
- | • When this message is issued in response to a 10 GbE RoCE Express interface or ISM interface becoming inoperative, no further action is required. If recovery fails, save the system log for problem determination.
- | • When this message is issued in response to an SMC-R link or SMC-D link failure, contact the system programmer.
- | • When this message is issued in response to a missing QDIO or iQDIO interrupt (AIMON support), contact the system programmer.

System programmer response:

- When this message is issued in response to a DISPLAY command, none.
- | • When this message is issued in response to a 10 GbE RoCE Express interface or ISM interface becoming inoperative, use *code* to determine the correct course of action. See message "IST1578I" on page 665 for more details.
- | • When this message is issued in response to an SMC-R link failure, use information in the IST2406I message group to determine the correct course of action. See message "IST2406I" on page 1033 for more details.
- | • When this message is issued in response to an SMC-D link failure, use information in the IST2421I message group to determine the correct course of action. See message "IST2421I" on page 1045 for more details.
- | • When this message is issued in response to a missing QDIO or iQDIO interrupt (AIMON support), use information in the IST2419I message group to determine the correct course of action. See message IST2419I for more details.

Routing code: 2

Descriptor code: 5

IST1718I DATAPATH DEVICE *device_addr* NOT FOUND FOR TRLE *trle*

Explanation: The subchannel address specified on the DEVICE keyword on the MODIFY TRACE command is not coded on the DATAPATH keyword on the TRLE statement.

device_addr is the value coded on the DEVICE keyword on the MODIFY TRACE command.

trle is the name of the TRLE coded on the ID keyword on the MODIFY TRACE command.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

System action: The command will fail.

Operator response: Enter a valid subchannel address on the DEVICE keyword on the MODIFY TRACE command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1719I PCIREALO = *pcirealo* PCIREAL = *pcireal*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources or for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST1230I for a complete description of the MPC resources message group. See message IST2366I for a complete description of the 10 GbE RoCE Express resources message group.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2

Descriptor code: 5

IST1720I PCIVIRTO = *pcivirto* PCIVIRT = *pcivirt*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2

Descriptor code: 5

IST1721I SBALCNTO = *sbalcnto* SBALCNT = *sbalcnt*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1722I PACKCNTO = *packcnto* PACKCNT = *packcnt*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2

Descriptor code: 5

IST1723I SIGACNTO = *sigacnto* SIGACNT = *sigacnt*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2

Descriptor code: 5

IST1724I I/O TRACE = *iotrc* TRACE LENGTH = *length*

Explanation: This message is part of several message groups that VTAM issues in response to DISPLAY ID or DISPLAY TRL commands. This message will appear for a TRLE representing an OSA-Express Adapter or an IBM 10 GbE RoCE Express feature.

iotrc specifies whether I/O Trace is active for this device (**ON** or **OFF**).

length specifies the number of bytes being recorded for I/O Trace for this device.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1725E STORAGE SHORTAGE IN *structure_name* - UNABLE TO RECONNECT

Explanation: This message is issued when VTAM is attempting to reconnect to a coupling facility structure. A storage shortage in the structure was detected before attempting to reconnect. A storage shortage is defined as one or more of the following:

- 80% or greater of list entries are being used.
- 80% or greater of list elements are being used.

Before VTAM will connect to the structure, the storage problem must be corrected.

structure_name is the name of the MVS coupling facility structure.

System action: VTAM will remain disconnected from the coupling facility structure until the storage usage drops below 80%.

Operator response: Issue D NET,STATS,TYPE=CFS,STRNAME=*structure_name* to display the storage utilization of *structure_name*.

If either entry or element utilization is greater than 80%, start a rebuild using the SETXCF START,REBUILD command. This will cause VTAM to adjust the number of entries and elements in use. See the z/OS Communications Server: SNA Network Implementation Guide for more information about the SETXCF command.

If the rebuild does not relieve the storage shortage, the size of the structure will need to be increased. See the z/OS Communications Server: SNA Network Implementation Guide for information about how to adjust the size in the case of a storage shortage.

To force VTAM to reconnect to the structure regardless of storage utilization, issue the V NET,CFS,ACTION=CONNECT command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1726I CONNECTION IS PENDING DUE TO STORAGE SHORTAGE

Explanation: This message is part of a message group VTAM issues to indicate that the connection to the coupling facility structure is defined and active in the coupling facility policy but VTAM currently does not have a connection. The first message in the group is IST1367I. See the explanation of that message for additional information.

IST1727I • IST1729I

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1727I **DNS NAME:** *dns_name*

Explanation: VTAM issues this message as part of several different message groups. It is optional and is issued for one of the following reasons:

- In response to a DISPLAY ID command for a TN3270-connected application, CDRSC, or LU resource.
- In response to a DISPLAY ID,IDTYPE=IPADDR command when only one TN3270 client application, CDRSC, or LU is associated with the specified TN3270 client IP address.
- In response to a DISPLAY TSouser command for a TN3270-connected application, CDRSC, or LU resource.
- When a session setup fails as part of message group IST663I and the resource is a TN3270-connected application, CDRSC, or LU resource.

If the message ends with the (..) characters, it means that the DNS name was truncated as passed to z/OS Communications Server from the TN3270 Server. See the z/OS Communications Server: IP Configuration Guide for information about enabling messages.

Note: The saving and displaying of the IP Information for TELNET 3270 Clients is controlled by the IPINFO Start Option. See the z/OS Communications Server: SNA Resource Definition Reference for more information.
dns_name is the DNS NAME of the TN3270 client.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1728I *dns_name_continued*

Explanation: This message is a continuation of message IST1727I. It is issued as many times as necessary to display the entire DNS name. If the message ends with the (..) characters, it means that the DNS name was truncated as passed to z/OS Communications Server from the TN3270 Server.

dns_name_continued is the continuation of the DNS NAME displayed in message IST1727I.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1729I **OPTION** *traceopt* **MUST BE CODED WHEN SUBTRACE** *subtrace* **IS SPECIFIED**

Explanation: This message is issued in response to a MODIFY TRACE,TYPE=VTAM command or when TRACE,TYPE=VTAM is specified on the TRACE start option and SUBTRACE is specified without a valid OPTION parameter on the command.

System action: VTAM rejects the request. For start VTAM command, VTAM will issue message IST1311A to prompt you for the correct value of the TRACE or NOTRACE option.

Operator response: Enter the command again with the trace option specified on this message to activate or deactivate the SUBTRACE type.

System programmer response: If these start options are coded in an ATCSTRxx file, correct the trace option value

for the TRACE or NOTRACE in that file. For more information about VTAM start options, see the z/OS Communications Server: SNA Resource Definition Reference.

Routing code: 2

Descriptor code: 5

IST1730I **SUBTRACE** *subtrace* **ACTIVE UNDER TRACE OPTION** *traceopt*

Explanation: This message displays the current active subtrace option and its associated trace option. VTAM issues this message as part of a group of messages. The first message in the group is IST315I. See the explanation of that message for a complete description.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1731I *name* **ACTIVATION FAILED - HPR=RTP REQUIRED WITH HPR/IP**

Explanation: VTAM issues this message in response to a VARY ACT command on an XCA major node when VTAM is not configured for HPR RTP support and the port statement defines the shared access transport facility (SATF) as MEDIUM=HPRIP (Enterprise Extender).

name is the name of the major node for which the activation failed.

System action: Processing continues.

Operator response: Reconfigure VTAM to support HPR=RTP, or reconfigure the XCA port to specify an SATF which does not require HPR=RTP. The VARY ACT command may then be entered again.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1732I **VTAM INITIATED SLOWDOWN TERMINATION FOR DEVICE** *device*

Explanation: This message indicates the end of a slowdown condition for a channel-attached SNA device. The time interval identified by the second subparameter of the SLOWVAL start option has expired, causing VTAM to initiate I/O to *device* to force it out of a slowdown condition. This message will be preceded by IST1733I, which indicates that the device has been in a slowdown condition longer than the time period identified by the first subparameter of the SLOWVAL start option.

device is the name of the device.

System action: VTAM has initiated I/O to *device* to force it out of slowdown mode. VTAM will again send traffic to *device*.

Operator response: None.

System programmer response: If VTAM is required to initiate termination of the slowdown condition, then either 1) the signal from device to VTAM to exit slowdown has been lost or 2) the device is incapable of obtaining sufficient buffers to exit slowdown. For the first situation, the VTAM action will be sufficient to restart traffic to the device, although the lost signal should be investigated as a potential device or network problem. For the second condition, VTAM restarting traffic to the device will only force it back into a slowdown condition if buffers are still not available. Be sure the SLOWVAL start option values are sufficiently high.

Routing code: 2

Descriptor code: 4

IST1733I *device* **DEVICE HAS BEEN IN SLOWDOWN MORE THAN** *time* **SECONDS**

Explanation: The threshold identified by the first subparameter of the SLOWVAL start option has been exceeded. This means that the device is not accepting data from VTAM. This message can also be received for local SNA devices, (for example, 3174 controllers).

device is the name of the device that has been in slowdown mode.

time is value of the first subparameter of the SLOWVAL start option.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1734I **DEVICE** *device* **INITIATED SLOWDOWN TERMINATION**

Explanation: This message indicates the end of a slowdown condition for a channel-attached SNA device. The device sent VTAM a signal indicating that it should be removed from the slowdown condition. This message will be preceded by IST1733I, which indicates that the device has been in a slowdown condition longer than the time period identified by the first subparameter of the SLOWVAL start option.

device is the name of the device.

System action: VTAM resumes normal I/O.

Operator response: None.

System programmer response: Devices may enter and exit slowdown many times, based on the availability of buffers. This is a normal condition. The fact that IST1733I and this message are issued, however may indicate that either the first subparameter of the SLOWVAL start option is too low, or that the device is having problems obtaining sufficient buffers to allow it to exit slowdown in a timely manner.

Routing code: 2

Descriptor code: 4

IST1736I **PU NAME**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=*orig_cp_name*,DEST=*dest_cp_name* or DISPLAY TOPO,ORIG=*orig_cp_name*,TGN=*tgn* command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1737I *puname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=*orig_cp_name*,DEST=*dest_cp_name* or DISPLAY TOPO,ORIG=*orig_cp_name*,TGN=*tgn* command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1738I **ANR LABEL TP ER NUMBER**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID =*nodename* where *nodename* is an RTP PU. See IST1476I for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1739I *anrlabel tp ernumber*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID =*nodename* where *nodename* is an RTP PU. See IST1476I for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1740I **IBMTGPS IN *library* IS EMPTY - PROCESSING CONTINUES**

Explanation: VTAM issues this message when the library member IBMTGPS was empty.

library is the data definition name (DDNAME) specified for the definition library.

System action: VTAM initialization continues. However, the IBM-supplied classes of service may not be available for TGP selection.

Operator response: If the TG's classes of service have been defined under a different member name and are activated by configuration list processing or by a VARY ACT command, then no action is necessary.

System programmer response: Verify that IBMTGPS was intentionally left empty.

Routing code: 2

Descriptor code: 5

IST1743I **IBMTGPS IN *library* NOT FOUND - PROCESSING CONTINUES**

Explanation: VTAM issues this message when the library member IBMTGPS was not found.

library is the data definition name (DDNAME) specified for the definition library.

System action: VTAM initialization continues. However, the IBM-supplied classes of service may not be available for TGP selection.

Operator response: If the TG's classes of service have been defined under a different member name and are activated by configuration list processing or by a VARY ACT command, then no action is necessary.

System programmer response: Verify that IBMTGPS was intentionally not found.

Routing code: 2

Descriptor code: 5

IST1744I **IBMTGPS IN *library* IN ERROR - PROCESSING CONTINUES**

Explanation: VTAM issues this message when the library member IBMTGPS contained a syntax error.

library is the data definition name (DDNAME) specified for the definition library.

System action: VTAM initialization continues. However, the IBM-supplied classes of service may not be available for TGP selection.

Operator response: If the TG's classes of service have been defined under a different member name and are activated by configuration list processing or by a VARY ACT command, then no action is necessary.

System programmer response: See the z/OS Communications Server: IP Configuration Guide for more information.

IST1745I • IST1747I

Routing code: 2

Descriptor code: 5

IST1745I *rscname* REJECTED BECAUSE VARYWLD = *option*

Explanation: The *rscname* value for the ID keyword of a VARY command included a wildcard specification (* or ?). Wildcards are not permitted on this VARY command because the current value of the VARYWLD start option is *option*. Potential values for *option* are:

NOWILD

Wildcards are not permitted in any VARY commands.

OPERONLY

Wildcards are permitted in VARY commands from the network operator, but not from Program Operator Applications.

POAONLY

Wildcards are permitted in VARY commands from Program Operator Applications, but not from the network operator.

System action: Processing continues.

Operator response: Use the MODIFY VTAMOPTS command to change the VARYWLD value and reissue the VARY command.

System programmer response: If wildcards should be permitted from either the network operator or Program Operator Applications, update the value of the VARYWLD start option in the VTAM start list (ATCSTRxx) to VARYWLD=FULLWILD.

Routing code: 5

Descriptor code: 2

IST1746I *command* COMMAND PROCESSING COMPLETE

Explanation: VTAM issues this message when the command processing to a Program Operator Application (POA) is complete. This message does not appear on the system operator console. See the z/OS Communications Server: SNA Programming for more information.

command is the command entered through the program operator interface. The valid *commands* are VARY, MODIFY and DISPLAY.

This is the last message issued in response to the *command*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1747I SUMMARY OF STATE INFORMATION:

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY LINES or DISPLAY CLSTRS command. This message is a header for message IST1748I.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1748I *state1 = count1 [state2 = count2 [state3 = count3]]*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CLSTRS or DISPLAY LINES command.

If there are more than 3 states, the message is repeated as many times as necessary to display all states.

state is a resource status code. See z/OS Communications Server: IP and SNA Codes for potential values.

count is the number of resources in the *state* displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1749I *rscname REJECTED - VARYWLD = NO FOR APPL applname*

Explanation: The *rscname* value for the ID keyword of a VARY command issued by Program Operator Application *applname* included a wildcard specification (* or ?). Wildcards are not permitted on VARY commands from *applname* because the application's definition statement specifies VARYWLD=NO.

System action: Processing continues.

Operator response: No action is required unless wildcards are to be permitted in VARY commands from this application.

System programmer response: If wildcards should be permitted, update the value of the VARYWLD keyword on the APPL definition statement for *applname* to VARYWLD=YES.

Routing code: 5

Descriptor code: 2

IST1750I **PCITHRSO = *pcithrso* PCITHRSH = *pcithrsh***

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2

Descriptor code: 5

IST1751I **PCIUNPRO = *pciunpro* PCIUNPRD = *pciunprd***

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources or for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST1230I for a complete description of the MPC resources message group. See message IST2366I for a complete description of the 10 GbE RoCE Express resources message group.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2

Descriptor code: 5

IST1752I RPROCDEO = *rprocdeo* RPROCDEF = *rprocdef*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2**Descriptor code:** 5

IST1753I RREPLDEO = *rrepldeo* RREPLDEF = *rrepldef*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2**Descriptor code:** 5

IST1754I NOREADSO = *noreadso* NOREADS = *noreads*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2**Descriptor code:** 5

IST1755I SBALMAX = *sbalmax* SBALAVG = *sbalavg*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2**Descriptor code:** 5

IST1756I QDPTHMAX = *qdpthmax* QDPTHAVG = *qdpthavg*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

For detailed instructions about setting up an OSA-Express feature, see the zEnterprise System and System z10 OSA-Express Customer's Guide and Reference.

Routing code: 2**Descriptor code:** 5

IST1757I **PRIORITY***x*: *congstate* **PRIORITY***x*: *congstate*

Explanation: This message is part of several message groups that VTAM issues in response to DISPLAY ID or DISPLAY TRL commands. This message will appear for a TRLE representing an OSA-Express Adapter.

x specifies the write priority level.

congstate specifies the congestion state of that priority level. *congstate* will be **CONGESTED** when, at least once in the last congestion reporting window, all 128 writes for the priority level were unavailable. Otherwise *congstate* will be **UNCONGESTED**.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1758I **RSCV TOWARDS DLUR SAVED AT SESSION ACTIVATION**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID=sid,PATHINFO=YES command when the session has RSCV information reported by the DLUR node which acts as the CP(SLU). See the explanation of message IST879I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1759I **RTP RSCV FROM THE DIRECTION OF THE DLUR**

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID=sid,PATHINFO=YES command for an HPR session when the SLU endpoint of the session is at a DLUR node. The PLU endpoint of the session might be this z/OS Communications Server node. The RSCV displayed is the path of the RTP pipe from the perspective of the DLUR node. See the explanation of message IST879I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1760I *trlename* **SUBCHANNEL** *cua* **VARY OFFLINE NOT ALLOWED**

Explanation: VTAM received an MVS VARY OFFLINE command for the subchannel *cua* in the MPC group defined in *trlename*. The command is not allowed because the subchannel *cua* is the last active Read or Write device in this MPC group.

trlename is the name of the TRLE that contains the subchannel.

cua is the subchannel address.

System action: The VARY OFFLINE is ignored by VTAM and the CUA remains in a (system) pending offline state. Processing continues.

Operator response: If the intention is to deactivate the entire MPC group, issue a VARY OFFLINE FORCE command for the CUA, or deactivate the users of the MPC group as follows:

1. Issue VARY INACT command to the related SNA PU.
2. Issue STOP DEVICE command to the related TCP/IP devices.
3. When the MPC group is used by both SNA and TCP/IP issue both VARY INACT and STOP DEVICE.
4. When the MPC group is used by multiple TCP/IP stacks, a STOP DEVICE command must be issued for each TCP/IP stack using the group.
5. When the MPC group is QDIO (OSA-Express) and all devices are stopped, the MPC group will not deactivate until a specified time period (approximately 2 minutes) is exceeded. VARY OFFLINE FORCE will deactivate the MPC (QDIO) group immediately.

IST1761I • IST1763I

System programmer response: See the z/OS Communications Server: IP Configuration Guide for an explanation of how the keyword LASTRW on the TRLE definition statement affects the VTAM processing related to VARY OFFLINE (when associated with the last active read or write device in an MPC group). Careful consideration should be given when deciding how this keyword should be defined for your operating environment.

Routing code: 2

Descriptor code: 5

IST1761I *parameter* PARAMETER EXTRANEIOUS FOR DISPLAY ID COMMAND

Explanation: VTAM issues this message when an extraneous parameter is specified for a DISPLAY ID command.

parameter is the parameter that is not valid for a DISPLAY ID command.

Notes:

1. This message might be issued as the result of the intended verb of the command being specified incorrectly. For example, a DISPLAY NCPSTOR command issued with NCPSTOR misspelled:

```
DISPLAY NET,NCPSTORE,ID=name,ADDR=address
```

will result in this message issued with the text:

```
IST1761I ADDR PARAMETER EXTRANEIOUS FOR DISPLAY ID COMMAND
```

2. The parameter might be valid for other combinations of parameters and resource types.
3. Parameters on the operator commands are not processed in the order they are provided in the command.
4. All positional parameters in a command that occur before the first positional keyword parameter will be labeled Px, starting with P1.

System action: VTAM rejects the command.

Operator response: Reenter the command correctly. See the z/OS Communications Server: SNA Operation for the correct syntax.

System programmer response: None.

Routing code: 8

Descriptor code: 5

IST1762I *line* ACT FAILED, TCPNAME OR IPADDR START OPTION REQUIRED

Explanation: This message is displayed when an Enterprise Extender (HPR/IP) line activation fails because no value was specified in the TCPNAME and IPADDR start options. Without one of these values coded, VTAM cannot determine which TCP/IP stack will be used for Enterprise Extender (HPR/IP) data traffic.

line is the name of the Enterprise Extender (HPR/IP) line that failed.

System action: Enterprise Extender (HPR/IP) line activation failed.

Operator response: Code either TCPNAME or IPADDR as a VTAM start option. Temporarily, you can issue a MODIFY VTAMOPTS command and specify the value of one of these start options.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1763I NO ACTIVE CP-CP SESSION-CAPABLE TGS EXIST

Explanation: VTAM issues this message in response to a DISPLAY CPCP command when there is no active CP-CP session-capable TG connection to any node.

System action: The DISPLAY command fails. Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1764I NO ACTIVE CP-CP SESSION-CAPABLE TG TO *cpname*

Explanation: VTAM issues this message in response to a DISPLAY CPCP command when there is no active CP-CP session capable TG connection to the adjacent node that you specified.

cpname is the network-qualified name of the adjacent node.

System action: The DISPLAY command fails. Processing continues.

Operator response: Verify that the CP name specified in the ID operand is valid. If the CP name entered belongs to a node in the network, there is currently no active CP-CP session-capable connection to this node.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1765I ADJACENT CP WINNER LOSER STATE NODE ANDCB

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY CPCP command or when a CP-CP session cannot be activated. When a CP-CP session cannot be activated, the first message in the group is IST1110I. See the explanation of that message for a complete description of the message group.

When this message is issued in response to a DISPLAY CPCP command, this message is the first message in the group. A complete description of the message group follows the example.

```

IST350I  DISPLAY TYPE = CP-CP SESSION STATUS
IST1765I  ADJACENT CP          WINNER  LOSER  STATE      NODE ANDCB
IST1766I  adjacent_cp        cw_state cl_state state      node address
:
:
[IST1315I DISPLAY TRUNCATED AT MAX = number]
IST1454I  count ADJCP(S) DISPLAYED
IST314I  END

```

IST350I

- This message identifies the type of information in the display and is always CP-CP SESSION STATUS for this message group.

Note: CP-CP sessions see the contention winner and contention loser sessions of the CP-CP session pair.

IST1765I

This message is a header message for the information displayed in message IST1766I.

IST1766I

- One IST1766I will be issued for each adjacent node displayed.
- *adjacent_cp* is the network-qualified CP name of the adjacent control point.
- *cw_state* is the status of the contention winner CP-CP session. Valid values are:

ACT Active

INACT Inactive

PACT Pending active

PINACT

Pending inactive

- *cl_state* is the status of the contention loser CP-CP session. Valid values are:

ACT Active

INACT Inactive

IST1766I • IST1767I

PACT Pending active

PINACT

Pending inactive

- *state* is the state of the CP-CP sessions to the adjacent node being displayed. Valid values are:

UP One or more of the contention winner and contention loser sessions are active or pending-active.

DOWN

Both contention winner and contention loser sessions are coming down but are not completely inactive.

BOTH DOWN

Both contention winner and contention loser sessions are inactive.

- *node* is the APPN node type of the adjacent control point. Valid values are:

EN End node

NN Network node

- *address* is the hexadecimal storage address for the adjacent node control block where the CP-CP session information is saved.

IST1454I

count is the total number of adjacent CPs that support CP-CP sessions.

IST1315I

VTAM issues this message when the number of CP-CP session status to be displayed exceeds the value specified on the MAX operand.

number is the value specified for the MAX operand.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1766I *adjacent_cp cw_state cl_state state node address*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY CPCP command or when a CP-CP session cannot be activated. When a CP-CP session cannot be activated, the first message in the group is IST1110I. See the explanation of that message for a complete description of the message group. When this message is issued in response to a DISPLAY CPCP command, see IST1765I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1767I TRACE INITIATED FOR *number* DYNAMIC APPLICATIONS

Explanation: VTAM issues this message in response to a MODIFY TRACE command with all of the following:

- The ID operand specified as a model application name
- The SCOPE operand specified as ALL
- The TYPE operand specified as IO or BUF

MODIFY TRACE is used to initiate the IO or buffer trace on the model application and all the existing dynamic applications associated with the model. If there is at least one dynamic application associated with the model, this message will be issued to display the number of dynamic applications affected by the command.

number is the number of dynamic applications whose IO trace or buffer trace is initiated by a modify trace command.

System action: Processing Continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1768I TRACE TERMINATED FOR *number* DYNAMIC APPLICATIONS

Explanation: VTAM issues this message in response to a MODIFY NOTRACE command with all of the following:

- The ID operand specified as a model application name
- The SCOPE operand specified as ALL
- The TYPE operand specified as IO or BUF

MODIFY NOTRACE is used to terminate the IO or buffer trace on the model application and all the existing dynamic applications associated with the model. If there is at least one dynamic application associated with the model, this message will be issued to display the number of dynamic applications affected by the command.

number is the number of dynamic applications whose IO trace or buffer trace is terminated by a modify trace command.

System action: Processing Continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1769I LAST TDU RECEIVED - *date time* FROM *adjacent_cp*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name*. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*orig_cp_name*,DEST=*dest_cp_name*,TGN=*tgn*. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=*cp_name*,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=*orig_cp_name*,DEST=*dest_cp_name* or DISPLAY TOPO,ORIG=*orig_cp_name*,TGN=*tgn*. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1773I TNSTAT RECORDS CANNOT BE SENT TO SMF - SMF NOT IN SYSTEM

Explanation: This message is issued when SMF is unavailable at one of the following times:

- During VTAM initialization time and the TNSTAT start option was specified.
- A DISPLAY or MODIFY TNSTAT command has been accepted.
- When tuning statistics summary records have been built.

System action: Processing continues.

Operator response: If you intended to have SMF collect the TNSTAT summary records, then initiate SMF.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1774I

IST1774I OPTIMAL CNN ROUTE NOT CHOSEN - ENTRY/EXIT SUBAREA MISMATCH

Explanation: This message is the first in a group of messages that VTAM issues when an optimal CNN route exists and is not chosen during session activation. A complete description of the message group follows the example.

```
IST1774I OPTIMAL CNN ROUTE NOT CHOSEN - ENTRY/EXIT SUBAREA MISMATCH
IST1775I CNN ENTRY SUBAREA = entry_subarea  CNN EXIT SUBAREA = exit_subarea
IST664I REAL OLU=luname1      REAL DLU=luname2
IST889I SID = session_id
IST314I END
```

IST664I

The origin LU may be either the PLU or SLU. The same applies for the destination LU. If the origin or destination LU name is unknown, VTAM displays *****NA*****.

IST889I

ssid is a unique identifier for the session. If the session ID is unknown, VTAM displays *****NA*****.

IST1774I

- A CNN Route is not optimal if the following conditions are both true:
 - The chosen CNN entry and exit TG subareas do not match.
 - Another active TG to the network node is found that has the same characteristics as the chosen entry TG and the same subarea as the CNN exit TG.
- The reason a nonoptimal route might be chosen is one of the following:
 - The topology of the CNN is not known by the APPN topology and route selection process.
 - The route was calculated by a non-VTAM node that does not support the use of subarea numbers in route calculation.
- The following figure is an example of a configuration:

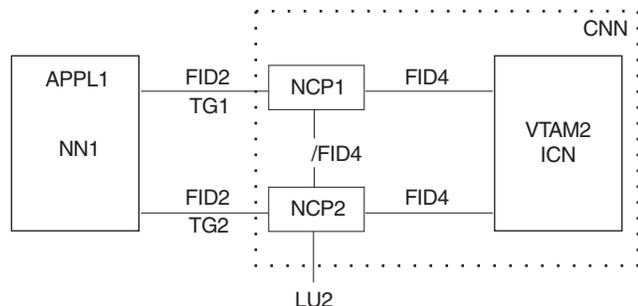


Figure 4. Sample configuration

- In this figure, the CNN is composed of VTAM2, NCP1, and NCP2. The subarea of NCP1 is the CNN entry TG subarea and the subarea of NCP2 is the CNN exit TG subarea. A session is started between APPL1 (PLU) and LU2 (SLU). If the adjacent network node (NN1) chooses to use TG1 instead of TG2, then the IST1774I message group will appear on VTAM2.

Note: The APPN node that picked the CNN entry TG (NN1 in the above configuration) is the NNS of the PLU, which may or may not be a VTAM. In addition, the NNS of the PLU may or may not be directly adjacent to the CNN.

IST1775I

This message follows IST1774I and indicates the CNN entry subarea and the CNN exit subarea.

entry_subarea is the decimal subarea of the node in the CNN where the BIND entered the CNN from the PLU.

exit_subarea is the decimal subarea of the node in the CNN where the BIND exited the CNN to the SLU.

System action: Processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If the APPN node calculating the session route (choosing the CNN entry subarea) was not VTAM, then change the APPN TG characteristics. If the APPN node calculating the session route (choosing the CNN entry subarea) was pre-V2R7 VTAM and the session partner is an LU on the CNN exit subarea (NCP), then change the APPN TG characteristics. See the z/OS Communications Server: SNA Network Implementation Guide for more information about APPN TG characteristics. If the APPN node calculating the session route is, at a minimum, V2R7 VTAM, then request a dump of the VTAM calculating the session route for problem determination. CNNRTMSG=SUPPRESS may be specified as the start option value or modified with the MODIFY VTAMOPTS command to suppress message group IST1774I.

Routing code: 8

Descriptor code: 4

IST1775I CNN ENTRY SUBAREA = *entry_subarea* CNN EXIT SUBAREA = *exit_subarea*

Explanation: VTAM issues this message as part of a message group to indicate that an optimal route through a CNN was not chosen during session establishment. See IST1774I for a complete description of the message group.

Routing code: 8

Descriptor code: 4

IST1776I TOPOLOGY RESOURCES WITH MOST RECENT TDU ACTIVITY

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT command. Possible message groups follow:

- This message group is issued if you allow the FORMAT command to default or you specify FORMAT=SHORT:

```

IST350I DISPLAY TYPE = TDU INFORMATION
IST1776I TOPOLOGY RESOURCES WITH MOST RECENT TDU ACTIVITY
IST2275I TDU INFORMATION SINCE LAST RESET ON date AT time
IST2290I TDUDIAG START OPTION = tdudiag_value
[IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
[IST924I -----]
[IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
[IST2278I SINCE VTAM START ON start_date AT start_time]
[IST2284I FOR THE FOLLOWING NODES AND TGS]
[IST2279I CP NAME          DESTINATION CP    TGN    TIME DETECTED]
[IST2280I cp_name         destination_cp   tgn    date_detected time_detected]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST924I -----]
[IST2359I NO TDU INFORMATION EXISTS]
[IST1779I TDUS RECEIVED BETWEEN first_tdu_date first_tdu_time - last_tdu_date last_tdu_time]
[IST1777I CP NAME          RSN          DESTINATION CP    TGN ACC  REJ]
[IST1778I cp_name         rsn          destination_cp    tgn count1 count2]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST924I -----]
[IST2285I TDUS SENT BETWEEN first_tdu_date first_tdu_time - last_tdu_date last_tdu_time]
[IST2288I CP NAME          RSN          DESTINATION CP    TGN SENT REC]
[IST1778I cp_name         rsn          destination_cp    tgn count1 count2]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST314I END

```

- If you specify FORMAT=LONG on the DISPLAY TOPO command, the display sections for TDUs received and TDUs sent are replaced with the following:

```

[IST924I -----]
[IST2359I NO TDU INFORMATION EXISTS]
[IST1779I TDUS RECEIVED BETWEEN first_tdu_date first_tdu_time - last_tdu_date last_tdu_time]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn          destination_cp    tgn]
[IST2353I ACCEPTED = accepted REJECTED = rejected]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]

```

IST1776I

```
[IST924I -----]
[IST2285I TDUS SENT BETWEEN first_tdu_date first_tdu_time - last_tdu_date last_tdu_time]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn          destination_cp    tgn]
[IST2352I SENT            = sent       RECEIVED = received]
:
:
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST314I END
```

IST350I

This message identifies the type of information in the display and is always TDU INFORMATION for this message group.

IST1776I

This is a header message for the most recent topology database updates (TDUs) and possible control vector corruption.

IST1777I

This is a header message for the information about topology resources in the TDUs that were received most recently that is displayed in the IST1778I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

ACC is the abbreviation for ACCEPTED.

REJ is the abbreviation for REJECTED.

IST1778I

- One IST1778I is issued for each topology resource displayed in a subgroup when the FORMAT=SHORT operand is specified or the default FORMAT value is taken.
- The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the last TDU count reset is smaller than the number requested on the display command, the number of IST1778I messages that are displayed in the subgroup will be smaller than the NUM value that was specified.
- *cp_name* is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.
- *rsn* is the resource sequence number (RSN) expressed in decimal.
- *destination_cp* is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. ***NA*** is displayed if the resource is a node.
- *tgn* is the transmission group number associated with the TG that is displayed. NA is displayed if the resource is a node.
- If the subgroup displays the information about topology resources in the TDUs that were received most recently:
 - *count1* is the total number of inbound TDUs that were accepted for this resource at the time the displayed TDU was received. Inbound TDUs are accepted when they contain new information that causes the resource record to be updated.
 - *count2* is the total number of inbound TDUs that were rejected for this resource at the time the displayed TDU was received. Inbound TDUs are rejected when they contain inconsistent information that causes outbound TDUs to be sent as corrections.
- If the subgroup displays the information about topology resources in the TDUs that were sent most recently:
 - *count1* is the total number of outbound TDUs that were sent for this resource at the time the displayed TDU was sent.
 - *count2* is the total number of inbound TDUs that were received for this resource at the time the displayed TDU was sent.

Tip: A *rsn* value of ***** or TDU counter values of ***** indicates that the values are greater than the available space for those values to be displayed in message IST1778I. You can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

IST1779I

This is a header message for message subgroups that display information about topology resources in the TDUs that were received most recently.

The *date* and *time* values indicate the date and time for the first topology resource and the last topology resource that are displayed in the subgroup. When there are no topology resources on the list, the *first_tdu_date* and *first_tdu_time* values display the date and time of the last reset of TDU information and TDU counters and the *last_tdu_date* and *last_tdu_time* values display the current date and time. See “DATE and TIME formats” on page 6 for information about the date and time values.

The first topology resource that is displayed in the subgroup is from the TDU that was received most recently. The last topology resource that is displayed in the subgroup is from the TDU that was received least recently.

IST2275I

This message displays the date and time when all the TDU information and TDU counters were reset. All TDU information and TDU counters are reset every 24 hours when garbage collection runs, or when a DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES or a DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES command is entered. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2276I

This message indicates that no corruption of topology control vectors was detected since VTAM was started.

IST2277I

This is a header message for a message subgroup that displays information about topology resources that have control vectors in the topology database that have possibly been corrupted.

Because the topology control vectors contain the resource sequence number (RSN) for a node or TG, which determines how the TDU is processed, it is possible that control vector corruption could cause a TDU war. The most probable cause of control vector corruption is a storage overlay.

IST2278I

This message displays the date and time that VTAM was started. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

Unlike the lists of topology resources in the TDUs that were received or sent most recently, the list of topology resources with possible topology control vector corruption is never cleared and includes any possible corruption detection since the start of VTAM.

IST2279I

This is a header message for the information about topology resources with possible topology control vector corruption that is displayed in the IST2280I messages that follow.

IST2280I

One IST2280I message is displayed for each topology resource that has control vectors that have possibly been corrupted.

Information about possible corrupted control vectors is maintained from the start of VTAM and is not deleted when TDU information is reset. All topology resources that have possible corrupted control vectors are displayed in this subgroup, regardless of the reset of TDU information.

The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the start of VTAM is smaller than the number requested on the display command, the number of IST2280I messages that are displayed in the subgroup will be smaller than the NUM value that was specified.

cp_name is the network-qualified CP name of the node, if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

destination_cp is the network-qualified CP name of the TG's destination node, if the resource that is displayed is a TG. If the resource is a node, then *****NA***** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed .

time_detected and *date_detected* are the date and time that possible corruption of control vectors for the topology resource was detected. See “DATE and TIME formats” on page 6 for information about date and time values.

IST1776I

IST2284I

This message indicates that possible topology control vector corruption was detected for a node or TG.

IST2285I

This is a header message for message subgroups that display information about topology resources in the TDUs that were sent most recently.

IST2285I displays the date and time for the first topology resource and the last topology resource that are displayed in the subgroup. When there are no topology resources on the list, the *first_tdu_date* and *first_tdu_time* values display the date and time of the last reset of TDU information and TDU counters. The *last_tdu_date* and *last_tdu_time* display the current date and time. See "DATE and TIME formats" on page 6 for information about date and time values.

The first topology resource that is displayed in the subgroup is from the TDU that was sent most recently. The last topology resource that is displayed in the subgroup is from the TDU sent least recently.

IST2288I

This is a header message for the information about topology resources in the TDUs that were sent most recently that is displayed in the IST1778I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

REC is the abbreviation for RECEIVED.

IST2290I

- *tdudiag_value* is the user-defined TDUDIAG start option value, specified on the START command or in the start list. The *tdudiag_value* value specifies when TDU diagnostic information is included with node or TG control vectors within a TDU. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference. Possible values can be one of the following:

A decimal value in the range of 1-65535

This is a threshold number of times that this network node has updated the resource sequence number (RSN) for a topology resource since the last time that TDU information was reset. When this threshold value is reached for a node or TG, TDU diagnostic information is included in the outbound TDU if the RSN is updated.

ALWAYS

TDU diagnostic information is always appended with the topology control vectors included in a TDU for a topology resource when the RSN for that resource is updated by this network node.

NEVER

TDU diagnostic information is never appended with the topology control vectors included in a TDU.

IST2301I

This message displays the number of topology resources that are displayed in a message subgroup.

num is the total number of topology resources that are displayed in a message subgroup.

total is the total number of topology resource records that currently exist on the displayed list.

IST2352I

This message follows message IST2358I and this message pair displays the information about topology resources in the TDUs that were sent most recently, when the FORMAT=LONG operand is specified.

sent is the total number of TDUs that were sent for this resource at the time that the displayed TDU was sent.

received is the total number of TDUs that were received for this resource at the time that the displayed TDU was sent.

IST2353I

This message follows message IST2358I and this message pair displays the information about topology resources in the TDUs that were received most recently, when the FORMAT=LONG operand is specified.

accepted is the total number of inbound TDUs that were accepted for this resource at the time that the displayed TDU was received. Inbound TDUs are accepted when they contain new information that causes the resource record to be updated.

rejected is the total number of inbound TDUs that were rejected for this resource at the time that the displayed TDU was received. Inbound TDUs are rejected when they contain backlevel information that causes outbound TDUs to be sent as corrections.

IST2357I

This is a header message for the information about topology resources in the TDUs that were received most recently or sent most recently. The information about each topology resource is displayed in a message pair when FORMAT=LONG is specified.

IST2358I

This is the first of two messages that display the information about a topology resource when the FORMAT=LONG operand is specified.

The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 topology resources, or message pairs, and the maximum value is 50. If the number of topology resources on the list since the last TDU count reset is smaller than the number requested on the display command, the number of topology resources that are displayed in the subgroup will be smaller than the NUM value that was specified.

cp_name is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

rsn is the resource sequence number (RSN) expressed in decimal.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource that is displayed is a node, ***NA*** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.

IST2359I

This message is displayed when there are no topology resources that have been received or sent since the TDU information and TDU counters were last reset. Message IST2275I displays the last reset date and time.

System action: Processing continues.

Operator response: If you are displaying TDU information because of performance degradation of the APPN network, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures, and do the following:

1. Repeat the display several times to see if there is a pattern of excessive TDU activity for a topology resource.
2. Enter the DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=ACTIVITY command to see the topology resources with the most frequent TDU activity.
3. If a node or TG is identified with excessive TDU activity, the following displays might provide information about the network nodes that are causing the performance degradation (TDU war):
 - DISPLAY NET,TOPO,LIST=TDUDIAG provides a summary of nodes and TGs with saved TDU diagnostic information.
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ID=cp_name provides details about saved TDU diagnostic information for a node.
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ORIG=orig_CP,DEST=dest_CP,TGN=tgn provides details about saved TDU diagnostic information for a TG.
4. If you can identify the network nodes that are involved in the TDU war, bring down the CP-CP sessions from one of the network nodes involved to all other network nodes in the network or subnetwork.
5. If you cannot stop the TDU war, save the system log and request a dump for problem determination. Contact the system programmer.

Tip: On the DISPLAY TOPO,LIST=TDUINFO command output, A RSN value of ***** or TDU counter values of ***** indicates that the value is greater than the available space for the value to be displayed in message IST1778I or IST2293I. You can use the CLEAR=YES operand specified on either the DISPLAY TOPO,LIST=TDUINFO command or the DISPLAY TOPO,LIST=TDUDIAG summary command to clear the TDU counters, but not the RSN value. Alternately, you can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

System programmer response: Take the following actions:

IST1777I • IST1778I

- If the operator provides output from the DISPLAY TOPO,LIST=TDUINFO or DISPLAY TOPO,LIST=TDUDIAG commands, use the display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to analyze the TDU activity. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: The following is an example of the display output from a DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT,NUM=2,FORMAT=LONG command:

```
IST350I DISPLAY TYPE = TDU INFORMATION
IST1776I TOPOLOGY RESOURCES WITH MOST RECENT TDU ACTIVITY
IST2275I TDU INFORMATION SINCE LAST RESET ON 01/29/10 AT 11:43:05
IST2290I TDUDIAG START OPTION = 1000
IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED
IST924I -----
IST1779I TDUS RECEIVED BETWEEN 01/29/10 11:43:47 - 01/29/10 11:43:55
IST2357I CP NAME          RSN          DESTINATION CP    TGN
IST2358I NETA.SSCP2A      24369982  NETA.SSCP1A       21
IST2353I  ACCEPTED = 1435981    REJECTED = 2537561
IST2358I NETA.SSCP2A      24369980  NETA.SSCP1A       21
IST2353I  ACCEPTED = 1435981    REJECTED = 2537560
IST2301I 2 OF 50 TOPOLOGY RESOURCES DISPLAYED
IST924I -----
IST2285I TDUS SENT BETWEEN 01/29/10 11:43:47 - 01/29/10 11:43:55
IST2357I CP NAME          RSN          DESTINATION CP    TGN
IST2358I NETA.SSCP2A      24369984  NETA.SSCP1A       21
IST2352I  SENT      = 4296828    RECEIVED = 65097324
IST2358I NETA.SSCP2A      24369982  NETA.SSCP1A       21
IST2352I  SENT      = 4296827    RECEIVED = 65097323
IST2301I 2 OF 50 TOPOLOGY RESOURCES DISPLAYED
IST314I END
```

IST1777I CP NAME RSN DESTINATION CP TGN ACC REJ

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1778I cp_name rsn destination_cp tgn count1 count2

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1779I TDUS RECEIVED BETWEEN *first_tdu_date first_tdu_time - last_tdu_date last_tdu_time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT command. See IST1776I for a complete description of the message groups.

Routing code: 2

Descriptor code: 5

IST1780I TOPOLOGY RESOURCES WITH MOST FREQUENT TDU ACTIVITY

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY command.

- For LIST=TDUDIAG, see message IST2274I for a complete description of the message group.
- For LIST=TDUINFO, possible message groups follow:
- This message group is issued if you allow the FORMAT operand to default or you specify FORMAT=SHORT:

```

IST350I DISPLAY TYPE = TDU INFORMATION
IST1780I TOPOLOGY RESOURCES WITH MOST FREQUENT TDU ACTIVITY
IST2275I TDU INFORMATION SINCE LAST RESET ON date AT time
IST2290I TDUDIAG START OPTION = tdudiag_value
[IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
[IST924I -----]
[IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
[IST2278I SINCE VTAM START ON start_date AT start_time]
[IST2284I FOR THE FOLLOWING NODES AND TGS]
[IST2279I CP NAME          DESTINATION CP   TGN   TIME DETECTED]
[IST2280I cp_name         destination_cp   tgn   date_detected time_detected]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2359I NO TDU INFORMATION EXISTS]
[IST2286I TDUS RECEIVED:]
[IST1777I CP NAME          RSN          DESTINATION CP   TGN ACC  REJ]
[IST1778I cp_name         rsn          destination_cp   tgn count1 count2]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
IST2287I TDUS SENT:
[IST2288I CP NAME          RSN          DESTINATION CP   TGN SENT REC]
[IST1778I cp_name         rsn          destination_cp   tgn count1 count2]
.
.
IST2301I num OF total RECORDS DISPLAYED
[IST924I -----]
[IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:]
[IST2292I CP NAME          RSN          DESTINATION CP   TGN  UPDATED]
[IST2293I cp_name         rsn          destination_cp   tgn  updated]
.
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST314I END

```

- If you specify FORMAT=LONG on the DISPLAY TOPO command, the display sections for TDUs that were received, TDUs that were sent, and RSNs that were updated by this node are replaced with the following:

```

[IST924I -----]
[IST2359I NO TDU INFORMATION EXISTS]
[IST2286I TDUS RECEIVED:]

```

IST1780I

```
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn           destination_cp    tgn]
[IST2353I  ACCEPTED = accepted    REJECTED = rejected]
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2287I TDU SENT:]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn           destination_cp    tgn]
[IST2352I  SENT           = sent      RECEIVED = received]
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn           destination_cp    tgn]
[IST2291I  UPDATED       = updated]
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST314I END
```

IST350I

This message identifies the type of information in the display and is always TDU INFORMATION for this message group.

IST1777I

This is a header message for the information about topology resources in the TDUs that were received most frequently that is displayed in the IST1778I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

ACC is the abbreviation for ACCEPTED.

REJ is the abbreviation for REJECTED.

IST1778I

- One IST1778I is issued for each topology resource that is displayed in a subgroup when the FORMAT=SHORT operand is specified or the default FORMAT value is taken.
- The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the TDU information and TDU counters were last reset is smaller than the number requested on the display command, the number of IST1778I messages that are displayed in the subgroup will be smaller than the NUM value that was specified.
- *cp_name* is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.
- *rsn* is the resource sequence number (RSN) expressed in decimal.
- *destination_cp* is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, ***NA*** is displayed.
- *tgn* is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.
- If the subgroup displays the information about topology resources in the TDUs that were received most frequently:
 - *count1* is the total number of inbound TDUs that were accepted for this resource at the time that the displayed TDU was received. Inbound TDUs are accepted when they contain new information that causes the resource record to be updated.
 - *count2* is the total number of inbound TDUs that were rejected for this resource at the time that the displayed TDU was received. Inbound TDUs are rejected when they contain inconsistent information that causes outbound TDUs to be sent as corrections.
- If the subgroup displays the information about topology resources in the TDUs that were sent most frequently:
 - *count1* is the total number of outbound TDUs that were sent for this resource at the time that the displayed TDU was sent.

- *count2* is the total number of inbound TDUs that were received for this resource at the time that the displayed TDU was sent.

Tip: A RSN value of ********* or TDU counter values of ********* indicates that the values are greater than the available space for those values to be displayed in message IST1778I. You can enter the command with the **FORMAT=LONG** operand to display these values in a format that includes two lines of output for each resource.

IST1780I

This is a header message for the most frequent topology database updates (TDUs), possible control vector corruption, and resource sequence number (RSN) updates by this node.

IST2275I

This message displays the date and time when all the TDU information and TDU counters were reset. All TDU information and TDU counters are reset every 24 hours when garbage collection runs, or when a **DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES** or a **DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES** command is entered. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2276I

This message indicates that no corruption of topology control vectors was detected since VTAM was started.

IST2277I

This is a header message for a message subgroup that displays information about topology resources that have control vectors in the topology database that have possibly been corrupted.

Because the topology control vectors contain the resource sequence number (RSN) for a node or TG, which determines how a TDU is processed, it is possible that control vector corruption could cause a TDU war. The most probable cause of control vector corruption is a storage overlay.

IST2278I

This message displays the date and time that VTAM was started. See "DATE and TIME formats" on page 6 for information about date and time values.

Unlike the lists of topology resources in the TDUs that were received or sent most frequently, the list of topology resources with possible topology control vector corruption is never cleared and includes any possible corruption detection since the start of VTAM.

IST2279I

This is a header message for the information about topology resources with possible topology control vector corruption that is displayed in the IST2280I messages that follow.

IST2280I

One IST2280I is displayed for each topology resource with control vectors that have possibly been corrupted.

Information about possible corrupted control vectors is maintained from the start of VTAM and is not deleted when TDU information is reset. All topology resources with possible corrupted control vectors are displayed in this subgroup, regardless of the reset of TDU information.

The **NUM** operand can be specified on the **DISPLAY** command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the start of VTAM is smaller than the number requested on the display command, the number of IST2280I messages that are displayed in the subgroup will be smaller than the **NUM** value that was specified.

cp_name is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, *****NA***** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, **NA** is displayed.

time_detected and *date_detected* is the date and time that possible corruption of control vectors for the topology resource was detected. See "DATE and TIME formats" on page 6 for information about date and time values.

IST1780I

IST2284I

This message indicates that possible topology control vector corruption was detected for a node or TG.

IST2286I

This is a header message for message subgroups that display information about topology resources in the TDUs that were received in inbound TDUs most frequently.

The first topology resource that is displayed in the subgroup is the resource with the most frequent TDU activity. The last topology resource that is displayed in the subgroup is the resource with the least frequent TDU activity.

IST2287I

This is a header message for message subgroups that display information about topology resources in the TDUs that were sent most frequently.

The first topology resource that is displayed in the subgroup is the resource with the most frequent TDU activity. The last topology resource that is displayed in the subgroup is the resource with the least frequent TDU activity.

IST2288I

This is a header message for the information about topology resources in the TDUs that were sent most frequently, that is displayed in the IST1778I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

REC is the abbreviation for RECEIVED.

IST2289I

This is a header message for information about topology resources that have resource sequence numbers (RSNs) that were updated by this node.

The first topology resource that is displayed in the subgroup is the resource with a RSN that was updated most frequently. The last topology resource that is displayed in the subgroup is the resource with a RSN that was updated least frequently.

IST2290I

- *tdudiag_value* is the user-defined TDUDIAG start option value, specified on the START command or in the start list, and specifies when TDU diagnostic information is included with node or TG control vectors within a TDU. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference for additional information about this start option. Possible values can be one of the following:
 - A decimal value in the range 1-65535. This is a threshold number of times this network node has updated the resource sequence number (RSN) for a topology resource since the last time TDU information was reset. When this threshold value is reached for a node or TG, TDU diagnostic information is included in the outbound TDU if the RSN is updated.
 - **ALWAYS** specifies that TDU diagnostic information is always appended with the topology control vectors included in a TDU for a topology resource when the RSN for that resource is updated by this network node.
 - **NEVER** specifies that TDU diagnostic information is never appended with the topology control vectors included in a TDU.

IST2291I

This message follows message IST2358I and this message pair displays the information about topology resources that have a RSN that was updated by this node, when the FORMAT=LONG operand is specified.

updated is the number of times that the topology resource had been updated at the time of the last RSN update.

IST2292I

This is a header message for the information about topology resources with RSNs that were updated by this node. The topology resources are displayed in the IST2293I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

IST2293I

One IST2293I is issued for each topology resource that has a RSN that was updated by this node. The first IST2293I message in this message subgroup describes the topology resource whose RSN was updated by this node most frequently.

The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the TDU information and TDU counters were last reset is smaller than the number requested on the display command, the number of IST2293I messages that are displayed in the subgroup will be smaller than the NUM value that was specified.

cp_name is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

rsn is the updated RSN expressed in decimal.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, ***NA*** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.

updated is the number of times that the topology resource has been updated at the time of the last RSN update.

Tip: A RSN value of ***** or update counter value of ***** indicates that the value is greater than the available space for the value to be displayed in message IST2293I. You can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

IST2301I

This message displays the number of topology resources in a message subgroup.

num is the total number of topology resources that are displayed.

total is the total number of topology resource records that are on the displayed list.

IST2352I

This message follows message IST2358I when the FORMAT=LONG operand is specified. The message pair displays the information about topology resources in the TDUs that were sent most frequently.

sent is the total number of TDUs that were sent for this resource at the time that the displayed TDU was sent.

received is the total number of TDUs that were received for this resource at the time that the displayed TDU was sent.

IST2353I

This message follows message IST2358I when the FORMAT=LONG operand is specified. The message pair displays the information about topology resources in the TDUs that were received most frequently.

accepted is the total number of inbound TDUs that were accepted for this resource at the time that the displayed TDU was received. Inbound TDUs are accepted when they contain new information that causes the resource record to be updated.

rejected is the total number of inbound TDUs that were rejected for this resource at the time that the displayed TDU was received. Inbound TDUs are rejected when they contain inconsistent information that causes outbound TDUs to be sent as corrections.

IST2357I

- This is a header message for the information about topology resources that is displayed in message pairs when FORMAT=LONG is specified. The information is displayed in three sections:
 - topology resources in the TDUs that were received most frequently
 - topology resources in the TDUs that were sent most frequently
 - topology resources with RSNs that were updated by this node

IST2358I

This is the first of two messages that display the information about a topology resource when the FORMAT=LONG operand is specified.

The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 topology resources, or message pairs, and the maximum value is 50. If the number of topology resources on the list since the last TDU count reset is smaller than the number requested on the display command, the number of topology resources that are displayed in the subgroup will be smaller than the NUM value that was specified.

IST1780I

cp_name is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

rsn is the resource sequence number (RSN) expressed in decimal.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, *****NA***** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, **NA** is displayed.

IST2359I

This message is displayed when there are no topology resources that have been received, sent, or had RSNs updated since the TDU information and TDU counters were last reset. Message IST2275I displays last reset date and time.

System action: Processing continues.

Operator response: If you are displaying TDU information because of performance degradation of the APPN network, use the information about display TDU information in *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures*, and do the following:

1. Repeat the display several times to see if there is a pattern of excessive TDU activity for a topology resource.
2. Enter the `DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=RECENT` command to see the topology resources with the most recent TDU activity.
3. If a node or TG is identified with excessive TDU activity, the following displays might provide information about the network nodes that are causing the performance degradation (TDU war):
 - `DISPLAY NET,TOPO,LIST=TDUDIAG` provides a summary of nodes and TGs with saved TDU diagnostic information.
 - `DISPLAY NET,TOPO,LIST=TDUDIAG,ID=cp_name` provides details about saved TDU diagnostic information for a node.
 - `DISPLAY NET,TOPO,LIST=TDUDIAG,ORIG=orig_CP,DEST=dest_CP,TGN=tgn` provides details about saved TDU diagnostic information for a TG.
4. If you can identify the network nodes that are involved in the TDU war, bring down the CP-CP sessions from one of the network nodes involved to all other network nodes in the network or subnetwork.

Tip: On the `DISPLAY NET,TOPO,LIST=TDUINFO` command output, A RSN value of ********* or TDU counter values of ******** indicates that the value is greater than the available space for the value to be displayed in message IST1778I or IST2293I. You can clear the TDU counters, but not the RSN, with the `CLEAR=YES` operand specified on either the `DISPLAY TOPO,LIST=TDUINFO` command or the `DISPLAY TOPO,LIST=TDUDIAG` summary command. Alternately, you can enter the command with the `FORMAT=LONG` operand to display these values in a format that includes two lines of output for each resource.

System programmer response: Take the following actions:

- If the operator provides output from the `DISPLAY NET,TOPO,LIST=TDUINFO` or `DISPLAY NET,TOPO,LIST=TDUDIAG` command, use the display TDU information in *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* to analyze the TDU activity. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Problem determination: See the system programmer response.

Module: You can display the module that issues a SNA message in the message by setting the `MSGMOD` start option to `YES`. See "Adding the originating module to the message text" on page 5 for more information about the `MSGMOD` start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: The following is an example of the display output from a `DISPLAY`

NET,TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,NUM=5,FORMAT=SHORT command:

```

IST350I DISPLAY TYPE = TDU INFORMATION
IST1780I TOPOLOGY RESOURCES WITH MOST FREQUENT TDU ACTIVITY
IST2275I TDU INFORMATION SINCE LAST RESET ON 01/29/10 AT 11:43:05
IST2290I TDUDIAG START OPTION = 1000
IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED
IST924I -----
IST2286I TDUS RECEIVED:
IST1777I CP NAME          RSN      DESTINATION CP    TGN ACC  REJ
IST1778I NETA.SSCP2A      6        NETA.SSCP1A      21  2    0
IST1778I CNRA.LVRN4A     2        NETA.SSCP2A      21  1    0
IST1778I NETA.SSCP2A     2        CNRA.LVRN4A      21  1    0
IST1778I NETA.SSCPAA     4        NETA.SSCP1A      21  1    0
IST1778I NETA.SSCPAA     2        ***NA***         NA  1    0
IST2301I 5 OF 6 TOPOLOGY RESOURCES DISPLAYED
IST924I -----
IST2287I TDUS SENT:
IST2288I CP NAME          RSN      DESTINATION CP    TGN SENT REC
IST1778I NETA.SSCP2A      6        NETA.SSCP1A      21  3    3
IST1778I NETA.SSCP1A     6        NETA.SSCP2A      21  3    1
IST1778I NETA.SSCP2A     2        ***NA***         NA  2    1
IST1778I NETA.SSCP1A     2        ***NA***         NA  2    0
IST1778I CNRA.LVRN4A     2        NETA.SSCP2A      21  1    1
IST2301I 5 OF 11 TOPOLOGY RESOURCES DISPLAYED
IST924I -----
IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:
IST2292I CP NAME          RSN      DESTINATION CP    TGN  UPDATED
IST2293I NETA.SSCP1A     6        NETA.SSCP2A      21   1
IST2293I CNRA.LVRN4A     2        NETA.SSCP1A      21   1
IST2293I NETA.SSCP1A     2        CNRA.LVRN4A      21   1
IST2301I 3 OF 3 TOPOLOGY RESOURCES DISPLAYED
IST314I END

```

IST1781I INITDB CHECKPOINT DATASET LAST GARBAGE COLLECTION

Explanation: VTAM issues this message as part of a group messages in response to a DISPLAY TOPO, LIST=SUMMARY command. See IST1306I for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1782I ENTRY NAME TABLE NAME ACTIVATION TIME

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY COS,TYPE=APPN command. A complete description of the message group follows the example.

```

IST350I DISPLAY TYPE = APPN COS
IST1782I ENTRY NAME      TABLE NAME    ACTIVATION TIME
IST1783I cos_entry      cos_table    date          time
:
:
IST314I END

```

IST350I

This message identifies the type of information in the display and is always APPN Class of Service for this message group.

IST1782I

This message is a header message for the information displayed in message IST1783I.

IST1783I • IST1786I

IST1783I

One IST1783I will be issued for each APPN COS entry displayed.

cos_entry is the name of the APPN Class of Service entry.

cos_table is the name of the last APPNCOS table that was used to create or update the Class of Service entry.

The *date* and *time* values are displayed in the ACTIVATION TIME field. The *date* and *time* values specify when the Class of Service entry was created or last updated. See "DATE and TIME formats" on page 6 for information about the *date* value.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1783I *cos_entry cos_table date time*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY COS,TYPE=APPN command. The first message of the group is IST1782I. See the explanation of that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1784I **LAST TDU RECEIVED - NONE**

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST1785I *initdb_date initdb_time garbage_collect_date garbage_collect_time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY,TOPO,LIST=SUMMARY command. See IST1306I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1786I **HPR ROUTE TEST INITIATED FOR RTP PU**

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1787I HPR ROUTE TEST RESULTS FOR RTP PU *puname*

Explanation: VTAM issues this message as the first of a message group to display the results of an HPR Route Test for *puname*. This HPR Route Test was initiated in response to a DISPLAY RTPS command with ID=*puname* or TCID=*tcid_value* and TEST=YES being issued for the RTP PU identified by *puname*. This message is the first in a group of messages and the full description of the message group follows the example.

```

IST1787I HPR ROUTE TEST RESULTS FOR RTP PU puname
IST1788I NODE CP NAME    TG NUMBER  PARTNER CP NAME  INTERNODAL TIME
IST1789I                                     (MILLISECONDS)
IST1790I node_cpname    tg_number  partner_cpname  internodal_time
[IST1791I HPR ROUTE TEST PACKET NOT RETURNED BY NODE cpname]
IST1792I TOTAL RTP TRAVERSAL TIME traversal_time MILLISECONDS
IST314I  END

```

IST1787I

puname is the RTP PU for which the Route Test results are displayed.

IST1788I

This message serves as a header for message IST1788I to identify the output columns in that message.

IST1789I

This message shows that the internodal_time value is in milliseconds.

IST1790I

- This message provides the data obtained by the Route Test. One of these messages will be issued for each link (Transmission Group) in the RTP pipe.
- *node_cpname* is the CP name of the node owning the Transmission Group(TG).
- *tg_number* is the negotiated TG number for this RTP or **UNKNOWN** if the real TG information is not available.
- *partner_cpname* is the CP name of the partner node for this TG.
- *internodal_time* is the time it took for a Route Test packet to traverse this TG, in milliseconds, or *****NA***** if this test packet did not return.

Note: The sum of the internodal times shown in the IST1790I messages might be as much as 1 ms less for each hop in the RTP than the total RTP traversal time shown in message IST1792I, because integer division might cause internodal times to be truncated during calculation.

IST1791I

This message will be issued for all nodes in the RTP pipe that did not return a Route Test packet.

cpname is the CP name of the node that did not return the Route Test packet.

IST1792I

This message tells how long it took a Route Test packet to be sent from this VTAM to the other end of the RTP pipe.

traversal_time is the total time in milliseconds it took for a Route Test packet to travel from VTAM to the other end of the RTP pipe.

System action: Processing continues.

Operator response: Examine the internodal and traversal times for each link (Transmission Group) to identify any links where the traversal time is slow. Route Test packets not returned would indicate a problem with one or more of the links between this host node and the node identified by IST1791I. Path Switching for this RTP should be automatically attempted by the system.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1788I NODE CP NAME TG NUMBER PARTNER CP NAME INTERNODAL TIME

Explanation: This message is part of a group of messages that VTAM issues in response to an HPR Route Test. The first message of the group is IST1787I. See the explanation of that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1789I (MILLISECONDS)

Explanation: This message is part of a group of messages that VTAM issues in response to an HPR Route Test. The first message of the group is IST1787I. See the explanation of that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1790I *node_cpname tg_number partner_cpname internodal_time*

Explanation: This message is part of a group of messages that VTAM issues in response to an HPR Route Test. The first message of the group is IST1787I. See the explanation of that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1791I HPR ROUTE TEST PACKET NOT RETURNED BY NODE *cp_name*

Explanation: This message is part of a group of messages that VTAM issues in response to an HPR Route Test. The first message of the group is IST1787I. See the explanation of that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1792I TOTAL RTP TRAVERSAL TIME *traversal_time* MILLISECONDS

Explanation: This message is part of a group of messages that VTAM issues in response to an HPR Route Test. The first message of the group is IST1787I. See the explanation of that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1793I HPR ROUTE TEST NOT INITIATED - RTP PU NOT IN PROPER STATE

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1794I HPR ROUTE TEST NOT INITIATED - TEST ALREADY IN PROGRESS

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1795I HPR ROUTE TEST NOT INITIATED - INSUFFICIENT STORAGE

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1796I SYSTEM-MANAGED DUPLEXING REBUILD IS IN PROGRESS

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1797I STRUCTURE TYPE = *type*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1798I TOPOLOGY DATASET RETRIEVED WAS CREATED ON *date time*

Explanation: VTAM issues this message when topology data from a previously saved topology checkpoint data set has been read successfully at VTAM initialization.

The *date* and *time* values specify when the data set was created. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1799I NO ROUTE AVAILABLE TO DESTINATION IP ADDRESS *ipaddr*

Explanation: This message is the first in a group of messages that VTAM issues when the TCP/IP stack could not find a route to the destination VIPA address specified. A complete description of the message group follows the example.

```
IST1799I NO ROUTE AVAILABLE TO DESTINATION IP ADDRESS ipaddr
IST1680I type IP ADDRESS ip_address
IST314I END
```

IST1799I

ipaddr is the destination static VIPA address.

IST1680I

type indicates which IP address is being displayed. In this message group, *type* is always LOCAL.

ip_address is the source static VIPA address.

System action: The Enterprise Extender connection will fail to activate and the associated link will be deactivated because no route was available.

Operator response: None.

IST1800I

System programmer response: There is no route to this IP address. For an Enterprise Extender connection, the address must be a static VIPA and a route must be available between the two endpoints of the connection. Determine if this address has been specified correctly and that there is a route in both directions between the endpoints of the Enterprise Extender connection.

Routing code: 2

Descriptor code: 5

IST1800I TRLE = *trlename* ** CONGESTED **

Explanation: This message is issued in response to the following display commands when the associated device is congested:

- D NET TRL
- D NET,TRL,TRLE=*trlename*
- D NET,ID=*trlename*

** CONGESTED *** indicates that the associated device *trlename* has an excessive amount of outbound I/O work that is queued at the Data Link Control (DLC) layer. This congestion might be related to system storage problems (such as storage shortages) for this system.

System action: None.

Operator response: When a device is marked congested, further action is required to determine whether the congestion is related to a system storage problem. The following steps should be taken:

1. Review the system console for any messages related to current storage shortage conditions.
2. Issue the following display commands:
 - VTAM display commands:
 - D NET,CSM
 - D NET,BFRUSE
 - D NET,STORUSE,POOL=*
 - TCP/IP display command (if applicable):
 - D TCPIP,, STOR
3. Issue D NET,TRL,TRLE= *trlename* to obtain more details about the device congestion (reference message IST1802I).
4. Activate VTAM tuning statistics (TNSTAT) or RMF™ (or other monitoring tools) to monitor this specific device.
5. Display the active jobs in the system to determine whether new work was recently started.

If the previous steps indicate a system storage shortage is present, it might be necessary to obtain documentation (such as a CONSOLE LOG and a DUMP) to diagnose the congestion related to this device. This condition might be relieved by stopping the device (TCP/IP) or inactivating the PU (SNA).

System programmer response: The following steps might be required to isolate a system storage problem that is related to an I/O device:

1. Review the network configuration related to this device or any recent configuration changes for this system.
2. Review or monitor (using the output from VTAM TNSTAT or RMF) the network traffic related to this device. Compare the actual workload to the I/O capacity of the hardware device.
3. Determine if the congestion is related to a specific time of day, job, application, or type of work load.
4. Verify that Missing Interrupt Handler (MIH) is defined for the write devices.
5. Review or verify that the maintenance level for the hardware device is current.
6. Consider automating the necessary storage displays to monitor system conditions.

Routing code: 2

Descriptor code: 5

IST1801I UNITS OF WORK FOR NCB AT ADDRESS *stor_addr*

Explanation: This message is displayed as a result of display command D NET,TRL,TRLE= *trlename* or D NET,ID = *trlename*.

stor_addr is the storage address of the Node Control Block (NCB) that is related to this device. For a description of the counts of units of work, see IST1802I.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1802I *pn* CURRENT = *cur* AVERAGE = *avg* MAXIMUM = *max*

Explanation: This message is issued as a result of display command D NET,TRL,TRLE=*trlename*,or D NET,ID=*trlename*. This message provides the detailed counts of units of work for a specific device or MPC group measured at the Data Link Control (DLC) layer.

pn is the Priority Queue Number (such as P1) for this device. *pn* is only displayed when applicable to a DLC.

Each of the following counts CURRENT, AVERAGE, and MAXIMUM is a 4-digit (nnnn) decimal number with a range of 1 - 9999. When the count exceeds 9999, the number will be expressed as nnnK (thousands - such as 12K). The highest value that can be displayed is 999K.

cur is the current total number of outbound work units that are being processed by the DLC layer for this device or MPC group.

avg is the average number of outbound work units that have been processed by the DLC layer for this device since activation. Average means how many outbound work units are present at the DLC layer for this device each time the DLC processes outbound work.

max is the maximum number of outbound work elements that accumulated in the DLC layer for this device since activation.

System action: None.

Operator response: None. However, if the CURRENT COUNT is excessive, the device might be marked ** CONGESTED **. See IST1800I for an explanation of ** CONGESTED **.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1803I *parameter* PARAMETER VALUE NOT VALID - DEFAULT *default* USED

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1804I *parameter* PARAMETER NOT VALID - IGNORED

Explanation: VTAM can issue this message as part of a group of messages or as a stand-alone message.

When VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO command, see IST1295I for a complete description of the message group.

VTAM issues this message alone in response to a MODIFY RESOURCE,ID=*cdrsc_name*,ADJLIST=*list*,ACTION=UPDATE when the command is entered in a pure APPN node. A

IST1805I • IST1807I

pure APPN node is a VTAM that is started with start options NODETYPE=NN or NODETYPE=EN, but without HOSTSA or with HOSTSA and SACONNS=NO.

parameter is the parameter that is not valid on the command. For the MODIFY RESOURCE command in a pure APPN node, *parameter* will always be ADJLIST.

System action: Processing continues. If this message is issued in response to a MODIFY RESOURCE command, the specified ADJLIST is not associated with the CDRSC.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1805I ONLY LOCAL TOPOLOGY INFORMATION IS AVAILABLE

Explanation: VTAM issues this message when a DISPLAY TOPO command is issued at an end node and one of the following is true:

- The requested information is not available at the end node. In this case, this message will be displayed before IST1308I.
- The information displayed might be a subset of the information displayed when the same command is issued at a network node. In this case, this message is part of a group of messages in response to a DISPLAY TOPO command. See IST1295I for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1806I NO DIAL-IN LINE FOUND FOR HPR/IP SWITCHED CONNECTION

Explanation: This message is issued when there are no HPR/IP (Enterprise Extender) lines available to accept a dial in predefined Enterprise Extender (EE) network connection. The lines are defined in the HPR/IP (Enterprise Extender) XCA major node.

System action: Processing continues and the EE connection was not established. The other side of the EE connection (where the dial out was initiated) will eventually discover the connection was not established, and an INOP will be generated (due to a timeout while waiting for a response to EE connection initiation).

Operator response: Save the system log and contact the system programmer for problem determination.

System programmer response: Add lines to one of the GROUPs used to define HPR/IP (Enterprise Extender) predefined connections in the XCA major node. See the z/OS Communications Server: SNA Resource Definition Reference for information about defining EE connections and see the z/OS Communications Server: SNA Network Implementation Guide for general information about Enterprise Extender.

Routing code: 2

Descriptor code: 5

IST1807I NO DIAL-IN LINE FOR HPR/IP VIRTUAL NODE *nodename*

Explanation: This message is issued when there are no HPR/IP (Enterprise Extender) lines available to accept a dial in for an Enterprise Extender (EE) Connection Network. The lines are defined in the HPR/IP (Enterprise Extender) XCA major node.

nodename is the name of the HPR/IP (Enterprise Extender) virtual node for a connection network.

System action: Processing continues and the EE connection was not established. The other side of the EE connection (where the dial out was initiated) will eventually discover that the connection was not established and an INOP will

be generated (due to a timeout while waiting for a response to EE connection initiation.)

Operator response: Save the system log and contact the system programmer for problem determination.

System programmer response: Add lines to the GROUP used to define the HPR/IP (Enterprise Extender) Connection Network in the XCA major node. See the z/OS Communications Server: SNA Resource Definition Reference for information about defining EE connections and see the z/OS Communications Server: SNA Network Implementation Guide for general information about Enterprise Extender.

Routing code: 2

Descriptor code: 5

IST1809I HPR ROUTE TEST NOT INITIATED - INSUFFICIENT PATH INFORMATION

Explanation: VTAM issues this message as part of a subgroup of messages in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1810I PKTIQDO = *pktiqdo* PKTIQD = *pktiqd*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1811I BYTIQDO = *bytiqdo* BYTIQD = *bytiqd*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1816I PARAMETER 1 FOR DISCNTIM MUST BE NUMERIC OR IMMED

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the first parameter specified for the DISCNTIM start option is not correct. The first parameter for the DISCNTIM start option must be numeric, or the character value IMMED.

System action: VTAM ignores the option. If the error occurred during START processing, VTAM will issue message IST1311A to prompt you to enter the start option value of DISCNTIM again. See IST1311A for more information. If the error occurred in response to a MODIFY VTAMOPTS command, processing continues.

Operator response: If the error occurred during START processing, enter a valid value for parameter one of DISCNTIM option in response to IST1311A. You can also enter a blank if you want to accept the default value for DISCNTIM. If the error occurred in response to a MODIFY VTAMOPTS command, issue the command again, specifying a valid value for parameter one of DISCNTIM.

System programmer response: If the error occurred during START processing, correct the value for DISCNTIM, if DISCNTIM is coded in an ATCSTRxx file. If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

Routing code: 2

Descriptor code: 5

IST1817I PATH SWITCH REASON: RTP CONNECTION UNAVAILABLE

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1818I PATH SWITCH REASON: SHORT REQUEST RETRY LIMIT EXHAUSTED

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1819I PATH SWITCH REASON: TG INOP

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1820I PATH SWITCH REASON: MODIFY RTP COMMAND ISSUED

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1821I PATH SWITCH REASON: AUTO PATH SWITCH FOR PSRETRY

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1822I PATH SWITCH REASON: UNKNOWN

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1823I LIST DVIPA SYSNAME TCPNAME # ASSIGNED PORTS

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1824I *list dvipa numports*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1825I *sysname tcpname numports*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1826I **PORTS:** *port1 port2 port3 port4 port5 port6*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1827I *port1 port2 port3 port4 port5 port6*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1828I **LIST** *listnum* **IS UNCLAIMED**

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1829I **NO CLAIMED LISTS FOUND FOR THE SPECIFIED DVIPA**

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1830I **NO CLAIMED LISTS FOUND**

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1831I *percent* OF SYSTEM CSA STORAGE REMAINING = *sys_csa_avail*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the group is IST449I. See the explanation of that message for a full description.

Routing code: 2

Descriptor code: 5

IST1832I CSALIMIT VALUE *csa_limit* MIGHT BE TOO SMALL

Explanation: VTAM issues this message when a nonzero value is specified for CSALIMIT that is less than 25 Megabytes (25 000 Kilobytes) and the ,F modifier is specified to make it an absolute setting. This message is informational because the value coded might be appropriate for your system.

csa_limit is the CSA limit specified in the CSALIMIT start option or a MODIFY CSALIMIT command.

System action: Processing continues.

Operator response: When VTAM is active, issue a DISPLAY BFRUSE,BUFFER=* command and save the console output for the system programmer.

System programmer response: See the z/OS Communications Server: SNA Resource Definition Reference and the z/OS Communications Server: SNA Network Implementation Guide for information about setting the CSALIMIT value too low. See the z/OS Communications Server: SNA Operation for details on using the VTAM DISPLAY BFRUSE command output to determine the currently available and the total system CSA.

Routing code: 2

Descriptor code: 3

IST1833I CSA STORAGE ALLOCATION EXCEEDS SPECIFIED CSALIMIT VALUE

Explanation: A CSA storage request caused VTAM to exceed the value specified for CSALIMIT.

System action: Processing continues.

Operator response: Monitor CSA storage usage with the DISPLAY BFRUSE,BUFFER=* command. See the z/OS Communications Server: SNA Operation for details. Save this console output for the System Programmer.

System programmer response: Determine if the current value for CSALIMIT is set too low and modify it, if necessary. See the z/OS Communications Server: SNA Resource Definition Reference for information about specifying a low CSALIMIT value. See the z/OS Communications Server: SNA Operation for details on using the VTAM DISPLAY BFRUSE command output to determine the currently available and the total system CSA. See the z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures about storage problem procedures for CSA storage problems.

Routing code: 2

Descriptor code: 3

IST1834I LIST DVIPA SYSNAME TCPNAME #ENTRIES TGDCOUNT SEQNUMBER

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1835I *list dvipa*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1836I *sysname tcpname #entries tgcoun*t

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1837I *sysname tcpname #entries seqnumber*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1838I **LIST ENTRY KEYS:**

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1839I *list_entry_key*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1840I **DLUR = dlurname**

Explanation: VTAM issues this message as part of a message group to indicate the name of the dependent LU requester (DLUR) associated with a resource for which a negative response to a request was received. The first message in the group is IST1139I. See the description of that message for a complete description.

IST1841I **ACTUAL DATA FLOW RATE = actual units**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is either IST1476I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST1842I **NUMBER OF NLPS RETRANSMITTED = retransmitted**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1843I NUMBER OF NLPS ON WAITING-TO-SEND QUEUE = *waitsend*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a rapid transport protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1844I ARB MODE = *mode*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1845I BOUNDARY DIVIDING REGIONS *lower* AND *upper* = *boundary* MILLISECONDS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1846I *type* RECEIVER THRESHOLD = *threshold* MICROSECONDS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1847I NUMBER OF NLPS ON WAITING-FOR-ACKNOWLEDGEMENT QUEUE = *waitack*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1848I SEND BYTE COUNT = *sendcount* RECEIVE BYTE COUNT = *receivecount*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1849I LARGEST NLP SENT = *size* BYTES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1850I LARGEST NLP RECEIVED = *size* BYTES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1851I SMOOTHED ROUND TRIP TIME = *smoothed_time* MILLISECONDS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1852I LIVENESS TIMER = *liveness* SECONDS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1853I NUMBER OF NLPS ON OUT-OF-SEQUENCE QUEUE = *out_of_sequence*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1854I NUMBER OF NLPS ON INBOUND SEGMENTS QUEUE = *inbound_segs*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1855I NUMBER OF SESSIONS USING RTP = *sessions*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1856I LAST PATH SWITCH OCCURRENCE WAS ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1857I BACKPRESSURE REASON COUNTS:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1858I PATHSWITCH SEND QUEUE MAX STORAGE FAILURE STALLED PIPE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1859I *pathswitch sendqmax storefail stalledpipe*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1860I NUMBER OF NLPS SENT = *sent* - OVERFLOW = *overflow*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1861I NUMBER OF NLPS RECEIVED = *received* - OVERFLOW = *overflow*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1862I ARB MAXIMUM SEND RATE = *maximum units*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1863I SUBAREA INDEX ELEMENT

Explanation: This message is the first of a group of messages that VTAM issues in response to a DISPLAY VTAMSTOR command to display storage contents associated with a resource name or a network address. A complete description of the message group follows the example.

```
IST1863I SUBAREA          INDEX          ELEMENT
IST1864I X'saHex'(saDec)  X'indHex' (indDec)  X'eleHex' (eleDec)
IST1573I type STORAGE DISPLAY BEGINS AT LOCATION address
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
IST1574I offset hexdata_1 hexdata_2 hexdata_3 hexdata_4 EBCDIC_data
:
:
IST314I END
```

IST1573I

type indicates the type of storage being displayed. The values for *type* are RDTE or RDTE PROFILE.

address indicates the hexadecimal storage address for the beginning of the display.

IST1574I

This message displays storage beginning at the address indicated in message IST1573I. This message is issued as many times as necessary to display the entire RDTE or RDTE profile.

offset is the hexadecimal offset of the storage from the address in message IST1573I.

hexdata_1, *hexdata_2*, *hexdata_3*, and *hexdata_4* each display four bytes of the storage in hexadecimal format.

EBCDIC_data displays sixteen bytes of the storage in EBCDIC format.

IST1863I

This message is the header for the information displayed in message IST1864I.

IST1864I

This message provides the requested network address in hexadecimal and decimal.

saHex is the subarea address in hexadecimal.

saDec is the subarea address in decimal.

indHex is the index in hexadecimal.

indDec is the index in decimal.

eleHex is the element in hexadecimal.

eleDec is the element in decimal.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1864I X'saHex'(saDec) X'indHex' (indDec) X'eleHex' (eleDec)

Explanation: This is part of the message group that begins with message IST1863I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1865I

IST1865I GLOBAL INOPDUMP = *status*

Explanation: This message is the first in a group of messages in response to the DISPLAY INOPDUMP or MODIFY INOPDUMP commands. Possible message groups follow:

- | • In response to a DISPLAY INOPDUMP command when INOPDUMP is globally set for all control groups:
| IST350I DISPLAY TYPE = INOPDUMP
| IST1865I GLOBAL INOPDUMP = *status*
| [IST924I -----]
| [IST1954I TRL MAJOR NODE = trl_major_node_name]
| [IST1866I TRLE = trlename INOPDUMP = ON]
| :
| :
| IST314I END
- | • In response to a DISPLAY INOPDUMP command when INOPDUMP is selectively enabled for one or more control
| groups:
| IST350I DISPLAY TYPE = INOPDUMP
| IST1865I GLOBAL INOPDUMP = ON BY CONTROL GROUPS
| IST1904I INOPDUMP = *current_value*
| [IST924I -----]
| [IST1954I TRL MAJOR NODE = trl_major_node_name]
| [IST1866I TRLE = trlename INOPDUMP = ON]
| :
| :
| IST314I END
- | • In response to a MODIFY INOPDUMP command:
| IST1865I GLOBAL INOPDUMP = *status*
| [IST1866I TRLE = trlename INOPDUMP = *status*]
| :
| :
| [IST1867I INOPDUMP = *status* FOR ALL TRLE BASED RESOURCES]
| IST223I MODIFY COMMAND COMPLETE
| IST314I END
- | • In response to a MODIFY VTAMOPTS, INOPDUMP command:
| IST1865I GLOBAL INOPDUMP = *status*
| IST1867I INOPDUMP = *status* FOR ALL TRLE BASED RESOURCES
| IST314I END

IST223I

VTAM issues this message when the MODIFY command has successfully completed.

IST350I

This message identifies the type of information shown in the display. For this message group, type is always INOPDUMP.

IST1865I

- | • *status* can be one of the following:
 - | – ON indicates that all active non-TRLE controlled resources might attempt to initiate an automatic VTAM dump when an inoperative condition is detected.
 - | – OFF indicates that no active non-TRLE controlled resources will attempt to initiate an automatic VTAM dump when an inoperative condition is detected.
 - | – ON BY CONTROL GROUPS indicates that INOPDUMP has been selectively enabled for resources identified by specific control group classifications. These resources might attempt to initiate an automatic VTAM dump when an inoperative condition is detected.
 - | – OFF BY CONTROL GROUPS indicates that INOPDUMP has been selectively disabled for resources identified by specific control group classifications. These resources will not attempt to initiate an automatic VTAM dump when an inoperative condition is detected.
- | • The global INOPDUMP status is the default used to initialize each TRLE-based resource INOPDUMP status when the TRLEs are activated.

IST1866I

- If you receive this message in response to a DISPLAY INOPDUMP command, it will appear once for each TRLE with INOPDUMP=ON.
- *trlename* is the name of the TRLE for which status is being reported.
- *status* can be one of the following:
 - ON indicates that the resources defined in the TRLE might attempt to initiate an automatic VTAM dump when an inoperative condition is detected.
 - OFF indicates that the resources defined in the TRLE will not attempt to initiate an automatic VTAM dump when an inoperative condition is detected.

IST1867I

- *status* can be one of the following:
 - ON indicates that the INOPDUMP status for every TRLE in all active predefined TRL major nodes has been set to ON.
 - OFF indicates that the INOPDUMP status for every TRLE in all active predefined TRL major nodes has been set OFF.
 - SELECTIVELY PROCESSED indicates that a MODIFY VTAMOPTS,INOPDUMP command has been issued to enable or disable INOPDUMP processing selectively by control groups. The INOPDUMP status for every TRLE in all active predefined TRL major nodes which match the specified control groups has been set appropriately.
- This message is a reminder to the operator that use of the MODIFY VTAMOPTS,INOPDUMP command or a global MODIFY INOPDUMP command also sets the INOPDUMP status for each TRLE in all active predefined TRL major nodes. However, if there are no active predefined TRL major nodes, this message will not appear in the response.

IST1904I

INOPDUMP is the name of the VTAM start option.

current_value lists the names of the INOPDUMP control groups which are currently enabled. See the z/OS Communications Server: SNA Resource Definition Reference for more information regarding INOPDUMP control groups.

IST1954I

trl_major_node_name is the name of the TRL major node defining the TRLE for which status is being reported.

This message is issued once for each active predefined TRL major node.

System action: Processing continues

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1866I TRLE = *trlename* INOPDUMP = *status*

Explanation: VTAM issues this message as part of the response to the following commands:

- DISPLAY INOPDUMP to show all TRLEs for which INOPDUMP = ON; see IST1865I for an example of this message group.
- MODIFY INOPDUMP (with the TRLE operand) to show the new INOPDUMP status of each TRLE in the operand list; see IST1865I for an example of this message group.
- DISPLAY ID=*trlename* when INOPDUMP=ON for *trlename*.
- DISPLAY TRL,TRLE=*trlename* when INOPDUMP=ON for *trlename*.

trlename is the name of the TRLE for which status is being reported.

status can be one of the following:

- ON indicates that the resources defined in the TRLE might attempt to initiate an automatic VTAM dump when an inoperative condition is detected.

IST1867I • IST1870I

- OFF indicates that the resources defined in the TRLE will not attempt to initiate an automatic VTAM dump when an inoperative condition is detected.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1867I INOPDUMP = *status* FOR ALL TRLE-BASED RESOURCES

Explanation: This message is part of a message group that begins with message IST1865I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1868I DISPLAY APING FAILED - TP INSTANCE LIMIT EXCEEDED

Explanation: The DISPLAY APING command was issued; however, the instance limit for the APING command transaction program (TP) has already been reached, so no further DISPLAY APING commands may be started until an executing APING completes.

System action: Processing continues.

Operator response: Wait until a currently executing DISPLAY APING command completes and reissue the command, or issue the MODIFY APINGTP command to increase the APING command TP instance limit.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1869I NO *tpname* SESSIONS EXIST

Explanation: A DISPLAY APINGTP or DISPLAY APINGDTP operator command was issued specifying LIST=ALL or LIST=COUNT to display session information for active instances of the requested TP. However, there are no sessions active for that transaction program.

tpname is either APING or APINGD.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1870I *tpname* HAS *count* ACTIVE SESSIONS

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY APINGTP or DISPLAY APINGDTP command when LIST=ALL is specified. The message will be issued without detailed session information in response to one of these commands when LIST=COUNT is specified. A complete description of the message group follows the example.

```
IST1870I tpname HAS count ACTIVE SESSIONS
[IST1888I lotype = luname SID = sid]
[IST1888I lotype = luname SID = sid]
IST314I END
```

IST1870I

tpname is either APING or APINGD.

count shows the number of active sessions for the specified transaction program.

IST1888I

lutype is either DLU or OLU.

luname is the name of the destination logical unit (DLU) or originating logical unit (OLU) with which the APING session exists.

sid is the session identifier (SID) used to identify the session over which the APING transaction occurs. The value *****NA***** is displayed if the session identifier is not currently available to VTAM.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1871I MESSAGE TRIGGER: MESSAGE = *msgnum* MATCHLIM = *matchlimit*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY CSDUMP command. This message group displays the status of the message trigger used to trigger a dump and the sense trigger used to trigger a dump. A complete description of the message group follows the example.

```

IST350I DISPLAY TYPE = CSDUMP TRIGGERS
[IST1871I MESSAGE TRIGGER: MESSAGE = msgnum MATCHLIM = matchlimit]
[IST1872I VALUE fieldnum = specifiedtext]
[IST2235I REMOTE DUMP FOR XCF LINK INOP: remote_dump]
[IST2234I MESSAGE TRIGGER: TCPNAME = tcpjobname]
[IST2399I MESSAGE TRIGGER: RNICTRLE = rnic_trlenam]
[IST1874I MESSAGE TRIGGER: NONE]
[IST1873I SENSE TRIGGER: SENSE = sensecode RU = rucode MATCHLIM = matchlimit]
[IST2240I SENSE TRIGGER: TCPNAME = tcpjobname]
[IST1875I SENSE TRIGGER: NONE]
IST314I END

```

IST350I

This message identifies the type of information shown in the display. For this message group, type is always CSDUMP TRIGGERS and the display contains the status of the CSDUMP triggers.

IST1871I

This message is issued when a message trigger is used to trigger a dump.

msgnum is the message number of the message trigger.

matchlimit specifies the number of times the message trigger will be used.

IST1872I

This message displays the contents of the message variable text fields if the variable text field was specified for the message. This message will be issued for each of the values that the user specified in the format (value_1,value_2,value_3). If any value is skipped, this message is issued with the value of ***NONE***. No message will be issued for trailing values not specified.

fieldnum is the field number of the message variable text field. The fields are numbered in the order in which they appear in the trigger message.

specifiedtext is the value that the user specified to be used for a trigger.

IST1873I

This message contains the information about the sense trigger used to trigger a dump.

sensecode is the sense code used as the trigger.

rucode is the request unit code used as a trigger. If there is no RU specified for a sense trigger, a value of ***ANY*** is displayed.

IST1872I • IST1874I

matchlimit specifies the number of times the sense trigger can be used.

IST1874I

This message indicates that no message trigger is set.

IST1875I

This message indicates that no sense trigger is set.

IST2234I

This message displays the TCP job name associated with the message trigger.

The *tcpjobname* value is the job name of the TCP stack that is specified for this trigger.

IST2235I

This message indicates whether a dump of the remote VTAM will be attempted when an XCF link connecting two VTAMs in a sysplex goes INOP.

The *remote_dump* value is either YES or NO.

IST2240I

This message displays the TCP job name associated with the sense trigger.

The *tcpjobname* value is the job name of the TCP stack that is specified for this trigger.

IST2399I

This message displays the TRLE name associated with the message trigger.

The *rnic_trlename* value is the name of a 10 GbE RoCE Express TRLE that is specified for this trigger.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1872I VALUE *fieldnum* = *specifiedtext*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1873I SENSE TRIGGER: SENSE = *sensecode* RU = *rucode* MATCHLIM = *matchlimit*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1874I MESSAGE TRIGGER: NONE

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. The first message in the group is either this message or IST1871I. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1875I SENSE TRIGGER: NONE

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1876I MESSAGE TRIGGER DELETED

Explanation: VTAM issues this message in response to a MODIFY CSDUMP command with the DELETE operand specified.

The following is a complete description of the group:

```
[IST1876I MESSAGE TRIGGER DELETED]
[IST1878I NO MESSAGE TRIGGER EXISTS]
[IST1877I SENSE TRIGGER DELETED]
[IST1882I NO SENSE TRIGGER EXISTS]
IST223I MODIFY CSDUMP COMMAND COMPLETED
IST314I END
```

IST1876I

VTAM deleted the message trigger that was set to cause a dump to be taken. This message is issued if DELETE=ALL or DELETE=MESSAGE is specified.

IST1877I

VTAM deleted the sense trigger that was set to cause a dump to be taken. This message is issued if DELETE=ALL or DELETE=SENSE is specified.

IST1878I

VTAM did not find the message trigger set when processing a MODIFY CSDUMP command with DELETE=MESSAGE or DELETE=ALL specified.

IST1882I

VTAM did not find the sense trigger set when processing a MODIFY CSDUMP command with DELETE=SENSE or DELETE=ALL specified.

System action: Processing continues

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1877I SENSE TRIGGER DELETED

Explanation: VTAM issues this message as a part of a message group in response to a MODIFY CSDUMP command. See IST1876I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1878I NO MESSAGE TRIGGER EXISTS

Explanation: VTAM issues this message as a part of a message group in response to a MODIFY CSDUMP command. See IST1876I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1879I VTAM DUMPING FOR CSDUMP TRIGGER MESSAGE *messagenum*

Explanation: VTAM initiated a dump in response to the trigger message being detected.

messagenum is the message number of the trigger message.

System action: VTAM takes a dump if the system dump data set is usable at this time. If VTAM successfully initiates the dump, the performance for other jobs might be degraded until the dump is complete.

Operator response: Save the system log and the contents of the dump for problem determination. Contact the system programmer.

System programmer response: Save the system log and the contents of the dump for problem determination. Contact the IBM software support center.

Routing code: 2

Descriptor code: 5

IST1880I VTAM DUMPING FOR CSDUMP TRIGGER SENSE *sensecode* RU *rcode*

Explanation: VTAM initiated a dump in response to the trigger sense code being detected.

sensecode is the sense code used for the trigger.

rcode is the request unit code used for the trigger. If there is no RU specified for a sense trigger, a value of *ANY* is displayed.

System action: VTAM takes a dump if the system dump data set is usable at this time. If VTAM successfully initiates the dump, the performance for other jobs might be degraded until the dump is complete.

Operator response: Save the system log and the contents of the dump for problem determination. Contact the system programmer.

System programmer response: Save the system log and the contents of the dump for problem determination. Contact the IBM software support center.

Routing code: 2

Descriptor code: 5

IST1881I VTAM DUMPING FOR CSDUMP - IMMEDIATE DUMP

Explanation: The VTAM Operator issued a MODIFY CSDUMP command to take a dump immediately.

System action: VTAM takes a dump if the system dump data set is usable at this time. If VTAM successfully initiates the dump, the performance for other jobs might be degraded until the dump is complete.

Operator response: Save the system log and the contents of the dump for problem determination. Contact the system programmer.

System programmer response: Save the system log and the contents of the dump for problem determination. Contact the IBM software support center.

Routing code: 2

Descriptor code: 5

IST1882I NO SENSE TRIGGER EXISTS

Explanation: VTAM issues this message as a part of a message group in response to a MODIFY CSDUMP command. See IST1876I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1883I SESSION ESTABLISHED WITH *rscname* - DLUR *dlurname*

Explanation: VTAM issues this message when a session between the physical unit with the name *rscname* has been established using DLUR *dlurname*.

rscname is the name of the resource.

dlurname is the network-qualified CP name of the dependent LU requester (DLUR) in the form netid.name. If the DLUR name cannot be determined ***NA*** (not available) will be displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST1884I SESSION ENDED WITH *rscname* - DLUR *dlurname*

Explanation: VTAM issues this message when the SSCP-PU session between VTAM and the physical unit with name *rscname* has ended. The PU was using DLUR *dlurname* to connect to VTAM.

rscname is the name of the resource.

dlurname is the network-qualified CP name of the dependent LU requester (DLUR) in the form netid.name. If the DLUR name cannot be determined ***NA*** (not available) will be displayed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 8

Descriptor code: 4

IST1885I SIO = *sio* SLOWDOWN = *slowdown*

Explanation: VTAM issues this message in response to a DISPLAY ID command requesting the status of an XCA major node. This message is issued for XCA major nodes that specify a CUADDR.

sio is the number of start I/O operations counted for the subchannel. This number is cumulative (from the time that the node was last activated) and is expressed in decimal. The value of *sio* is never larger than 65535. If *sio* is 65535, its value is reset to 0 when the next start I/O operation takes place. If the subchannel is not active for this major node, *sio* will display as N/A.

slowdown indicates if the subchannel is in slowdown. Values are YES and NO. SLOWDOWN = YES means that the XCA device will not accept write data from VTAM. SLOWDOWN = NO is the normal state of the subchannel. If the subchannel is not active for this major node, *slowdown* will display as N/A.

System action: Processing continues.

Operator response: If SLOWDOWN = YES is displayed, VTAM cannot write data to this device. If this device has a large amount of data queued to be written to it, a storage shortage might occur. Storage usage displays can be used to indicate if unusually high amounts of storage are being used. DISPLAY NET, BFRUSE can be used to display VTAM storage usage and DISPLAY NET,CSM can be used to display CSM storage usage. Use any problem determination aids available for the XCA device itself to determine why it is in slowdown. If storage usage is high, and the slowdown condition persists, the operator can use the VARY command to make this XCA major node inactive.

System programmer response: Use any diagnostics available for that device to determine why the XCA device is in slowdown.

Routing code: 2, 8

Descriptor code: 5

IST1886I SLOWDOWN TIME EXCEEDS MAXSLOW = *time* SECONDS FOR DEVICE *device*

Explanation: The subchannel threshold identified by the second subparameter of MAXSLOW on the PORT definition statement on an XCA subchannel has been exceeded. This means that the XCA device passed control information to VTAM indicating that the device will not accept data. Sessions using this device will probably experience performance degradation.

time is the subchannel threshold value in seconds.

device is the subchannel (CUA) that is in slowdown.

System action: Processing continues.

Operator response: Storage usage might rise if a large amount of data is queued to be sent to the device that is in slowdown. Issue storage use display commands to determine whether storage usage is high. DISPLAY NET,BFRUSE can be used to display VTAM storage usage and DISPLAY NET,CSM can be used to display CSM storage usage. If storage usage is high and the slowdown condition persists, the operator can VARY INACT this XCA device. DISPLAY NET,MAJNODES can be used to determine which XCA nodes are active. Message IST1021I in the displays of those XCA major nodes will show which are using this subchannel. Any diagnostic aids available for the XCA device itself should be invoked to determine why it is reporting a slowdown condition to VTAM.

System programmer response: Use any diagnostics available for that device to determine why the XCA device is in slowdown.

Routing code: 2

Descriptor code: 5

IST1887I DEVICE *device* EXITED SLOWDOWN MODE

Explanation: This message indicates the end of a slowdown condition for an XCA device. The device sent VTAM control information indicating it is no longer in slowdown. This message will only be issued if message IST1886I was previously issued, indicating that the device was in slowdown for a period longer than the second subparameter of the MAXSLOW parameter for an XCA major node.

device is the subchannel CUA that has exited slowdown.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1888I *lotype = luname* SID = *sid*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY APINGDTP command or a DISPLAY APINGTP command. The first message in the group is IST1870I. See that message for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST1889I SSCP-SSCP SESSION TO *sscpname* HELD FOR PACING

Explanation: VTAM issues this message when an attempt to send an RU on the SSCP-SSCP session is held because the session has been in a pacing held state longer than three seconds.

This message will continue to be issued at 3-second intervals, for as long as attempts are made to send RUs on the SSCP-SSCP session and the session remains in a pacing held state.

sscpname is the name of the partner SSCP in session with this VTAM.

System action: Processing continues.

Operator response: Issue VTAM commands to help identify any network problems. Examples would be DISPLAY NET,ROUTE,BLOCKED and DISPLAY NET,ROUTE,HELD to determine status of the virtual routes. Contact the operator of the partner sscpname to issue similar commands and to coordinate network problem determination. If the problem persists, take a dump of the VTAM ASID by issuing a MODIFY vtamproc,CSDUMP and save the log for problem determination. To attempt to recover this SSCP-SSCP session, deactivate and reactivate the session.

System programmer response: If a VR held or blocked condition was indicated, setting the VOSDEACT VTAM start option to YES will cause a VR to be deactivated if a VR out of sequence condition occurs. A VR out of sequence condition could result in a hung VR, if VOSDEACT is set to NO. Use the log and dump information for problem determination.

Routing code: 2

Descriptor code: 3

IST1890I *line* ACTIVATION FAILED - NO SOURCE IP ADDRESS AVAILABLE

Explanation: This message is displayed when an Enterprise Extender (HPR/IP) line activation fails because no static VIPA address was available to use for the connection. The static VIPA address is derived from any of the following sources:

- Supplied by the TCP/IP stack identified on the TCPNAME start option.
- Supplied on the IPADDR start option, or as the IPADDR operand on the XCA major node GROUP definition statement.
- Resolved from the value supplied as the HOSTNAME start option, or as the HOSTNAME operand on the XCA major node GROUP definition statement.

Without one of these values coded to provide the static VIPA address, VTAM cannot determine which TCP/IP stack will be used for Enterprise Extender (HPR/IP) data traffic.

line is the name of the Enterprise Extender (HPR/IP) line that failed.

System action: Enterprise Extender (HPR/IP) line activation failed.

Operator response: Issue DISPLAY VTAMOPTS and DISPLAY ID=*XCAmajornodename* (where *XCAmajornodename* is the name of the XCA major node that includes *line*) to determine whether settings for TCPNAME, IPADDR, or HOSTNAME are defined to the system.

If no values for the TCPNAME, IPADDR, and HOSTNAME start options or definition statement operands are defined, code a value for TCPNAME, IPADDR, or HOSTNAME as a VTAM start option. Temporarily, you can issue a MODIFY VTAMOPTS command and specify the value of one of these start options.

System programmer response: If the activation is failing because of a lack of TCPNAME, IPADDR, or HOSTNAME setting, include the appropriate start option setting in the start list file, or update the XCA major node definition statement to include either IPADDR or HOSTNAME.

Routing code: 2

Descriptor code: 5

IST1891I *pu* DIAL FAILED - MISMATCH OF IP ADDRESS FAMILIES

Explanation: This message is the first message in a group of messages displayed when the dialing of an Enterprise Extender (HPR/IP) connection fails because the remote IP address is not in the same IP address family as the local IP address; for instance, the remote IP address is an IPv4 address and the local is an IPv6 address. If the addresses are in different family types, the Enterprise Extender connection cannot be established. A complete description of the message group follows the example.

```
IST1891I line ACTIVATION FAILED - MISMATCH OF IP ADDRESS FAMILIES
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST314I END
```

IST1891I

IST1680I

type is either LOCAL or REMOTE to identify the IP address displayed.

ip_address is either the remote IP address or the local IP address. The first instance of IST1680I will display the remote IP address, and the second instance of IST1680I will display the local IP address. If *ip_address* is ****NA****, it means that the remote node is using IPv6 protocols but the local connection is using IPv4 protocols.

IST1891I

line is the name of the Enterprise Extender (HPR/IP) connection that failed.

IST1909I

value is the host name, owned by a target remote node, that was used to acquire the remote IP address as part of name-to-address resolution. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

value is the host name used to acquire the local static VIPA address used as part of the attempted route determination. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on IST1909I or IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

System action: Activation of the Enterprise Extender (HPR/IP) connection failed.

Operator response: None.

System programmer response: The Enterprise Extender connection cannot activate if the local and remote IP addresses are not in the same address family. The IP addresses can be obtained from the following sources:

- For both predefined and connection network Enterprise Extender connections, the local IP address (*ip_address* on the IST1680I instance with type LOCAL) is obtained from one of the following:
 - The TCP/IP stack identified on the TCPNAME start option.
 - The IPADDR start option, or the IPADDR operand on the XCA major node GROUP definition statement associated with the Enterprise Extender connection network or predefined Enterprise Extender connection used for the failed route attempt, when IST1910I is not displayed.
 - The name-to-address resolution of *value* on IST1910I, which represents either the value supplied as the HOSTNAME start option, or the value specified as the HOSTNAME operand on the XCA major node GROUP definition statement associated with the Enterprise Extender connection network or predefined Enterprise Extender connection used for the failed route attempt.
- For predefined Enterprise Extender connections, the remote IP address (*ip_address* on the IST1680I instance with type REMOTE) is obtained from one of the following:
 - The IPADDR operand on the PATH statement, when IST1909I is not displayed.
 - The name-to-address resolution of *value* on IST1909I, which represents the value specified as the HOSTNAME operand on the PATH definition statement.
- For connection network Enterprise Extender connections, the remote IP address (*ip_address* on the IST1680I instance with type REMOTE) is obtained from one of the following:
 - The IPv4 address provided by the remote Enterprise Extender node in the APPN Route Selection Control Vector (RSCV) describing the session route to use, when IST1909I is not displayed.
 - The name-to-address resolution of *value* on IST1909I, which represents the host name provided by the remote Enterprise Extender node in the APPN Route Selection Control Vector (RSCV) describing the session route to use.

Ensure that one of the following is true:

- The local or remote address was specified correctly.
- The correct local or remote host name, or both, have been used for name-to-address resolution.
- For an EE Connection Network, verify that all nodes are defining identical EE Connection Network names with an IP address from the same IP address family.

Routing code: 2

Descriptor code: 5

IST1892I NO ROUTE AVAILABLE TO DESTINATION

Explanation: VTAM displays this message group to indicate that the TCP/IP stack could not find a route to the specified destination address when activating an Enterprise Extender connection. For an Enterprise Extender connection to activate successfully:

- The local IP address must be a static VIPA owned by a TCP/IP stack on this node
- The remote IP address must be either a static VIPA (if it is on a z/OS host) owned by the intended destination node or a network address translation (NAT) address used to ultimately access the remote node
- A route must be available between the two endpoints of the connection.

A complete description of the message group follows the example.

```
IST1892I NO ROUTE AVAILABLE TO DESTINATION
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST314I END
```

IST1680I

type is either LOCAL or REMOTE to identify the IP address displayed.

ip_address is either the remote IP address or the local IP address. The first instance of IST1680I will display the remote IP address, and the second instance of IST1680I will display the local IP address.

IST1909I

value is the host name, owned by a target remote node, that was used to acquire the remote IP address as part of name-to-address resolution. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

value is the host name used to acquire the local static VIPA address used as part of the attempted route determination. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on IST1909I or IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

System action: The Enterprise Extender dial out attempt failed.

Operator response: None.

System programmer response: There is no route between these IP addresses. The IP addresses used in the connection activation attempt can be obtained in the following ways:

- For both predefined and connection network Enterprise Extender connection, the local IP address (*ip_address* on the IST1680I instance with *type* LOCAL) is obtained from one of the following:
 - The TCP/IP stack identified on the TCPNAME start option.
 - The IPADDR start option, or the IPADDR operand on the XCA major node GROUP definition statement associated with the Enterprise Extender connection network or predefined Enterprise Extender connection used for the failed route attempt, when IST1910I is not displayed.
 - The name-to-address resolution of *value* on IST1910I, which represents either the value supplied as the HOSTNAME start option, or the value specified as the HOSTNAME operand on the XCA major node GROUP definition statement associated with the Enterprise Extender connection network or predefined Enterprise Extender connection used for the failed route attempt.

IST1893I

- For predefined Enterprise Extender connections, the remote IP address (*ip_address* on the IST1680I instance with *type* **REMOTE**) is obtained from one of the following:
 - The IPADDR operand on the PATH statement, when IST1909I is not displayed.
 - The name-to-address resolution of *value* on IST1909I, which represents the value specified as the HOSTNAME operand on the PATH definition statement.
- For connection network Enterprise Extender connections, the remote IP address (*ip_address* on the IST1680I instance with *type* **REMOTE**) is obtained from one of the following:
 - The IPv4 address provided by the remote Enterprise Extender node in the APPN Route Selection Control Vector (RSCV) describing the session route to use, when IST1909I is not displayed.
 - The name-to-address resolution of *value* on IST1909I, which represents the host name provided by the remote Enterprise Extender node in the APPN Route Selection Control Vector (RSCV) describing the session route to use.

Ensure that all of the following are true:

- The local or remote address has been specified correctly.
- The correct local or remote host name, or both, have been used for name-to-address resolution.
- The routes exist in both directions between the attempted endpoints of the Enterprise Extender connection.
- The NAT translation tables are accurate for translating the NAT address to the ultimate target destination VIPA address (if on a z/OS host).
- The firewall along the route between the attempted endpoints of the Enterprise Extender connection is configured to allow traffic to flow from one endpoint to the other.

Routing code: 2

Descriptor code: 5

IST1893I NAME-TO-ADDRESS RESOLUTION FAILED

Explanation: This message is the first in a group of messages displayed when resolution of a host name owned by a remote node into an IP address is attempted but was unsuccessful. Name-to-address resolution is attempted as part of the following:

- LU-LU session activation when the session route traverses an Enterprise Extender connection network and the remote endpoint provides a host name, either instead of or in addition to an IP address, in the APPN Route Selection Control Vector (RSCV) representing the session route.
- VARY ACT command processing for a switched major node when the HOSTNAME operand was coded on the PATH statement.
- DISPLAY EE or DISPLAY EEDIAG command was issued which specified a remote HOSTNAME filter.

The complete message group in these situations is:

```
IST1893I NAME-TO-ADDRESS RESOLUTION FAILED
IST1909I REMOTE HOSTNAME value
[IST1911I value]
IST314I END
```

This message is also the first message in a group of messages displayed when resolution of a locally owned host name into an IP address was unsuccessfully attempted. This type of name-to-address resolution is attempted as part of the following:

- VARY ACT command processing for a line defined under a GROUP in an XCA major node when HOSTNAME was coded on the GROUP statement or was inherited from the HOSTNAME start option.
- DISPLAY EE or DISPLAY EEDIAG command was issued which specified a local HOSTNAME filter.

The complete message group in these situations is:

```
IST1893I NAME-TO-ADDRESS RESOLUTION FAILED
IST1910I LOCAL HOSTNAME value
[IST1911I value]
IST314I END
```

IST1909I

value is the host name owned by a remote node for which name-to-address resolution was attempted. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

value is the locally owned host name for which name-to-address resolution was attempted. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of value on IST1909I or IST1910I. IST1911I is repeated as often as necessary to display the entire character string.

System action:

- For LU-LU session processing:
 - In addition to its host name, if the target endpoint did not supply an IP address in the APPN RSCV, then session activation fails. If an IP address was supplied in addition to the host name, then processing continues with an attempt to use the supplied IP address to establish an IP connection.
- For VARY ACT processing:
 - The resource activation fails.
- For DISPLAY EE or DISPLAY EEDIAG processing:
 - The display command is not performed.

Operator response: Save the system log for problem determination. For DISPLAY EE or DISPLAY EEDIAG processing, determine whether the correct host name value is being resolved. If you specified an incorrect host name, issue the display command again specifying the correct host names.

System programmer response:

- For LU-LU session processing:
 - Determine if the correct host name value is being supplied by the remote node on the APPN RSCV, and if not, update the appropriate start option or XCA major node definition with the correct HOSTNAME.
 - If the correct host name is being supplied, verify that the name-to-address resolution mapping for the host name yields the desired static VIPA address (if on a z/OS host) of the node that owns the host name, or that it yields the correct network address translation (NAT) address to ultimately reach the target static VIPA address of the node that owns the host name. If the resolution is not correct, update the DNS zone files or local host files with the corrected name-to-address resolution. If the resolution is intended to yield an IPv6 address, ensure that the TCP/IP stack is enabled for IPv6 processing so that the resolver will search for IPv6 addresses.
- For VARY ACT command processing when activating an XCA major node:
 - Determine if the correct host name value is being resolved. If the activation is using an incorrect host name, do one of the following:
 - If the failing host name is a local host name acquired from the start option, use MODIFY VTAMOPTS to correct the HOSTNAME start option.
 - If the failing host name is a local host name defined on the GROUP definition statement, deactivate the XCA major node, define the correct HOSTNAME on the appropriate GROUP definition statement, and reactivate the XCA major node.
 - If the correct host name is being supplied, verify that the name-to-address resolution mapping for the host name yields the desired static VIPA address on this node. If the resolution is not correct, update the DNS zone files or the appropriate local hosts files with the corrected name-to-address resolution. If the resolution is intended to yield an IPv6 address, ensure that the TCP/IP stack is enabled for IPv6 processing and that at least one TCP/IP IPv6 interface is active, so that the resolver will search for IPv6 addresses.
 - If name-to-address resolution processing is taking a long time, (for example, because the SEARCH directive in the TCP/IP Resolver Configuration file specifies a large number of domain names) the resolution attempt might be abandoned by VTAM before it can successfully complete due to the setting of the IPRESOLV operand on the PORT definition statement associated with the XCA major node. If that is the case, increase the value of the IPRESOLV operand on the PORT definition statement.
- For VARY ACT command processing when activating a switched major node:

IST1894I

- Determine if the correct host name value is being resolved. If the activation is using the incorrect host name, deactivate the switched major node, define the correct HOSTNAME on the appropriate PATH definition statement, and reactivate the switched major node.
- If the correct host name is being supplied, verify that the name-to-address resolution mapping for the host name yields the desired static VIPA address (if on a z/OS host) of the node that owns the host name, or that it yields the correct network address translation (NAT) address to ultimately reach the target static VIPA address of the node that owns the host name. If the resolution is not correct, update the DNS zone files or the appropriate local hosts files with the corrected name-to-address resolution. If the resolution is intended to yield an IPv6 address, ensure that the TCP/IP stack is enabled for IPv6 processing so that the resolver will search for IPv6 addresses.
- If name-to-address resolution processing is taking a long time, (for example, because the SEARCH directive in the TCP/IP Resolver Configuration file specifies a large number of domain names) the resolution attempt might be abandoned by VTAM before it can successfully complete due to the setting of the IPRESOLV operand on the PATH definition statement. If that is the case, increase the value of the IPRESOLV operand on the PATH definition statement.
- For DISPLAY EE or DISPLAY EEDIAG command processing:
 - If the correct host name is being supplied on the display command, verify the following:
 - The name-to-address resolution mapping for the host name yields the correct static VIPA address (if on a z/OS or OS/390® host) of the node that owns the host name.
 - If network address translation (NAT) is in use, the name-to-address resolution mapping for the host name yields the correct NAT address to ultimately reach the target static VIPA address of the node that owns the host name.
 - If the resolution is not correct, update the DNS zone files or the appropriate local hosts files with the corrected name-to-address resolution. If the resolution is intended to yield an IPv6 address, ensure that the TCP/IP stack is enabled for IPv6 processing so that the resolver searches for IPv6 addresses.

Routing code: 2

Descriptor code: 5

IST1894I *value1* IGNORED - INCOMPATIBLE WITH *value2*

Explanation: VTAM issues this message when one start option or definition statement operand is not processed because a mutually exclusive start option or definition statement was also specified. This message is issued when either of the following situations arise:

- A conflict between two start options during START command processing.
- A conflict between two definition statement operands during VARY ACT processing of a major node.

When issued during START command processing:

- *value1* is the name of the start option that will not be processed because of the start option conflict.
- *value2* is the name of the start option that will be processed, despite the start option conflict.

value1 and *value2* are on the same definition statement.

When issued during VARY ACT command processing:

- *value1* is the name of the definition statement operand that will not be processed because of the conflict with the second definition statement operand.
- *value2* is the name of the definition statement operand that will be processed, despite the conflict with the first definition statement operand.

System action:

- For VTAM START command processing, VTAM processes the value for *value2* while ignoring the coding of *value1*. Processing continues for the remaining start options.
- For VARY ACT command processing, VTAM processes the value for *value2* while ignoring the coding of *value1*. Processing continues for any remaining definition statement operands on the major node definition deck.

Operator response:

- For VTAM START command processing, if *value1* is the preferred setting to be enforced, issue MODIFY VTAMOPTS, specifying the desired *value1* setting, to deactivate the *value2* setting and activate the *value1* setting.
- For VARY ACT command processing, if *value1* is the preferred operand to be enforced, issue VARY INACT to deactivate the major node, remove *value2* from the definition deck, and then issue VARY ACT to activate the major node with the desired operand in effect.

System programmer response:

- For VTAM START command processing, correct the start option setting in ATCSTRxx to remove the start option that is not required.
- For VARY ACT command processing, modify the definition deck to remove the definition statement operand that is not required.

Routing code: 2**Descriptor code:** 5**IST1895I** *value1* RESET - INCOMPATIBLE WITH *value2*

Explanation: VTAM issues this message when the start option specified on a MODIFY VTAMOPTS command is mutually exclusive with a start option already active for the node. The active start option is deactivated and the start option specified on the MODIFY command is activated.

value1 is the name of the active start option that will be deactivated due to the conflict with the start option specified on the MODIFY VTAMOPTS command.

value2 is the name of the start option that was specified on the MODIFY VTAMOPTS command.

System action: VTAM processes *value2*, and if successful, resets *value1*. Processing continues for any remaining start options specified on the MODIFY command.

Operator response: If *value1* is the preferred setting, issue MODIFY VTAMOPTS, specifying the *value1* setting.

System programmer response: None.

Routing code: 2**Descriptor code:** 5**IST1896I** VNNNAME *nodename*

Explanation: VTAM issues this message as part of a group of messages in response to failure to activate an Enterprise Extender line. The first message in the group is IST1899I. See the explanation of that message for a complete description.

Routing code: 2**Descriptor code:** 5**IST1897I** *line* ACTIVATION FAILED - TCPNAME START OPTION REQUIRED

Explanation: This message is displayed when an Enterprise Extender line activation fails because no value was specified in the TCPNAME start option. This message is issued when all of the following conditions are true:

- The IPADDR or HOSTNAME parameter is specified on any Enterprise Extender GROUP definition statement.
- Running in a CINET TCP/IP environment (Common INET - multiple TCP/IP stacks.) If OMVS is not initialized at Enterprise Extender line activation, a Common INET environment is assumed.

line is the name of the Enterprise Extender line that failed activation.

System action: Enterprise Extender line activation failed.

Operator response: Temporarily, you can issue a MODIFY VTAMOPTS command and specify the value of the TCPNAME start option. Then reissue the VARY ACT command to activate the Enterprise Extender line. Contact the system programmer.

System programmer response: Code the TCPNAME as a VTAM start option.

Routing code: 2

Descriptor code: 5

IST1898I *line* ACTIVATION FAILED - IPADDR OR HOSTNAME REQUIRED

Explanation: If more than one GROUP is defined in the Enterprise Extender XCA major node, and either IPADDR or HOSTNAME is specified on any of the GROUPs, then IPADDR or HOSTNAME must be supplied on all of the GROUPs, or either the IPADDR or HOSTNAME start option must be specified.

line is the name of the Enterprise Extender line that failed activation.

System action: Enterprise Extender line activation failed.

Operator response: Issue MODIFY,VTAMOPTS,IPADDR=*ipaddress* or MODIFY VTAMOPTS,HOSTNAME=*hostname*, then reactivate the Enterprise Extender line. Contact the system programmer with the system log.

System programmer response: Code the required IPADDR or HOSTNAME on all the GROUP definition statements in the Enterprise Extender XCA major node, or add either the IPADDR or HOSTNAME start option to the start file. Deactivate and reactivate the Enterprise Extender XCA major node to pick up the parameter changes.

Routing code: 2

Descriptor code: 5

IST1899I *line* ACTIVATION FAILED - VRN INFORMATION MUST BE UNIQUE

Explanation: This message is the first message in a group of messages displayed when the same VNNAME is defined more than once in the Enterprise Extender XCA major node but the IPADDR value, or HOSTNAME value, or IP address resolved from the HOSTNAME value associated with each VNNAME definition is not unique.

A complete description of the message group follows the example.

```
IST1899I line ACTIVATION FAILED - VRN INFORMATION MUST BE UNIQUE
IST1896I VNNAME nodename
IST1680I type IPADDR ipaddress
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST314I END
```

IST1680I

This message is issued to display the IP address associated with the VNNAME definition. If message IST1910I is also present, then the IP address was obtained using the name-to-address resolution of *value*. If IST1910I is not displayed, then the IP address was specified as the IPADDR operand associated with the VNNAME definition.

type is LOCAL.

ipaddress is the IP address of the static VIPA used on this node. An ****NA**** in this field indicates that the value is not available because the name-to-address resolution of the HOSTNAME value has not completed or was unsuccessful.

IST1896I

nodename is the network qualified name of the VNNAME definition with the non-unique information.

IST1899I

line is the name of the Enterprise Extender line that failed activation.

IST1910I

This message is issued when the host name associated with the VNNAME definition is not unique, or the host name is unique but the local static VIPA address that was obtained after name-to-address resolution of *value* is not unique.

value is the host name, or the first 45 characters of the host name, associated with the VNNAME definition. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

System action: The Enterprise Extender line is failed.

Operator response: Contact the system programmer.

System programmer response: Correct the Enterprise Extender definition statements, or the DNS zone files or appropriate local hosts files, such that the VRN information for VNNAME is unique.

- If IST1680I is included in the message group, but IST1910I is not, then correct the IPADDR value on the appropriate VNNAME definition so that the VNNAME/IPADDR pair is unique.
- If IST1910I is included in the message group, then either correct the HOSTNAME value on the appropriate VNNAME definition so that the VNNAME/HOSTNAME pair is unique, or correct the DNS zone files or local hosts file such that value will resolve to a unique static VIPA address.

Deactivate and reactivate the Enterprise Extender major node.

Routing code: 2

Descriptor code: 5

IST1900I ASSIGNED IP ADDRESS *ip_address*

Explanation: VTAM issues this message in response to the first VARY ACTIVATE command for an Enterprise Extender link. This message displays the local IP address (static VIPA) that will be used by all Enterprise Extender connections. This static VIPA is assigned by TCP/IP during port activation when both of the following conditions are true:

- The IPADDR or HOSTNAME parameter is not coded as a start option or on any of the Enterprise Extender GROUP definition statements.
- The TCPNAME start option has been specified.

ip_address is the value of the IP address. If ****NA**** is displayed, the value is not available.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1901I LINES UNDER GROUP: *grpname*

Explanation: This message is a header line that VTAM issues in response to a DISPLAY ID command for an external communication adapter (XCA) major node that defines an Enterprise Extender connection. This message is repeated in the display output when the lines defined under a particular Enterprise Extender GROUP match the requested SCOPE operand of the DISPLAY command.

grpname is the symbolic name of the line group in which the line being displayed is defined.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1902I **GROUP =** *grpname*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for an external communication adaptor (XCA) major node that defines an Enterprise Extender connection. This message is repeated for each Enterprise Extender GROUP definition statement (predefined connections) for the XCA major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1903I **FAILURE OVER VRN** *vrnname* **TO CP** *partername*

Explanation: This message indicates the occurrence of a dial failure or a connection INOP for a connection over the named Virtual Routing Node (VRN) to the named partner node. This message will appear after either message IST590I (for a dial out failure) or IST1196I (for a connection INOP). IST1903I can appear as a single line message or as the first message in a message group. The description of the message group follows the example.

```
IST1903I FAILURE OVER VRN vrnnameTO CP partername
IST2050I THIS PATH WILL NOT BE SELECTED FOR UNRCHTIM = seconds SECONDS
[IST2186I THIS PATH WILL NOT BE SELECTED FOR UNRCHTIM SECONDS]
IST314I END
```

IST1903I

- *vrnname* is the name of the VRN over which the failure occurred.
- *partername* is the CP name of the node adjacent to the VRN that was the endpoint of the failed dial or INOPed connection.
- This message is an indication that the named partner node cannot be reached at this time using the connection network path across the named VRN. This connection network path might have been chosen for this connection because it had a lower weight than any alternate path available at one of the following times:
 - The time of this failing dial
 - The time of the dial that set up the existing connection
 - The time of a path switch to this connection network path for an existing RTP connection
- If IST1903I is issued as a single line message, and this path still has the lowest weight of any available path to the partner node, any attempt to redial the partner node will continue to try the path over this particular VRN, which will probably result in failure until the underlying problem with this path is corrected.

IST2050I

- *seconds* is the number of seconds that the partner node through this VRN (both identified in message IST1903I) is considered to be unreachable.
- This message is issued on a network node. It is issued as part of a group with IST1903I when the unreachable time value on the UNRCHTIM start option is specified or the UNRCHTIM operand is specified on a PORT or GROUP definition statement that defines this VRN in an Enterprise Extender Extended Communications Adapter (XCA) major node.

See the UNRCHTIM start option in z/OS Communications Server: SNA Resource Definition Reference for more information.

IST2186I

This message is issued on an end node. It is issued as part of a group with IST1903I when the UNRCHTIM start option is specified or the UNRCHTIM operand is specified on a PORT or GROUP definition statement that defines this VRN in an Enterprise Extender Extended Communications Adapter (XCA) major node. See UNRCHTIM start option in z/OS Communications Server: SNA Resource Definition Reference and Unreachable time (UNRCHTIM) considerations in z/OS Communications Server: SNA Operation for more information about UNRCHTIM.

System action: Processing continues. When IST2050I is issued with IST1903I, the route to the unreachable partner node through the named Enterprise Extender VRN will not be considered for a session path until the unreachable time expires. If the unreachable time expires and this path still has the lowest weight of any available path to the partner node, the path over this particular Enterprise Extender VRN will be selected on the next attempt to redial the partner node, which might again result in failure if the underlying problem with the connection has not been corrected. That dial failure will cause the unreachable time to be set again to prevent selection of the path through this Enterprise Extender VRN to the unreachable partner node for the period of time specified for that Enterprise Extender VRN. This will continue until the problem with the connection path is corrected.

Operator response: If message IST2050I is included with message IST1903I, the connection path over the named Enterprise Extender VRN will remain unavailable for the number of seconds specified as the unreachable time for that VRN, to provide time for you to find and correct the source of the underlying problem. Issue the `DISPLAY TOPO,LIST=UNRCHTIM` command to display the unreachable partner information and use the output to help identify the location of the failure.

If message IST2186I is included with message IST1903I, the connection path over the named Enterprise Extender VRN will remain unavailable for the amount of time specified by the UNRCHTIM start option to provide time for you to find and correct the source of the underlying problem. The UNRCHTIM value depends on which version of z/OS Communications Server is in use on the end node's network node server (NNS). If z/OS Communications Server V1R6 or V1R7 is in use on the end node's NNS, the value comes from the end node's configuration (either the UNRCHTIM start option or the UNRCHTIM operand on the PORT or GROUP definition statement that defines the VRN). If z/OS Communications Server V1R8 or later is in use on the end node's NNS, the value comes from the NNS's configuration (either the UNRCHTIM start option or the UNRCHTIM operand on the PORT or GROUP definition statement that defines the VRN). Issue the `DISPLAY TOPO,LIST=UNRCHTIM` command on the NNS to display the unreachable partner information. This information includes the expiration time (the time at which the path will no longer be considered unreachable). This information can also be used to help identify the location of the failure.

If the problem has been corrected and the display of unreachable partner information indicates that there are paths through Enterprise Extender connection networks that will remain unavailable for some time, then you can issue the `MODIFY TOPO,FUNCTION=CLRUNRCH` command to clear the unreachable partner information to make that path available for route calculation again. If you are receiving the IST1903I message group repetitively, you can increase the value of the UNRCHTIM start option using the `MODIFY VTAMOPTS` command or change the value of the UNRCHTIM operand on the PORT or GROUP statement in the EE XCA major node in VTAMLST and then use the `VARY ACT,ID=xca_major_node,UPDATE=ALL` command to change the value dynamically. See UNRCHTIM start option in z/OS Communications Server: SNA Resource Definition Reference and Unreachable time (UNRCHTIM) considerations in z/OS Communications Server: SNA Operation for more information about UNRCHTIM.

If IST1903I is issued as a single line message, to avoid repeated failures, you can temporarily make the connection path over the named VRN unavailable until the source of the underlying problem is found and corrected.

First, if it is active, turn off the start option PSRETRY. Issue the `MODIFY VTAMOPTS, PSRETRY=(0,0,0,0)` command to prevent any existing RTPs that are successfully using the named VRN to reach their destination endpoints from path-switching to a less attractive route. Then take one of the following actions to make the named VRN unavailable:

- Issue the `MODIFY TOPO FUNCTION=QUIESCE, SCOPE=NETWORK` command specifying the VRN named in IST1903I to remove the VRN from consideration by Topology in route calculations. Quiescing the VRN will make all paths through this VRN unavailable for all nodes connected to the connection network, not just the path identified in message IST1903I.
- Issue the `VARY INACT` command for the local link to the VRN.
- Increase the weight of this connection network path by issuing the `MODIFY TGP` command for the TGs to and from the VRN.

You might need to take the above actions (disabling PSRETRY and the single action chosen from the list above) from both this node and the partner node to successfully route around the connection network problem. When you have taken these actions, use established procedures to diagnose the underlying problem at both this node and the partner node to find and correct the problem.

When the problem has been corrected, reverse the actions taken above so the current connections and future connection attempts will be rerouted over the connection network path. Depending on which action was taken above, do one of the following things:

- Issue the `MODIFY TOPO FUNCTION=NORMAL, SCOPE=NETWORK` command for the named VRN.
- Reactivate the local link to the VRN.

IST1904I • IST1909I

- Issue the MODIFY TGP command for the TGs to and from the VRN to decrease the weight of the connection network path.

You can re-enable PSRETRY. This will cause existing RTPs to periodically check for a lower weight path and switch to it if one is available.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1904I *option = current_value*

| **Explanation:** VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS or
| DISPLAY INOPDUMP command. The first message in these groups are IST1188I and IST1865I, respectively. See the
| explanation of those messages for a complete description.

Routing code: 2

Descriptor code: 5

IST1905I **START OPTION = value**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1906I **CURRENT VALUE = current_value**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1907I **ORIGINAL VALUE = original_value**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1908I **ORIGIN = origin**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY VTAMOPTS command. The first message in the group is IST1188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1909I **REMOTE HOSTNAME value**

Explanation: VTAM issues this message as part of a group of messages in response to DISPLAY ID command processing for a remote node connected using Enterprise Extender.

VTAM also issues this message as part of several message groups. These message groups begin with message IST149I, IST1891I, IST1892I, IST1893I, IST2001I, IST2065I, IST2066I, IST2119I, IST2130I, or IST2145I. See the explanations of these messages for a complete description.

value is the host name that was used to acquire the remote IP address associated with this connection to the remote node. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages. See the description of IST1911I for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1910I LOCAL HOSTNAME *value*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for one of the following:

- A remote node connected using Enterprise Extender.
- An XCA major node representing Enterprise Extender connections.
- A GROUP definition statement associated with an XCA major node that represents Enterprise Extender connections.

VTAM also issues this message as part of several message groups. These message groups begin with message IST1891I, IST1892I, IST1893I, IST1899I, IST2000I, IST2001I, IST2002I, IST2065I, IST2066I, IST2119I, IST2130I or IST2145I. See the explanations of those messages for a complete description.

value is the host name that was used to acquire the local static VIPA address associated with this end of the Enterprise Extender connections. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed using one or more IST1911I messages. See IST1911I for more information about that message.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1911I *value*

Explanation: VTAM issues this message as part of a group of messages in response to DISPLAY ID command processing for one of the following:

- A remote node connected using Enterprise Extender
- An XCA major node representing Enterprise Extender connections
- A GROUP definition statement associated with an XCA major node that represents Enterprise Extender connections

VTAM also issues this message as part of several message groups. These message groups begin with message IST149I, IST1188I, IST1891I, IST1892I, IST1893I, IST1899I, IST2000I, IST2001I, IST2002I, IST2065I, IST2066I, IST2119I, IST2130I or IST2145I. See the explanations of those messages for a complete description.

value is the continuation information for either IST1909I or IST1910I, when the value being displayed is too long to fit on the individual message. See the individual message for a complete description.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

IST1912I • IST1915I

Descriptor code: 5

IST1912I IP ADDRESS *ipaddr*

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY ID,IDTYPE=IPADDR command when multiple LUs are associated with the specified TN3270 client IP address. A complete description of the message group follows.

```
IST1912I IP ADDRESS ipaddr
IST1913I LUNAME          PORT
IST1914I netid.luname   portno
:
:
IST314I END
```

IST1912I

Message IST1912I contains the IP address specified in the DISPLAY request.

ipaddr is the IP address specified in the DISPLAY request.

IST1913I

Message IST1913I is a column header for IST1914I.

IST1914I

Message IST1914I is issued for each LU associated with the specified TN3270 client IP address.

netid.luname is the network-qualified name of the LU.

portno is the port number associated with the IP address. The IP address and port number identify the remote TN3270 client.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1913I LUNAME PORT

Explanation: This message is issued as part of a group of messages that VTAM issues in response to a DISPLAY ID,IDTYPE=IPADDR command when multiple LUs are associated with the specified TN3270 client IP address. The first message in the group is IST1912I. See the description of that message for a detailed explanation.

Routing code: 2

Descriptor code: 5

IST1914I *netid.luname portnum*

Explanation: This message is issued as part of a group of messages that VTAM issues in response to a DISPLAY ID,IDTYPE=IPADDR command when multiple LUs are associated with the specified TN3270 client IP address. The first message in the group is IST1912I. See the description of that message for a detailed explanation.

Routing code: 2

Descriptor code: 5

IST1915I *line* ACTIVATION FAILED - VNNAME ALREADY ACTIVE AS GLOBAL

Explanation: If the same VNNAME is defined more than once in the Enterprise Extender XCA major node, the VNTYPE associated with the virtual routing node (VRN) must be the same. In this case, a VRN is being activated with a VNTYPE of LOCAL, but a VRN with the same VNNAME is already activate with a VNTYPE of GLOBAL.

line is the name of the Enterprise Extender line that failed activation.

System action: The Enterprise Extender line activation is failed.

Operator response: Contact the system programmer.

System programmer response: Correct the Enterprise Extender definition statements to ensure that all virtual routing nodes with the same VNNAME are defined with the same VNTYPE. Then deactivate and reactivate the XCA major node.

Routing code: 2

Descriptor code: 5

IST1916I *line* ACTIVATION FAILED - VNNAME ALREADY ACTIVE AS LOCAL

Explanation: If the same VNNAME is defined more than once in the Enterprise Extender XCA major node, the VNTYPE associated with the virtual routing node (VRN) must be the same. In this case, a VRN is being activated with a VNTYPE of GLOBAL, but a VRN with the same VNNAME is already active with a VNTYPE of LOCAL.

line is the name of the Enterprise Extender line that failed activation.

System action: The Enterprise Extender line activation fails.

Operator response: Contact the system programmer.

System programmer response: Correct the Enterprise Extender definition statements to ensure that all virtual routing nodes with the same VNNAME are defined with the same VNTYPE. Then deactivate and reactivate the XCA major node.

Routing code: 2

Descriptor code: 5

IST1917I *option1* IN CONFLICT WITH *option2* - BOTH OPTIONS IGNORED

Explanation: This message is issued in response to a MODIFY VTAMOPTS command specifying two start options that cannot be modified at the same time. See the z/OS Communications Server: SNA Resource Definition Reference for an explanation of why the two start options are in conflict.

option1 is the name of one of the start options in conflict on the MODIFY command.

option2 is the name of the second start option that is in conflict on the MODIFY command.

System action: *option1* and *option2* are ignored. Any other start option specified on the MODIFY command is processed independently of these start options.

Operator response: Specify either MODIFY VTAMOPTS,*option1*=value or MODIFY VTAMOPTS,*option2*=value, but not both. See the z/OS Communications Server: SNA Operation for information about MODIFY VTAMOPTS.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1919I INOPCODES FOR MODULE *modulename*:

Explanation: VTAM issues this message as part of a group of messages in response to a MODIFY or DISPLAY INOPCODE command. A complete description of the message group follows:

When MODIFY INOPCODE:

```
IST1919I INOPCODES FOR MODULE modulename:
IST1920I  DUMP ENABLED:
IST1921I   inopcode_list
IST1922I  DUMP DISABLED:
IST1921I   inopcode_list
IST223I  MODIFY COMMAND COMPLETED
IST314I  END
```

When DISPLAY INOPCODE:

IST1920I • IST1921I

```
IST350I DISPLAY TYPE = INOPCODE
IST1919I INOPCODES FOR MODULE modulename:
IST1920I   DUMP ENABLED:
IST1921I     inopcode_list
IST1922I   DUMP DISABLED:
IST1921I     inopcode_list
[IST1919I INOPCODES FOR MODULE modulename:]
[IST1920I   DUMP ENABLED:           ]
[IST1921I     inopcode_list       ]
[IST1922I   DUMP DISABLED:       ]
[IST1921I     inopcode_list       ]
.
.
IST314I END
```

IST350I

This message identifies the type of information in the display and is always INOPCODE for this message group.

IST1919I

This message is a header for subsequent IST1920I, IST1921I, and IST1922I messages.

modulename identifies the VTAM modules for which the INOPCODES are being reported.

IST1920I

This message is a header for subsequent IST1921I messages. This message does not appear (nor will the IST1921I continuation message appear) if there are no INOPCODEs that are dump enabled in *modulename*.

IST1921I

inopcode_list specifies up to 14 INOPCODEs in *modulename* that are dump enabled or dump disabled.

IST1922I

This message is a header for subsequent IST1921I messages. This message does not appear (nor will the IST1921I continuation message appear) if there are no INOPCODEs that are dump disabled in *modulename*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1920I DUMP ENABLED:

Explanation: VTAM issues this message as part of a group of messages in response to a MODIFY or DISPLAY INOPCODE command. See IST1919I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1921I *inopcode_list*

Explanation: VTAM issues this message as part of a group of messages in response to a MODIFY or DISPLAY INOPCODE command. See IST1919I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1922I DUMP DISABLED:

Explanation: VTAM issues this message as part of a group of messages in response to a MODIFY or DISPLAY INOPCODE command. See IST1919I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST1923I MODULE *modulename* INOPCODE *inopcode* DOES NOT EXIST

Explanation: VTAM issues this error message in response to a MODIFY INOPCODE command that specified *modulename* and *inopcode*. This message is issued when *modulename* is a valid VTAM module that contains INOPCODEs, but *inopcode* is not one of the codes used by *modulename*.

modulename is the name specified on the MODIFY INOPCODE command.

inopcode is the code specified on the MODIFY INOPCODE command.

System action: Processing continues.

Operator response: Issue DISPLAY NET,INOPCODE,MODULE=*modulename* and check the list of INOPCODEs returned. Reissue the command with the correct INOPCODE.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1924I *modulename* DOES NOT EXIST OR DOES NOT CONTAIN INOPCODES

Explanation: VTAM issues this error message in response to a MODIFY or DISPLAY INOPCODE command that specified *modulename*. This message is issued when *modulename* is not a valid VTAM module or *modulename* is a valid VTAM module but does not use any INOPCODEs.

modulename is the name specified on the MODIFY or DISPLAY INOPCODE command.

System action: Processing continues.

Operator response: Issue the DISPLAY INOPCODE command without the MODULE operand. The response shows all VTAM modules that use INOPCODEs. If necessary, correct *modulename* and reissue the MODIFY or DISPLAY INOPCODE command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1925I SOCKET OPENED BY SNAMGMT SERVER SUBTASK

Explanation: VTAM issues this message when the SNA Network Management Server subtask successfully opens a Listener socket. The SNA Network Management Interface is ready to process connection requests from client applications.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1926I SNAMGMT SERVER IS UNABLE TO ACCEPT CONNECTION REQUESTS

Explanation: This message is the first of a group of messages that VTAM issues when the SNA Network Management Server is unable to accept connection requests from client applications. This occurs when VTAM cannot establish a Listener socket. The second message in the message group describes the specific failure that occurred. The message group follows:

```
IST1926I    SNAMGMT SERVER IS UNABLE TO ACCEPT CONNECTION REQUESTS
IST1927I    SOCKET callname CALL FAILED - RC = rtncode RSN = reason
IST314I    END
```

IST1926I

This message indicates that the SNA Network Management Server is not able to successfully open a socket to accept connection requests from client applications.

IST1927I

A UNIX System Services function call issued by the SNA Network Management Server failed, which prevents it from accepting connection requests.

callname is the name of the UNIX System Services function call that failed. These function calls are listed and described in the z/OS UNIX System Services Programming: Assembler Callable Services Reference.

rtncode is the return code value, in decimal, returned from the UNIX System Services function call that failed. These return codes are listed and described in the z/OS UNIX System Services Messages and Codes.

reason is the reason code value, in hexadecimal, returned from the UNIX System Services function call that failed. The format of the 4-byte reason code is explained in the introduction to the Reason Code section of the z/OS UNIX System Services Messages and Codes, where the reason codes are listed.

System action: The SNA Network Management Server socket remains closed and no client connection requests are accepted.

Operator response: Save the system log for problem determination.

System programmer response: Correct the error indicated by the UNIX System Services function call, return code and reason code identified by IST1927I.

Routing code: 2

Descriptor code: 5

IST1927I SOCKET *callname* CALL FAILED - RC = *rtncode* RSN = *reason*

Explanation: VTAM issues this message in the following situations:

- As part of a group of messages when a UNIX System Services function call issued by the SNA Network Management Server fails, which prevents it from accepting connection requests. The first message in the group is IST1926I. See the description of that message for more information about the message group.
- As part of a group of messages when a UNIX System Services function call issued by the SNA Network Management Server fails, which causes the Server to close a connection with a client application. The first message in the group is IST1933I. See the description of that message for more information about the message group.

Routing code: 2

Descriptor code: 5

IST1928I SNAMGMT CONNECTION TO *userid* IS ACTIVE

Explanation: VTAM issues this message when a connection to the SNA Network Management Server from a client application opens.

userid is the user ID that owns the client application.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1929I SNAMGMT CONNECTION TO *userid* HAS ENDED

Explanation: VTAM issues this message when a connection to the SNA Network Management Server from a client application ends.

userid is the user ID that owns the client application. If the user ID is unknown, VTAM displays ***NA***.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1930I SOCKET CLOSED BY SNAMGMT SERVER SUBTASK

Explanation: VTAM issues this message when the SNA Network Management Server subtask closes the Listener socket. No connection requests from client applications will be processed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1931I SNAMGMT CONNECTION REFUSED FOR *userid*

Explanation: VTAM issues this message when the SNA Network Management Server refuses a connection request from a client application because the VTAM capacity for simultaneous client connections has been reached.

userid is the user ID that owns the client application. If the user ID is unknown, VTAM displays ***NA***.

System action: Processing continues. The SNA Network Management Server continues to process existing connections.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1932I SNAMGMT SECURITY CHECK FAILED FOR *userid*

Explanation: VTAM issues this message when a connection to the SNA Network Management Server from a client application is not authorized. VTAM closes the connection.

userid is the user ID of the application that attempted the connection to the SNA Network Management Server. If the user ID is unknown, VTAM displays ***NA***.

System action: Processing continues. The SNA Network Management Server continues to accept new connections and process existing connections.

Operator response: Contact the security administrator.

System programmer response: If this user should be authorized to use the SNA Network Management Server, update the security server to allow this user access to the SNA Network Management Server.

Routing code: 2

IST1933I • IST1935I

Descriptor code: 5

IST1933I SNAMGMT SERVER CLOSING CONNECTION TO *userid*

Explanation: VTAM issues this message as the first in a group of messages when a UNIX System Services function call issued by the SNA Network Management Server fails, which causes the Server to close a connection with a client application. The SNA Network Management Server is still able to accept client connection requests, and other existing connections are not disrupted.

```
IST1933I  SNAMGMT SERVER CLOSING CONNECTION TO userid
IST1927I  SOCKET callname CALL FAILED - RC = rtncode RSN = reason
IST314I   END
```

IST1933I

This message indicates that the SNA Network Management Server is closing a connection with a client application owned by *userid*.

userid is the user ID that owns the client application whose connection is being closed. If the user ID is unknown, VTAM displays *****NA*****.

IST1927I

callname is the name of the UNIX System Services function call that failed. These functions are listed and described in the z/OS UNIX System Services Programming: Assembler Callable Services Reference.

rtncode is the return code value, in decimal, from the UNIX System Services function call that failed. These return codes are listed and described in the z/OS UNIX System Services Messages and Codes.

reason is the reason code value, in hexadecimal, from the UNIX System Services function call that failed. The format of the 4-byte reason code is explained in the introduction to the Reason Code section of the z/OS UNIX System Services Messages and Codes, where the reason codes are listed.

System action: VTAM closes the client connection for which this error occurred. The SNA Network Management Server remains available to service existing connections and accept new connection requests.

Operator response: Save the system log for problem determination.

System programmer response: Correct the error indicated by the UNIX System Services function call, return code, and reason code identified by IST1927I.

Routing code: 2

Descriptor code: 5

IST1934I IDBLK = *idblk* IDNUM = *idnum*

Explanation: VTAM issues this message in response to a DISPLAY ID command for any type 1 or type 2 switched PU.

idblk is the value specified on the IDBLK parameter on the PU statement that defines the switched PU.

idnum is the value specified on the IDNUM parameter on the PU statement that defines the switched PU. *idblk* and *idnum* are used together to identify the PU.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1935I RIF = *route_information*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a switched PU defined for an external communication adapter (XCA) LAN connection.

route_information is the hexadecimal value of the Route Information Field (RIF) for a LAN connection. See RFC 1042 for more information about this field. See Appendix F, "Related protocol specifications," on page 1261 for information about accessing RFCs.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1936I **LOCADDR = *locaddr***

Explanation: VTAM issues this message in response to a DISPLAY ID command for a logical unit.

locaddr is the value specified on the LOCADDR parameter on the LU statement that defines the logical unit.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1937I **PATH SWITCH REASON: INITIATED BY REMOTE PARTNER**

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

IST1938I **APPC = *value***

Explanation: VTAM issues this message in response to a DISPLAY ID command for a VTAM application.

value is the APPC value specified on the APPL definition statement for the application being displayed.

- YES indicates that the application is APPC capable.
- NO indicates that the application is not APPC capable.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1939I **INACT FINAL = *status***

Explanation: VTAM issues this message in response to a DISPLAY ID command for a dependent LU requester (DLUR) that is represented by a CDRSC.

status is YES to indicate that a VARY INACT command with FINAL=YES was issued against the DLUR. This would indicate that there are no immediate plans to reactivate this node as a DLUR. To enable the DLUR again, issue a VARY ACT command on the DLUR CDRSC. See z/OS Communications Server: SNA Operation for additional information about the VARY INACT FINAL=YES command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

IST1940I **MODIFY COMMAND REJECTED - SNAMGMT ALREADY ACTIVE**

Explanation: VTAM issues this message when the MODIFY VTAMOPTS,SNAMGMT=YES command has been issued and the SNA Network Management Server is already active.

System action: VTAM rejects the MODIFY VTAMOPTS,SNAMGMT=YES command.

Operator response: The SNA Network Management Server subtask may be closing the Listener socket due to either an abend of the subtask or a recently-issued MODIFY VTAMOPTS,SNAMGMT=NO command. If this is the case and you want to reactivate the SNA Network Management Server subtask after this processing completes, wait until VTAM issues message IST1930I and then reissue the MODIFY VTAMOPTS,SNAMGMT=YES command.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1941I MODIFY COMMAND REJECTED - SNAMGMT ALREADY SET TO NO

Explanation: VTAM issues this message when the MODIFY VTAMOPTS,SNAMGMT=NO command has been issued and the SNAMGMT start option is already set to NO.

System action: VTAM rejects the MODIFY VTAMOPTS,SNAMGMT=NO command.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1942I APPN LOCATE SEARCH STEPS ATTEMPTED

Explanation: VTAM issues this message as part of a subgroup of messages to provide locate search failure information when a locate search fails to find the destination LU. This subgroup is issued only if the LSIRFMSG function is active for this node and the APPN search fails.

```
IST1942I APPN LOCATE SEARCH STEPS ATTEMPTED
[IST1943I DIRECTED SEARCH TO A SERVED END NODE]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1944I DIRECTED SEARCH TO A NETWORK NODE]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1945I DIRECTED SEARCH TO A BORDER NODE]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1946I LOCAL SUBAREA SEARCH]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1947I BROADCAST SEARCH TO SERVED END NODES]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1948I DIRECTED SEARCHES TO BORDER NODES]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1949I DIRECTED SEARCH TO A CENTRAL DIRECTORY SERVER]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1950I DIRECTED SEARCHES TO ALTERNATE CENTRAL DIRECTORY SERVERS]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1951I BROADCAST SEARCH TO NETWORK NODES]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
[IST1952I DIRECTED SEARCHES TO INTERCHANGE NODES]
[IST1953I search_nodename - SENSE code FROM reply_nodename]
IST314I      END
```

IST1942I

This message is a header message for APPN locate failure information.

IST1943I

This message is a header message for information displayed in message IST1953I for a failed directed search to a served end node.

IST1944I

This message is a header message for information displayed in message IST1953I for a failed directed search to a network node.

IST1945I

This message is a header message for information displayed in message IST1953I for a failed directed search to a border node.

IST1946I

This message is a header message for information displayed in message IST1953I for a failed search of the local subarea.

IST1947I

This message is a header message for information displayed in message IST1953I for a failed broadcast search to served end nodes.

IST1948I

This message is a header message for information displayed in message IST1953I for failed directed searches to border nodes.

IST1949I

This message is a header message for information displayed in message IST1953I for a failed directed search to a central directory server.

IST1950I

This message is a header message for information displayed in message IST1953I for failed directed searches to alternate central directory servers.

IST1951I

This message is a header message for information displayed in message IST1953I for failed broadcast search to network nodes.

IST1952I

This message is a header message for information displayed in message IST1953I for failed directed searches to interchange nodes.

IST1953I

This message lists the name of a node to which a locate search is sent, the sense code returned, and the name of the node that set the failing sense code. This message will be issued for each node searched during a search step. The messages appear in the order that the replies were received.

search_nodename is the network-qualified name of the node to which directory services attempted to send a locate search request.

code is the sense code returned in the locate reply. See the z/OS Communications Server: IP and SNA Codes for a description of sense.

reply_nodename is the node that set the sense code that was returned on the locate reply. If the *reply_nodename* value is *****NA*****, then the CV35 on the locate reply did not contain a procedure origin name.

System action: The locate search failed.

Operator response: Save the system log for problem determination.

System programmer response: Use the output to assist in determining the cause of the problem. You might need to work with system programmers in other networks to determine the failures for resources located in other networks.

Routing code: 8

Descriptor code: 4

IST1943I DIRECTED SEARCH TO A SERVED END NODE

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1944I DIRECTED SEARCH TO A NETWORK NODE

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

IST1945I • IST1950I

Descriptor code: 4

IST1945I DIRECTED SEARCH TO A BORDER NODE

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1946I LOCAL SUBAREA SEARCH

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1947I BROADCAST SEARCH TO SERVED END NODES

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1948I DIRECTED SEARCHES TO BORDER NODES

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1949I DIRECTED SEARCH TO A CENTRAL DIRECTORY SERVER

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1950I DIRECTED SEARCHES TO ALTERNATE CENTRAL DIRECTORY SERVERS

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1951I BROADCAST SEARCH TO NETWORK NODES

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1952I DIRECTED SEARCHES TO INTERCHANGE NODES

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1953I *search_nodename* - **SENSE** *code* **FROM** *reply_nodename*

Explanation: This message is part of a message subgroup that is issued with the IST663I message group when the LSIRFMSG and FSIRFMSG start options are enabled for this network node. The first message of the subgroup is IST1942I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 4

IST1954I TRL MAJOR NODE = *major_node_name*

Explanation: VTAM issues this message as part of a group of messages in response to:

- A DISPLAY TRL command
- A DISPLAY ID=*trl_element* command
- A DISPLAY INOPDUMP command
- A DISPLAY TNSTAT command

major_node_name is the name of TRL major node.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1955I STALL DETECTED FOR RTP *puname* **TO** *cpname*

Explanation: This unsolicited message is issued when HPR detects that data flow for an RTP pipe stalled. The data flow is considered stalled because the RTP partner requested retransmission of at least one NLP, but the request cannot be honored. It might be an indication of either a device problem or an internal software problem.

Tip: It is not unusual for a stall to be detected on an RTP pipe that is in the process of pathswitching.

puname is the name of the HPR PU.

cpname is the name of the CP at the other end of the pipe.

System action: HPR attempts to make an internal copy of the NLPs causing the data flow stall (known as NLP recovery). If the copy is successful the recovered NLPs are retransmitted. If the stall persists, IST1956I is issued every 30 seconds until the stall is alleviated.

IST1956I • IST1957I

Operator response: The operator can use the DISPLAY NET,ID=*puname* or DISPLAY NET,RTPS,STALL=YES commands to monitor stalled RTP pipes.

If the data flow stall persists, issue VARY *procname*,INACT,ID=*puname*,TYPE=FORCE to deactivate the HPR PU and end the hung sessions.

If you want VTAM to automatically deactivate stalled RTP pipes after a specified amount of time, use the HPRSTALL start option. See the HPRSTALL start option information in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: If data flow stalls are prevalent and persistent, contact VTAM support for instructions about gathering documentation for problem determination.

Routing code: 2

Descriptor code: 4

IST1956I STALL CONTINUES FOR RTP *puname* TO *cpname*

Explanation: This unsolicited message is issued at 30-second intervals as long as data flow continues to be stalled for an RTP pipe.

puname is the name of the HPR PU.

cpname is the name of the CP at the other end of the pipe.

System action: HPR continues to wait for the partner RTP to acknowledge receipt of the NLPs identified as causing the data flow stall. When all those NLPs are acknowledged, the data flow stall is considered alleviated and IST1957I is issued.

Operator response: Use the DISPLAY NET,ID=*puname* or DISPLAY NET,RTPS,STALL=YES commands to monitor stalled RTP pipes.

If the data flow stall persists, issue VARY *procname*,INACT,ID=*puname*,TYPE=FORCE to deactivate the HPR PU and end the stalled sessions.

If you want VTAM to automatically deactivate stalled RTP pipes after a specified amount of time, use the HPRSTALL start option. See the HPRSTALL start option information in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: If data flow stalls are prevalent and persistent, contact VTAM support for instructions about gathering documentation for problem determination.

Routing code: 2

Descriptor code: 4

IST1957I STALL ALLEVIATED FOR RTP *puname* TO *cpname*

Explanation: This unsolicited message is issued when HPR detects that a data flow stall for an RTP pipe has been alleviated. The RTP pipe data flow is back to normal.

puname is the name of the HPR PU.

cpname is the name of the CP at the other end of the pipe.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IST1958I **NUMBER OF ORPHANED BUFFERS = *orphaned_NLP_count***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1959I **DATA FLOW STATE = NORMAL**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1960I *puname cpname appncos switch congest stall sessions*

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a DISPLAY RTPS command. The first message of the subgroup is IST1695I. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST1961I **DATA FLOW STATE = STALLED**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1962I **APPNCOS = *appncos_name* - PRIORITY = NETWORK**

Explanation: VTAM issues this message for the following reasons:

- In response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route.
- When an RTP pipe is activated and deactivated, this message might be issued as part of a group of messages headed by IST1488I. See the explanation for that message for a complete description.

This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **network**.

appncos_name is the APPNCOS name used in the direction of the other endpoint of the RTP pipe.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1963I APPNCOS = *appncos_name* - PRIORITY = HIGH

Explanation: VTAM issues this message for the following reasons:

- In response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route.
- When an RTP pipe is activated and deactivated, this message might be issued as part of a group of messages headed by IST1488I. See the explanation for that message for a complete description.

This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **high**.

appncos_name is the APPNCOS name used in the direction of the other endpoint of the RTP pipe.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1964I APPNCOS = *appncos_name* - PRIORITY = MEDIUM

Explanation: VTAM issues this message for the following reasons:

- In response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route.
- When an RTP pipe is activated and deactivated, this message might be issued as part of a group of messages headed by IST1488I. See the explanation for that message for a complete description.

This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **medium**.

appncos_name is the APPNCOS name used in the direction of the other endpoint of the RTP pipe.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1965I APPNCOS = *appncos_name* - PRIORITY = LOW

Explanation: VTAM issues this message for the following reasons:

- In response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route.
- When an RTP pipe is activated and deactivated, this message might be issued as part of a group of messages headed by IST1488I. See the explanation for that message for a complete description.

This message displays information about an APPN Class of Service (APPNCOS) with a transmission priority of **low**.

appncos_name is the APPNCOS name used in the direction of the other endpoint of the RTP pipe.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1966I **ACTIVATED AS ACTIVE ON** *date AT time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1967I **ACTIVATED AS PASSIVE ON** *date AT time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. The first message in the group is IST1476I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1968I **ARB INFORMATION:**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. This message is the first in a group of messages and the full description of the message group follows.

```

IST1968I      ARB INFORMATION:
[IST1844I      ARB MODE = mode]
[IST1697I      RTP PACING ALGORITHM = ARB RESPONSIVE MODE]
[IST2267I      RTP PACING ALGORITHM = ARB PROGRESSIVE MODE]
[IST2395I      RTP PACING ALGORITHM = ARB BASE MODE]
IST1477I      ALLOWED DATA FLOW RATE = allowed units
IST1516I      INITIAL DATA FLOW RATE = initial units
IST1841I      ACTUAL DATA FLOW RATE = actual units
IST1969I      MAXIMUM ACTUAL DATA FLOW RATE = max_rate units
IST1862I      ARB MAXIMUM SEND RATE = maximum units
[IST1845I      BOUNDARY DIVIDING REGIONS lower AND upper = boundary  MILLISECONDS]
:
:
[IST1846I      Type RECEIVER THRESHOLD = threshold MICROSECONDS]
:
:
IST1970I      RATE REDUCTIONS DUE TO RETRANSMISSIONS = count
IST924I      -----
IST1971I      TIMER INFORMATION:
IST1852I      LIVENESS TIMER = liveness SECONDS
IST1851I      SMOOTHED ROUND TRIP TIME = smoothed_time MILLISECONDS
IST1972I      SHORT REQUEST TIMER = timer MILLISECONDS
IST2229I      REFIFO TIMER = refifo MILLISECONDS

IST924I      -----
IST1973I      OUTBOUND TRANSMISSION INFORMATION:
IST1974I      NUMBER OF NLPS SENT = count ( estimate )
IST1975I      TOTAL BYTES SENT = count ( estimate )
IST1849I      LARGEST NLP SENT = size BYTES
IST1980I      SEQUENCE NUMBER = sequence_num (X'hex_value')
IST1842I      NUMBER OF NLPS RETRANSMITTED = retransmitted
IST2249I      NLP RETRANSMIT RATE = percentage
[IST2236I      LAST NLP RETRANSMITTED ON date AT time]
IST1976I      BYTES RETRANSMITTED = count ( estimate )
IST1478I      NUMBER OF UNACKNOWLEDGED BUFFERS = buffers
IST1958I      NUMBER OF ORPHANED BUFFERS = orphaned_NLP_count
IST1843I      NUMBER OF NLPS ON WAITING-TO-SEND QUEUE = waitsend
IST1847I      NUMBER OF NLPS ON WAITING-FOR-ACKNOWLEDGEMENT QUEUE = waitack
IST2268I      NUMBER OF BYTES ON WAITING-FOR-ACK QUEUE = waitforackbytes
IST1977I      MAXIMUM NUMBER OF NLPS ON WAITING-FOR-ACK QUEUE = count
IST2269I      MAXIMUM NUMBER OF BYTES ON WAITING-FOR-ACK QUEUE = maxwaitforack
IST1978I      WAITING-FOR-ACK QUEUE MAX REACHED ON date AT time
IST2085I      NUMBER OF NLPS ON OUTBOUND WORK QUEUE = num_nlps

```

IST1968I

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IST2086I    MAXIMUM NUMBER OF NLPS ON OUTBOUND WORK QUEUE = max_num_nlps
IST2087I    OUTBOUND WORK QUEUE MAX REACHED ON date AT time
IST1511I    MAXIMUM NETWORK LAYER PACKET SIZE = size BYTES
IST924I    -----
IST1979I    INBOUND TRANSMISSION INFORMATION:
IST2059I    NUMBER OF NLPS RECEIVED = count ( estimate )
IST1981I    TOTAL BYTES RECEIVED = count ( estimate )
IST1850I    LARGEST NLP RECEIVED = size BYTES
IST1980I    SEQUENCE NUMBER = sequence_num (X'hex_value')
IST1853I    NUMBER OF NLPS ON OUT-OF-SEQUENCE QUEUE = outofsequence
IST2230I    MAXIMUM NUMBER OF NLPS ON OUT-OF-SEQUENCE QUEUE = maxoutofsequence

IST1854I    NUMBER OF NLPS ON INBOUND SEGMENTS QUEUE = inboundsegs
IST1982I    NUMBER OF NLPS ON INBOUND WORK QUEUE = count
IST1983I    MAXIMUM NUMBER OF NLPS ON INBOUND WORK QUEUE = count
IST924I    -----
IST1984I    PATH SWITCH INFORMATION:
IST2271I    PATH SWITCH DELAY = ps_delay_value
[IST2272I    PATH SWITCH DELAYED UNTIL date AT time]
[IST1856I    LAST PATHSWITCH OCCURRENCE WAS ON date AT time]
[IST1817I    PATH SWITCH REASON: RTP CONNECTION UNAVAILABLE]
[IST1818I    PATH SWITCH REASON: SHORT REQUEST RETRY LIMIT EXHAUSTED]
[IST1819I    PATH SWITCH REASON: TG INOP]
[IST1820I    PATH SWITCH REASON: MODIFY RTP COMMAND ISSUED]
[IST1821I    PATH SWITCH REASON: AUTO PATH SWITCH FOR PSRETRY]
[IST1937I    PATH SWITCH REASON: INITIATED BY REMOTE PARTNER]
[IST1822I    PATH SWITCH REASON: UNKNOWN]
[IST2239I    PATH SWITCH REASON: MNPS ENDPOINT RECOVERY]
[IST2335I    PATH SWITCH REASON: XMIT STALL RECOVERY]
IST1985I    PATH SWITCHES INITIATED FROM REMOTE RTP = count
IST1986I    PATH SWITCHES INITIATED FROM LOCAL RTP = count
IST1987I    PATH SWITCHES DUE TO LOCAL FAILURE = count
IST1988I    PATH SWITCHES DUE TO LOCAL PSRETRY = count
IST924I    -----
IST1857I    BACKPRESSURE REASON COUNTS:
IST1858I    PATHSWITCH  SEND QUEUE MAX  STORAGE FAILURE  STALLED PIPE
IST2205I    -----
IST1859I    pathswitch  sendqmax      storefail    stalledpipe
IST2211I    ACK QUEUE MAX
IST2205I    -----
IST2212I    ackqmax
[IST2213I    LAST BACKPRESSURE APPLIED ON date AT time]
[IST2214I    BACKPRESSURE REASON: PATHSWITCH]
[IST2215I    BACKPRESSURE REASON: SEND QUEUE MAXIMUM REACHED]
[IST2216I    BACKPRESSURE REASON: STORAGE FAILURE]
[IST2217I    BACKPRESSURE REASON: STALLED PIPE]
[IST2218I    BACKPRESSURE REASON: WAITING-FOR-ACK QUEUE MAXIMUM REACHED]

IST924I    -----
IST2250I    ALL DIAGNOSTIC COUNTERS CLEARED ON date AT time
[IST2248I    ALL DIAGNOSTIC COUNTERS CLEARED FOR number RTP PIPES]
```

IST924I

This message is used as a separator message.

IST1477I

allowed is the allowed rate at which data can be sent over the RTP connection at the time this message is displayed.

units is the unit of measure for the rate and is displayed in bits, kilobits, megabits, or gigabits per second (BITS/SEC, KBITS/SEC, MBITS/SEC, or GBITS/SEC).

IST1478I

buffers is the number of I/O buffers containing outbound data that have been sent to the partner without an acknowledgment since the HPR PU was activated.

IST1511I

size is the maximum size of a network layer packet (NLP) that can be sent over this Rapid Transfer Protocol (RTP) connection in bytes.

IST1516I

initial is the initial data flow rate for this Rapid Transfer Protocol (RTP) connection.

units is the unit of measure for the rate and is displayed in bits, kilobits, megabits, or gigabits per second (BITS/SEC, KBITS/SEC, MBITS/SEC, or GBITS/SEC).

IST1697I

This message indicates that the responsive-mode adaptive rate-based (ARB) pacing algorithm is being used.

IST1817I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a rapid transfer protocol (RTP) and the last path switch took place because the underlying physical connection or the RTP itself was not in a state suitable for RTP traffic.

IST1818I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a rapid transfer protocol (RTP) and the last path switch took place because the RTP partner was not responding to status requests initiated by this RTP endpoint. Each time a status request is sent to the partner a short request timer is set to time the transaction. If the short request timer expires and no response is received from the partner, the process is repeated. This process will repeat until the retry limit for the RTP pipe is exhausted. When the retry limit is met, a path switch is requested to try to restore communications with the RTP partner.

The short request timer is an internally calculated value. It is based on the observed response time of the RTP pipe. This timer cannot be specified externally.

IST1819I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the last path switch took place because the physical connection that the RTP pipe traversed suffered an INOP condition.

IST1820I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the last path switch took place because an operator issued a MODIFY RTP command to force an RTP path switch.

IST1821I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the last path switch took place because the PSRETRY start option value forced an automatic path switch for this RTP connection.

IST1822I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the reason for the last RTP path switch is unavailable.

IST1841I

This message shows the actual data flow rate for this Rapid Transfer Protocol (RTP). It should be compared with the allowed data rate displayed by message IST1477I, and the initial data rate displayed by IST1516I.

actual is the actual rate at which data is being sent over the RTP connection at the time this message is displayed.

units is the unit of measure for the rate and is displayed in bits, kilobits, megabits, or gigabits per second (BITS/SEC, KBITS/SEC, MBITS/SEC, or GBITS/SEC).

The data flow rate is updated approximately every second while data is flowing.

IST1842I

IST1968I

This message is issued if HPRDIAG=YES is specified.

retransmitted is the number of network layer packets (NLPs) that have been retransmitted for this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.

IST1843I

This message is issued if HPRDIAG=YES is specified.

waitsend is the number of network layer packets (NLPs) currently in the waiting-to-send queue.

IST1844I

- This message is issued if HPRDIAG=YES is specified.
- *mode* is the current Adaptive Rate-Based (ARB) pacing mode. The value is one of the following:
 - Green** Data transmission is being performed without significant network congestion.
 - Yellow** Data transmission is being slowed down because network congestion has been detected.
 - Red** Data transmission is being affected by severe network congestion which might result in packet loss.

IST1845I

This message is issued if HPRDIAG=YES is specified and the base mode Adaptive Rate-Based (ARB) pacing algorithm is in use for this Rapid Transfer Protocol (RTP). It is issued three times to display each of the three Delay Change Sum (DCS) boundaries dividing the four ARB regions.

lower is a number (1, 2, or 3) representing the ARB region below the boundary.

upper is a number (2, 3, or 4) representing the ARB region above the boundary.

boundary is the DCS boundary in milliseconds dividing the two ARB regions designated by *lower* and *upper*.

IST1846I

- This message is issued if HPRDIAG=YES is specified and the responsive mode Adaptive Rate-Based (ARB) pacing algorithm is in use for this Rapid Transfer Protocol (RTP). It is issued three times to show each of the receiver thresholds identified by the message: CURRENT, MAXIMUM and MINIMUM.
- *type* is the receiver threshold type. The value is one of the following:

CURRENT

Amount of accumulated network delay permitted before a slowdown message is returned to the connection partner.

MAXIMUM

Maximum amount of accumulated network delay specifically allowed for this link's network capacity.

MINIMUM

Minimum amount of accumulated network delay specifically allowed for this link's network capacity.

- *threshold* is the receiver threshold value, in microseconds.

IST1847I

This message is issued if HPRDIAG=YES is specified.

waitack is the number of network layer packets (NLPs) currently in the waiting-for-acknowledgement queue.

IST1849I

This message is issued if HPRDIAG=YES is specified.

size is the number of data bytes contained in the largest network layer packet (NLP) sent on this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.

IST1850I

This message is issued if HPRDIAG=YES is specified.

size is the number of bytes contained in the largest network layer packet (NLP) received on this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.

IST1851I

This message is issued if HPRDIAG=YES is specified.

smoothed_time is the current smoothed round trip time, in milliseconds, for this Rapid Transfer Protocol (RTP). If that time is less than one millisecond, it will be rounded up to one millisecond in this message display.

IST1852I

- This message is issued if HPRDIAG=YES is specified.
- *liveness* is the value of the liveness timer, in seconds. The liveness timer specifies how long to wait without receipt of a network layer packet (NLP) from the connection partner before sending a liveness message to verify that the connection is still operational.

If *liveness* is zero, the RTP pipe is traversing a one-hop Enterprise Extender (including those RTP pipes where the RSCV describes a two-hop path across an EE connection network), and HPR Liveness Reduction for EE is enabled. The HPR ALIVE timer will not be used by this RTP endpoint. The HPR Liveness Reduction for EE function is enabled by the HPREELIV operand specified on the XCA Major Node for Enterprise Extender. See the z/OS Communications Server: SNA Resource Definition Reference for more information about the liveness timer.

IST1853I

This message is issued if HPRDIAG=YES is specified.

outofsequence is the number of network layer packets (NLPs) currently in the out-of-sequence queue.

IST1854I

This message is issued if HPRDIAG=YES is specified.

inboundsegs is the number of network layer packets (NLPs) currently in the inbound segments queue.

IST1856I

This message is issued if HPRDIAG=YES is specified and a path switch has occurred for this Rapid Transfer Protocol (RTP). It is the first of a subgroup of messages that includes one of the following messages: IST1817I, IST1818I, IST1819I, IST1820I, IST1821I, and IST1822I. The date and time are displayed for the last path switch occurrence.

The *date* and *time* values specify the date and time of the last path switch occurrence. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST1857I

This message is issued if HPRDIAG=YES is specified. It is a header message for the RTP backpressure information in the display.

IST1858I

This message is issued if HPRDIAG=YES is specified. It is a header message for the information displayed in message IST1859I.

IST1859I

- This message is issued if HPRDIAG=YES is specified. It displays the number of times that this Rapid Transfer Protocol (RTP) pipe went into backpressure (held up outbound data transmission) since the last CLEAR command was issued or the activation of the RTP pipe. Additional backpressure information is in message IST2211I.
- *pathswitch* is the number of times that this RTP pipe went into backpressure because of a path switch.
- *sendqmax* is the number of times that this RTP pipe went into backpressure by reaching the send queue maximum limit.
- *storefail* is the number of times that this RTP pipe went into backpressure because of a failure to obtain storage.
- *stalledpipe* is the number of times that this RTP pipe went into backpressure because of a stalled RTP pipe. An RTP pipe is considered stalled when data is not flowing because of one of the following conditions:
 - The RTP partner requests the retransmission of at least one NLP, but that request cannot be honored.
 - The RTP partner repeatedly requests the retransmission of the same NLP. In this case, VTAM honors the request by retransmitting the NLP, but the partner does not receive this NLP.

IST1862I

This message is issued if HPRDIAG=YES is specified.

IST1968I

maximum is the Adaptive Rate-Based (ARB) pacing maximum send rate that was reached for this Rapid Transfer Protocol (RTP) since the HPR PU was activated.

units is the unit of measure for the rate and is displayed in bits, kilobits, or megabits per second (BITS/SEC, KBITS/SEC, or MBITS/SEC).

IST1937I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the most recent RTP path switch was initiated by the remote partner.

IST1958I

This message is issued if HPRDIAG=YES is specified.

orphaned_NLP_count is the number of I/O buffers that were not returned by the DLC since the last CLEAR command was issued or the activation of the RTP pipe. A nonzero count indicates a device or DLC problem.

IST1968I

This message is issued if HPRDIAG=YES is specified. It is a header message for the Adaptive Rate-Based (ARB) pacing information in the display.

IST1969I

This message is issued if HPRDIAG=YES is specified.

max_rate is the maximum rate at which data was sent over the RTP connection since the last CLEAR command was issued or the activation of the RTP pipe.

units is the unit of measure for the rate and is displayed in bits, kilobits, or megabits per second (BITS/SEC, KBITS/SEC, or MBITS/SEC).

The data flow rate is updated approximately every second while data is flowing.

IST1970I

This message is issued if HPRDIAG=YES is specified and IST1697I indicates that the responsive mode enhancements for the Adaptive Rate-Based (ARB) pacing algorithm is being used.

count is number of times the data flow rate was reduced because of excessive packet loss since the last CLEAR command was issued or the activation of the RTP pipe. This value also represents the number of times that the ARB mode changed to yellow.

IST1971I

This message is issued if HPRDIAG=YES is specified. It is a header message for the RTP timer information in the display.

IST1972I

This message is issued if HPRDIAG=YES is specified.

timer is the short request timer value. This is the amount of time allotted for the connection partner to respond to status requests from this host.

IST1973I

This message is issued if HPRDIAG=YES is specified. It is a header message for the outbound data information in the display.

IST1974I

- This message is issued if HPRDIAG=YES is specified.
- *count* is the number of network layer packets (NLPs) that were sent on this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.
- *estimate* is an estimate of *count*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K estimate is in units of 1000 NLPs.

- M estimate is in units of 1 000 000 NLPs.
- G estimate is in units of 1 000 000 000 NLPs.
- T estimate is in units of 1 000 000 000 000 NLPs.
- P estimate is in units of 1 000 000 000 000 000 NLPs.

IST1975I

- This message is issued if HPRDIAG=YES is specified.
- *count* is the total number of bytes that were sent on this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.
- *estimate* is an estimate of *count*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

- K estimate is in units of 1000 bytes.
- M estimate is in units of 1 000 000 bytes.
- G estimate is in units of 1 000 000 000 bytes.
- T estimate is in units of 1 000 000 000 000 bytes.
- P estimate is in units of 1 000 000 000 000 000 bytes.

IST1976I

- This message is issued if HPRDIAG=YES is specified.
- *count* is the total number of bytes that were retransmitted on this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.
- *estimate* is an estimate of *count*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

- K estimate is in units of 1000 bytes.
- M estimate is in units of 1 000 000 bytes.
- G estimate is in units of 1 000 000 000 bytes.
- T estimate is in units of 1 000 000 000 000 bytes.
- P estimate is in units of 1 000 000 000 000 000 bytes.

IST1977I

This message is issued if HPRDIAG=YES is specified.

count is the maximum number of network layer packets (NLPs) that have been in the waiting-for-acknowledgement queue since the last CLEAR command was issued or the activation of the RTP pipe.

IST1978I

This message is issued if HPRDIAG=YES is specified.

The *date* and *time* values specify when the waiting-for-acknowledgement queue maximum length was most recently reached. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST1979I

This message is issued if HPRDIAG=YES is specified. It is a header message for the inbound data information in the display.

IST1980I

This message is issued if HPRDIAG=YES is specified.

sequence_num is either the current send byte sequence number, if issued with the IST1973I header message, or the current receive byte sequence number, if issued with the IST1979I header message.

hex_value is the hexadecimal representation of *sequence_num*.

IST1981I

IST1968I

- This message is issued if HPRDIAG=YES is specified.
- *count* is the total number of bytes that were received on this Rapid Transfer Protocol (RTP) pipe since the last CLEAR command was issued or the activation of the RTP pipe.
- *estimate* is an estimate of *count*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K estimate is in units of 1000 bytes.
M estimate is in units of 1 000 000 bytes.
G estimate is in units of 1 000 000 000 bytes.
T estimate is in units of 1 000 000 000 000 bytes.
P estimate is in units of 1 000 000 000 000 000 bytes.

IST1982I

This message is issued if HPRDIAG=YES is specified.

count is the number of network layer packets (NLPs) currently in the inbound work queue.

IST1983I

This message is issued if HPRDIAG=YES is specified.

count is the maximum number of network layer packets (NLPs) that were in the inbound work queue since the last CLEAR command was issued or the activation of the RTP pipe.

IST1984I

This message is issued if HPRDIAG=YES is specified. It is a header message for the RTP path switch information in the display.

IST1985I

This message is issued if HPRDIAG=YES is specified.

count is the number of RTP path switches that were initiated from the remote partner since the last CLEAR command was issued or the activation of the RTP pipe.

IST1986I

This message is issued if HPRDIAG=YES is specified.

count is the number of RTP path switches initiated locally since the last CLEAR command was issued or the activation of the RTP pipe.

IST1987I

This message is issued if HPRDIAG=YES is specified.

count is the number of RTP path switches that occurred as the result of local failure since the last CLEAR command was issued or the activation of the RTP pipe.

IST1988I

This message is issued if HPRDIAG=YES is specified.

count is the number of RTP path switches that occurred as the result of local PSRETRY since the last CLEAR command was issued or the activation of the RTP pipe.

IST2059I

- This message is issued if HPRDIAG=YES is specified.
- *count* is the number of network layer packets (NLPs) that were received on this Rapid Transfer Protocol (RTP) since the last CLEAR command was issued or the activation of the RTP pipe.
- *estimate* is an estimate of *count*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K estimate is in units of 1000 NLPs.
M estimate is in units of 1 000 000 NLPs.

- G estimate is in units of 1 000 000 000 NLPs.
- T estimate is in units of 1 000 000 000 000 NLPs.
- P estimate is in units of 1 000 000 000 000 000 NLPs.

IST2085I

This message is issued if HPRDIAG=YES is specified.

num_nlps is the number of work elements currently on the RPNCB outbound work queue.

IST2086I

This message is issued if HPRDIAG=YES is specified.

max_num_nlps is the maximum number of work elements that have been on the RPNCB outbound work queue since the last CLEAR command was issued or the activation of the RTP pipe.

IST2087I

This message is issued if HPRDIAG=YES is specified.

The *date* and *time* values specify when the RPNCB outbound work queue maximum length was most recently reached. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2205I

This message is used as a separator message.

IST2211I

This message is issued if HPRDIAG=YES is specified. It is a header message for the information displayed in message IST2212I. This is a continuation of the information displayed in message IST1858I.

IST2212I

This message is issued if HPRDIAG=YES is specified. It displays the number of times that this Rapid Transfer Protocol (RTP) pipe went into backpressure (held up outbound data transmission) since the last CLEAR command was issued or the activation of the RTP pipe.

The *ackqmax* value is the number of times that this RTP went into backpressure by reaching the waiting-for-acknowledgement queue maximum limit.

IST2213I

This message is issued if HPRDIAG=YES is specified.

The *date* and *time* values specify when RTP backpressure was most recently applied. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2214I

This message is displayed following message IST2213I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the most recent RTP backpressure was applied because of a pathswitch.

IST2215I

This message is displayed following message IST2213I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the most recent RTP backpressure was applied because the send queue maximum limit was reached.

IST2216I

This message is displayed following message IST2213I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the most recent RTP backpressure was applied because of a storage failure.

IST2217I

IST1968I

- This message is displayed following message IST2213I if HPRDIAG=YES was specified on the DISPLAY ID command for an RTP pipe and the most recent RTP backpressure was applied because of a stalled pipe. An RTP pipe is considered stalled when data is not flowing because of one of the following conditions:
 - The RTP partner requests the retransmission of at least one NLP, but the request cannot be honored.
 - The RTP partner repeatedly requests the retransmission of the same NLP. In this case, VTAM honors the request by retransmitting the NLP, but the partner does not receive this NLP.

IST2218I

This message is displayed following message IST2213I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the most recent RTP backpressure was applied because the waiting-for-acknowledgement queue maximum limit was reached.

IST2229I

This message is issued if HPRDIAG=YES is specified.

refifo is the refifo timer value. This is the amount of time this end of the RTP pipe waits before reporting missing packets (gaps) to the partner.

IST2230I

This message is issued if HPRDIAG=YES is specified.

maxoutofsequence is the maximum number of network layer packets (NLPs) that have been on the out-of-sequence queue since the last CLEAR command was issued or the activation of the RTP pipe.

IST2236I

This message is issued if HPRDIAG=YES is specified.

The *date* and *time* values specify when a network layer packet (NLP) was most recently retransmitted for this RTP pipe since the HPR PU was activated. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2239I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a Rapid Transfer Protocol (RTP) and the last path switch took place for the recovery of an MNPS application.

IST2248I

This message is issued if HPRDIAG=YES and CLEAR=ALL are specified.

The *number* value is the total number of RTP pipes whose diagnostic counters were cleared. The *number* value is always 1 when the DISPLAY ID command is issued with HPRDIAG=YES and CLEAR=ALL.

IST2249I

This message is issued if HPRDIAG=YES is specified.

The *percentage* value is the retransmission rate as a percentage of NLPs that were sent since the last CLEAR command was issued or since the activation of the RTP pipe. The percentage is accurate to 4 decimal places.

IST2250I

This message is issued if HPRDIAG=YES is specified.

The *date* and *time* values specify when all diagnostic counters for the RTP pipe were cleared with the CLEAR command or since the activation of the pipe. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2267I

This message indicates that the progressive-mode adaptive rate-based (ARB) pacing algorithm is being used.

IST2268I

This message is issued if HPRDIAG=YES is specified.

The *waitforackbytes* value is the total number of bytes that are currently in the waiting-for-acknowledgement queue.

IST2269I

This message is issued if HPRDIAG=YES is specified.

The *maxwaitforack* value is the maximum number of bytes that have been in the waiting-for-acknowledgement queue since the last CLEAR command was issued or the activation of the RTP pipe. If the value displayed is 999999999, this means that the maximum value reached 999999999 bytes or more.

IST2271I

This message is issued if HPRDIAG=YES is specified.

The *ps_delay_value* value is the HPR path switch delay value, in seconds, that is configured for this RTP pipe. This value specifies the amount of time that this RTP endpoint will delay entering the path switch state as a result of an unresponsive RTP partner.

IST2272I

This message is issued if HPRDIAG=YES is specified and this RTP endpoint is in the path switch delay state as a result of an unresponsive partner.

The *date* and *time* values specify when all diagnostic counters for the RTP pipe were cleared with the CLEAR command or since the activation of the pipe. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2335I

This message is displayed following message IST1856I if HPRDIAG=YES was specified on the DISPLAY ID command for a rapid transfer protocol (RTP) pipe and the last path switch took place because an transmission (XMIT) stalled condition was detected. The XMIT stalled condition is detected when the partner RTP end point requested an NLP to be retransmitted six times and ten seconds have elapsed since the packet was initially sent.

IST2395I

This message indicates that the base-mode adaptive rate-based (ARB) pacing algorithm is being used.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1969I MAXIMUM ACTUAL DATA FLOW RATE = *max_rate units*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1970I RATE REDUCTIONS DUE TO RETRANSMISSIONS = *count*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1971I TIMER INFORMATION:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1972I SHORT REQUEST TIMER = *timer* MILLISECONDS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1973I OUTBOUND TRANSMISSION INFORMATION:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1974I NUMBER OF NLPS SENT = *count (estimate)*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1975I TOTAL BYTES SENT = *count (estimate)*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1976I BYTES RETRANSMITTED = *count (estimate)*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1977I MAXIMUM NUMBER OF NLPS ON WAITING-FOR-ACK QUEUE = *count*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1978I **WAITING-FOR-ACK QUEUE MAX REACHED ON** *date AT time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1979I **INBOUND TRANSMISSION INFORMATION:**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1980I **RECEIVE SEQUENCE NUMBER =** *sequence_no (x'hex_value')*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1981I **TOTAL BYTES RECEIVED =** *count (estimate)*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1982I **NUMBER OF NLPS ON INBOUND WORK QUEUE =** *count*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1983I **MAXIMUM NUMBER OF NLPS ON INBOUND WORK QUEUE =** *count*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1984I PATH SWITCH INFORMATION:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1985I PATH SWITCHES INITIATED FROM REMOTE RTP = count

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1986I PATH SWITCHES INITIATED FROM LOCAL RTP = count

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1987I PATH SWITCHES DUE TO LOCAL FAILURE = count

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1988I PATH SWITCHES DUE TO LOCAL PSRETRY = count

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST1989I NO MATCHING AUTOLOGON REQUESTS

Explanation: This message is issued in response to a DISPLAY AUTOLOG command when there are no pending AUTOLOGON requests outstanding for any controlling applications, or for the controlling application identified by the ID= *operand*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IST1990I PENDING AUTOLOGON REQUESTS FOR:

Explanation: This message is the first in a group of messages that VTAM issues in response to a DISPLAY AUTOLOG command when outstanding AUTOLOGON requests exist. The complete description of the message group follows the example.

```

IST350I DISPLAY TYPE = AUTOLOG
IST1990I PENDING AUTOLOGON REQUESTS FOR:
[IST1991I pluname - WAITING FOR PLU NOTIFICATION]
[IST1992I pluname - WAITING FOR AUTOTI TIMER]
[IST1993I pluname - WAITING FOR CDRM ACTIVATION]
[IST1994I pluname - WAITING FOR CDRM OR CPCP ACTIVATION]
[IST1995I pluname - WAITING FOR AUTOCAP NODE ACTIVATION]
[IST1996I      OR AUTOTI TIMER]
[IST1998I pluname - WAITING FOR AUTOTI/AUTORTRY START OPTION]
[IST1999I      MODIFICATION OR SLU REACTIVATION]
[IST2100I pluname - NORMALLY LOGGED OFF LUS]
[IST1997I      sluname          sluname          sluname]
:
:
[IST1315I DISPLAY TRUNCATED AT MAX = number]
IST314I END

```

IST350I

This message identifies the type of information shown in the display. For this message group the display type is always AUTOLOG.

IST1315I

VTAM issues this message when the number of resources to be displayed exceeds the value specified on the MAX operand.

number is the value specified for the MAX operand.

IST1990I

This message is the header message for information displayed in the AUTOLOG messages IST1991I- IST1998I and IST2100I. Only one IST1991I, IST1992I, IST1993I, IST1994I, IST1995I, IST1998I, or IST2100I will be issued for each controlling application displayed.

IST1991I

This message is issued when the pending AUTOLOGON requests for this controlling application are waiting for notification that the controlling application is now available for sessions.

pluname is the name of the controlling application for which there are pending AUTOLOGON requests. *pluname* is in the form of *netid.pluname*.

If a pending AUTOLOGON request was created using the network-qualified name of the controlling application, then *pluname* will be shown as a network qualified (real) name in the form *netid.pluname*. If the pending AUTOLOGON request was created using the name of the controlling application that is not a network-qualified (alias) name, then only the unqualified name will be shown in the form *pluname*.

IST1992I

This message is issued when the pending AUTOLOGON requests for this controlling application will be redriven when the timer set by the AUTOTI start option has expired. See the z/OS Communications Server: SNA Resource Definition Reference for the start option description.

pluname is the name of the controlling application for which there are pending AUTOLOGON requests. *pluname* is in the form of *netid.pluname*.

If a pending AUTOLOGON request was created using the network-qualified name of the controlling application, then *pluname* will be shown as a network qualified (real) name in the form *netid.pluname*. If the pending AUTOLOGON request was created using the name of the controlling application that is not a network-qualified (alias) name, then only the unqualified name will be shown in the form *pluname*.

IST1993I

IST1990I

This message is issued when the pending AUTOLOGON requests for this controlling application will be redriven when a new adjacent CDRM is activated. IST1996I might also be issued as a continuation of IST1993I.

pluname is the name of the controlling application for which there are pending AUTOLOGON requests. *pluname* is in the form of *netid.pluname*.

If a pending AUTOLOGON request was created using the network-qualified name of the controlling application, then *pluname* will be shown as a network qualified (real) name in the form *netid.pluname*. If the pending AUTOLOGON request was created using the name of the controlling application that is not a network-qualified (alias) name, then only the unqualified name will be shown in the form *pluname*.

IST1994I

This message is issued when the pending AUTOLOGON requests for this controlling application will be redriven when a new adjacent CDRM or a new CP-CP session is activated. IST1996I might also be issued as a continuation of IST1994I.

pluname is the name of the controlling application for which there are pending AUTOLOGON requests. *pluname* is in the form of *netid.pluname*.

If a pending AUTOLOGON request was created using the network-qualified name of the controlling application, then *pluname* will be shown as a network qualified (real) name in the form *netid.pluname*. If the pending AUTOLOGON request was created using the name of the controlling application that is not a network-qualified (alias) name, then only the unqualified name will be shown in the form *pluname*.

IST1995I

This message is issued when the pending AUTOLOGON requests for this controlling application will be redriven when a new adjacent CDRM is activated or when a new CP-CP session is activated to an adjacent APPN node which supports automatic LOGON. See the AUTORTRY start option in the z/OS Communications Server: SNA Resource Definition Reference for the start option description. IST1996I might also be issued as a continuation of IST1995I.

pluname is the name of the controlling application for which there are pending AUTOLOGON requests. *pluname* is in the form of *netid.pluname*.

If a pending AUTOLOGON request was created using the network-qualified name of the controlling application, then *pluname* will be shown as a network qualified (real) name in the form *netid.pluname*. If the pending AUTOLOGON request was created using the name of the controlling application that is not a network-qualified (alias) name, then only the unqualified name will be shown in the form *pluname*.

IST1996I

This message is a continuation of IST1993I, IST1994I, or IST1995I when the pending AUTOLOGON requests for the controlling application identified by the previous message will also be redriven when the timer set by the AUTOTI start option has expired. See the z/OS Communications Server: SNA Resource Definition Reference for the start option description.

IST1997I

This message is issued when SCOPE=ALL is specified. IST1997I is repeated until all logical units are displayed or until the DSLPYMAX start option, DSPLYDEF start option, or MAX operand value on the DISPLAY AUTOLOG command has been reached. See the z/OS Communications Server: SNA Resource Definition Reference for start option descriptions.

When IST1997I is preceded by either IST1991I, IST1992I, IST1993I, IST1994I, IST1995I, or IST1998I, then *sluname* is the name of the logical unit that has a pending AUTOLOGON request for the controlling application identified in the previous message. *sluname* is in the form *netid.sluname*.

When IST1997I is preceded by IST2100I, then *sluname* is the name of a logical unit that had performed a normal termination to the controlling application identified in message IST2100I. *sluname* is in the form *netid.sluname*.

IST1998I

This message is issued when a pending AUTOLOGON request exists for this controlling application that is not waiting for PLU notification. The AUTOTI and AUTORTRY start options are set to values which will not cause this request to be redriven. See the z/OS Communications Server: SNA Resource Definition Reference for the start option descriptions. Message IST1999I will always be issued as a continuation of this message.

pluname is the name of the controlling application for which there are pending AUTOLOGON requests. *pluname* is in the form of *netid.pluname*.

If a pending AUTOLOGON request was created using the network-qualified name of the controlling application, then *pluname* will be shown as a network qualified (real) name in the form *netid.pluname*. If the pending AUTOLOGON request was created using the name of the controlling application that is not a network-qualified (alias) name, then only the unqualified name will be shown in the form *pluname*.

IST1999I

This message is a continuation of the text in message IST1998I.

IST2100I

This message is included when there are LUs that have normally terminated their controlling application session with the named PLU. The controlling session can be initiated by the VARY ACT,ID=*luname* or VARY AUTOLOG operator commands. See z/OS Communications Server: SNA Operation for more information. The names of the LUs in this state will be listed in the IST1997I messages immediately following the IST2100I message when SCOPE=ALL is included on the DISPLAY AUTOLOG command. See the information about the automatic logon in z/OS Communications Server: SNA Operation for information on how to establish a controlling application session.

pluname is the name of the controlling application that has LUs that terminated their controlling session. *pluname* is in the form of *netid.pluname*.

System action: Processing continues.

Operator response: For messages IST1998I and IST1999I you can take the following actions to redrive a session attempt to the controlling application.

- Issue a Modify VTAMOPTS command to change the AUTOTI to a nonzero value.
- Use the following sequence of procedures to drive a session attempt to the controlling application:
 1. Issue the Display AUTOLOG command with SCOPE= ALL to obtain a list of SLU names.
 2. Use the SLU names contained in the IST1997I messages from the display command to issue VARY ACT,ID=*sluname* command for each SLU name.
- Issue a VARY AUTOLOG,ID=*pluname* to the PLU name displayed in messages IST1998I or IST1999I.

For message IST2100I, you can take the following actions to redrive a session attempt to the controlling application.

- Use the following sequence of procedures to drive a session attempt to the controlling application:
 1. Issue a DISPLAY AUTOLOG command with SCOPE=ALL to obtain a list of SLU names.
 2. Use the SLU names contained in the IST1997I messages from the display command to issue a VARY ACT,ID=*sluname* command for each SLU name.
- Issue a VARY AUTOLOG,ID=*pluname* command to the PLU name displayed in message IST2100I.

System programmer response: For messages IST1998I and IST1999I, update the AUTORTRY or AUTOTI start option in the VTAM start list (ATCSTRxx) to a value which will drive pending AUTOLOGON requests. See the z/OS Communications Server: SNA Resource Definition Reference for the Start Options description.

Otherwise no action is required.

Routing code: 2

Descriptor code: 5

IST1991I *pluname* - WAITING FOR PLU NOTIFICATION

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1992I *pluname* - WAITING FOR AUTOTI TIMER

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1993I *pluname* - WAITING FOR CDRM ACTIVATION

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1994I *pluname* - WAITING FOR CDRM OR CPCP ACTIVATION

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1995I *pluname* - WAITING FOR AUTOCAP NODE ACTIVATION

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1996I OR AUTOTI TIMER

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1997I *sluname1 sluname2 sluname3*

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1998I *pluname* - WAITING FOR AUTOTI/AUTORTRY START OPTION

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST1999I MODIFICATION OR SLU REACTIVATION

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

Chapter 10. IST messages for VTAM network operators IST2000I – IST2446I

This chapter lists the VTAM messages beginning with IST in the range of IST2000I through IST2446I. These messages can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

Note: Messages that begin with the prefix **ISTF** are issued by the VTAM dump analysis tool and the VTAM internal trace (VIT) analysis tool. Help information is available as a part of each tool by pressing F1. Therefore, **ISTF** messages are not documented in z/OS Communications Server: SNA Messages. See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for additional information.

IST2000I ENTERPRISE EXTENDER GENERAL INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command for general Enterprise Extender information. This message is the first in a group of messages. When LIST=DETAIL is specified an optional message subgroup, beginning with message IST1680I, is displayed for each local IP address. The full description of the message group follows the example.

```
IST2000I ENTERPRISE EXTENDER GENERAL INFORMATION
IST1685I TCP/IP JOB NAME = jobname
IST2003I ENTERPRISE EXTENDER XCA MAJOR NODE NAME = name
IST2004I LIVTIME = (init_value,max_value) SRQTIME = srqtime SRQRETRY = srqretry
IST2005I IPRESOLV = ipresolv
IST2231I CURRENT CLOCK RATE = current
[IST2232I HPR CLOCK RATE LAST SET TO HIGH ON date AT time]
[IST2233I HPR CLOCK RATE LAST EXITED HIGH ON date AT time]
IST924I -----
IST2006I PORT PRIORITY = SIGNAL      NETWORK      HIGH      MEDIUM      LOW
IST2007I IPPORT NUMBER = portsig     portnet     porthigh   portmed     portlow
IST2008I IPTOS VALUE   = sigtos      nettos     hightos    medtos     lowtos
IST924I -----
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST2004I LIVTIME = (init_value,max_value) SRQTIME = srqtime SRQRETRY = srqretry]
[IST2009I RTP PIPES = rtppipes        LU-LU SESSIONS      = sessions  ]
[IST2010I INOPS DUE TO SRQRETRY EXPIRATION = inopcount ]
[IST1324I VNNAME = vnname           VNGROUP = vngroup vntype ]
[IST2011I AVAILABLE LINES FOR THIS EE VRN = vrnlines  ]
[IST2012I ACTIVE CONNECTIONS USING THIS EE VRN = vrnconns  ]
[IST2013I AVAILABLE LINES FOR PREDEFINED EE CONNECTIONS = predeflines]
[IST2014I ACTIVE PREDEFINED EE CONNECTIONS = predefconns]
[IST2015I ACTIVE LOCAL VRN EE CONNECTIONS = lvrnconns ]
[IST2016I ACTIVE GLOBAL VRN EE CONNECTIONS = gvrnconns ]
[IST924I ----- ]
IST2017I TOTAL RTP PIPES = tottrtppipes LU-LU SESSIONS = totsessions
IST2018I TOTAL ACTIVE PREDEFINED EE CONNECTIONS = totpredefconns
IST2019I TOTAL ACTIVE LOCAL VRN EE CONNECTIONS = totlvrnconns
IST2020I TOTAL ACTIVE GLOBAL VRN EE CONNECTIONS = totgvrnconns
IST2021I TOTAL ACTIVE EE CONNECTIONS = totconns
IST314I END
```

IST924I

This message is a line separator between subgroups.

IST2000I

IST1324I

- This is the first message of an optional subgroup. When LIST=DETAIL is specified, this subgroup is displayed for each active Enterprise Extender virtual routing node. This message is a header message for messages IST2011I and IST2012I. This message is also associated with a subgroup of messages that begins with message IST1680I.
- *vname* is the fully qualified virtual routing node name.
- *vngroup* is the GROUP associated with the connection network definition.
- *vntype* indicates the type of HPR/IP (Enterprise Extender) connection network. The two possible values are:

(LOCAL)

The connection network is being defined as a LOCAL virtual routing node (the connection network cannot traverse network or subnetwork boundaries). Either VNTYPE was not specified, or VNTYPE was specified as LOCAL on the definition of the Enterprise Extender virtual routing node.

(GLOBAL)

The connection network is being defined as a GLOBAL virtual routing node (the connection network can traverse network or subnetwork boundaries). VNTYPE was specified as GLOBAL on the definition of the Enterprise Extender virtual routing node.

- The complete message subgroup follows the example.

```
IST1324I VNAME = vname          VNGROUP = vngroup vntype
IST2011I      AVAILABLE LINES FOR THIS EE VRN      = vrnlines
IST2012I      ACTIVE CONNECTIONS USING THIS EE VRN = vrnconns
```

IST1680I

- This is the first message of an optional subgroup. When LIST=DETAIL is specified, this subgroup is displayed for each active local IP address.
- *type* is always LOCAL for this subgroup display.
- *ip_address* is the IP address. The complete message subgroup follows the example.

```
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST2004I LIVTIME = (init_value,max_value) SRQTIME = srqtime SRQRETRY = srqretry]
[IST2009I RTP PIPES = rtppipes      LU-LU SESSIONS      = sessions  ]
[IST2010I INOPS DUE TO SRQRETRY EXPIRATION              = inopcount  ]
[IST1324I VNAME = vname          VNGROUP = vngroup vntype ]
[IST2011I      AVAILABLE LINES FOR THIS EE VRN      = vrnlines  ]
[IST2012I      ACTIVE CONNECTIONS USING THIS EE VRN = vrnconns  ]
IST2013I AVAILABLE LINES FOR PREDEFINED EE CONNECTIONS = predeflines
IST2014I ACTIVE PREDEFINED EE CONNECTIONS             = predefconns
IST2015I ACTIVE LOCAL VRN EE CONNECTIONS             = lvrnconns
IST2016I ACTIVE GLOBAL VRN EE CONNECTIONS            = gvrnconns
IST924I -----
```

IST1685I

jobname is the 1-8 character TCP/IP job name used to start the TCP/IP address space. See the z/OS Communications Server: IP Configuration Guide for information about the TCP/IP job name.

IST1910I

value is the host name used to acquire the local static IP address displayed in message IST1680I. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on message IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

IST2000I

This message is the header message for the general Enterprise Extender display output.

IST2003I

name is the name of the Enterprise Extender XCA major node.

IST2004I

The first occurrence of this message, under the IST2000I message group, displays the LDLC timer operands that are specified on PORT definition statement or default values.

The other occurrences of this message, under the IST1680I message group, display the LDLC timer operands that are associated with each local static VIPA address. See the information about the removing a generic resource in z/OS Communications Server: SNA Resource Definition Reference for more information about the LIVTIME operand for Enterprise Extender.

init_value is the initial duration, in seconds, of an Enterprise Extender logical data link control (LDLC) liveness timer interval.

max_value is the maximum duration, in seconds, of an Enterprise Extender LDLC liveness timer interval.

srqtime is the duration, in seconds, of the Enterprise Extender LDLC short request timer interval. The short request timer interval represents the amount of time the LDLC layer waits, without receipt of a response from the connection partner, before sending the LDLC signal again.

srqretry is the number of times the short request timer is tried again before the Enterprise Extender port becomes inoperative.

IST2005I

ipresolv is the number of seconds VTAM waits for name-to-address resolution requests to complete before canceling the request. The value displayed is associated with the Enterprise Extender port and only affects local HOSTNAME name-to-address resolution requests.

IST2006I

This message is a header message for the information displayed in messages IST2007I and IST2008I.

IST2007I

This message lists the Enterprise Extender port numbers used to transmit signal, network, high, medium, and low priority data.

portsig is the port number used to transmit signal priority data.

portnet is the port number used to transmit network priority data.

porthigh is the port number used to transmit high priority data.

portmed is the port number used to transmit medium priority data.

portlow is the port number used to transmit low priority data.

IST2008I

This message lists the Type of Service (TOS) values associated with each Enterprise Extender port.

signal is the TOS value associated with the Enterprise Extender port used for signal priority data.

network is the TOS value associated with the Enterprise Extender port used for network priority data.

high is the TOS value associated with the Enterprise Extender port used for high priority data.

medium is the TOS value associated with the Enterprise Extender port used for medium priority data.

low is the TOS value associated with the Enterprise Extender port used for low priority data.

IST2009I

This message is associated with a subgroup of messages that begins with message IST1680I.

rtppipes is the number of RTP pipes, originating in this host that traverse EE connections associated with the local IP address displayed in message IST1680I of this subgroup.

sessions is the number of LU-LU sessions associated with the *rtppipes*.

IST2010I

This message is associated with a subgroup of messages that begins with message IST1680I.

inopcount is the number of Enterprise Extender connections, associated with the local IP address displayed in message IST1680I of this subgroup, that have been INOPed by VTAM due to SRQRETRY exhaustion.

IST2000I

IST2011I

This message is associated with a subgroup of messages that begins with message IST1680I.

vrnlines is the number of available lines associated with the virtual routing node displayed in message IST1324I of this subgroup.

IST2012I

This message is associated with a subgroup of messages that begins with message IST1680I.

vrnconns is the number of active EE connections associated with the virtual routing node displayed in message IST1324I of this subgroup.

IST2013I

- This message is associated with a subgroup of messages that begins with message IST1680I.
- *predeflines* is the number of available lines for predefined (non-VRN) Enterprise Extender connections that are associated with the local IP address displayed in message IST1680I of this subgroup.

Result: If the value for *predeflines* displays as 0, this might mean that all Enterprise Extender lines are associated with Connection Network (CN) groups. In that case, all available lines that are associated with CN groups are available for predefined connections. Lines will be selected from the local CN groups first. If no local CN lines are available, then lines will be selected from the global CN groups.

IST2014I

This message is associated with a subgroup of messages that begins with message IST1680I.

predefconns is the number of active predefined (non-VRN) Enterprise Extender connections that are associated with the local IP address displayed in message IST1680I of this subgroup.

IST2015I

This message is associated with a subgroup of messages that begins with message IST1680I.

lvrnconns is the number of Enterprise Extender LOCAL virtual routing node connections that are associated with the local IP address displayed in message IST1680I of this subgroup. *lvrnconns* is the sum of all the *vrnconns* values that are associated with LOCAL virtual routing nodes displayed in message IST2012I for this IST1680I subgroup.

IST2016I

This message is associated with a subgroup of messages that begins with message IST1680I.

gvrnconns is the number of Enterprise Extender GLOBAL virtual routing node connections associated with the local IP address displayed in message IST1680I of this subgroup. *gvrnconns* is the sum of all the *vrnconns* values that are associated with GLOBAL virtual routing nodes displayed in message IST2012I for this IST1680I subgroup.

IST2017I

totrtppipes is the total number of RTP pipes originating in this host that traverse EE connections on this host.

totrtppipes is the sum of the *rtppipes* values displayed in message IST2009I of each IST1680I subgroup. *totsessions* is the total number of LU-LU sessions associated with the *totrtppipes*.

totsessions is the sum of the *sessions* values displayed in message IST2009I of each IST1680I subgroup.

IST2018I

totpredefconns is the total number of active predefined (non-VRN) Enterprise Extender connections on this host.

totpredefconns is the sum of the *predefconns* values displayed in message IST2014I of each IST1680I subgroup.

IST2019I

totlvrnconns is the total number of active Enterprise Extender connections on this host that are associated with a LOCAL virtual routing node. *totlvrnconns* is the sum of the *lvrnconns* values displayed in message IST2015I of each IST1680I subgroup.

IST2020I

totgvnconns is the total number of active Enterprise Extender connections on this host that are associated with a GLOBAL virtual routing node. *totgvnconns* is the sum of the *gvnconns* values displayed in message IST2016I of each IST1680I subgroup.

IST2021I

totactive is the total number of active Enterprise Extender connections on this host. *totactive* is the sum of the *totpredefconns*, *totlvnconns* and *totgvnconns* values reported in messages IST2018I, IST2019I and IST2020I respectively.

IST2231I

current is the current rate of the HPR clock. If the HPRCLKRT start option is set to STANDARD, then the current rate will always display as STANDARD. If the HPRCLKRT start option is set to ADAPTIVE, then the current rate displays as STANDARD or HIGH, depending on network conditions.

IST2232I

This message is issued when the HPRCLKRT start option is set to ADAPTIVE and the HPR clock has entered high mode at some point.

The *date* and *time* values specify when the HPR clock most recently entered high mode. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2233I

This message is issued only when the HPRCLKRT start option is set to ADAPTIVE and the HPR clock has exited high mode back to standard mode.

The *date* and *time* values specify when the HPR clock most recently exited high mode. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2001I ENTERPRISE EXTENDER CONNECTION INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command for Enterprise Extender connection information. This message is the first in a group of messages. The display output might consist of multiple Enterprise Extender connections being displayed. Each matching connection will be displayed in a subgroup beginning with message IST1680I. The full description of the message group follows the example.

```

IST2001I ENTERPRISE EXTENDER CONNECTION INFORMATION
[IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator]
[IST075I NAME = name, TYPE = type ]
[IST924I -----]
  IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
  IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
  IST2346I CP NAME = cp_name
  IST2022I EE CONNECTION ACTIVATED ON date AT TIME time
  IST2114I LIVTIME:   INITIAL = init_value MAXIMUM = max_value CURRENT = cur_value
[IST2023I CONNECTED TO LINE linename_]

```

IST2001I

```
[IST2024I CONNECTED TO SWITCHED PU puname ]
[IST2343I EE HEALTH VERIFICATION NOT SUPPORTED BY REMOTE EE PARTNER]
IST2025I LDLC SIGNALS RETRANSMITTED AT LEAST ONE TIME      = numsignals
IST2026I LDLC SIGNALS RETRANSMITTED SRQRETRY TIMES        = numsignals
IST2009I RTP PIPES = rtppipes      LU-LU SESSIONS        = sessions
IST2027I DWINOP = dwinop      REDIAL = redial      REDDELAY = redelay
IST2028I KEEPACT = keepact
[IST924I -----]
[IST2030I PORT PRIORITY = SIGNAL ]
[IST2029I   MTU SIZE = mtusize]
[IST2036I   NLPS SENT           = nlps_sent           ( estimate ) ]
[IST2037I   BYTES SENT          = bytes_sent          ( estimate ) ]
[IST2038I   NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I   BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I   NLPS RECEIVED       = nlps_received       ( estimate ) ]
[IST2041I   BYTES RECEIVED      = bytes_received      ( estimate ) ]
[IST924I -----]
[IST2031I PORT PRIORITY = NETWORK]
[IST2029I   MTU SIZE = mtusize]
[IST2036I   NLPS SENT           = nlps_sent           ( estimate ) ]
[IST2037I   BYTES SENT          = bytes_sent          ( estimate ) ]
[IST2038I   NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I   BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I   NLPS RECEIVED       = nlps_received       ( estimate ) ]
[IST2041I   BYTES RECEIVED      = bytes_received      ( estimate ) ]
[IST924I -----]
[IST2032I PORT PRIORITY = HIGH ]
[IST2029I   MTU SIZE = mtusize]
[IST2036I   NLPS SENT           = nlps_sent           ( estimate ) ]
[IST2037I   BYTES SENT          = bytes_sent          ( estimate ) ]
[IST2038I   NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I   BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I   NLPS RECEIVED       = nlps_received       ( estimate ) ]
[IST2041I   BYTES RECEIVED      = bytes_received      ( estimate ) ]
[IST924I -----]
[IST2033I PORT PRIORITY = MEDIUM ]
[IST2029I   MTU SIZE = mtusize]
[IST2036I   NLPS SENT           = nlps_sent           ( estimate ) ]
[IST2037I   BYTES SENT          = bytes_sent          ( estimate ) ]
[IST2038I   NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I   BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I   NLPS RECEIVED       = nlps_received       ( estimate ) ]
[IST2041I   BYTES RECEIVED      = bytes_received      ( estimate ) ]
[IST924I -----]
[IST2034I PORT PRIORITY = LOW ]
[IST2029I   MTU SIZE = mtusize]
[IST2036I   NLPS SENT           = nlps_sent           ( estimate ) ]
[IST2037I   BYTES SENT          = bytes_sent          ( estimate ) ]
[IST2038I   NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I   BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I   NLPS RECEIVED       = nlps_received       ( estimate ) ]
[IST2041I   BYTES RECEIVED      = bytes_received      ( estimate ) ]
[IST924I -----]
IST2035I TOTALS FOR ALL PORT PRIORITIES
IST2036I   NLPS SENT           = nlps_sent           ( estimate )
IST2037I   BYTES SENT          = bytes_sent          ( estimate )
IST2038I   NLPS RETRANSMITTED = nlps_retransmitted ( estimate )
IST2039I   BYTES RETRANSMITTED = bytes_retransmitted( estimate )
IST2040I   NLPS RECEIVED       = nlps_received       ( estimate )
IST2041I   BYTES RECEIVED      = bytes_received      ( estimate )
[IST2042I count OF total EE CONNECTIONS DISPLAYED ]
IST314I END
```

IST075I

This message is displayed when a DISPLAY EE command is issued using the ID parameter.

name is the name of the LINE or PU that is displayed.

type is described in Chapter 17, "Node and ID types in VTAM messages," on page 1137.

IST924I

This message is a line separator between subgroups.

IST1680I

- This is the first message of a message subgroup. For DISPLAY EE commands that result in multiple EE connections being displayed, this subgroup is displayed for each matching EE connection. When LIST=DETAIL is specified, five optional subgroups, beginning with the IST2030I subgroup and ending with the IST2034I subgroup, will also be displayed.
- *type* is either LOCAL or REMOTE, indicating which IP address is being displayed.
- *ip_address* is the IP address.
- The complete message subgroup (LIST=SUMMARY) follows:

```

IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
IST2346I CP NAME = cp_name
IST2022I EE CONNECTION ACTIVATED ON date AT TIME time
[IST2023I CONNECTED TO LINE linename ]
[IST2024I CONNECTED TO SWITCHED PU puname ]
IST2025I LDLC SIGNALS RETRANSMITTED AT LEAST ONE TIME = numsignals
IST2026I LDLC SIGNALS RETRANSMITTED SRQRETRY TIMES = numsignals
IST2009I RTP PIPES = rtppipes LU-LU SESSIONS = lusessions
IST2027I DWINOP = dwinop REDIAL = redial REDDELAY = redelay
IST2028I KEEPACT = keepact
IST2029I MTU SIZE = mtusize
IST924I -----
IST2035I TOTALS FOR ALL PORT PRIORITIES
IST2036I NLPS SENT = nlps_sent ( estimate )
IST2037I BYTES SENT = bytes_sent ( estimate )
IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )
IST2039I BYTES RETRANSMITTED = bytes_retransmitted ( estimate )
IST2040I NLPS RECEIVED = nlps_received ( estimate )
IST2041I BYTES RECEIVED = bytes_received ( estimate )

```

IST1909I

value is the host name used to acquire the remote IP address associated with this connection to the remote node. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

value is the host name used to acquire the local static IP address displayed in message IST1680I. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on messages IST1909I and IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

IST2001I

This message is the header message for the Enterprise Extender connection display output.

IST2009I

rtppipes is the number of RTP pipes originating in this host that traverse EE connections associated with the local IP address displayed in message IST1680I of this subgroup.

sessions is the number of LU-LU sessions associated with the *rtppipes*.

IST2001I

IST2022I

The *date* and *time* values specify when this EE connection was activated. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2023I

linename is the name of the Enterprise Extender line that is being used for this Enterprise Extender connection.

IST2024I

puname is the name of the switched PU that is being used for this Enterprise Extender connection.

IST2025I

numsignals is the number of Logical Data Link Control (LDLC) signals that had to be retransmitted at least one time, prior to a response being received from the partner Enterprise Extender node.

IST2026I

numsignals is the number of Logical Data Link Control (LDLC) signals that had to be retransmitted SRQRETRY times, prior to a response being received from the partner Enterprise Extender node.

IST2027I

dwinop is the value of the DWINOP parameter associated with this Enterprise Extender physical unit. The DWINOP parameter specifies whether the physical unit is to be dialed after it has INOPed.

redial is the value of the REDIAL parameter associated with this Enterprise Extender physical unit. The REDIAL parameter specifies the number of times dialing is to be tried again before returning a dialing error to VTAM.

reddelay is the value of the REDDELAY parameter associated with this Enterprise Extender physical unit. The REDDELAY parameter specifies the number of seconds between each attempt to redial an Enterprise Extender connection.

IST2028I

keepact is the value of the KEEPACT parameter associated with this Enterprise Extender line. The KEEPACT parameter specifies whether the line used for this Enterprise Extender connection should be automatically reactivated when the line is deactivated by a link INOP.

IST2029I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, or IST2034I. When policy-based routing is in effect, the MTU size might be different for each of the ports, depending on the routes chosen for EE traffic. This message is issued for each of the five EE ports, regardless of whether policy-based routing is in effect and regardless of whether the display is for an IPv4 or IPv6 connection.
- *mtusize* is the size of the largest packet that VTAM will send over this Enterprise Extender connection. The MTU size (both IPv4 and IPv6) might change during the life of the EE connection. The displayed value is obtained in the following manner:
 1. VTAM queries the TCP/IP stack to obtain its MTU size and sets the EE connection to use this value. This MTU size has already been reduced to account for various header lengths such as the IP, UDP, and LLC headers necessary for EE traffic.
 2. VTAM takes into account the VTAM MTU operand value, if it is specified. The MTU operand can be specified on three types of VTAM major nodes:
 - For EE connection networks, this operand is defined on the connection network GROUP definition statements in the EE XCA major node.
 - For dial-in EE connections with associated PUs that are dynamically created, this operand is defined on the model major node (DYNTYPE=EE) PU definition statement.
 - For predefined EE connections, this operand is defined on the PU definition statement in the switched major node.
 3. VTAM uses the lesser of the TCP/IP stack computed MTU size and the VTAM defined MTU operand value (if it is specified). If the TCP/IP stack value is less than 768 bytes, VTAM sets the MTU value to 768 because this is the smallest packet size allowed by the HPR architecture.

Generally, the MTU size for an EE connection is reasonably constant when the EE connection is established. However, in the event that the TCP/IP stack MTU size changes, RTP pipes with endpoints on the same node as the TCP/IP stack dynamically detect these changes when their outbound packets are being transmitted. Some reasons for MTU size changes include the following:

- New IP routes become available, which have different local MTU sizes.
- Existing IP routes become unavailable.
- Path MTU discovery is enabled for IPv4 or IPv6 EE connections, and path MTU changes are discovered in the IP network. See the PMTUD start option information in z/OS Communications Server: SNA Resource Definition Reference.

IST2030I, IST2031I, IST2032I, IST2033I, IST2034I, IST2035I

- Messages IST2030I through IST2034I are header messages for optional message subgroups. One subgroup is displayed for each port priority when LIST=DETAIL is specified. Each header message is followed by messages IST2029I, IST2036I, IST2037I, IST2038I, IST2039I, IST2040I, and IST2041I.
- IST2035I is a header message for a subgroup that displays a summary of all port priorities. This subgroup includes the same messages as those that are listed for each port priority subgroup, with the exception of IST2029I.
- Each of these subgroups is also associated with a subgroup of messages that begins with message IST1680I.
- A sample of one of the subgroups follows:

```
IST2030I PORT PRIORITY = SIGNAL
IST2029I MTU SIZE = mtusize
IST2036I NLPs SENT           = nlp_sent           ( estimate )
IST2037I BYTES SENT         = bytes_sent         ( estimate )
IST2038I NLPs RETRANSMITTED = nlp_retransmitted ( estimate )
IST2039I BYTES RETRANSMITTED = bytes_retransmitted( estimate )
IST2040I NLPs RECEIVED      = nlp_received      ( estimate )
IST2041I BYTES RECEIVED     = bytes_received     ( estimate )
```

IST2036I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *nlp_sent* is the total number of network layer packets (NLP) that have been sent across this EE connection for this specific priority. This value is maintained from the time this connection was activated.
- *estimate* is an estimate of the displayed *nlp_sent*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

```
K      estimate is in units of 1000 NLPs.
M      estimate is in units of 1 000 000 NLPs.
G      estimate is in units of 1 000 000 000 NLPs.
T      estimate is in units of 1 000 000 000 000 NLPs.
P      estimate is in units of 1 000 000 000 000 000 NLPs.
```

IST2037I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *bytes_sent* is the total number of bytes that have been sent across this EE connection for this specific priority. This value is maintained from the time this connection was activated.
- *estimate* is an estimate of the displayed *bytes_sent*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

```
K      estimate is in units of 1000 bytes.
M      estimate is in units of 1 000 000 bytes.
G      estimate is in units of 1 000 000 000 bytes.
T      estimate is in units of 1 000 000 000 000 bytes.
P      estimate is in units of 1 000 000 000 000 000 NLPs.
```

IST2001I

IST2038I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *npls_retransmitted* is the total number of network layer packets (NLP) that have been retransmitted across this EE connection for this specific priority. This value is maintained from the time this connection was activated.
- *estimate* is an estimate of the displayed *npls_retransmitted*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K	estimate is in units of 1000 NLPs.
M	estimate is in units of 1 000 000 NLPs.
G	estimate is in units of 1 000 000 000 NLPs.
T	estimate is in units of 1 000 000 000 000 NLPs.
P	estimate is in units of 1 000 000 000 000 000 NLPs.

IST2039I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *bytes_retransmitted* is the total number of bytes that have been retransmitted across this EE connection for this specific priority. This value is maintained from the time this connection was activated.
- *estimate* is an estimate of the displayed *bytes_retransmitted*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K	estimate is in units of 1000 bytes.
M	estimate is in units of 1 000 000 bytes.
G	estimate is in units of 1 000 000 000 bytes.
T	estimate is in units of 1 000 000 000 000 bytes.
P	estimate is in units of 1 000 000 000 000 000 bytes.

IST2040I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *npls_received* is the total number of network layer packets (NLP) that have been received across this EE connection for this specific priority. This value is maintained from the time this connection was activated.
- *estimate* is an estimate of the displayed *npls_received*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K	estimate is in units of 1000 NLPs.
M	estimate is in units of 1 000 000 NLPs.
G	estimate is in units of 1 000 000 000 NLPs.
T	estimate is in units of 1 000 000 000 000 NLPs.
P	estimate is in units of 1 000 000 000 000 000 NLPs.

IST2041I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *bytes_received* is the total number of bytes that have been received across this EE connection for this specific priority. This value is maintained from the time this connection was activated.
- *estimate* is an estimate of the displayed *bytes_received*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K	estimate is in units of 1000 bytes.
M	estimate is in units of 1 000 000 bytes.

- G** estimate is in units of 1 000 000 000 bytes.
- T** estimate is in units of 1 000 000 000 000 bytes.
- P** estimate is in units of 1 000 000 000 000 000 bytes.

IST2042I

This is an optional message that is issued when the DISPLAY EE command contains either a remote IPADDR or a remote HOSTNAME.

count is the number of matching EE connections displayed in the output.

total is the total number of EE connections that match the parameters specified on the DISPLAY EE command. The total might be larger than the displayed count because the number of EE connections displayed is governed by the MAX parameter.

IST2114I

This message displays the initial, maximum and current LIVTIME values for an Enterprise Extender connection. See the information about the external communication adapter (XCA) major node in z/OS Communications Server: SNA Resource Definition Reference for more information about the LIVTIME operand for Enterprise Extender.

init_value is the initial LIVTIME value, in seconds, defined for Enterprise Extender connections.

max_value is the maximum LIVTIME value, in seconds, defined for Enterprise Extender connections.

cur_value is the current LIVTIME value, in seconds, being used by this Enterprise Extender connection.

IST2119I

This is an optional message that is issued when the DISPLAY EE command contains HOSTNAME filters.

The *correlator* value is a unique display correlator associated with this DISPLAY EE command, which requires host name resolution. This correlator can be used to locate the various message groups associated with this DISPLAY EE command.

IST2323I

During the activation of the EE Connection, VTAM sent Logical Data Link Control (LDLC) probes to the remote partner to determine if all five ports are accessible. VTAM did not receive a response from any of the LDLC probe requests. VTAM continued with the activation of the EE connection between this node and the remote partner. Because VTAM received no replies to its LDLC probe requests, VTAM determined that the remote partner does not support EE health verification.

IST2346I

cp_name is the CP name of the remote node associated with this Enterprise Extender connection.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not recommended.

IST2002I ENTERPRISE EXTENDER AGGREGATE CONNECTION INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command for aggregate Enterprise Extender connection information. This message is the first in a group of messages. This message group is displayed when the DISPLAY EE command is issued and only a local IPADDR or a local HOSTNAME is supplied as input. The output information is the aggregate of all Enterprise Extender connections associated with the local IPADDR or local HOSTNAME. When LIST=DETAIL is specified, five optional message subgroups, beginning with the IST2030I subgroup and ending with the IST2034I subgroup, are displayed for each port priority. The full description of the message group follows:

```

IST2002I ENTERPRISE EXTENDER AGGREGATE CONNECTION INFORMATION
[IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator]
IST924I -----
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST2004I LIVTIME = (init_value,max_value) SRQTIME = srqtime SRQRETRY = srqretry]
IST2009I RTP PIPES = rtppipes LU-LU SESSIONS = sessions
IST2010I INOPS DUE TO SRQRETRY EXPIRATION = inopcount
[IST1324I VNNAME = vnname VNGROUP = vngroup vntype ]
[IST2011I AVAILABLE LINES FOR THIS EE VRN = vrnlines ]
[IST2012I ACTIVE CONNECTIONS USING THIS EE VRN = vrnconns ]
IST2013I AVAILABLE LINES FOR PREDEFINED EE CONNECTIONS = predeflines
IST2014I ACTIVE PREDEFINED EE CONNECTIONS = predefconns
IST2015I ACTIVE LOCAL VRN EE CONNECTIONS = lvrnconns
IST2016I ACTIVE GLOBAL VRN EE CONNECTIONS = gvrnconns
[IST2043I TOTAL ACTIVE EE CONNECTIONS FOR LOCAL HOSTNAME = totconns ]
[IST2044I TOTAL ACTIVE EE CONNECTIONS FOR LOCAL IPADDR = totconns ]
[IST924I -----]
[IST2030I PORT PRIORITY = SIGNAL ]
[IST2036I NLPS SENT = nlps_sent ( estimate ) ]
[IST2037I BYTES SENT = bytes_sent ( estimate ) ]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I NLPS RECEIVED = nlps_received ( estimate ) ]
[IST2041I BYTES RECEIVED = bytes_received ( estimate ) ]
[IST924I -----]
[IST2031I PORT PRIORITY = NETWORK]
[IST2036I NLPS SENT = nlps_sent ( estimate ) ]
[IST2037I BYTES SENT = bytes_sent ( estimate ) ]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I NLPS RECEIVED = nlps_received ( estimate ) ]
[IST2041I BYTES RECEIVED = bytes_received ( estimate ) ]
[IST924I -----]
[IST2032I PORT PRIORITY = HIGH ]
[IST2036I NLPS SENT = nlps_sent ( estimate ) ]
[IST2037I BYTES SENT = bytes_sent ( estimate ) ]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I NLPS RECEIVED = nlps_received ( estimate ) ]
[IST2041I BYTES RECEIVED = bytes_received ( estimate ) ]
[IST924I -----]
[IST2033I PORT PRIORITY = MEDIUM ]
[IST2036I NLPS SENT = nlps_sent ( estimate ) ]
[IST2037I BYTES SENT = bytes_sent ( estimate ) ]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I NLPS RECEIVED = nlps_received ( estimate ) ]
[IST2041I BYTES RECEIVED = bytes_received ( estimate ) ]
[IST924I -----]
[IST2034I PORT PRIORITY = LOW ]
[IST2036I NLPS SENT = nlps_sent ( estimate ) ]
[IST2037I BYTES SENT = bytes_sent ( estimate ) ]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate ) ]
[IST2039I BYTES RETRANSMITTED = bytes_retransmitted( estimate ) ]
[IST2040I NLPS RECEIVED = nlps_received ( estimate ) ]

```

```
[IST2041I  BYTES RECEIVED      = bytes_received    ( estimate ) ]
IST924I  -----
IST2035I  TOTALS FOR ALL PORT PRIORITIES
IST2036I  NLPS SENT           = n1ps_sent         ( estimate )
IST2037I  BYTES SENT          = bytes_sent        ( estimate )
IST2038I  NLPS RETRANSMITTED = n1ps_retransmitted ( estimate )
IST2039I  BYTES RETRANSMITTED = bytes_retransmitted ( estimate )
IST2040I  NLPS RECEIVED      = n1ps_received    ( estimate )
IST2041I  BYTES RECEIVED      = bytes_received    ( estimate )
IST314I  END
```

IST924I

This message is a line separator between subgroups.

IST1324I

- This is the first message of a subgroup. This subgroup is displayed for each active Enterprise Extender virtual routing node. This message is a header message for messages IST2011I and IST2012I. This message is also associated with a subgroup of messages that begins with message IST1680I.
- *vnname* is the fully qualified virtual routing node name.
- *vngroup* is the GROUP associated with the connection network definition.
- *vntype* indicates the type of HPR/IP (Enterprise Extender) connection network. The two possible values are:

(LOCAL)

The connection network is being defined as a LOCAL Virtual Routing Node (the connection network cannot traverse network or subnetwork boundaries.) Either VNTYPE was not specified, or VNTYPE was specified as LOCAL on the definition of the Enterprise Extender virtual routing node.

(GLOBAL)

The connection network is being defined as a GLOBAL Virtual Routing Node (the connection network can traverse network or subnetwork boundaries.) VNTYPE was specified as GLOBAL on the definition of the Enterprise Extender virtual routing node.

- The complete message subgroup follows the example.

```
IST1324I  VNNAME = vnname          VNGROUP = vngroup vntype
IST2011I  AVAILABLE LINES FOR THIS EE VRN      = vrnlines
IST2012I  ACTIVE CONNECTIONS USING THIS EE VRN = vrnconns
```

IST1680I

type is always LOCAL for this display.

ip_address is the IP address.

IST1910I

value is the host name used to acquire the local static IP address displayed in message IST1680I. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on message IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

IST2004I

This message displays the LDLC timer operands that are associated with the local static VIPA address displayed in message IST1680I. See the external communication adapter (XCA) major node information in z/OS Communications Server: SNA Resource Definition Reference for more information about the LIVTIME operand for Enterprise Extender.

The *init_value* value is the initial duration, in seconds, of an Enterprise Extender logical data link control (LDLC) liveness timer interval.

The *max_value* value is the maximum duration, in seconds, of an Enterprise Extender LDLC liveness timer interval.

IST2002I

The *srqtime* value is the duration, in seconds, of the Enterprise Extender LDLC short request timer interval. The short request timer interval represents the amount of time the LDLC layer waits, without receipt of a response from the connection partner, before sending the LDLC signal again.

The *srqretry* value is the number of times the short request timer is tried again before the Enterprise Extender port becomes inoperative.

IST2009I

rtppipes is the number of RTP pipes originating in this host that traverse EE connections associated with the local IP address displayed in message IST1680I.

sessions is the number of LU-LU sessions associated with the *rtppipes*.

IST2010I

inopcount is the number of Enterprise Extender connections associated with the local IP address displayed in message IST1680I that have been INOPed by VTAM due to SRQRETRY exhaustion.

IST2011I

vrnlines is the number of available lines associated with the virtual routing node displayed in message IST1324I of this subgroup.

IST2012I

vrnconns is the number of active EE connections associated with the virtual routing node displayed in message IST1324I of this subgroup.

IST2013I

predeflines is the number of available lines for predefined (non-VRN) Enterprise Extender connections that are associated with the local IP address displayed in message IST1680I.

IST2014I

predefconns is the number of active predefined (non-VRN) Enterprise Extender connections that are associated with the local IP address displayed in message IST1680I.

IST2015I

lvrnconns is the number of Enterprise Extender local virtual routing node connections that are associated with the local IP address displayed in message IST1680I.

lvrnconns is the sum of all the *vrnconns* values that are associated with LOCAL virtual routing nodes displayed in message IST2012I for this local IP address.

IST2016I

gvrnconns is the number of Enterprise Extender global virtual routing node connections associated with the local IP address displayed in message IST1680I.

gvrnconns is the sum of all the *vrnconns* values that are associated with GLOBAL virtual routing nodes displayed in message IST2012I for this local IP address.

IST2030I, IST2031I, IST2032I, IST2033I, IST2034I, IST2035I

- Messages IST2030I through IST2034I are header messages for optional message subgroups. One subgroup is displayed for each port priority when LIST=DETAIL is specified. Each header message is followed by messages IST2036I, IST2037I, IST2038I, IST2039I, IST2040I, and IST2041I.
- IST2035I is a header message for a subgroup that displays a summary of all port priorities. This subgroup includes the same messages as those that are listed for each port priority subgroup.
- Each of these subgroups is also associated with a subgroup of messages that begins with message IST1680I.
- A sample of one of the subgroups follows:

```
IST2030I PORT PRIORITY = SIGNAL
IST2036I NLPS SENT           = nlps_sent           ( estimate )
IST2037I BYTES SENT         = bytes_sent         ( estimate )
IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )
```

```

IST2039I  BYTES RETRANSMITTED = bytes_retransmitted( estimate )
IST2040I  NLPS RECEIVED      = nlp_received      ( estimate )
IST2041I  BYTES RECEIVED     = bytes_received   ( estimate )

```

IST2036I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *nlp_sent* is the total number of network layer packets (NLP) that have been sent across all active EE connections associated with the local IP address displayed in message IST1680I. This value is the aggregate of these connections for this specific priority. Each EE connection has its own count of sent NLPs, which is maintained from the time each connection was activated.
- *estimate* is an estimate of the displayed *nlp_sent*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K estimate is in units of 1000 NLPs.

M estimate is in units of 1 000 000 NLPs.

G estimate is in units of 1 000 000 000 NLPs.

T estimate is in units of 1 000 000 000 000 NLPs.

P estimate is in units of 1 000 000 000 000 000 NLPs.

IST2037I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *bytes_sent* is the total number of bytes that have been sent across all active EE connections associated with the local IP address displayed in message IST1680I. This value is the aggregate of these connections for this specific priority. Each EE connection has its own count of sent bytes, which is maintained from the time each connection was activated.
- *estimate* is an estimate of the displayed *bytes_sent*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K estimate is in units of 1000 bytes.

M estimate is in units of 1 000 000 bytes.

G estimate is in units of 1 000 000 000 bytes.

T estimate is in units of 1 000 000 000 000 bytes.

P estimate is in units of 1 000 000 000 000 000 bytes.

IST2038I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *nlp_retransmitted* is the total number of network layer packets (NLP) that have been retransmitted across all active EE connections associated with the local IP address displayed in message IST1680I. This value is the aggregate of these connections for this specific priority. Each EE connection has its own count of retransmitted NLPs, which is maintained from the time each connection was activated.
- *estimate* is an estimate of the displayed *nlp_retransmitted*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:

K estimate is in units of 1000 NLPs.

M estimate is in units of 1 000 000 NLPs.

G estimate is in units of 1 000 000 000 NLPs.

T estimate is in units of 1 000 000 000 000 NLPs.

P estimate is in units of 1 000 000 000 000 000 NLPs.

IST2039I

IST2002I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *bytes_retransmitted* is the total number of bytes that have been retransmitted across all active EE connections associated with the local IP address displayed in message IST1680I. This value is the aggregate of these connections for this specific priority. Each EE connection has its own count of retransmitted bytes, which is maintained from the time each connection was activated.
- *estimate* is an estimate of the displayed *bytes_retransmitted*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:
 - K** estimate is in units of 1000 bytes.
 - M** estimate is in units of 1 000 000 bytes.
 - G** estimate is in units of 1 000 000 000 bytes.
 - T** estimate is in units of 1 000 000 000 000 bytes.
 - P** estimate is in units of 1 000 000 000 000 000 bytes.

IST2040I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *npls_received* is the total number of network layer packets (NLP) that have been received across all active EE connections associated with the local IP address displayed in message IST1680I. This value is the aggregate of these connections for this specific priority. Each EE connection has its own count of received NLPs, which is maintained from the time each connection was activated.
- *estimate* is an estimate of the displayed *npls_received*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:
 - K** estimate is in units of 1000 NLPs.
 - M** estimate is in units of 1 000 000 NLPs.
 - G** estimate is in units of 1 000 000 000 NLPs.
 - T** estimate is in units of 1 000 000 000 000 NLPs.
 - P** estimate is in units of 1 000 000 000 000 000 NLPs.

IST2041I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *bytes_received* is the total number of bytes that have been received across all active EE connections associated with the local IP address displayed in message IST1680I. This value is the aggregate of these connections for this specific priority. Each EE connection has its own count of received bytes, which is maintained from the time each connection was activated.
- *estimate* is an estimate of the displayed *bytes_received*. It is in the form xxxU, where xxx is a numeric value and U is the unit of measure for xxx as follows:
 - K** estimate is in units of 1000 bytes.
 - M** estimate is in units of 1 000 000 bytes.
 - G** estimate is in units of 1 000 000 000 bytes.
 - T** estimate is in units of 1 000 000 000 000 bytes.
 - P** estimate is in units of 1 000 000 000 000 000 bytes.

IST2043I

totconns is the number of active EE connections associated with the local HOSTNAME entered as input on the DISPLAY EE command.

IST2044I

totconns is the number of active EE connections associated with the local IP address (IPADDR) entered as input on the DISPLAY EE command.

IST2119I

This is an optional message that is issued when the DISPLAY EE command contains HOSTNAME filters.

The *correlator* value is a unique display correlator associated with this DISPLAY EE command, which requires host name resolution. This correlator can be used to locate the various message groups associated with this DISPLAY EE command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2003I ENTERPRISE EXTENDER XCA MAJOR NODE NAME = *name*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2004I LIVTIME = (*init_value,max_value*) SRQTIME = *srqtime* SRQRETRY = *srqretry*

Explanation: VTAM issues this message for the following reasons:

- As part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.
- As part of a group during the activation of an EE XCA major node group that experienced problems associated with the LDLC timer operands. In this case, the first message in the group is IST2188I. See the explanation of that message for a complete description.
- As part of a group in response to a DISPLAY EE command with the following values:
 - A local IP address on the IPADDR operand or a local host name on the HOSTNAME operand is specified.
 - A remote IP address on the IPADDR operand or a remote host name on the HOSTNAME operand is not specified.
 - The ID operand is not specified.

The first message in the group is IST2002I. See the explanation of that message for a complete description.

- As part of a group in response to a DISPLAY EEDIAG command with the SRQRETRY operand specified. The first message in the group is IST2066I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2005I IPRESOLV = *ipresolv*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2006I PORT PRIORITY = SIGNAL NETWORK HIGH MEDIUM LOW

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2007I IPPORT NUMBER = *portsig portnet porthigh portmed portlow*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2008I IPTOS VALUE = *sigtos nettos hightos medtos lowtos*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2009I RTP PIPES = *rtppipes* LU-LU SESSIONS = *sessions*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I, IST2001I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2010I INOPS DUE TO SRQRETRY EXPIRATION = *inopcount*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2011I AVAILABLE LINES FOR THIS EE VRN = *vrnlines*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2012I ACTIVE CONNECTIONS USING THIS EE VRN = *vrnconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2013I **AVAILABLE LINES FOR PREDEFINED EE CONNECTIONS** = *predeflines*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2014I **ACTIVE PREDEFINED EE CONNECTIONS** = *predefconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2015I **ACTIVE LOCAL VRN EE CONNECTIONS** = *lvrnconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2016I **ACTIVE GLOBAL VRN EE CONNECTIONS** = *gvrnconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2000I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2017I **TOTAL RTP PIPES** = *totrtppipes* **LU-LU SESSIONS** = *totsessions*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for more information.

Routing code: 2

Descriptor code: 5

IST2018I **TOTAL ACTIVE PREDEFINED EE CONNECTIONS** = *totpredefconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2019I TOTAL ACTIVE LOCAL VRN EE CONNECTIONS = *totlvrnconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2020I TOTAL ACTIVE GLOBAL VRN EE CONNECTIONS = *totgvrnconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2021I TOTAL ACTIVE EE CONNECTIONS = *totconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2022I EE CONNECTION ACTIVATED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2001I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2023I CONNECTED TO LINE *linename*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE or DISPLAY EEDIAG command. The first message in the group is IST2001I, IST2065I, IST2066I, or IST2119I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2024I CONNECTED TO SWITCHED PU *puname*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE or DISPLAY EEDIAG command. The first message in the group is IST2001I, IST2065I, or IST2066I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2025I LDLC SIGNALS RETRANSMITTED AT LEAST ONE TIME = *numsignals*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2001I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2026I **LDLC SIGNALS RETRANSMITTED SRQRETRY TIMES = *numsignals***

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2001I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2027I **DWINOP = *dwinop* REDIAL = *redial* REDDELAY = *reddelay***

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2001I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2028I **KEEPACT = *keepact***

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2001I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2029I **MTU SIZE = *mtusize***

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message group that contains this message begins with IST2001I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2030I **PORT PRIORITY = SIGNAL**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2031I **PORT PRIORITY = NETWORK**

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2032I PORT PRIORITY = HIGH

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2033I PORT PRIORITY = MEDIUM

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2034I PORT PRIORITY = LOW

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2035I TOTALS FOR ALL PORT PRIORITIES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2036I NLPS SENT = *nmps_sent* (estimate)

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2037I BYTES SENT = *bytes_sent (estimate)*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2038I NLPS RETRANSMITTED = *nlps_retransmitted (estimate)*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. This message group begins with message IST2065I.

See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2039I BYTES RETRANSMITTED = *bytes_retransmitted (estimate)*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2040I NLPS RECEIVED = *nlps_received (estimate)*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups that contain this message begin with message IST2001I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2041I BYTES RECEIVED = *bytes_received (estimate)*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The output of the DISPLAY EE command varies depending on the format of the command. The message groups which contain this message begin with message IST2001I and IST2002I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2042I *count* OF total EE CONNECTIONS DISPLAYED

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE or DISPLAY EEDIAG command. The first message in the group is either IST2001I, IST2065I, or IST2066I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2043I TOTAL ACTIVE EE CONNECTIONS FOR LOCAL HOSTNAME = *totconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2002I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2044I TOTAL ACTIVE EE CONNECTIONS FOR LOCAL IPADDR = *totconns*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2002I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2045I ENTERPRISE EXTENDER XCA MAJOR NODE NOT ACTIVE

Explanation: This message is issued in response to a DISPLAY EE or a DISPLAY EEDIAG command if the Enterprise Extender XCA major node is not active.

System action: The DISPLAY EE or DISPLAY EEDIAG command is not performed.

Operator response: Activate the Enterprise Extender XCA major node if you want Enterprise Extender connectivity.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2046I MNPS FORCED TAKEOVER TIMER EXPIRED FOR *applname*

Explanation: An MNPS forced takeover request was received and accepted for the MNPS application *applname* owned by the VTAM issuing this message, but the processing necessary to transfer ownership of the application to the requesting node did not complete in the anticipated amount of time.

applname is the name of the application requested to move as part of forced takeover processing.

System action: Ownership of the application is transferred unconditionally to the requesting node. Access to the MNPS coupling facility data structure is restricted for the copy of the application on the VTAM issuing this message, so that any coupling facility updates attempted at the VTAM issuing this message will not affect the data in the structure.

Operator response: Issue VARY INACT, ID=*applname* to attempt to clean up the local information about the application.

System programmer response: Collect VTAM internal traces at the VTAM issuing this message and contact IBM Service to determine why the CLOSE ACB processing did not complete as anticipated.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2047I *name* DOES NOT HAVE AN ACTIVE EE CONNECTION

Explanation: The LINE or PU name entered on the ID operand of the DISPLAY EE or DISPLAY EEDIAG command does not have an active Enterprise Extender connection at this time. No Enterprise Extender specific information is available.

System action: The DISPLAY EE or DISPLAY EEDIAG command is not performed.

Operator response: Verify the name supplied on the ID operand of the DISPLAY EE or DISPLAY EEDIAG command is correct. Issue a DISPLAY ID=*name*,E command to verify the current state of this LINE or PU. See z/OS Communications Server: SNA Operation for more information about commands or command syntax.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2048I LOCAL IPADDR IS NOT VALID WITH LOCAL HOSTNAME

Explanation: A DISPLAY EE or DISPLAY EEDIAG command was entered that specified both a local IPADDR and a local HOSTNAME. Only one local input is allowed.

System action: The DISPLAY EE or DISPLAY EEDIAG command was not performed.

Operator response: Issue the DISPLAY EE or DISPLAY EEDIAG command again specifying either a local IPADDR or a local HOSTNAME, but not both. See z/OS Communications Server: SNA Operation for more information about commands or command syntax.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2049I REMOTE IPADDR IS NOT VALID WITH REMOTE HOSTNAME

Explanation: A DISPLAY EE or DISPLAY EEDIAG command was entered that specified both a remote IPADDR and a remote HOSTNAME. Only one remote input is allowed.

System action: The DISPLAY EE or DISPLAY EEDIAG command is not performed.

Operator response: Issue the DISPLAY EE or DISPLAY EEDIAG command again specifying either a remote IPADDR or a remote HOSTNAME, but not both. See z/OS Communications Server: SNA Operation for more information about commands or command syntax.

System programmer response: None.

Source: z/OS Communications Server SNA

IST2050I • IST2056I

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2050I THIS PATH WILL NOT BE SELECTED FOR UNRCHTIM = *seconds* SECONDS

Explanation: VTAM issues this message as part of a group of messages when a dial failure or a connection INOP occurs on a network node for a connection over an Enterprise Extender Virtual Routing Node (VRN) to a specific partner node. The first message in the group is IST1903I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2052I ORIGIN NODE PARTNER NODE UNRCHTIM EXPIRES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The first message in the group is IST2057I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2054I VIRTUAL NODE PARTNER NODE UNRCHTIM EXPIRES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The first message in the group is IST2057I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2055I *vrn_or_orig_name partner_name unrchtim time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The first message in the group is IST2057I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2056I NO MATCHING UNREACHABLE PARTNER INFORMATION EXISTS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The first message in the group is IST2057I. See the explanation of that message for a complete description.

This message can also be issued as a single-line message in response to a MODIFY TOPO,FUNCTION=CLRURCH command. It indicates that there is no unreachable partner information that matches the values specified on the ORIG, VRN, and DEST operands on the command, so no information can be cleared.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2057I UNREACHABLE PARTNER INFORMATION:

Explanation: VTAM issues this message as the first message of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The description of the message group follows:

```
IST2057I UNREACHABLE PARTNER INFORMATION:
[IST924I -----]
[IST2150I VIRTUAL NODE vrn_name - count UNREACHABLE PARTNERS]
[IST2151I PARTNER LIMIT EXCEEDED - UNUSABLE UNTIL COUNT IS BELOW lowerlim]
[IST2052I ORIGIN NODE PARTNER NODE UNRCHTIM EXPIRES]
[IST2055I orig_name partner_name unrchtim time]
.
.
[IST1315I DISPLAY TRUNCATED AT keyword = number]
[IST924I -----]
[IST2056I NO MATCHING UNREACHABLE PARTNER INFORMATION EXISTS]
IST314I END
```

IST924I

This message is a separator message.

IST1315I

- VTAM issues this message when the number of unreachable partner paths to be displayed exceeds the value specified for the MAX operand.
- In the message text:

keyword

The *keyword* value is always MAX.

number

The value specified for the MAX operand.

IST2052I

This message is a header message for unreachable partner information associated with the Enterprise Extender virtual routing node (VRN) named in message IST2150I.

IST2055I

orig_name is the network-qualified name of the origin node in the path to the unreachable partner node.

partner_name is the network qualified name of the partner node that is unreachable on the path through an Enterprise Extender virtual routing node (VRN).

unrchtim is the time in seconds that a path through the VRN will not be considered as a possible session path to an unreachable partner. The path is identified by origin node, intermediate VRN, and unreachable destination partner node. This is the unreachable time value of UNRCHTIM specified for the Enterprise Extender VRN in the node that detected the path through the VRN to the unreachable partner. See the UNRCHTIM start option in z/OS Communications Server: SNA Resource Definition Reference for more information about the unreachable time value of the UNRCHTIM start option or the UNRCHTIM operand in the XCA major node.

It is possible for *unrchtim* in the node that detected the problem to be different in other nodes that have learned the unreachable partner information through TDU flows. This happens if topology that includes unreachable partner information is exchanged when a CP-CP session is established between two network nodes or between an end node and its network node server. The time until the unreachable information expires is calculated from the *unrchtim* value, so when a topology exchange is done after the initial detection of the unreachable partner, it is necessary to alter the *unrchtim* value sent in the topology information to make sure the expiration time is consistent on all nodes. In this case, *unrchtim* is not meaningful in the nodes that learned the unreachable partner information through TDU flows and the *unrchtim* value will display as five asterisks (*****).

IST2057I

time is the time that the unreachable time will expire. When the time expires, if this path still has the lowest weight of any available path to the partner node, the path over this particular Enterprise Extender VRN will be selected on the next attempt to redial the partner node. The dial attempt will result in failure if the underlying problem with the connection has not been corrected. That dial failure will cause the unreachable time to be set again to prevent selection of the path through this Enterprise Extender VRN to the unreachable partner node for the period of time specified for the VRN. This will continue until the problem with the connection path is corrected.

The time is expressed in 24-hour system format (hh:mm:ss). For example, 1:00 p.m. is displayed as 13:00:00. The expiration time might appear to be earlier than the time the DISPLAY TOPO command was entered if the unreachable time value causes the time to expire the following day (after 24:59:59 on the day the command was entered). For example, if the DISPLAY TOPO command is entered at 23:45:00 and the unreachable time expires at 1:15 a.m., *time* will be 01:15:00.

This message is issued as many times as necessary to display all of the unreachable partner information that matches the values specified on the ORIG, VRN, and DEST operands of the DISPLAY TOPO,LIST=UNRCHTIM command. The unreachable path is from the name specified by the *orig_name* value to the name specified by the *vrn_name* value (from message IST2150I) to the name specified by the *partner_name* value. See z/OS Communications Server: SNA Network Implementation Guide for more information about this display.

IST2056I

This message is issued when there is no unreachable partner information that matches the values specified on the ORIG, VRN, and DEST operands of the DISPLAY command.

IST2150I

- In the message text:

vrn_name

The network-qualified name of the Enterprise Extender virtual routing node (VRN) that is the intermediate node in a path to an unreachable partner.

count

The total number of unreachable partner paths that are associated with the named Enterprise Extender VRN in the topology database.

The *count* value might differ from the number of unreachable partner paths displayed for the VRN in message IST2055I messages if the ORIG, VRN, or DEST operand is used on the DISPLAY TOPO,LIST=UNRCHTIM command to limit the scope of unreachable partner paths displayed or if the message display is truncated with message IST1315I.

IST2151I

- This message is issued when the number of unreachable partner paths associated with the VRN in message IST2150I exceeds the unreachable partner limit.
- A user-specified limit of unreachability records associated with an Enterprise Extender VRN can be set on the UNRCHTIM start option. When the count of unreachable partner paths through an Enterprise Extender VRN exceeds this limit, the VRN is no longer used for session route selection. The VRN remains unusable until enough unreachability records that are associated with the VRN are deleted to make the count less than 80% of the limit set in the UNRCHTIM start option. An unreachability record is deleted when the unreachable time that is associated with that record expires, or when the unreachability records are manually cleared with the MODIFY TOPO,FUNCTION=CLRUNRCH command. See the UNRCHTIM start option in z/OS Communications Server: SNA Resource Definition Reference for more information.
- In the message text:

lowerlim

When the number of unreachable partner paths through an EE VRN falls below the number specified by the *lowerlim* value, the unreachable partner limit is no longer considered to be exceeded.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2058I UNREACHABLE PARTNER LIMIT EXCEEDED FOR VRN *cpname*

Explanation: This message is issued when the addition of an unreachable partner record to the topology database caused the number of unreachable partner paths that are associated with the Enterprise Extender virtual routing node (VRN) to exceed the unreachable partner limit for the VRN.

A user-specified limit of unreachability records associated with an Enterprise Extender VRN can be set on the UNRCHTIM start option. When the count of unreachable partner paths through an Enterprise Extender VRN exceeds this limit, the VRN is no longer used for session route selection. The VRN remains unusable until enough unreachability records that are associated with the VRN are deleted to make the count less than 80% of the limit set in the UNRCHTIM start option. As long as the number of unreachable partner paths remains above or equal to 80% of this limit, the unreachable partner limit is considered to be exceeded. An unreachability record is deleted when the unreachable time that is associated with that record expires, or when the unreachability records are cleared with the MODIFY TOPO,FUNCTION=CLRUNRCH command. See the UNRCHTIM start option in z/OS Communications Server: SNA Resource Definition Reference for more information about the unreachable partner limit on the UNRCHTIM start option.

The *cpname* value is the network-qualified name of the Enterprise Extender VRN associated with the unreachable partner information. The VRN is the intermediate node on a path to an unreachable partner node. See z/OS Communications Server: SNA Network Implementation Guide for more information.

System action: Processing continues.

Operator response: Unreachable partner information represents a path through an Enterprise Extender VRN to an unreachable partner. The unreachable partner information is created to enable VTAM to route around a problem with the underlying IP connection between the origin node and the unreachable partner. IST2058I is issued when the limit of unreachable partner paths associated with an Enterprise Extender VRN has been exceeded. This is an indication that multiple nodes are unreachable and the problem is widespread and probably not transient.

Issue the DISPLAY TOPO,LIST=UNRCHTIM command to display the information about unreachable partner paths that are associated with the Enterprise Extender VRN. This information can help you determine where in the network the problem exists. A route through this Enterprise Extender VRN will not be considered for a session path until the unreachable time expires for enough unreachable partner nodes to bring the number of unreachable partner paths that are associated with the Enterprise Extender VRN below 80% of the unreachable partner limit specified or defaulted on the UNRCHTIM start option. Unreachable partner records can also be cleared with the MODIFY TOPO,FUNCTION=CLRUNRCH command. See the information about the MODIFY TOPO command in z/OS Communications Server: SNA Operation for more information.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 3

IST2059I NUMBER OF NLPS RECEIVED = *count* (*estimate*)

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2061I NO FORCED TAKEOVER REQUESTS ARE ACCEPTABLE

Explanation: VTAM issues this message in response to a DISPLAY ID command for an application that supports persistent sessions for one of these situations:

- The application is found on the VTAM on which the command is issued, and the application has indicated that neither multinode persistent (MNPS) nor single node persistent (SNPS) forced takeover requests will be accepted for this application.
- An application that supports MNPS is specified, the application is found in the MNPS coupling facility structure, and the application has indicated that neither MNPS nor SNPS forced takeover requests will be accepted for this application.

This message indicates the support level that was last requested by the application. See z/OS Communications Server: SNA Programming for more information about forced takeover processing.

System action: Processing continues.

Operator response: Contact the system programmer.

System programmer response: If the setting displayed is not correct, modify the application behavior so that when SETLOGON OPTCD=PERSIST is issued by the application, the correct value for the PARM=(FORCETKO=) operand is specified.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2062I *type* FORCED TAKEOVER REQUESTS ARE ACCEPTABLE

Explanation: VTAM issues this message in response to a DISPLAY ID command for an application that supports persistent sessions.

- This message is displayed with *type*=SNPS when:
 - The application is found on the VTAM on which the command is issued and the application has indicated that single node persistent (SNPS) forced takeover requests will be accepted, but that multinode persistent (MNPS) forced takeover requests will not be accepted.
 - An application that supports MNPS is specified, the application is found in the MNPS coupling facility structure, and the application has indicated that SNPS forced takeover requests will be accepted for this application, but that MNPS forced takeover requests will not be accepted.
- This message is displayed with *type*=MNPS when:
 - The application is found on the VTAM on which the command is issued and the application has indicated that multinode persistent (MNPS) forced takeover requests will be accepted, but that single node persistent (SNPS) forced takeover requests will not be accepted.
 - An application that supports MNPS is specified, the application is found in the MNPS coupling facility structure, and the application has indicated that MNPS forced takeover requests will be accepted for this application, but that SNPS forced takeover requests will not be accepted.

This message indicates the support level that was last requested by the application. An application must still be enabled for persistence before a forced takeover will successfully complete. See z/OS Communications Server: SNA Programming for more information on enabling an application for persistence, and for information on forced takeover processing in general.

type specifies one of the following values:

MNPS Indicates that multinode persistent forced takeover requests are permitted, but single node persistent forced takeover requests are not permitted.

SNPS Indicates that single node persistent forced takeover requests are permitted, but multinode persistent forced takeover requests are not permitted.

System action: Processing continues

Operator response: Contact the system programmer.

System programmer response: If the setting displayed is not correct, modify the application behavior so that when SETLOGON OPTCD=PERSIST is issued by the application, the correct value for the PARM=(FORCETKO=) operand is specified.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2063I ALL FORCED TAKEOVER REQUESTS ARE ACCEPTABLE

Explanation: VTAM issues this message in response to a DISPLAY ID command for an application that supports persistent sessions for one of these situations:

- The application is found on the VTAM on which the command is issued, and the application has indicated that both single node persistent (SNPS) and multinode persistent (MNPS) forced takeover requests will be accepted for this application.
- An application that supports MNPS is specified, the application is found in the MNPS coupling facility structure, and the application has indicated that both MNPS and SNPS forced takeover requests will be accepted for this application.

This message indicates the support level that was last requested by the application. An application must still be enabled for persistence before a forced takeover will successfully complete. See z/OS Communications Server: SNA Programming for more information about enabling an application for persistence, and for information about forced takeover processing in general.

System action: Processing continues.

Operator response: Contact the system programmer.

System programmer response: If the setting displayed is not correct, modify the application behavior so that when SETLOGON OPTCD=PERSIST is issued by the application, the correct value for the PARM=(FORCETKO=) operand is specified.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2064I PLU TO SLU RU SIZE = *plu_to_slu_rusize* SLU TO PLU RU SIZE = *slu_to_plu_rusize*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2065I ENTERPRISE EXTENDER CONNECTION REXMIT INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG command for Enterprise Extender connection retransmission information. This message is the first in a group of messages. The display output might consist of multiple Enterprise Extender connections being displayed. Each matching connection will be displayed in a subgroup beginning with message IST1680I. The full description of the message group follows the example.

```

IST2065I ENTERPRISE EXTENDER CONNECTION REXMIT INFORMATION
[IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator]
IST2067I EEDIAG DISPLAY ISSUED ON date AT time
IST924I -----
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
[IST2023I CONNECTED TO LINE linename]
[IST2024I CONNECTED TO SWITCHED PU puname]
[IST924I -----]
[IST2030I PORT PRIORITY = SIGNAL]
[IST2036I NLPS SENT = nlps_sent ( estimate )]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )]
[IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate]
[IST924I -----]
[IST2031I PORT PRIORITY = NETWORK]
[IST2036I NLPS SENT = nlps_sent ( estimate )]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )]
[IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate]
[IST924I -----]
[IST2032I PORT PRIORITY = HIGH ]
[IST2036I NLPS SENT = nlps_sent ( estimate )]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )]
[IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate]
[IST924I -----]
[IST2033I PORT PRIORITY = MEDIUM]
[IST2036I NLPS SENT = nlps_sent ( estimate )]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )]
[IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate]
[IST924I -----]
[IST2034I PORT PRIORITY = LOW]
[IST2036I NLPS SENT = nlps_sent ( estimate )]
[IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )]
[IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate]
IST924I -----
IST2035I TOTALS FOR ALL PORT PRIORITIES
IST2036I NLPS SENT = nlps_sent ( estimate )
IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )
IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate
IST2069I REXMIT COUNTERS LAST CLEARED ON date AT time
[IST2071I ALL DIAGNOSTIC COUNTERS CLEARED FOR count EE CONNECTIONS]
[IST2072I REXMIT COUNTERS CLEARED FOR count EE CONNECTIONS]
[IST2073I SRQRETRY COUNTERS CLEARED FOR count EE CONNECTIONS]
[IST1315I DISPLAY TRUNCATED AT MAX = number]
IST2042I count OF total EE CONNECTIONS DISPLAYED
IST314I END

```

IST924I

This message is a line separator between subgroups.

IST1315I

This message is issued when the number of EE connections displayed exceeds the value specified for the MAX operand.

number is the value specified for the MAX operand.

IST1680I

- This is the first message of a message subgroup. For DISPLAY EEDIAG commands that result in multiple EE connections being displayed, this subgroup is displayed for each matching EE connection. When LIST=DETAIL is specified, five optional subgroups, beginning with the IST2030I subgroup and ending with the IST2034I subgroup, are also displayed.
- *type* is either **LOCAL** or **REMOTE**, indicating which IP address is being displayed.
- *ip_address* is the IP address.
- The complete message subgroup (LIST=SUMMARY) follows:

```

IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
[IST2023I CONNECTED TO LINE linename ]
[IST2024I CONNECTED TO SWITCHED PU puname ]
IST924I -----
IST2035I TOTALS FOR ALL PORT PRIORITIES
IST2036I  NLPS SENT           = nlps_sent           ( estimate )
IST2038I  NLPS RETRANSMITTED = nlps_retransmitted ( estimate )
IST2068I  NLP RETRANSMIT RATE = nlp_retransmit_rate

```

IST1909I

value is the host name used to acquire the remote IP address associated with this connection to the remote node. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

value is the host name used to acquire the local static VIPA address displayed in message IST1680I. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on messages IST1909I and IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

IST2023I

This message is issued when the ID operand is specified with a switched PU name that has an active Enterprise Extender connection.

linename is the name of the Enterprise Extender line used for this Enterprise Extender connection.

IST2024I

This message is not issued in the case where the ID operand is specified with a switched PU name that has an active Enterprise Extender connection. In this case, message IST2023I is issued. For all other cases, this message is issued as part of the DISPLAY EEDIAG connection display.

puname is the name of the switched PU used for this Enterprise Extender connection.

IST2030I, IST2031I, IST2032I, IST2033I, IST2034I, IST2035I

- Messages IST2030I through IST2034I are header messages for optional message subgroups. One subgroup is displayed for each port priority when LIST=DETAIL is specified. Each header message is followed by messages IST2036I, IST2038I, and IST2068I.
- IST2035I is a header message for a subgroup that displays a summary of all port priorities. This subgroup includes the same messages as listed for each port priority subgroup.
- Each of these subgroups is also associated with a subgroup of messages that begins with message IST1680I.
- A sample of one of the subgroups follows:

IST2065I

```
IST2030I PORT PRIORITY = SIGNAL
IST2036I NLPS SENT = nlps_sent ( estimate )
IST2038I NLPS RETRANSMITTED = nlps_retransmitted ( estimate )
IST2068I NLP RETRANSMIT RATE = nlp_retransmit_rate
```

IST2036I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *nlps_sent* is the total number of network layer packets (NLP) that have been sent across this EE connection for this specific priority. This value is maintained from the time this connection was activated, or since the last DISPLAY EEDIAG command was issued specifying the CLEAR=ALL|REXMIT parameter.
- *estimate* is an estimate of the displayed *nlps_sent*. It is in the form *xxxU*, where *xxx* is a numeric value and *U* is the unit of measure for *xxx* as follows:

K Estimate is in units of 1000 NLPs.
M Estimate is in units of 1 000 000 NLPs.
G Estimate is in units of 1 000 000 000 NLPs.
T Estimate is in units of 1 000 000 000 000 NLPs.
P Estimate is in units of 1 000 000 000 000 000 NLPs.

IST2038I

- This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I or IST2035I.
- *nlps_retransmitted* is the total number of network layer packets (NLP) that have been retransmitted across this EE connection for this specific priority. This value is maintained from the time this connection was activated, or since the last DISPLAY EEDIAG command was issued specifying the CLEAR=ALL|REXMIT parameter.
- *estimate* is an estimate of the displayed *nlps_retransmitted* value. It is in the form *xxxU*, where *xxx* is a numeric value and *U* is the unit of measure for *xxx* as follows:

K Estimate is in units of 1000 NLPs.
M Estimate is in units of 1 000 000 NLPs.
G Estimate is in units of 1 000 000 000 NLPs.
T Estimate is in units of 1 000 000 000 000 NLPs.
P Estimate is in units of 1 000 000 000 000 000 NLPs.

IST2042I

count is the number of matching EE connections displayed in the output.

total is the total number of EE connections that match the parameters specified on the DISPLAY EEDIAG command. The total might be larger than the displayed count because the number of EE connections displayed is governed by the MAX parameter.

IST2065I

This message is the header message for the Enterprise Extender connection retransmission information display output.

IST2067I

The *date* and *time* values specify when this DISPLAY EEDIAG command was issued. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2068I

This message is associated with a subgroup of messages that begins with message IST2030I, IST2031I, IST2032I, IST2033I, IST2034I, or IST2035I.

nlp_retransmit_rate is the current network layer packet (NLP) retransmission rate for this EE connection. This rate is maintained for each specific priority. Issuing the LIST=DETAIL on the DISPLAY EEDIAG,REXMIT command

displays the current retransmission rate for each priority level. The LIST=SUMMARY output displays the average retransmission rate for all priorities associated with this EE connection. This value is maintained from the time this connection was activated, or since the last DISPLAY EEDIAG command was issued specifying the CLEAR=ALL|REXMIT parameter.

It is in the form *xxx%*, where *xxx* is the numeric value of the retransmission rate, specified as a percentage.

IST2069I

The *date* and *time* values specify when the retransmission counters were last cleared for this EE connection. The date and time values displayed in this message, combined with the date and time values displayed in message IST2067I, provide the time interval during which the retransmission metrics were collected. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2071I

count is the number of EE connections that had both their REXMIT and SRQRETRY counters cleared as a result of the CLEAR=ALL parameter.

IST2072I

count is the number of EE connections that had their retransmission counters cleared as a result of the CLEAR=REXMIT parameter.

IST2073I

count is the number of EE connections that had their SRQRETRY counters cleared as a result of the CLEAR=SRQRETRY parameter.

IST2119I

This is an optional message that is issued when the DISPLAY EEDIAG command contains HOSTNAME filters.

The *correlator* value is a unique display correlator associated with this DISPLAY EEDIAG command, which requires host name resolution. This correlator can be used to locate the various message groups associated with this DISPLAY EEDIAG command.

System action: Processing continues.

Operator response: If the *nlp_retransmit_rate* value displayed in message IST2068I is unusually high, the Enterprise Extender network might need to be diagnosed to determine why the packets are being discarded or lost. If the *nlp_retransmit_rate* value displayed in message IST2068I is unacceptable, and an alternate non-EE path to the partner exists, the EE connection might need to be deactivated so RTP pipes can pathswitch to the non-EE path.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2066I ENTERPRISE EXTENDER CONNECTION SRQRETRY INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG command for Enterprise Extender connection SRQRETRY information. This message is the first in a group of messages. The display output might consist of multiple Enterprise Extender connections being displayed. Each matching connection will be displayed in a subgroup beginning with message IST1680I. The full description of the message group follows the example.

```
IST2066I ENTERPRISE EXTENDER CONNECTION SRQRETRY INFORMATION
[IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator]
IST2067I EEDIAG DISPLAY ISSUED ON date AT time
IST924I -----
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
```

IST2066I

```
[IST1911I value]
  IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
[IST2004I LIVTIME = (init_value,max_value) SRQTIME = srqtime SRQRETRY = srqretry]
[IST2023I CONNECTED TO LINE linename]
[IST2024I CONNECTED TO SWITCHED PU puname]
  IST2074I SUCCESSFUL SRQRETRY ATTEMPT = attempt OCCURRENCES = occurrences
  IST2070I SRQRETRY COUNTERS LAST CLEARED ON date AT time
[IST2071I ALL DIAGNOSTIC COUNTERS CLEARED FOR count EE CONNECTIONS]
[IST2072I REXMIT COUNTERS CLEARED FOR count EE CONNECTIONS ]
[IST2073I SRQRETRY COUNTERS CLEARED FOR count EE CONNECTIONS]
[IST1315I DISPLAY TRUNCATED AT MAX = number]
  IST2042I count OF total EE CONNECTIONS DISPLAYED
  IST314I END
```

IST924I

This message is a line separator between subgroups.

IST1315I

This message is issued when the number of EE connections displayed exceeds the value specified for the MAX operand.

number is the value specified for the MAX operand.

IST1680I

This is the first message of a message subgroup. For DISPLAY EEDIAG commands that result in multiple EE connections being displayed, this subgroup is displayed for each matching EE connection. When LIST=SUMMARY is specified, message IST2074I is repeated for each SRQRETRY attempt that meets or exceeds the specified input value. When LIST=DETAIL is specified, message IST2074I is repeated for all SRQRETRY attempts.

type is either **LOCAL** or **REMOTE**, indicating which IP address is being displayed.

ip_address is the IP address.

IST1909I

value is the host name used to acquire the remote IP address associated with this connection to the remote node. If the host name is longer than 44 characters, then the first 44 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

value is the host name used to acquire the local static VIPA address displayed in message IST1680I. If the host name is longer than 45 characters, then the first 45 characters are displayed as *value* and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

value is the continuation of *value* on messages IST1909I and IST1910I. IST1911I is repeated as many times as necessary to display the entire character string.

IST2004I

This message displays the LDLC timer operands that are associated with the local static VIPA address displayed in IST1680I. See the external communication adapter (XCA) major node information in z/OS Communications Server: SNA Resource Definition Reference for more information about the LIVTIME operand for Enterprise Extender.

init_value is the initial value, in seconds, of an Enterprise Extender logical data link control (LDLC) liveness timer interval.

max_value is the maximum value, in seconds, of an Enterprise Extender LDLC liveness timer interval.

srqtime is the value, in seconds, of the Enterprise Extender LDLC short request timer interval. The short request timer interval represents the amount of time the LDLC layer will wait, without receipt of a response from the connection partner, before sending the LDLC signal again.

srqretry is the number of times the short request timer is tried again before the Enterprise Extender port becomes inoperative.

IST2023I

This message is issued when the ID operand is specified with a switched PU name that has an active Enterprise Extender connection.

linename is the name of the Enterprise Extender line that is being used for this Enterprise Extender connection.

IST2024I

This message is not issued in the case where the ID operand is specified with a switched PU name that has an active Enterprise Extender connection. In this case, message IST2023I is issued. For all other cases, this message is issued as part of the DISPLAY EEDIAG connection display.

puname is the name of the switched PU that is being used for this Enterprise Extender connection.

IST2042I

count is the number of matching EE connections displayed in the output.

total is the total number of EE connections that match the parameters specified on the DISPLAY EEDIAG command. The total might be larger than the displayed count because the number of EE connections displayed is governed by the MAX parameter.

IST2066I

This message is the header message for the Enterprise Extender connection SRQRETRY information display output.

IST2067I

The *date* and *time* values specify when this DISPLAY EEDIAG command was issued. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2070I

The *date* and *time* values specify when the SRQRETRY counters were last cleared for this EE connection. The date and time values displayed in this message, combined with the date and time values displayed in message IST2067I, provide the time interval during which the SRQRETRY metrics were collected. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2071I

count is the number of EE connections that had both their REXMIT and SRQRETRY counters cleared as a result of the CLEAR=ALL parameter.

IST2072I

count is the number of EE connections that had their retransmission counters cleared as a result of the CLEAR=REXMIT parameter.

IST2073I

count is the number of EE connections that had their SRQRETRY counters cleared as a result of the CLEAR=SRQRETRY parameter.

IST2074I

attempt is the number of times an LDLC TEST command (SRQRETRY attempt) had to be tried again prior to receiving a response from the EE partner.

occurrences is the number of times it took *attempt* number of retry attempts to receive a response from the EE partner.

Rule: When LIST=DETAIL is specified, the first IST2074I message displays *attempt* as 0. A value of 0 means this is the first time the LDLC TEST command was sent to the partner. If a TEST response is received from the EE partner on this occurrence, this means there were no problems encountered in the network and no retry attempts were necessary.

IST2119I

This is an optional message that is issued when the DISPLAY EEDIAG command contains HOSTNAME filters.

The *correlator* value is a unique display correlator associated with this DISPLAY EEDIAG command, which requires host name resolution. This correlator can be used to locate the various message groups associated with this DISPLAY EEDIAG command.

System action: Processing continues.

Operator response: None.

System programmer response: Use the display results to determine whether Enterprise Extender timer values are coded appropriately for network conditions. See the information about the DISPLAY EEDIAG in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2067I EEDIAG DISPLAY ISSUED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. The output of the DISPLAY EEDIAG command varies depending on the format of the command. The first message in the groups is either IST2065I, IST2066I, IST2119I, or IST2119I. See the explanations of those messages for complete descriptions.

Routing code: 2

Descriptor code: 5

IST2068I NLP RETRANSMIT RATE = *nlp_retransmit_rate*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG command that specified the REXMIT parameter. The first message in the group is IST2065I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2069I REXMIT COUNTERS LAST CLEARED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG command that specified the REXMIT parameter. The first message in the group is IST2065I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2070I SRQRETRY COUNTERS LAST CLEARED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG command that specified the SRQRETRY parameter. The first message in the group is IST2066I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2071I ALL DIAGNOSTIC COUNTERS CLEARED FOR *count* EE CONNECTIONS

Explanation: VTAM issues this message in response to a DISPLAY EEDIAG command that specified CLEAR=ALL. The output of the DISPLAY EEDIAG command varies depending on the format of the command. If the DISPLAY EEDIAG command specified either the REXMIT or SRQRETRY operands, the first message in those groups is IST2065I and IST2066I respectively. See the explanations of those messages for complete descriptions.

count is the number of EE connections that had both their REXMIT and SRQRETRY counters cleared as a result of the CLEAR=ALL parameter.

System action: For the EE connections affected by the scope of the DISPLAY EEDIAG command, all associated diagnostic counters have been cleared.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2072I REXMIT COUNTERS CLEARED FOR *count* EE CONNECTIONS

Explanation: VTAM issues this message in response to a DISPLAY EEDIAG command that specified CLEAR=REXMIT. The output of the DISPLAY EEDIAG command varies depending on the format of the command. If the DISPLAY EEDIAG command specified either the REXMIT or SRQRETRY operands, the first message in those groups is IST2065I and IST2066I respectively. See the explanations of those messages for complete descriptions.

count is the number of EE connections that had their retransmission counters cleared as a result of the CLEAR=REXMIT parameter.

System action: For the EE connections affected by the scope of the DISPLAY EEDIAG command, all associated REXMIT diagnostic counters have been cleared.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2073I SRQRETRY COUNTERS CLEARED FOR *count* EE CONNECTIONS

Explanation: VTAM issues this message in response to a DISPLAY EEDIAG command that specified CLEAR=SRQRETRY. The output of the DISPLAY EEDIAG command varies depending on the format of the command. If the DISPLAY EEDIAG command specified either the REXMIT or SRQRETRY operands, the first message in those groups is IST2065I and IST2066I respectively. See the explanations of those messages for complete descriptions.

count is the number of EE connections that had their SRQRETRY counters cleared as a result of the CLEAR=SRQRETRY parameter.

System action: For the EE connections affected by the scope of the DISPLAY EEDIAG command, all associated SRQRETRY diagnostic counters have been cleared.

Operator response: None.

IST2074I • IST2075I

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2074I SUCCESSFUL SRQRETRY ATTEMPT = attempt OCCURRENCES = occurrences

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG command that specified the SRQRETRY operands. The first message in the group is IST2066I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2075I DISPLAY RTPS SUMMARY INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. This message is the first in a group of messages. The LIST=SUMMARY format of the DISPLAY RTPS command provides a condensed format of the RTP pipe information that matched the scope of the display command. The full description of the message group follows the example.

```
IST2075I DISPLAY RTPS SUMMARY INFORMATION
IST2076I TOTAL MATCHING PIPES   = num_pipes
IST2077I CPSVCMG PIPES         = num_cpsvcmg
IST2078I RSETUP PIPES          = num_rsetup
IST2079I LU-LU PIPES           = num_lulu
IST2080I PATH SWITCHING PIPES  = num_switching
IST2081I CONGESTED PIPES       = num_congested
IST2082I STALLED PIPES        = num_stalled
IST2083I SESSIONS              = num_sessions
IST314I END
```

IST2075I

This message is the header message for the Enterprise Extender connection retransmission information display output.

IST2076I

num_pipes is the total number of pipes that match the scope of the DISPLAY RTPS command.

IST2077I

num_cpsvcmg is the total number of CP-CP session (CPSVCMG) RTP pipes that match the scope of the DISPLAY RTPS command.

IST2078I

num_rsetup is the total number of route setup (RSETUP) RTP pipes that match the scope of the DISPLAY RTPS command.

IST2079I

num_lulu is the total number of LU-LU RTP pipes that match the scope of the DISPLAY RTPS command.

IST2080I

num_switching is the total number of RTP pipes that match the scope of the DISPLAY RTPS command, which are currently in path switch state.

IST2081I

num_congested is the total number of RTP pipes that match the scope of the DISPLAY RTPS command, which are currently congested.

IST2082I

num_stalled is the total number of RTP pipes that match the scope of the DISPLAY RTPS command, which are currently stalled.

IST2083I

num_sessions is the total number of sessions associated with the RTP pipes that match the scope of the DISPLAY RTPS command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2076I TOTAL MATCHING PIPES = *num_pipes*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2077I CPSVCMG PIPES = *num_cpsvcmg*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2078I RSETUP PIPES = *num_rsetup*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2079I LU-LU PIPES = *num_lulu*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2080I **PATH SWITCHING PIPES = *num_switching***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2081I **CONGESTED PIPES = *num_congested***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2082I **STALLED PIPES = *num_stalled***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2083I **SESSIONS = *num_sessions***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY RTPS,LIST=SUMMARY command. The first message in the group is IST2075I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2084I ***count* OF total MATCHING RTP PIPES DISPLAYED**

Explanation: VTAM issues this message as part of a group in response to a DISPLAY RTPS command. The first message in the group is IST1695I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2085I **NUMBER OF NLPS ON OUTBOUND WORK QUEUE = *num_nlps***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a rapid transport protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2086I **MAXIMUM NUMBER OF NLPS ON OUTBOUND WORK QUEUE = *max_num_nlps***

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a rapid transport protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2087I **OUTBOUND WORK QUEUE MAX REACHED ON** *date AT time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a rapid transport protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2088I **CDRSCS DEFINED USING THIS MODEL:**

Explanation: VTAM issues this message as part of a subgroup in response to a DISPLAY ID command when the resource identified by ID is a model CDRSC and clone CDRSCs exist, using this model, that meet the specified SCOPE criteria. A complete description of the message subgroup follows the example.

```
IST2088I CDRSCS DEFINED USING THIS MODEL:
IST1276I cdrsname status CDRM = cdrmname
:
```

IST1276I

This message lists the resource name, its status, and the name of the controlling CDRM.

VTAM repeats this message as many times as needed to list all the clone CDRSCs associated with this model CDRSC.

cdrsname is the name of the resource. The name will be network qualified in the form *netid.name* if the resource is a real CDRSC. The name will not be network qualified if the resource is an alias CDRSC.

status is the status of the resource. See z/OS Communications Server: IP and SNA Codes for a description of *status*.

cdrmtime is the name of the controlling CDRM. If the CDRM is not available, *cdrmtime* is *****NA*****.

IST2088I

IST2088I is the header message for the IST1276I messages.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2089I **NO CDRSCS DEFINED USING THIS MODEL**

Explanation: VTAM issues this message in response to a DISPLAY ID command when the resource identified by ID is a model CDRSC and no clone CDRSCs exist using this model.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

IST2090I • IST2091I

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2090I TRACE INITIATED FOR *number* CLONE CDRSCS

Explanation: VTAM issues this message in response to a MODIFY TRACE command with all of the following:

- The ID operand specified as a model CDRSC
- The SCOPE operand specified as ALL
- The TYPE operand specified as IO or BUF

This MODIFY TRACE command initiates the IO trace or buffer trace on the model CDRSC and all the existing clone CDRSCs associated with the model. If there is at least one clone CDRSC associated with the model, this message will be issued to display the number of clone CDRSCs affected by the command.

number is the number of clone CDRSCs whose IO trace or buffer trace is initiated by this MODIFY TRACE command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2091I TRACE ENDED FOR *number* CLONE CDRSCS

Explanation: VTAM issues this message in response to a MODIFY NOTRACE command with all of the following:

- The ID operand specified as a model CDRSC name
- The SCOPE operand specified as ALL
- The TYPE operand specified as IO or BUF

This MODIFY NOTRACE command ends the IO trace or buffer trace on the model CDRSC and all the existing clone CDRSCs associated with the model. If there is at least one clone CDRSC associated with the model, this message will be issued to display the number of clone CDRSCs affected by the command.

number is the number of clone CDRSCs whose IO trace or buffer trace is ended by this MODIFY NOTRACE command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2092I NO CLONE CDRSCS EXIST FOR SCOPE *scope*

Explanation: VTAM issues this message in response to a DISPLAY ID command when the resource identified by ID is a model CDRSC and no clone CDRSCs exist that meet the specified SCOPE criteria.

scope is the SCOPE specified on the command.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2093I AUTOLOGON SEARCH INITIATED FOR *number* **APPLICATIONS**

Explanation: This message is issued in response to a VARY AUTOLOG operator command. The message contains the number of controlling applications for which autologon searches will be initiated.

number is the number of controlling applications.

System action: None.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2094I MODEL CDRSC WAS NOT DELETED - CLONE CDRSCS EXIST

Explanation: A model CDRSC was the subject of a VARY INACT,DELETE=YES command, but it had clone CDRSCs associated with it. The model CDRSC could not be deleted because of the presence of the clone CDRSCs.

System action: Processing continues.

Operator response: After the last clone CDRSC associated with the model CDRSC is deleted, re-issue the VARY INACT command against the model CDRSC. If you want the model CDRSC to be deleted immediately, you can add SCOPE=ALL to the VARY INACT command to delete the model CDRSC and all the clone CDRSCs associated with it.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2095I **MODEL CDRSC DELETE = *delete_value***

Explanation: VTAM issues this message in response to a DISPLAY ID command when the resource identified by ID is a model CDRSC or a clone CDRSC. If the resource is a model CDRSC, the current value of the DELETE parameter on this model CDRSC's definition is displayed. If the resource is a clone CDRSC, the model CDRSC used to build this clone CDRSC is found and the current value of the model CDRSC's DELETE parameter is displayed.

delete_value is the current value of the DELETE keyword on the model CDRSC definition. Its value can be **YES** or **NO**.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2096I **AUTOLOGON SEARCH COMPLETED FOR APPLICATION *pluname***

Explanation: This is the first message of a group of messages that VTAM issues when a response is received to a search initiated by a VARY AUTOLOG command. A complete description of the message group follows.

```
IST2096I AUTOLOGON SEARCH COMPLETED FOR APPLICATION pluname
[IST2097I STATUS - CANNOT BE LOCATED]
[IST2098I STATUS - UNABLE TO ACCEPT LOGONS]
[IST2099I STATUS - AUTOLOGON SESSIONS INITIATED FOR number LUS]
IST314I END
```

IST2096I

This message is always issued upon receiving a response to a search that was initiated by a VARY AUTOLOG command. It will be followed by one of the status messages, IST2097I, IST2098I, or IST2099I.

pluname is the name of the controlling application for which a response to a VARY AUTOLOG command-initiated search was received. *pluname* is in the form of *netid.pluname*.

IST2097I

The search was unable to locate the controlling application named in the preceding IST2096I message. No sessions will be initiated for LUs waiting for automatic logon sessions to this controlling application.

IST2098I

The search located the controlling application named in the preceding IST2096I message. The status of the controlling application indicated that it was not able to accept sessions at this time. A single session is initiated, which will establish a notification path between the controlling application host and this host. This will allow the controlling application's host to send this VTAM a notification of the application's ability to accept logons. When the notification is received, this VTAM will generate initiation requests for all LUs waiting for automatic logon sessions to that application.

IST2099I

The search located the controlling application named in the preceding IST2096I message. The status of the controlling application indicated that it is able to accept sessions at this time. VTAM initiates sessions for all LUs waiting for automatic logon sessions to that application.

number is the number of session initiation requests that will be generated for the controlling application

System action: For message IST2097I processing continues.

For message IST2098I VTAM initiates a single session to the application named in the preceding IST2096I message.

For message IST2099I VTAM initiates sessions for LUs waiting for automatic logon sessions to the application named in the preceeding IST2096I message.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2097I STATUS = CANNOT BE LOCATED

Explanation: This message is part of a group of messages that VTAM issues when a response is received to a search initiated by a VARY AUTOLOG command. The first message of that group is IST2096I. See the explanation of that message for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2098I STATUS = UNABLE TO ACCEPT LOGONS

Explanation: This message is part of a group of messages that VTAM issues when a response is received to a search initiated by a VARY AUTOLOG command. The first message of that group is IST2096I. See the explanation of that message for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2099I STATUS = AUTOLOGON SESSIONS INITIATED FOR *number* LUS

Explanation: This message is part of a group of messages that VTAM issues when a response is received to a search initiated by a VARY AUTOLOG command. The first message of that group is IST2096I. See the explanation of that message for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2100I *pluname* - NORMALLY LOGGED OFF LUS

Explanation: This message is part of a message group that is issued in response to a DISPLAY AUTOLOG command. The first message of the group is IST1990I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2101I NO LUS EXIST IN A STATE TO INITIATE AN AUTOLOGON SESSION

Explanation: This message is issued in response to a VARY AUTOLOG command when there are no LUs that require generation of a session initiation request for one or more controlling applications specified by the ID= operand. An LU would require generation of a session initiation request if it were currently session capable but was not in session with its controlling application.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

IST2102I

Routing code: 2

Descriptor code: 5

IST2102I RSCV FROM PLU

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a session setup failure. This message subgroup is displayed in a message group headed by IST663I.

This message indicates that the messages that follow describe part or all of the session path for this session as it was calculated during session initiation. The session path information describes the portion of the route originating in the direction of the CP (PLU) and extending towards the CP (SLU). This message subgroup will be displayed only if the CP (PLU) is not this node or a subarea node connected to this ICN, session path data was saved during session initiation, and the session initiation failed for either of the following reasons:

- Trial and error routing using an adjacent SSCP table failed. The destination LU was found by an SSCP, but that SSCP rejected the session initiation with a non-reroutable sense code.
- Trial and error routing using an adjacent SSCP table exhausted the table. All adjacent SSCPs were tried, but the destination LU was not known to any of the SSCPs.

A complete description of the message subgroup follows.

```
IST2102I RSCV FROM PLU
IST1460I TGN CPNAME          TG TYPE      HPR
IST1461I tgn cpname          tgtype      hpr
:
```

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- The route selection control vector (RSCV) is displayed showing a portion of the route towards the CP (SLU). Multiple IST1461I messages might be needed to display the portion of the route known by this node.
- *tgn* is the transmission group number.
- *cpname* is the destination CP name for the transmission group.
- *tgtype* is the transmission group type. The values for *tgtype* can be:

APPN Indicates that this TG is an APPN-based TG.

INTERCHANGE

Indicates that this TG represents a TG from an interchange node to a subarea node.

VRTG Indicates that this TG is a virtual-route-based TG.

ISL Indicates that this TG is an intersubnet TG.

- *hpr* corresponds with the HPR start option. The values for *hpr* can be:

RTP Indicates that this node provides RTP-level HPR support.

ANR Indicates that this node provides ANR-level HPR support.

NA Indicates that this node provides no HPR support.

IST2102I

This message is a header message for information displayed in messages IST1460I and IST1461I.

System action: The session initiation failed.

Operator response: Save the system log for problem determination.

System programmer response: Use the output to determine the cause of the problem. Work with the system programmers for other networks to determine the cause of failures for resources located in other networks.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 8

Descriptor code: 4

IST2103I RSCV TOWARDS SLU

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a session setup failure. This message subgroup is displayed in a message group headed by IST663I.

This message indicates that the messages that follow describe part or all of the session path for this session as it was calculated during session initiation. The session path information describes the portion of the route originating at this node, or a subarea node connected to this ICN, and extending towards the CP (SLU). This message subgroup is displayed only if session path data was saved during session initiation and the session initiation fails for either of the following reasons:

- Trial and error routing using an adjacent SSCP table failed. The destination LU was found by an SSCP, but that SSCP rejected the session initiation with a non-reroutable sense code.
- Trial and error routing using an adjacent SSCP table exhausted the table. All adjacent SSCPs were tried, but the destination LU was not known to any of the SSCPs.

A complete description of the message subgroup follows.

```
IST2103I RSCV TOWARDS SLU
IST1460I TGN CPNAME          TG TYPE      HPR
IST1461I tgn cpname         tgtype     hpr
:
```

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- The route selection control vector (RSCV) is displayed showing a portion of the route towards the CP (SLU). Multiple IST1461I messages might be needed to display the portion of the route known by this node.
- *tgn* is the transmission group number.
- *cpname* is the destination CP name for the transmission group.
- *tgtype* is the transmission group type. The values for *tgtype* can be:
 - APPN** Indicates that this TG is an APPN-based TG.
 - INTERCHANGE** Indicates that this TG represents a TG from an interchange node to a subarea node.
 - VRTG** Indicates that this TG is a virtual-route-based TG.
 - ISL** Indicates that this TG is an intersubnet TG.
- *hpr* corresponds with the HPR start option. The values for *hpr* can be:
 - RTP** Indicates that this node provides RTP-level HPR support.
 - ANR** Indicates that this node provides ANR-level HPR support.
 - *NA*** Indicates that this node provides no HPR support.

IST2103I

This message is a header message for information displayed in messages IST1460I and IST1461I.

System action: The session initiation failed.

Operator response: Save the system log for problem determination.

System programmer response: Use the output to determine the cause of the problem. Work with the system programmers for other networks to determine the cause of failures for resources located in other networks.

IST2104I

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 8

Descriptor code: 4

IST2104I RSCV TOWARDS DLUR

Explanation: This message is part of a subgroup of messages that VTAM issues in response to a session setup failure. This message subgroup is displayed in a message group headed by IST663I.

This message indicates that the messages that follow describe part or all of the session path for this session as it was calculated during session initiation. The session path information represents a view of the session from the dependent LU requester (DLUR) node which is acting as CP (SLU). This message group is displayed only if the following conditions are true:

- The session involves a DLUR-owned dependent SLU.
- This node is the dependent LU server (DLUS) for the SLU.
- The DLUR node reports the session path information for the session on the SESSST RU.
- The session initiation was rejected after the SLU sent the BIND response.

A complete description of the message subgroup follows.

```
IST2104I RSCV TOWARDS DLUR
IST1460I TGN CPNAME          TG TYPE      HPR
IST1461I tgn cpname          tgtype     hpr
:
```

IST1460I

This message is a header message for information displayed in message IST1461I.

IST1461I

- The route selection control vector (RSCV) is displayed showing a portion of the route towards the CP (SLU). Multiple IST1461I messages might be needed to display the portion of the route known by this node.
- *tgn* is the transmission group number.
- *cpname* is the destination CP name for the transmission group.
- *tgtype* is the transmission group type. The values for *tgtype* can be:

APPN Indicates that this TG is an APPN-based TG.

INTERCHANGE

Indicates that this TG represents a TG from an interchange node to a subarea node.

VRTG Indicates that this TG is a virtual-route-based TG.

ISL Indicates that this TG is an intersubnet TG.

- *hpr* corresponds with the HPR start option. The values for *hpr* can be:

RTP Indicates that this node provides RTP-level HPR support.

ANR Indicates that this node provides ANR-level HPR support.

NA Indicates that this node provides no HPR support.

IST2104I

This message is a header message for information displayed in messages IST1460I and IST1461I.

System action: The session initiation failed.

Operator response: Save the system log for problem determination.

System programmer response: Use the output to determine the cause of the problem. Work with the system

programmers for other networks to determine the cause of failures for resources located in other networks.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 8

Descriptor code: 4

IST2105I *name* ACTIVATION FAILED - HPR/IP XCA NODE ALREADY ACTIVE

Explanation: VTAM issues this message in response to a VARY ACT command for an XCA major node when there is already an XCA major node active with the PORT statement defining the shared access transport facility (SATF) as MEDIUM=HPRIP (Enterprise Extender). There can be only one active HPR/IP XCA major node in VTAM.

name is the name of the major node for which the activation failed.

System action: The activation of the XCA major node fails. Processing continues.

Operator response: Issue the DISPLAY NET,MAJNODES command to find the HPR/IP XCA major node that is already active.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2106I **MODIFY GR DELETE FAILED FOR** *generic_resource*

Explanation: This message is the first in a group of messages in response to a MODIFY GR DELETE command that cannot complete successfully. A complete description of the message group follows:

```
IST2106I MODIFY GR DELETE FAILED FOR generic_resource
[IST2107I LOCAL GR ACB IS OPEN]
[IST2108I LOCAL APPLICATION OWNED GR AFFINITY EXISTS]
[IST2109I NON-LOCAL GR INSTANCE SELECTABLE]
[IST2110I NON-LOCAL APPLICATION OWNED GR AFFINITY EXISTS]
[IST2111I NON-LOCAL GR SESSION ACTIVE]
IST314I END
```

IST2106I

generic_resource is the generic resource name. The name will be network qualified in the form *netid.name*

IST2107

This message indicates that the ACB for at least one instance of the generic resource on this host is still open. The generic resource was not deleted.

IST2108I

This message indicates that an application-owned affinity exists for a generic resource on this host. The generic resource was not deleted.

IST2109I

This message indicates that at least one instance of the generic resource is selectable on another host in the sysplex. Processing of the MODIFY GR DELETE command was completed for instances of the generic resource that reside on this host. The information in the generic resource coupling facility structure was not deleted.

IST2110I

This message indicates that an application-owned affinity exists for a generic resource that resides on another host in the sysplex. Processing of the MODIFY GR DELETE command was completed for instances of the generic resource that reside on this host. The information in the generic resource coupling facility structure was not deleted.

IST2111I

This message indicates that a session is active to an instance of the generic resource on another host in the sysplex. Processing of the MODIFY GR DELETE command was completed for instances of the generic resource that reside on this host. The information in the generic resource coupling facility structure was not deleted.

System action: Processing continues.

Operator response:

1. Issue DISPLAY NET,ID=*generic_resource*,IDTYPE=GENERIC to list all instances of the generic resource.
2. End all sessions with all instances of the generic resource.
3. Issue DISPLAY NET,GRAFFIN,LU=*,GNAME=*generic_resource* to display all affinities with the generic resource.
4. Delete all affinities, then close the ACB of all instances of the generic resource. The application is responsible for deleting application-owned affinities after the session is ended. Deleting application-owned affinities might require the application to be active and invocation of an application unique command, or termination of the application. See application-specific documentation to determine how to delete application-owned affinities. VTAM deletes VTAM-owned affinities when sessions end or the application closes its ACB.
5. See the information about removing a generic resource in z/OS Communications Server: SNA Network Implementation Guide for a complete description of generic resource deletion procedure.

System programmer response: For message IST2107I, IST2109I and IST2111I, no action is required.

For message IST2108I and IST2110I, ensure that the application deletes the application-owned affinities using the VTAM API CHANGE ENDAFFIN command. See the information about closing an application program that is a member of a generic resource in z/OS Communications Server: SNA Programming for more information about the VTAM API CHANGE ENDAFFIN command.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 8

Descriptor code: 5

IST2107I LOCAL GR ACB IS OPEN

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY GR DELETE command fails. The first message of that group is IST2106I. See the explanation of that message for a complete description of the message group.

Routing code: 8

Descriptor code: 5

IST2108I LOCAL APPLICATION OWNED GR AFFINITY EXISTS

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY GR DELETE command fails. The first message of that group is IST2106I. See the explanation of that message for a complete description of the message group.

Routing code: 8

Descriptor code: 5

IST2109I NON-LOCAL GR INSTANCE SELECTABLE

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY GR DELETE command fails. The first message of that group is IST2106I. See the explanation of that message for a complete description of the message group.

Routing code: 8

Descriptor code: 5

IST2110I NON-LOCAL APPLICATION OWNED GR AFFINITY EXISTS

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY GR DELETE command fails. The first message of that group is IST2106I. See the explanation of that message for a complete description of the message group.

Routing code: 8

Descriptor code: 5

IST2111I NON-LOCAL GR SESSION ACTIVE

Explanation: This message is part of a group of messages that VTAM issues when a MODIFY GR DELETE command fails. The first message of that group is IST2106I. See the explanation of that message for a complete description of the message group.

Routing code: 8

Descriptor code: 5

IST2113I *luname* SESSION DEACTIVATED - EXPFLTRM THRESHOLD EXCEEDED

Explanation: This message is issued when VTAM detects an LU-LU session that has met or exceeded the threshold defined by the EXPFLTRM start option. The EXPFLTRM start option defines the number of expedited data flow control (DFC) and session control (SC) request units (RU) that a boundary-attached LU can send without receiving a response from the partner LU.

luname is the name of the LU whose LU-LU session is deactivated

System action: The LU-LU session is deactivated.

Operator response: Contact the system programmer.

System programmer response: If this message is issued repeatedly for the same LU, the LU should be investigated for possible emulator or hardware problems. Alternatively, if the EXPFLTRM start option value is too small for your environment, you can increase the defined value of the EXPFLTRM threshold in the ATCSTRxx start option file used to initialize VTAM. See the EXPFLTRM start option information in z/OS Communications Server: SNA Resource Definition Reference for more information.

The EXPFLTRM start option value can be modified to a larger value with the MODIFY VTAMOPTS command. See the MODIFY VTAMOPTS command information in z/OS Communications Server: SNA Operation.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2114I LIVTIME: INITIAL = *init_value* MAXIMUM = *max_value* CURRENT = *cur_value*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a switched PU associated with an Enterprise Extender connection. VTAM also issues this message as part a message group in response to a DISPLAY EE command. This message group begins with message IST2001I. See the explanation of that message for a complete description.

IST2116I

This message displays the initial, maximum and current LIVTIME values for an Enterprise Extender connection. See the information about the external communication adapter (XCA) major node in z/OS Communications Server: SNA Resource Definition Reference for more information about the LIVTIME operand for Enterprise Extender.

init_value is the initial LIVTIME value, in seconds, defined for Enterprise Extender connections.

max_value is the maximum LIVTIME value, in seconds, defined for Enterprise Extender connections.

cur_value is the current LIVTIME value, in seconds, being used by this Enterprise Extender connection.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2116I STALL DETECTED FOR XCF TRLE *trlename* TO *cpname*

Explanation: This unsolicited message is issued when VTAM detects that outbound data flow for an XCF connection stalled for more than 180 seconds. The data flow is considered stalled because this node sent a pacing request to the partner node and a response was not received. This might be an indication of an unresponsive partner or an internal software problem.

trlename is the name of the XCF TRLE.

cpname is the CP name of the partner node for this XCF connection.

System action: All outbound data flow across this XCF connection is suspended until the stall is alleviated. If the stall persists, message IST2117I is issued every 60 seconds until the stall is alleviated. If the pacing response is received from the partner node, the stall is considered alleviated and message IST2118I is issued.

When more than 15 minutes has elapsed since a pacing request was transmitted to the partner node, the XCF connection will be ended. When the connection is ended, message IST1578I is issued to indicate that an inoperative condition was detected. VTAM automatically attempts to re-establish connectivity to the XCF partner.

Operator response: If the XCF data flow stall persists, VTAM or CSM storage might increase. To alleviate the storage problem, deactivate all of the users of this XCF connection by performing the following actions:

1. Locate users of the device by issuing the D NET,ID=*trlename* command to obtain a list of the upper-layer protocols (*ulp_id*) using the XCF facility. Obtain the *ulp_id* from message IST1717I in the display output.
 - If VTAM is using this XCF TRLE for SNA traffic, the *ulp_id* represents SNA XCF PU name.
 - If TCP/IP is using the XCF TRLE for IP traffic, the *ulp_id* represents the TCP/IP job name.
2. Deactivate the device for SNA traffic by issuing the V NET,INACT,ID=*ulp_id*,TYPE=FORCE command.
3. Deactivate the device for IP traffic by performing the following steps on each TCP/IP stack that uses this device:
 - For predefined and dynamic IPv4 XCF connections, issue the V TCPIP,*ulp_id*,STOP,*cpname* command.
 - For predefined IPv6 XCF connections, issue the V TCPIP,*ulp_id*,STOP,*intf_name* command where *intf_name* is the user defined INTERFACE name for the IPv6 XCF connection. If the *intf_name* is not known, issue the D TCPIP,*ulp_id*,NETSTAT,DEVLINKS command. Locate the "DEVNAME: *cpname*" line of output. If found, locate the associated "INTFNAME: *intf_name*" line in the output, which follows the DEVNAME line.
 - For dynamic IPv6 XCF connections, issue the V TCPIP,*ulp_id*,STOP,EZ6XCF*nn* command where *nn* is the value of the MVS system symbol (SYSCLONE) of the partner node for this XCF connection.

System programmer response: First, investigate if the partner node is overloaded or involved in activity that will prevent it from responding. If XCF data flow stalls are prevalent and persistent, take a dump of both nodes at the next occurrence and contact the IBM software support center.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2117I STALL CONTINUES FOR XCF TRLE *trlename* TO *cpname*

Explanation: This unsolicited message is issued at 60-second intervals as long as data flow continues to be stalled for an XCF connection. The stall was originally reported in an IST2116I message. The data flow is considered stalled because this node sent a pacing request to the partner node and a response has not been received. This might be an indication of an unresponsive partner or an internal software problem.

trlename is the name of the XCF TRLE.

cpname is the CP name of the partner node for this XCF connection.

System action: All outbound data flow across this XCF connection is suspended until the stall is alleviated. If the stall persists, this message is issued every 60 seconds until the stall is alleviated. If the pacing response is received from the partner node, the stall is considered alleviated and message IST2118I is issued.

When more than 15 minutes has elapsed since a pacing request was transmitted to the partner node, the XCF connection will be ended. When the connection is ended, message IST1578I is issued to indicate that an inoperative condition was detected. VTAM automatically attempts to re-establish connectivity to the XCF partner.

Operator response: If the XCF data flow stall persists, VTAM or CSM storage might increase. To alleviate the storage problem, deactivate all of the users of this XCF connection by performing the following actions:

1. Locate users of the device by issuing the D NET,ID=*trlename* command to obtain a list of the upper-layer protocols (*ulp_id*) using the XCF facility. Obtain the *ulp_id* from message IST1717I in the display output.
 - If VTAM is using this XCF TRLE for SNA traffic, the *ulp_id* represents SNA XCF PU name.
 - If TCP/IP is using the XCF TRLE for IP traffic, the *ulp_id* represents the TCP/IP job name.
2. Deactivate the device for SNA traffic by issuing the V NET,INACT,ID=*ulp_id*,TYPE=FORCE command.
3. Deactivate the device for IP traffic by performing the following steps on each TCP/IP stack that uses this device:
 - For predefined and dynamic IPv4 XCF connections, issue the V TCPIP,*ulp_id*,STOP,*cpname* command.
 - For predefined IPv6 XCF connections, issue the V TCPIP,*ulp_id*,STOP,*intf_name* command where *intf_name* is the user defined INTERFACE name for the IPv6 XCF connection. If the *intf_name* is not known, issue the D TCPIP,*ulp_id*,NETSTAT,DEVLINKS command. Locate the "DEVNAME: *cpname*" line of output. If found, locate the associated "INTFNAME: *intf_name*" line in the output, which follows the DEVNAME line.
 - For dynamic IPv6 XCF connections, issue the V TCPIP,*ulp_id*,STOP,EZ6XCF*nn* command where *nn* is the value of the MVS system symbol (SYSCLONE) of the partner node for this XCF connection.

System programmer response: First, investigate if the partner node is overloaded or involved in activity that will prevent it from responding. If XCF data flow stalls are prevalent and persistent, take a dump of both nodes at the next occurrence, then contact the IBM software support center.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2118I STALL ALLEVIATED FOR XCF TRLE *trlename* TO *cpname*

Explanation: This unsolicited message is issued when XCF detects that a data flow stall for an XCF connection has been alleviated. The stall was originally reported in an IST2116I message.

trlename is the name of the XCF TRLE.

cpname is the CP name of the partner node for this XCF connection.

IST2119I

System action: Outbound data flow for this XCF connection is resumed.

Operator response: None.

System programmer response: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: *correlator*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE or DISPLAY EEDIAG command that specifies HOSTNAME filters, or in response to a DISPLAY EEDIAG, TEST=YES command. This message is the first in various message groups. This message can also be contained in other message groups headed by message IST2001I, IST2002I, IST2065I, IST2066I, or IST2130I. See the explanation of those messages for a complete description. A complete description of the message groups headed by this message follows.

The following message group is issued when VTAM accepts the DISPLAY EE or DISPLAY EEDIAG command that specifies HOSTNAME filters:

```
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
[IST2067I EEDIAG DISPLAY ISSUED ON date AT time]
IST2120I HOSTNAME RESOLUTION IN PROGRESS
IST314I END
```

The following message group is issued by VTAM when host name resolution processing successfully completes for a DISPLAY EE command that specifies HOSTNAME filters:

```
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
IST2121I HOSTNAME RESOLUTION COMPLETE
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
IST314I END
```

The following message group is issued by VTAM when host name resolution processing successfully completes for a DISPLAY EEDIAG command that specifies HOSTNAME filters:

```
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
IST2121I HOSTNAME RESOLUTION COMPLETE
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
[IST2023I CONNECTED TO LINE linename]
[IST2126I CONNECTIVITY TEST IN PROGRESS]
IST314I END
```

The following message group is issued by VTAM when host name resolution failure occurs for a DISPLAY EE or DISPLAY EEDIAG command that specifies HOSTNAME filters:

```
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
IST2121I HOSTNAME RESOLUTION COMPLETE
[IST1893I NAME-TO-ADDRESS RESOLUTION FAILED]
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
```

```
[IST1893I NAME-TO-ADDRESS RESOLUTION FAILED]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
IST314I END
```

The following message group is issued by VTAM when it accepts a DISPLAY EEDIAG,TEST=YES command that did not specify HOSTNAME filters:

```
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
IST2067I EEDIAG DISPLAY ISSUED ON date AT time
IST1680I type IP ADDRESS ip_address
IST1680I type IP ADDRESS ip_address
IST2023I CONNECTED TO LINE l inename
IST2126I CONNECTIVITY TEST IN PROGRESS
IST314I END
```

IST1680I

- This message is displayed for the following reasons:
 - When host name resolution is required to process the display command and the name-to-address function fails for the local host name, this message is issued to display the remote IP address. This IP address might have been specified as input using the IPADDR filter, or it might have been acquired through the host name resolution function.
 - When host name resolution is required to process the display command and the name-to-address function fails for the remote host name, this message is issued to display the local IP address. This IP address might have been specified as input using the IPADDR filter, or it might have been acquired through the host name resolution function.
 - When a D NET,EEDIAG,TEST=YES command is entered that did not specify host name filters, this message is issued to display the local and remote IP addresses used for the EE connectivity test. In this case, the first occurrence of this message identifies the local IP address and the second occurrence identifies the remote IP address.
- In the message text:

type

Indicates which IP address is being displayed. The value is either LOCAL or REMOTE.

ip_address

Indicates the IP address.

IST1893I

- This message is the first in a group of messages displayed when resolution of a host name into an IP address is attempted but was unsuccessful.
- The following message group is issued by VTAM when host name resolution fails for the local host name:

```
IST1893I NAME-TO-ADDRESS RESOLUTION FAILED
IST1910I LOCAL HOSTNAME value
[IST1911I value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
IST314I END
```

Result: If host name resolution fails for the local host name, VTAM also displays the information available for the REMOTE filter. This information is presented in the optional messages IST1680I, IST1909I, and IST1911I.

- The following message group is issued by VTAM when host name resolution fails for the remote host name:

```
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST1893I NAME-TO-ADDRESS RESOLUTION FAILED
IST1909I REMOTE HOSTNAME value
[IST1911I value]
IST314I END
```

IST2119I

Result: If host name resolution fails for the remote host name, VTAM also displays the information available for the LOCAL filter. This information is presented in optional messages IST1680I, IST1910I, and IST1911I.

IST1909I

- In the message text:

value

The host name supplied to the name-to-address function that is used to acquire the remote IP address. The remote IP address is then used to process the display command. If the host name is longer than 44 characters, then the first 44 characters are displayed as the *value* value and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

- In the message text:

value

The host name supplied to the name-to-address function that is used to acquire the local IP address. The local IP address is then used in the processing of the display command. If the host name is longer than 45 characters, then the first 45 characters are displayed as the *value* value and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

- In the message text:

value

The continuation of the *value* value on messages IST1909I and IST1910I. Message IST1911I is repeated as many times as necessary to display the entire character string.

IST2023I

- In the message text:

linename

The name of the Enterprise Extender line that VTAM is using to perform an Enterprise Extender connectivity test.

IST2067I

The *date* and *time* values specify when this DISPLAY EEDIAG command was issued. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2119I

- In the message text:

correlator

A unique display correlator associated with this DISPLAY EE or DISPLAY EEDIAG command, which requires host name resolution. This correlator can be used to locate the various message groups associated with this display command.

IST2120I

This message indicates that name-to-address resolution for the host name filters has been initiated. When the host name resolution completes, another IST2119I message group is issued, which includes message IST2121I.

IST2121I

This message indicates that name-to-address resolution for the host name filters has completed.

IST2126I

This message is issued when VTAM initiates an Enterprise Extender connectivity test. When the connectivity test completes, a message group headed by IST2130I is issued.

System action: If message IST1893I is issued to report a host name resolution failure, the DISPLAY EE or DISPLAY EEDIAG command is not performed. Otherwise, the DISPLAY EE or DISPLAY EEDIAG command processing continues.

Operator response: If message IST1893I is issued to report a host name resolution failure, save the system log for problem determination if the correct host name value is being resolved. If you specified an incorrect host name, specify the correct host name and issue the display command again.

System programmer response: If message IST1893I is issued to report a host name resolution failure, and the correct host name is being specified on the display command, ensure the following:

- The name-to-address resolution mapping for the host name yields the correct static VIPA address (if on a z/OS host) of the node that owns the host name.
- If network address translation (NAT) is in use, the name-to-address resolution mapping for the host name yields the correct NAT address to ultimately reach the target static VIPA address of the node that owns the host name.

If the resolution is not correct, update the DNS zone files or the appropriate local hosts files with the corrected name-to-address resolution. If the resolution is intended to yield an IPv6 address, ensure that the TCP/IP stack is enabled for IPv6 processing so that the resolver searches for IPv6 addresses. See the information about resolvers in z/OS Communications Server: IP Configuration Guide for more information about the resolver function.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2120I HOSTNAME RESOLUTION IN PROGRESS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE or DISPLAY EEDIAG command that specified HOSTNAME filters. This message indicates that name-to-address resolution of the host name filters has been initiated. The first message in this message group is IST2119I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2121I HOSTNAME RESOLUTION COMPLETE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EE or DISPLAY EEDIAG command that specified HOSTNAME filters. This message indicates that name-to-address resolution of the host name filters has completed. The first message in this message group is IST2119I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2122I EE DISPLAY REJECTED - MAXHNRES LIMIT EXCEEDED

Explanation: A DISPLAY EE or DISPLAY EEDIAG command that specified HOSTNAME filters was entered. The number of host name resolutions required to process this display command would cause VTAM to exceed the MAXHNRES start option value.

System action: The DISPLAY EE or DISPLAY EEDIAG command is not performed.

Operator response: Wait until some of the previous display commands requiring host name resolution complete, then issue the display command again. The following commands might also be useful:

- The D NET,VTAMOPTS,OPTION=MAXHNRES command displays the current value of this start option. If the value is not defined large enough for your system, contact your system programmer to increase the value defined for the MAXHNRES start option.
- The D NET,EEDIAG,TEST=PENDING command queries the display commands that are pending host name resolution results.

For more information about the MAXHNRES start option, see z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: If the defined or defaulted value of the MAXHNRES start option is not large enough for your system needs, code your preferred MAXHNRES start option value in the ATCSTRxx start list and restart VTAM. See the MAXHNRES start option in the z/OS Communications Server: SNA Resource Definition Reference for more information.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2123I DIAL FAILED FOR EE PU *puname* - EXISTING CONNECTION FOUND

Explanation: This message is the first in a group of messages that VTAM issues when a dial fails for an Enterprise Extender connection. The complete description of the message group follows.

```
IST2123I DIAL FAILED FOR EE PU puname - EXISTING CONNECTION FOUND
IST1680I type IP ADDRESS ip_address
IST1680I type IP ADDRESS ip_address
IST314I  END
```

IST1680I

- This message is issued to display the IP addresses of the failing connection. In the message text:

type

Indicates which IP address is being displayed. The value is either LOCAL or REMOTE.

ip_address

The IP address.

IST2123I

- This message is issued when a dial request for a new EE connection fails. An existing connection was found with the same local and remote IP addresses. In the message text:

puname

The name of the predefined switch PU that initiated the dial.

System action: The EE dial request fails, but the existing EE connection is unaffected.

Operator response: Contact the system programmer.

System programmer response: Correct the switch major node PU definitions so that multiple connections are not defined to have the same local and remote IP addresses between two EE hosts. See Rule for multiple EE connections in z/OS Communications Server: SNA Network Implementation Guide for more information about how to correctly define multiple EE connections between two adjacent CPs.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2124I REMOTE IPADDR OR HOSTNAME IS ALSO REQUIRED

Explanation: VTAM issues this message in response to a DISPLAY EEDIAG,TEST=YES command that specified only a local IPADDR filter or local HOSTNAME filter. To perform an EE connectivity test, the EEDIAG command filters specified on the EE connectivity test must uniquely identify the EE endpoints you want to test.

System action: The DISPLAY EEDIAG,TEST=YES command is not performed.

Operator response: Specify a remote IPADDR filter or remote HOSTNAME filter in addition to the EEDIAG filter already specified on the DISPLAY EEDIAG,TEST=YES command. Optionally, you can specify the ID filter on the DISPLAY EEDIAG,TEST=YES command instead of the IPADDR and HOSTNAME filters. See z/OS Communications Server: SNA Operation for more information about commands and command syntax.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2125I LOCAL IPADDR OR HOSTNAME IS ALSO REQUIRED

Explanation: VTAM issues this message in response to a DISPLAY EEDIAG,TEST=YES command that specified only a remote IPADDR filter or remote HOSTNAME filter. To perform an EE connectivity test, the EEDIAG command filters specified on the EE connectivity test must uniquely identify the EE endpoints you want to test.

System action: The DISPLAY EEDIAG,TEST=YES command is not performed.

Operator response: Specify a local IPADDR filter or local HOSTNAME filter in addition to the EEDIAG filter already specified on the DISPLAY EEDIAG,TEST=YES command. You can specify the ID filter on the DISPLAY EEDIAG,TEST=YES command instead of the IPADDR and HOSTNAME filters. See z/OS Communications Server: SNA Operation for more information about commands and command syntax.

System programmer response: None.

User response: Not applicable.

IST2126I • IST2127I

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2126I CONNECTIVITY TEST IN PROGRESS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. This message indicates that the EE connectivity test request has been initiated. The first message in this message group is IST2119I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2127I CONNECTIVITY TEST FAILED - NO DIAL OUT LINE AVAILABLE FOR EE

Explanation: A DISPLAY EEDIAG,TEST=YES command was issued to perform an Enterprise Extender connectivity test, but no dial out line was available. At least one EE line associated with the local static VIPA address you are testing must be active and available for use. The EE connectivity test requires an available line to conduct the test even if the connection you are testing has an active EE connection over another EE line.

System action: The DISPLAY EEDIAG,TEST=YES command is not performed.

Operator response: To use the EE connectivity test, perform the following actions to activate an Enterprise Extender line:

- If EE lines in the EE XCA major node group associated with the local static VIPA address are defined but not currently active, issue a V NET,ACT,ID=*groupname*,SCOPE=ALL command to activate these lines.
- If lines were activated, issue the DISPLAY EEDIAG,TEST=YES command again.
- If no lines are available to perform the EE connectivity test, contact your system programmer.

System programmer response: Update the EE XCA major node to define additional lines that you need to use the EE connectivity test.

- If you defined a new group with additional lines, the operator can dynamically activate a new group in the EE XCA major node. Issue the V NET,ACT,ID=*eexcamajornode*,UPDATE=ALL command. See z/OS Communications Server: SNA Operation for more information about using the VARY command.
- If you defined additional lines to an existing group, activating the new lines might be disruptive to existing EE connections. If this is acceptable, the operator can perform one of the following to activate the newly defined lines:
 - To dynamically update an EE XCA major node group, issue the V NET,INACT,ID=*eegroupname*,F command to deactivate all existing lines in the modified group. When the EE group is inactive, issue the V NET,ACT,ID=*eexcamajornode*,UPDATE=ALL command to dynamically update the group. Issue a V NET,INACT,ID=*eexcamajornode*,F command to deactivate Enterprise Extender. See z/OS Communications Server: SNA Operation for more information about using the VARY command.
 - Issue a V NET,ACT,ID=*eexcamajornode*,SCOPE=ALL command to activate the modified Enterprise Extender definitions.

When the lines are defined and activated, the operator can issue the DISPLAY EEDIAG,TEST=YES command again.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2128I CONNECTIVITY TEST FAILED - EE NOT AVAILABLE FOR LOCAL IPADDR

Explanation: A DISPLAY EEDIAG,TEST=YES command was issued to perform an Enterprise Extender connectivity test. VTAM detected that no EE lines associated with the local static VIPA address have been activated. At least one EE line associated with the local static VIPA address you are testing must be active and available for use.

System action: The DISPLAY EEDIAG,TEST=YES command is not performed.

Operator response: To use the EE connectivity test, perform the following actions to activate an Enterprise Extender line:

- If a group in the EE XCA major node associated with the local static VIPA address is defined but is not active, issue a V NET,ACT,ID=*groupname*,SCOPE=ALL command to activate these lines.
- If a group was successfully activated, issue the DISPLAY EEDIAG,TEST=YES command again.
- If a group in the EE XCA major node is not defined, contact the system programmer.

System programmer response: If no group exists in the EE XCA major node that is associated with the local static VIPA address, update the EE XCA major node to define such a group. Then the operator can issue one the following commands to activate the new definitions:

- To dynamically update the EE XCA major node group, issue the V NET,ACT,ID=*eexcamajornode*,UPDATE=ALL command. See z/OS Communications Server: SNA Operation for more information about using the VARY command.
- This method for activating the new group might be disruptive if existing EE connections are active. Issue a V NET,INACT,ID=*eexcamajornode*,F command to deactivate Enterprise Extender. Issue a V NET,ACT,ID=*eexcamajornode*,SCOPE=ALL command to activate your modified Enterprise Extender definitions.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2129I CONNECTIVITY TEST FAILED - MISMATCH OF IP ADDRESS FAMILY

Explanation: A DISPLAY EEDIAG,TEST=YES command was issued to perform an Enterprise Extender connectivity test. This message is the first message in a group of messages displayed when the test fails because the remote IP address is not in the same IP address family as the local IP address; for example, the local IP address is an IPv4 address and the remote IP address is an IPv6 address. If the addresses are in different families, the Enterprise Extender connection cannot be established. A complete description of the message group follows.

```
IST2129I CONNECTIVITY TEST FAILED - MISMATCH OF IP ADDRESS FAMILY
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
```

IST2129I

```
IST1680I type IP ADDRESS ip_address  
[IST1910I LOCAL HOSTNAME value]  
[IST1911I value]  
IST314I END
```

IST1680I

- In the message text:

type

Identifies the IP address that is displayed. The *type* value is either LOCAL or REMOTE..

ip_address

Either the remote IP address or the local IP address. The first instance of the IST1680I message displays the local IP address, and the second instance of the IST1680I message displays the remote IP address.

IST1909I

- In the message text:

value

The host name, owned by a target remote node, that was used to acquire the remote IP address as part of name-to-address resolution. If the host name is longer than 44 characters, then the first 44 characters are displayed as the *value* value and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

- In the message text:

value

The host name used to acquire the local static VIPA address that is used as part of the attempted route determination. If the host name is longer than 45 characters, then the first 45 characters are displayed as the *value* value and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

- In the message text:

value

The continuation of the *value* value on message IST1909I or IST1910I. Message IST1911I is repeated as many times as necessary to display the entire character string.

System action: The DISPLAY EEDIAG,TEST=YES command is not performed.

Operator response: If both a local and remote IP address are supplied as input to the D NET,EEDIAG,TEST=YES command, enter the command again specifying both IPADDR filters from the same IP address family. Otherwise, save the console log for problem determination.

System programmer response: The Enterprise Extender connectivity test cannot be performed if the local and remote IP addresses are not in the same address family. If the correct host name is being specified on the display command, verify the following:

- The name-to-address resolution mapping for the host name yields the expected static VIPA address (if on a z/OS host) of the node that owns the host name.
- If network address translation (NAT) is in use, the name-to-address resolution mapping for the host name yields the correct NAT address to ultimately reach the target static VIPA address of the node that owns the host name.

If the resolution is not correct, update the DNS zone files or the appropriate local host files with the corrected name-to-address resolution. If the resolution is intended to yield an IPv6 address, ensure that the TCP/IP stack is enabled for IPv6 processing so that the resolver searches for IPv6 addresses. See the information about resolvers in z/OS Communications Server: IP Configuration Guide for more information about the resolver function.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2130I ENTERPRISE EXTENDER CONNECTIVITY TEST INFORMATION

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. This message is the first in a group of messages. The full description of the message group follows the example.

```

IST2130I ENTERPRISE EXTENDER CONNECTIVITY TEST INFORMATION
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
IST2131I EEDIAG DISPLAY COMPLETED ON date AT time
IST2132I LDLC PROBE VERSIONS: VTAM = local_version PARTNER = remote_version
IST1680I type IP ADDRESS ip_address
IST1680I type IP ADDRESS ip_address
[IST2224I ENTERPRISE EXTENDER ROUTING POLICY INFORMATION]
[IST2225I PORT ROUTE TABLE ROUTING RULE]
[IST2205I ---- -]
[IST2226I portnum route_table routing_rule]
IST924I -----
IST2133I INTFNAME: intfname INTFTYPE: intftype
[IST2134I CONNECTIVITY SUCCESSFUL PORT: portnum]
[IST2135I CONNECTIVITY UNSUCCESSFUL SENSE: sense PORT: portnum]
[IST2136I CONNECTIVITY TEST ENDED - MAXIMUM TIME LIMIT EXCEEDED]
[IST2227I CONNECTIVITY NOT TESTED - ROUTE NOT APPLICABLE PORT: portnum]
[IST2137I hop ipv4address flags RTT: time ]
[IST2138I hop ipv6address flags RTT: time]
IST924I -----
IST2139I CONNECTIVITY TEST RESULTS DISPLAYED FOR tested_routes OF total_routes ROUTES
IST314I END

```

IST924I

This message is a line separator between message IST2133I subgroups.

IST1680I

- The first occurrence of this message identifies the local IP address used for the Enterprise Extender (EE) connectivity test. The second occurrence identifies the remote IP address used for the EE connectivity test.
- In the message text:

type

Indicates which IP address is being displayed. The *type* value is either LOCAL or REMOTE.

ip_address

The IP address.

IST2119I

- In the message text:

correlator

A unique display correlator associated with this DISPLAY EEDIAG command. This correlator can be used to locate the various message groups associated with this DISPLAY EEDIAG command.

IST2131I

The *date* and *time* values specify when the EE connectivity test completed. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2132I

- In the message text:

IST2130I

local_version

The version of the Logical Data Link Control (LDLC) probe command supported by Communications Server for the EE connectivity test.

remote_version

The version of the Logical Data Link Control (LDLC) probe command supported by the partner EE endpoint.

IST2133I

- This is the first message of a message subgroup. The message subgroup is displayed for each TCP/IP interface that has a valid path to the remote IP address. When LIST=DETAIL is specified, message IST2137I (IPv4) or IST2138I (IPv6) is repeated for each time-to-live (TTL) hop for which an LDLC probe command was sent. When LIST=SUMMARY is specified or is the default value on the DISPLAY EEDIAG command, message IST2137I or IST2138I is displayed only once with the information related to the last hop that sent a reply to the LDLC probe command.
- In the message text:

intfname

The name of the TCP/IP interface that was used to perform the EE connectivity test.

intftype

The device type that was configured on the TCP/IP profile DEVICE statement or that was generated based on the INTERFACE statement.

- The IST2133I message subgroup has various formats. The following examples show both IPv4 and IPv6 formats.
- Successful IPv4 IST2133I message subgroup format:

```
IST2133I INTFNAME: intfname          INTFTYPE: intftype
IST2134I CONNECTIVITY SUCCESSFUL          PORT: portnum
IST2137I hop ipv4address          flags RTT: time
```

- Unsuccessful IPv4 IST2133I message subgroup format:

```
IST2133I INTFNAME: intfname          INTFTYPE: intftype
IST2135I CONNECTIVITY UNSUCCESSFUL  SENSE: sense          PORT: portnum
[IST2136I CONNECTIVITY TEST ENDED - MAXIMUM TIME LIMIT EXCEEDED]
IST2137I hop ipv4address          flags RTT: time
```

- Successful IPv6 IST2133I message subgroup format:

```
IST2133I INTFNAME: intfname          INTFTYPE: intftype
IST2134I CONNECTIVITY SUCCESSFUL          PORT: portnum
IST2138I hop ipv6address          flags RTT: time
```

- Unsuccessful IPv6 IST2133I message subgroup format:

```
IST2133I INTFNAME: intfname          INTFTYPE: intftype
IST2135I CONNECTIVITY UNSUCCESSFUL  SENSE: sense          PORT: portnum
[IST2136I CONNECTIVITY TEST ENDED - MAXIMUM TIME LIMIT EXCEEDED]
IST2138I hop ipv6address          flags RTT: time
```

IST2134I

- This message indicates that the EE connectivity test to the partner EE endpoint was successful for this specific EE port and TCP/IP interface.
- In the message text:

portnum

The Enterprise Extender User Datagram Protocol (UDP) port that was tested. The default EE port numbers are as follows:

- 12000 - Signal Priority
- 12001 - Network Priority
- 12002 - High Priority
- 12003 - Medium Priority
- 12004 - Low Priority

IST2135I

- This message indicates that the EE connectivity test to the partner EE endpoint was unsuccessful for this specific EE port and TCP/IP interface. This message might be issued if the test was unable to contact the partner EE node, or if a TTL hop in the route returned an unexpected Internet Control Message Protocol (ICMP) message in response to the LDLC probe command.
- In the message text:

sense

The SNA sense code that was sent in the LDLC probe response from the Enterprise Extender partner. The sense might display as ***NA*** if a response to the LDLC probe is not received from the EE partner. If a SNA sense code is displayed, see SNA sense codes in z/OS Communications Server: IP and SNA Codes for more information about this sense code.

portnum

The Enterprise Extender User Datagram Protocol (UDP) port that was tested. The default EE port numbers are as follows:

- 12000 - Signal Priority
- 12001 - Network Priority
- 12002 - High Priority
- 12003 - Medium Priority
- 12004 - Low Priority

IST2136I

This is an optional message in the IST2133I message subgroup that is issued when the EE connectivity test is unsuccessful. This message indicates that the EE connectivity test exceeded the amount of time allowed for the test to run. This time limit is specified or is the default value on the MAXTIME operand on the D NET,EEDIAG,TEST=YES command.

IST2137I

- This message displays information gathered during the EE connectivity test over an IPv4 route.
- When LIST=SUMMARY is specified or is the default value on the DISPLAY EEDIAG command, this message is displayed only once with the information related to a reply to the LDLC probe command.
- When LIST=DETAIL is specified on the DISPLAY EEDIAG command, this message is displayed for each TTL hop in the route to the EE partner. To reduce repetitive information in the detailed display, when a TTL hop is unresponsive to the LDLC probe, message IST2137I is displayed only for the first unresponsive hop and the last unresponsive hop. In these cases, all hops in between were also unresponsive to the LDLC probe command.
- In the message text:

hop

The TTL hop count used in the LDLC probe command. The TTL hop count is *NA (not applicable) when LIST=SUMMARY is specified.

ipv4addr

The source IPv4 address from the ICMP response. The source IPv4 address might display as an asterisk (*) if the TTL hop did not respond to the LDLC probes.

flags

This is an optional field. The *flags* field has one of two forms:

t-ccc The *t* value is a representative character of the error detected in response to the LDLC probe and the *ccc* value is the specific code associated with an ICMP message type (if the error detected is not associated with an ICMP message then the code value will be 0).

The error message type is displayed as one of the following:

- D - Destination unreachable ICMP type 3
- P - Parameter problem ICMP type 12
- Q - Source quench ICMP type 4

H - Hop limit was exceeded. A maximum of 255 hops can be tested when performing the EE connectivity test. The EE connectivity test will terminate for the route being tested.

IST2130I

L - A route loop condition was detected. This specific hop was already found as a previous hop for this route being tested. Because a route loop condition was detected the EE connectivity test will terminate for the route being tested.

For a list of the ICMP types and codes, go to .

- (a) The *a* value is the number of LDLC probe attempts, if more than one.

time

One of the following:

- The round-trip time required for the LDLC probe to be sent to an intermediate hop for which an ICMP response was received
- The round-trip time required for the LDLC probe to be sent to the destination hop for which either an ICMP response or LDLC probe response was received.

This field is displayed in milliseconds (ms). If the *time* field displays as 0, the round-trip time was less than 1 millisecond.

Result: The round-trip time for intermediate hops is computed when an ICMP message is received from the intermediate hop. Even though the round-trip time calculated to the Enterprise Extender remote partner is based on the receipt of a UDP datagram responding to the query that was received, intermediate hops might delay the returning of an ICMP message. The remote Enterprise Extender partner should always respond immediately to the query received. Therefore, in some instances the round-trip time to the remote Enterprise Extender node might be less than the value computed to intermediate hops.

IST2138I

- This message displays information gathered during the EE connectivity test over an IPv6 route.
- When LIST=SUMMARY is specified or is the default value on the DISPLAY EEDIAG command, this message is displayed only once. The information displayed is related to the reply from the last hop that received the LDLC probe command.
- When LIST=DETAIL is specified on the DISPLAY EEDIAG command, this message is displayed for each TTL hop in the route to the EE partner. To reduce repetitive information in the detailed display, when a TTL hop is unresponsive to the LDLC probe, message IST2138I is displayed only for the first unresponsive hop and the last unresponsive hop. In these cases, all hops in between were also unresponsive to the LDLC probe command.
- In the message text:

hop

The TTL hop count used in the LDLC probe command. The TTL hop count is *NA when LIST=SUMMARY is specified.

ipv6addr

The source IPv6 address from the ICMPv6 response. The source IPv6 address might display as an asterisk (*) if the TTL hop did not respond to the LDLC probes.

flags

This is an optional field. The *flags* field has one of two forms:

- t-ccc* The *t* value is a representative character of the ICMPv6 message type returned in response to the LDLC probe and the *ccc* value is the specific code associated with the ICMPv6 message type.

The ICMP message type is displayed as one of the following:

- B - Packet too big ICMPv6 Type 2
- D - Destination unreachable ICMPv6 Type 1
- P - Parameter problem ICMPv6 Type 4

For a list of the ICMPv6 types and codes, go to .

- (a) The *a* value is the number of LDLC probe attempts, if more than one.

time

One of the following:

- The round-trip time required for the LDLC probe to be sent to an intermediate hop for which an ICMPv6 response was received
- The round-trip time required for the LDLC probe to be sent to the destination hop for which either an ICMPv6 response or LDLC probe response was received.

This field is displayed in milliseconds (ms). If the *time* field displays as 0, the round-trip time was less than 1 millisecond.

Result: The round-trip time for intermediate hops is computed when an ICMP message is received from the intermediate hop. Even though the round-trip time calculated to the Enterprise Extender remote partner is based on the receipt of a UDP datagram responding to the query that was received, intermediate hops might delay the returning of an ICMP message. The remote Enterprise Extender partner should always respond immediately to the query received. Therefore, in some instances the round-trip time to the remote Enterprise Extender node might be less than the value computed to intermediate hops.

IST2139I

- In the message text:

tested_routes

The number of TCP/IP routes that were tested and displayed in the EE connectivity test output.

total_routes

The number of valid TCP/IP routes that were found between the EE endpoints.

IST2205I

This message is a line separator between various sections of the message group.

IST2224I

This message is displayed when policy-based routing is being used to determine an IPv4 route between two Enterprise Extender endpoints.

IST2225I

This message is displayed as a heading for displaying EE UDP port numbers and their associated route tables and policy-based routing rules.

IST2226I

- In the message text:

portnum

The EE UDP port number.

route_table

The route table being used for IPv4 route calculations. If the main routing table is being used, then the value EZBMAIN is displayed. If the value *NONE* is displayed, then no route could be calculated between the EE endpoints for this specific EE UDP port and the EE connectivity test was unsuccessful.

routing_rule

The policy-based routing rule associated with this EE UDP port. If no policy-based routing rule is associated with the port, then the value NONE is displayed.

IST2227I

- This message is an optional message in the IST2133I message subgroup that is issued when the EE connectivity test is not performed because the route is not associated with the specific EE UDP port. This message does not indicate an error. The EE connectivity test is not performed because the policy-based routing rule has indicated that this route is not associated with the EE UDP port that is being tested.
- In the message text:

portnum

The Enterprise Extender User Datagram Protocol (UDP) port that was tested.

System action: Processing continues.

IST2131I • IST2133I

Operator response: Review the Enterprise Extender Connectivity Test output for any unsuccessful test results. See DISPLAY EEDIAG,TEST=YES in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing the test output.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2131I EEDIAG DISPLAY COMPLETED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG command. The output of the DISPLAY EEDIAG command varies depending on the format of the command. The first message in the group is either IST2065I, IST2066I, or IST2130I. See the explanation of those messages for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2132I LDLC PROBE VERSIONS: VTAM = *local_version* PARTNER = *remote_version*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2133I INTFNAME: *intfname* INTFTYPE: *intftype*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2134I CONNECTIVITY SUCCESSFUL PORT: *portnum*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2135I CONNECTIVITY UNSUCCESSFUL SENSE: *sense* PORT: *portnum*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2136I CONNECTIVITY TEST ENDED - MAXIMUM TIME LIMIT EXCEEDED

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2137I *hop ipv4address flags* RTT: *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2138I *hop ipv6address flags* RTT: *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2139I CONNECTIVITY TEST RESULTS DISPLAYED FOR *tested_routes* OF *total_routes* ROUTES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2140I CONNECTIVITY TEST FAILED - LINE *linename* IS INACTIVATING

Explanation: A DISPLAY EEDIAG,TEST=YES command was previously issued to perform an Enterprise Extender connectivity test. Before the command completed, the line being used to perform this test was deactivated. The EE connectivity test fails as a result. VTAM issues this message as part of a message group headed by IST2119I. Message IST2119I identifies the display correlator assigned when the EE connectivity test command was entered.

System action: The DISPLAY EEDIAG,TEST=YES command processing ends.

Operator response: If this message is unexpectedly issued, perform the following actions:

- Investigate the console log from the time the DISPLAY EEDIAG,TEST=YES command was issued to the time this error message was issued. You can use the display correlator identified in message IST2119I to locate the relevant message groups associated with this connectivity test.
- Locate any messages or operator commands that list the specified *linename* value to assist in understanding why the line was deactivated. The following are some known reasons for this error message to be issued:
 - The line being used by the EE connectivity test was deactivated by the operator.
 - The VTAM-to-TCP/IP samehost interface (IUTSAMEH) was deactivated while the EE connectivity test was being performed.

System programmer response: None

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2141I CONNECTIVITY TEST FAILED - SWITCHED PU IS NOT ENABLED FOR EE

Explanation: A DISPLAY EEDIAG,ID=*puname*,TEST=YES command was issued to perform an Enterprise Extender connectivity test. The command specified a switched PU name on the ID operand. The connectivity test was failed because the switched PU definition statements did not have the correct definitions necessary for VTAM to attempt to establish an EE connection.

System action: The DISPLAY EEDIAG,ID=*puname*,TEST=YES command processing is not performed.

Operator response: The switched PU name specified on the ID operand of the DISPLAY EEDIAG,TEST=YES command is not correctly coded for VTAM to establish an outbound EE connection. If the incorrect PU name was specified, specify the correct switched PU name and issue the display command again. Alternatively, you can uniquely identify the EE connection to test by specifying any combination of the IPADDR and HOSTNAME filters, which provide both a local and remote input. See Display EEDIAG in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about the DISPLAY EEDIAG,TEST=YES command.

System programmer response: The switched PU definition statements did not have the correct definitions necessary for VTAM to attempt to establish an EE connection. If the correct switched PU name was specified on the ID operand of the DISPLAY EEDIAG,TEST=YES command, then perform the following actions:

- Verify that the GRPNM operand is specified on the switched PATH definition statement and that the group name defined on the GRPNM definition statement points to an active group in the Enterprise Extender XCA major node.
- Verify that either the IPADDR operand or the HOSTNAME operand is specified on the switched PATH definition statement.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2142I CONNECTIVITY TEST REJECTED - SAME TEST ALREADY IN PROGRESS

Explanation: VTAM issues this message as the first of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. A DISPLAY EEDIAG,TEST=YES command was previously issued to perform an Enterprise Extender connectivity test to the same EE endpoint you are trying to test. VTAM permits only one EE connectivity test to a specific EE connection at a time. The full description of the message group follows:

```
IST2142I CONNECTIVITY TEST REJECTED - SAME TEST ALREADY IN PROGRESS
IST2143I IN PROGRESS ENTERPRISE EXTENDER DISPLAY CORRELATOR: correlator
IST314I END
```

IST2143I

- In the message text:

correlator

The unique display correlator associated with a previous DISPLAY EEDIAG,TEST=YES command that is still in progress. This correlator can be used to locate the output associated with the previous DISPLAY EEDIAG,TEST=YES command.

System action: The DISPLAY EEDIAG,TEST=YES command is rejected.

Operator response: You can perform the following actions:

- Issue a D NET,EEDIAG,TEST=PENDING command to display all outstanding EE connectivity tests.
- Locate the message IST2147I in the output that contains the same message correlator as the one listed in message IST2143I. Message IST2147I is followed by message IST2148I, which states when the original EE connectivity test is due to expire. See the message IST2147I for a complete description of this message group.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2143I IN PROGRESS ENTERPRISE EXTENDER DISPLAY CORRELATOR: *correlator*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the message group is IST2142I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2144I CONNECTIVITY TEST REJECTED - MAXEETST LIMIT EXCEEDED

Explanation: A DISPLAY EEDIAG,TEST=YES command was issued that would have caused VTAM to exceed the MAXEETST start option value.

System action: The DISPLAY EEDIAG,TEST=YES command is not performed.

Operator response: Issue a D NET,VTAMOPTS,OPTION=MAXEETST command to display the current value of this start option.

- If the displayed value is defined large enough for your system, or it is defined to the maximum limit, then you must wait until at least one of the previous EE connectivity tests complete. When those commands complete, issue the display command again.
- If the displayed value is not large enough for your system, you can issue the F *procname*,VTAMOPTS,MAXEETST=*max_ee_connectivity_tests* command to increase this limit. When the limit is increased, issue the display command again. To permanently change the value of the MAXEETST start option, contact the system programmer.

Issue a D NET,EEDIAG,TEST=PENDING command to query the outstanding EE connectivity tests.

For more information about commands or command syntax, see *z/OS Communications Server: SNA Operation*.

See MAXEETST in *z/OS Communications Server: SNA Resource Definition Reference* for more information about the MAXEETST start option.

System programmer response: If the defined or default value of the MAXEETST start option is not large enough for your system needs, code the MAXEETST start option value that you want to use in the ATCSTRxx start list and restart VTAM.

User response: Not applicable.

Problem determination: Not applicable.

Source: *z/OS Communications Server SNA*

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2145I PENDING ENTERPRISE EXTENDER DISPLAY COMMANDS

Explanation: VTAM issues this message as the first in a group of messages in response to a DISPLAY EEDIAG,TEST=PENDING command. This message group displays current information about the DISPLAY EE and DISPLAY EEDIAG commands that are pending host name resolution. This message group also displays information about DISPLAY EEDIAG,TEST=YES commands that are in progress. The full description of the message group follows:

```
IST2145I PENDING ENTERPRISE EXTENDER DISPLAY COMMANDS
IST2067I EEDIAG DISPLAY ISSUED ON date AT time
[IST924I -----]
[IST2147I CORRELATOR: correlator LINE: linename STATUS: status]
[IST2067I EEDIAG DISPLAY ISSUED ON date AT time]
```

```
[IST2146I EE DISPLAY ISSUED ON date AT time]
[IST2148I EE CONNECTIVITY TEST REACHES MAXTIME ON date AT time]
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
[IST924I -----]
[IST1315I DISPLAY TRUNCATED AT MAX = number]
[IST2149I count OF total CORRELATORS DISPLAYED]
[IST1358I NO QUALIFYING MATCHES]
IST314I END
```

IST924I

This message is a line separator between message IST2147I subgroups.

IST1315I

- VTAM issues this message when the number of Enterprise Extender correlators to be displayed exceeds the value specified for the MAX operand.
- In the message text:

number

The value specified or the default value for the MAX operand.

IST1358I

VTAM issues this message when there are no pending Enterprise Extender display commands.

IST1680I

- This message is displayed in the IST2147I message subgroup for the following reasons:
 - When the *status* value in the preceding IST2147I message displays as PGAIN-LOCAL, this message is issued to display the remote IP address that might have been specified as input on the display command, or that it might have acquired through the host name resolution function.
 - When the *status* value in the preceding IST2147I message displays as PGAIN-REMOTE, this message is issued to display the local IP address that might have been specified as input on the display command, or that it might have acquired through the host name resolution function.
 - When the *status* value in the preceding IST2147I message displays as TEST-IN-PROGRESS, this message displays the local and the remote IP addresses being used to conduct the EE connectivity test. The first occurrence of this message displays the local IP address. The second occurrence of this message displays the remote IP address.
- In the message text:

type

Indicates which IP address is being displayed. The *type* value is either LOCAL or REMOTE.

ip_address

The IP address.

IST1909I

- This message is displayed in the IST2147I message subgroup when a remote host name filter is specified on the DISPLAY EE or DISPLAY EEDIAG command.
- In the message text:

value

The host name supplied to the name-to-address function, which is used to acquire the remote IP address. The remote IP address is then used in the processing of the display command. If the host name is longer than 44 characters, then the first 44 characters are displayed as the *value* value and the remaining characters are displayed in one or more IST1911I messages.

IST1910I

IST2145I

- This message is displayed in the IST2147I message subgroup when a local host name filter is specified on the DISPLAY EE or DISPLAY EEDIAG command.
- In the message text:

value

The host name supplied to the name-to-address function, which is used to acquire the local IP address. The local IP address is then used in the processing of the display command. If the host name is longer than 45 characters, then the first 45 characters are displayed as the *value* value and the remaining characters are displayed in one or more IST1911I messages.

IST1911I

- In the message text:

value

The continuation of the *value* value on messages IST1909I and IST1910I. Message IST1911I is repeated as many times as necessary to display the entire character string.

IST2067I

The *date* and *time* values specify when the DISPLAY EEDIAG command was issued. The first occurrence of this message in the output is when the DISPLAY EEDIAG,TEST=PENDING command was issued. All subsequent occurrences represent the date and time when the pending DISPLAY EEDIAG commands were issued. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2146I

The *date* and *time* values specify when the pending DISPLAY EE command was issued. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2147I

- This is the first message of various message subgroups. These subgroup are repeated for each Enterprise Extender display command that is pending host name resolution or EE connectivity test results. A complete description of the message groups headed by this message follows.
- The following message group is issued for each DISPLAY EE command pending host name resolution:

```
IST2147I CORRELATOR: correlator LINE: linename STATUS: status
IST2146I EE DISPLAY ISSUED ON date AT time
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
```

- The following message group is issued for each DISPLAY EEDIAG command pending host name resolution:

```
IST2147I CORRELATOR: correlator LINE: linename STATUS: status
IST2067I EEDIAG DISPLAY ISSUED ON date AT time
[IST1680I type IP ADDRESS ip_address]
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
[IST1680I type IP ADDRESS ip_address]
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
```

- The following message group is issued for each DISPLAY EEDIAG,TEST=YES command that is pending EE connectivity test results:

```
IST2147I CORRELATOR: correlator LINE: linename STATUS: status
IST2148I EE CONNECTIVITY TEST REACHES MAXTIME ON date AT time
IST1680I type IP ADDRESS ip_address
[IST1910I LOCAL HOSTNAME value]
[IST1911I value]
IST1680I type IP ADDRESS ip_address
[IST1909I REMOTE HOSTNAME value]
[IST1911I value]
```

- In the message text:

correlator

A unique display correlator associated with the pending DISPLAY EE or DISPLAY EEDIAG command. This correlator can be used to locate the various message groups associated with these display commands.

linename

The name of the Enterprise Extender line that VTAM is using to perform an Enterprise Extender connectivity test. If the pending EE display command is not associated with an EE connectivity test, or the EE connectivity test has not selected a line, the *linename* value might be displayed as ***NA***.

status

The current status of the pending Enterprise Extender display command. Possible values are:

PGAIN - LOC/REM

The Enterprise Extender display command that was issued is waiting for host name resolution to complete for both a local and remote HOSTNAME filter.

PGAIN - LOCAL

The Enterprise Extender display command that was issued is waiting for host name resolution to complete for a local HOSTNAME filter.

PGAIN - REMOTE

The Enterprise Extender display command that was issued is waiting for host name resolution to complete for a remote HOSTNAME filter.

Result: The PGAIN states can vary in duration depending on how long it takes for the resolver to resolve the host name, or for the request to fail (timeout using resolver configuration definitions).

TEST-IN-PROGRESS

The Enterprise Extender connectivity test command entered is currently testing the specified EE connection. The results of the test are displayed when the test completes, or when the time allowed for the test exceeds the MAXTIME value. See IST2148I for the date and time the connectivity test expires.

IST2148I

This message displays the estimated date and time when the DISPLAY EEDIAG,TEST=YES command is due to expire. The estimated date and time are calculated by adding the MAXTIME value to the time when VTAM invokes the TCP/IP stack to perform the EE connectivity test. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2149I

- In the message text:

count

The number of pending EE correlators displayed in the output.

total

The total number of EE correlators that are pending either host name resolution or EE connectivity test results. The total might be larger than the displayed count because the number of EE correlators displayed is governed by the MAX parameter.

System action: Processing continues.

Operator response: If there are many Enterprise Extender display requests that are pending for host name resolution results, and they are not completing in a timely manner, investigate the TCP/IP stack providing the name-to-address resolution support to discover why these requests are not completing sooner.

System programmer response: None

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

IST2146I • IST2151I

Routing code: 2

Descriptor code: 5

Example: None.

IST2146I EE DISPLAY ISSUED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=PENDING command. The first message in this message group is IST2145I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2147I CORRELATOR: *correlator* LINE: *linename* STATUS: *status*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=PENDING command. The first message in this message group is IST2145I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2148I EE CONNECTIVITY TEST REACHES MAXTIME ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=PENDING command. The first message in this message group is IST2145I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2149I *count* OF *total* CORRELATORS DISPLAYED

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY EEDIAG,TEST=PENDING command. The first message in this message group is IST2145I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2150I VIRTUAL NODE *vrn_name* - *count* UNREACHABLE PARTNERS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The first message in the group is IST2057I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2151I PARTNER LIMIT EXCEEDED - UNUSABLE UNTIL COUNT IS BELOW *lowerlim*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=UNRCHTIM command. The first message in the group is IST2057I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2152I MODIFY TOPO COMMAND FAILED

Explanation: This message is the first in a group of messages that VTAM issues when a MODIFY TOPO command fails. A complete description of the message group follows the example.

```
IST2152I  MODIFY TOPO COMMAND FAILED
[IST2153I  ORIG, VRN, OR DEST OPERAND REQUIRED]
IST314I  END
```

IST2153I

This message is issued when the MODIFY TOPO,FUNCTION=CLRNRCH operator command is entered without specifying at least one of the ORIG, VRN, or DEST operands.

System action: The topology database is not changed. Other processing continues.

Operator response: Re-enter the command with at least one of the ORIG, VRN, and DEST operands specified. See z/OS Communications Server: SNA Operation for more information about VTAM commands and their operands.

System programmer response: None

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2153I ORIG, VRN, OR DEST OPERAND REQUIRED

Explanation: VTAM issues this message as part of a group of messages in response to a MODIFY TOPO,FUNCTION=CLRNRCH command failure. The first message in the group is IST2152I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2154I ROUTE SELECTION TRACE IS ACTIVE - BFRNUM = *number_of_buffers*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TRACES,TYPE=ROUTE
- MODIFY TRACE,TYPE=ROUTE
- MODIFY TRACE,TYPE=ROUTE,BFRNUM=*number_of_buffers*

A complete description of the message group follows the example.

```
[IST350I  DISPLAY TYPE = TRACES,TYPE=ROUTE]
IST2154I  ROUTE SELECTION TRACE IS ACTIVE - BFRNUM = number_of_buffers
IST2156I  STORAGE ALLOCATED TO ROUTE SELECTION TRACE = storage_amount
IST314I  END
```

IST350I

This message is issued in response to a DISPLAY TRACES,TYPE=ROUTE command. It identifies the type of information in the display and is always TRACES,TYPE=ROUTE for this message group.

IST2154I

- This message is issued to indicate that the APPN route selection trace is active.
- In the message text:

IST2155I

number_of_buffers

The maximum number of 40 KB buffers to be allocated for the APPN route selection trace table.

- See the MODIFY TRACE command information in z/OS Communications Server: SNA Operation and the APPN route selection trace information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information about the APPN route selection trace.

IST2156I

- In the message text:

storage_amount

The total number of bytes that is currently allocated to the APPN route selection trace table. This value is in the form *xxxxxK*, where K is a unit of measure in units of 1024 bytes. Storage for the APPN route selection trace is not all allocated when the trace is activated, but is allocated in 40 K buffers as it is needed. If all of the storage allowed for the APPN route selection trace is not yet allocated, then the *storage_amount* value is less than 40 K multiplied by the *number_of_buffers* value displayed in message IST2154I. For example, if the *number_of_buffers* value in message IST2154I is 100 and only 50 buffers are currently allocated, then the *storage_amount* value is 2000 K.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST350I DISPLAY TYPE = TRACES,TYPE=ROUTE
IST2154I ROUTE SELECTION TRACE IS ACTIVE - BFRNUM = 100
IST2156I STORAGE ALLOCATED TO ROUTE SELECTION TRACE = 2000K
IST314I END
```

IST2155I ROUTE SELECTION TRACE IS INACTIVE

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TRACES,TYPE=ROUTE
- MODIFY NOTRACE,TYPE=ROUTE

A complete description of the message group follows the example.

```
[IST350I DISPLAY TYPE = TRACES,TYPE=ROUTE]
IST2155I ROUTE SELECTION TRACE IS INACTIVE
IST2156I STORAGE ALLOCATED TO ROUTE SELECTION TRACE = storage_amount
IST314I END
```

IST350I

This message is issued in response to a DISPLAY TRACES,TYPE=ROUTE command. It identifies the type of information in the display and is always TRACES,TYPE=ROUTE for this message group.

IST2155I

This message is issued to indicate that the APPN route selection trace is inactive.

IST2156I

- In the message text:

storage_amount

The total number of bytes that is currently allocated to the APPN route selection trace table. This value is in the form *xxxxxK*, where K is a unit of measure in units of 1024 bytes.

System action: Processing continues.

Operator response: The APPN route selection trace is used to diagnose the selection of incorrect routes through the APPN network for LU-LU sessions and for directed searches used to locate resources. If you have captured the documentation needed for diagnosis by dumping VTAM, you can free the APPN route selection trace storage with the MODIFY NOTRACE,TYPE=ROUTE,FREE=YES command.

See the MODIFY NOTRACE command in *z/OS Communications Server: SNA Operation* and the APPN route selection trace in *z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures* for more information about the APPN route selection trace.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST350I DISPLAY TYPE = TRACES,TYPE=ROUTE
IST2155I ROUTE SELECTION TRACE IS INACTIVE
ST2156I STORAGE ALLOCATED TO ROUTE SELECTION TRACE = 20000K
IST314I END
```

IST2156I STORAGE ALLOCATED TO ROUTE SELECTION TRACE = *storage_amount*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TRACES,TYPE=ROUTE
- MODIFY TRACE,TYPE=ROUTE
- MODIFY NOTRACE,TYPE=ROUTE

See IST2154I or IST2155I for a complete description of the message group.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2157I ALIASRCH = *searchoption*

Explanation: This message is part of a group of messages that VTAM issues in response to the following commands:

- DISPLAY ID=*adjcpname* command; see IST1100I for a complete description of this message group.
- DISPLAY ADJCP command; see IST1101I and IST1197I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST2158I VTAM HAS JOINED THE SYSPLEX GROUP *groupname*

Explanation: This message is issued when VTAM joins a sysplex group. VTAM will communicate with other VTAM nodes in the sysplex that join the same group.

In the message text:

groupname

The name of the sysplex group that VTAM joined.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

Example: None.

IST2159I XCF GROUP: *xcfgroup* CFS GROUP: *cfsgroup*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID=VTAM command. It displays the sysplex groups that this VTAM has joined.

In the message text:

xcfgroup

The name of the sysplex group that VTAM joined for dynamic XCF connectivity.

cfsgroup

The name of the sysplex group that VTAM joined for Coupling Facility Services (CFS) communication.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2160I *command* **FAILED : ULP IS USING TRLE** *nodename*

Explanation: This message is issued by VTAM when a VARY INACT command for a TRLE major node is rejected because the resource specified by the *nodename* value is being used by at least one Upper-layer Protocol (ULP). For some TRLEs, more than one ULP might be using the TRLE.

- For TCP/IP ULPs, ULP is a job name.
- For ANNC ULPs, ULP is a SNA PU.
- For ATM or EE ULPs, ULP is an XCA major node name.

In the message text:

nodename

A TRLE in the TRL major node. If a network-qualified name was entered on the command line, VTAM issues the *nodename* value in the form netid.name.

command

The VARY INACT,ID=*trl_major_node_name* command. See Chapter 16, "Command and RU types in VTAM messages," on page 1123 for a description of *command*.

System action: VTAM rejects the command.

Operator response: Issue the DISPLAY ID=*nodename* command to display the TRLE identified in the message. This display includes message IST1715I to indicate whether there can be one or more ULPs. See IST1715I for more information. The display might also include message IST1717I to identify the ULPs. See IST1717I for more information. After finding and inactivating the ULPs, issue the command again.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2161I **BLOCKED TIME =** *btime*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY CONVID command. The first message in the group is IST1040I. See the explanation of that message for a complete description.

Routing code: 8

Descriptor code: 5

IST2162I **INCONSISTENT UNRCHTIM VALUES DEFINED FOR** *vrn_name*

Explanation: An additional TG was activated to a virtual node that already had active TGs. The UNRCHTIM value associated with the additional TG was different from the UNRCHTIM value associated with the first TG that was activated to the virtual node. When different UNRCHTIM values are defined for TGs to the same virtual node, the UNRCHTIM value of the first TG to be activated is used.

In the message text:

vrn_name

The name of the virtual node.

System action: The UNRCHTIM value configured for the additional TG to the connection network is ignored. The UNRCHTIM value for the connection network continues to be the value configured for the first TG activated to the connection network.

Operator response: Contact the system programmer.

System programmer response: Update all PORT and GROUP statements in the EE XCA major node that are associated with the virtual node specified by the *vrn_name* value so that they all have the same UNRCHTIM value.

User response: Not applicable.

IST2163I

Problem determination: Not applicable.

Routing code: 2

Descriptor code: 5

Example: None.

IST2163I REBUILD FOR STRUCTURE *structure* STOPPED

Explanation: VTAM issues this message when it is stopping the rebuild of the coupling facility structure for any of the following reasons:

- Lost connection to new structure
- Lost connection to original structure
- Structure failure

This message is the first of a group of messages. A description of the message group follows.

```
IST2163I REBUILD FOR STRUCTURE structure STOPPED
[IST2164I FAILURE REASON - LOST CONNECTION TO NEW STRUCTURE]
[IST2165I FAILURE REASON - LOST CONNECTION TO ORIGINAL STRUCTURE]
[IST2166I FAILURE REASON - STRUCTURE FAILURE]
IST314I END
```

IST2163I

- In the message text:

structure

The name of the coupling facility structure.

IST2164I

The rebuild failed because VTAM lost connectivity to the new structure.

IST2165I

The rebuild failed because VTAM lost connectivity to the original structure.

IST2166I

The rebuild failed because VTAM received a Structure Failure Event in the Coupling Facility Event Exit. The coupling facility detected a problem.

System action:

IST2164I

VTAM continues to use the original structure. Processing continues.

IST2165I

As long as one VTAM in the group is connected to the original structure, rebuild continues from the connected VTAM. Processing continues on the new structure for the VTAM that lost connectivity to the original structure.

IST2166I

The structure rebuild stops. VTAM might continue with a local repopulation of the new structure or continue processing on the original structure depending on which structure failed.

Operator response:

IST2164I

Save the system log for problem determination. Use the VARY CFS command to connect VTAM to the new structure when the problem is corrected. See the VARY CFS command in z/OS Communications Server: SNA Operation for a description of the VARY CFS command. If you cannot resolve the problem, contact the system programmer.

IST2165I

Save the system log for problem determination. If you cannot resolve the problem, contact the system programmer.

IST2166I

Save the system log for problem determination. Make sure that all VTAMs in the sysplex have connectivity to the coupling facility. You can try a rebuild again by issuing the SETXCF START, REBUILD command. See the SETXCF command in z/OS MVS System Commands for a description of the SETXCF command.

System programmer response: Review the system log for problem determination.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: None.

IST2164I FAILURE REASON - LOST CONNECTION TO NEW STRUCTURE

Explanation: This message is part of a group of messages issued when a coupling facility structure rebuild fails. The first message in the group is IST2163I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2165I FAILURE REASON - LOST CONNECTION TO ORIGINAL STRUCTURE

Explanation: This message is part of a group of messages issued when a coupling facility structure rebuild fails. The first message in the group is IST2163I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2166I FAILURE REASON - STRUCTURE FAILURE

Explanation: This message is part of a group of messages issued when a coupling facility structure rebuild fails. The first message in the group is IST2163I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2167I DISCONNECT REASON - OPERATOR COMMAND

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2168I DISCONNECT REASON - NORMAL DISCONNECT

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2169I FAILURE REASON - SUBTASK ABEND

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2170I DISCONNECT REASON - VTAM HALTING

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2171I FAILURE REASON - LOST CONNECTIVITY

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2172I FAILURE REASON - STRUCTURE TYPE NOT VALID

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2173I FAILURE REASON - INTERNAL COUPLING FACILITY STRUCTURE ERROR

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2174I FAILURE REASON - CONNECTION NAME NOT VALID

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2175I FAILURE REASON - PROCESS TIMED OUT

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2176I FAILURE REASON - MVS EVENT

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2177I FAILURE REASON - UNSUPPORTED COUPLING FACILITY LEVEL

Explanation: This message is part of a group of messages issued when VTAM disconnects from the coupling facility structure. The first message in the group is IST1380I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2178I RPNCB ADDRESS = *rpncb_addr*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a PU type 2.1 that represents a rapid transport protocol (RTP) route.

This message identifies the node control block that represents the PU being displayed.

In the message text:

rpncb_addr

The hexadecimal address of the node control block.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2179I NO DIAL-OUT LINE FOUND FOR SWITCHED PU *puname*

Explanation: This message is issued in response to an Enterprise Extender dial failure. A switched connection cannot be established because no Enterprise Extender line is available for the PU name specified by the *puname* value.

System action: The process that initiated the dial fails.

Operator response: Issue the D NET,PATHS,ID=*puname* command to examine the EE XCA major node group associated with the local static VIPA address. If any EE lines are defined but currently not active, issue the V NET,ACT,ID=*groupname*,SCOPE=ALL command to activate these lines, then reissue the process that failed. If no lines are available, contact the system programmer.

System programmer response: Update the EE XCA major node to define additional lines on which to dial out in one of the following ways:

- If you defined a new group with additional lines, you can dynamically activate a new group in the EE XCA major node by issuing the V NET,ACT,ID=*eexcamajornode*,UPDATE=ADD command.
- If you defined additional lines to an existing group, activating the new lines might be disruptive to existing EE connections. If this is acceptable, you can perform one of the following actions to activate the newly defined lines:

IST2180I

- To dynamically update an EE XCA major node group, deactivate all existing lines in the modified group. Issue the V NET,INACT,ID=*eegroupname*,F command to deactivate these lines. When the EE group is inactive, you can issue the V NET,ACT,ID=*eegroupname*,UPDATE=ADD command to dynamically update the group.
- Issue a V NET,INACT,ID=*eexcamajornode*,F command to deactivate Enterprise Extender, then issue a V NET,ACT,ID=*eegroupname*,SCOPE=ALL command to activate your modified Enterprise Extender definitions.

When the lines are defined and activated, instruct the operator to reissue the process that generated the dial.

See z/OS Communications Server: SNA Resource Definition Reference for information about defining EE connections and z/OS Communications Server: SNA Network Implementation Guide for general information about Enterprise Extender.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2180I DYNLU = *dynlu_value* FOR *adjacent_node* SET FROM *source*

Explanation: VTAM issues this message when the DYNLU value associated with an adjacent node is set. DYNLU specifies whether cross-domain resources (CDRSCs) using adjacent link stations (ALS) attached to the adjacent node can be defined dynamically. The DYNLU value for an adjacent node will be set from one of the following:

- The DYNLU keyword on the corresponding ADJCP definition statement in a predefined adjacent control point (ADJCP) major node.
- The CDRSC keyword on the corresponding CDRM definition statement in a cross-domain resource manager (CDRM) major node, when the first connection activated to the adjacent node is a virtual route transmission group (VRTG).
- The DYNLU keyword, if specified, on the first PU used to establish a connection from this node to the adjacent node, when the first connection activated to the adjacent node is not a VRTG.
- The DYNLU start option if the DYNLU value is not obtained elsewhere.

The DYNLU value is associated with an adjacent APPN node when the first link to that adjacent node is activated. When the DYNLU value is associated with the adjacent node, that value will be propagated to all APPN links to the adjacent node as they are activated, regardless of the DYNLU value specified for each link. See the DYNLU Combinations table in the description of the adjacent control point major node DYNLU operand in z/OS Communications Server: SNA Resource Definition Reference for information about how to determine the source of the DYNLU value assigned to an adjacent CP and attached resources.

In the message text:

dynlu_value

The DYNLU value associated with the adjacent node, *adjacent_node*, which will be propagated to all resources attached to the adjacent node. The *dynlu_value* value can be one of the following:

YES

Specifies that dynamic definition of CDRSCs is allowed for sessions to or through this adjacent node. You are not required to predefine resources that use adjacent link stations attached to the node indicated by the *adjacent_node* value.

NO

Specifies that dynamic definition of CDRSCs is not allowed for sessions to or through this adjacent node. You must predefine resources that use adjacent link stations attached to the node indicated by the *adjacent_node* value. If you do not predefine the resources, session requests for sessions with the node indicated by the *adjacent_node* value will fail with sense code 08970015 or 08970016.

See sense code 08970015 or sense code 08970016 in z/OS Communications Server: IP and SNA Codes for more information.

adjacent_node

The network-qualified CP name of the adjacent node.

source

The source of the DYNLU value being associated with the *adjacent_node*. Possible values are:

ADJCP

Specifies that the DYNLU value associated with the adjacent node, which will be propagated to all resources that attach to that adjacent node, was learned from a predefined ADJCP definition statement in an ADJCP major node.

CDRM

Specifies that the DYNLU value associated with the adjacent node, which will be propagated to all resources that attach to that adjacent node, was learned from the CDRSC keyword on a predefined CDRM definition statement for that adjacent node in a CDRM major node. The DYNLU value is learned from a CDRM definition statement when the first connection activated to that adjacent node is a VRTG.

puname

The name of the first PU that connects to the adjacent node value, when no predefined ADJCP exists for that adjacent node, or a predefined ADJCP without DYNLU specified exists for the adjacent node. If a DYNLU value is specified on the PU definition for the PU specified by the *puname* value, it is the source of the DYNLU value being associated with the adjacent node. Otherwise, the DYNLU start option value is associated with the adjacent node and set in the PU.

System action: Processing continues.

Operator response: If message IST663I is received following this message indicating that session requests for sessions with *adjacent_node* fail with sense code 08970015 or 08970016, contact the system programmer. Otherwise, none. See sense code 08970015 or sense code 08970016 in z/OS Communications Server: IP and SNA Codes for more information.

Programmer response: If the DYNLU value for the adjacent node is not the setting that you want, do the following to reset the value for this adjacent node:

1. If an ADJCP major node exists with an ADJCP definition for the adjacent node, without DYNLU specified or with DYNLU specified with the incorrect value, first deactivate the ADJCP major node.
2. To ensure predictable results, you should code the desired DYNLU value on the ADJCP definition statement for the adjacent node in an ADJCP major node. See the adjacent control point major node information in z/OS Communications Server: SNA Resource Definition Reference for more information about coding an ADJCP.
3. Deactivate all PU connections, VRTG (CDRM) connections, and the CP-CP sessions to the adjacent node.
4. Enter a DISPLAY NET,RTPS,CPNAME=*adjacent_node* and make sure there are no RTPs active to the adjacent node. If active RTPs to the adjacent node exist, they must be deactivated. See the DISPLAY RTPS command in z/OS Communications Server: SNA Operation for more information about this command.
5. Activate the ADJCP major node.
6. Reactivate the desired PU connections, VRTG (CDRM) connections, and the CP-CP sessions to *adjacent_node*.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 6

IST2181I *struct_type* STRUCTURE NAME IS *struct_name*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY ID=VTAM command. It displays the name of the MNPS or Generic Resource structure that will be accessed by this VTAM node.

In the message text:

IST2182I

struct_type

The type of structure to be accessed. The *struct_type* value is one of the following:

GR Indicates that the structure is for Generic Resources

MNPS Indicates that the structure is for MultiNode Persistent Sessions

struct_name

The name of the structure to be accessed, including the subplex group ID (specified with the XCFGRPID start option).

System action: Processing Continues

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: See the displaying the host (this command works for any host) information in z/OS Communications Server: SNA Operation for an example. This display shows an interchange node

IST2182I UNRCHTIM = *unrchtim*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID command that is displaying either an Extended Communications Adapter (XCA) major node that defines Enterprise Extender or a GROUP in an Enterprise Extender XCA major node. This message is issued when the UNRCHTIM operand was specified on the PORT or GROUP definition statement that defines a VRN in the XCA major node.

In the message text:

unrchtim

Indicates what was specified for the UNRCHTIM operand on the PORT or GROUP definition statement that defines the VRN. On a network node, it is the value in seconds specified for the UNRCHTIM operand. On an end node, it is NO when a zero value was specified for the UNRCHTIM operand or YES when a non-zero value was specified for the UNRCHTIM operand. See UNRCHTIM in z/OS Communications Server: SNA Resource Definition Reference for information about the UNRCHTIM parameter on the PORT and GROUP definition statements.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example: Not applicable.

IST2183I QDIOSYNC = *armstate* - SYNCID = *syncid* - SAVED = *saved_state*

Explanation: VTAM issues this message as part of a message group. See the explanation of message IST1041I for a complete description of the group.

Routing code: 2

Descriptor code: 5

IST2184I QDIOSYNC = *armstate* - SYNCID = *syncid* - SAVED = *saved_state*

Explanation: VTAM issues this message as part of a message subgroup. See “IST1221I” on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST2185I FRINVCTO = *frinvcto* FRINVCT = *frinvct*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is “IST1230I” on page 479. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2186I THIS PATH WILL NOT BE SELECTED FOR UNRCHTIM SECONDS

Explanation: VTAM issues this message as part of a group of messages when a dial failure or a connection INOP occurs on an end node for a connection over an Enterprise Extender Virtual Routing Node (VRN) to a specific partner node. The first message in the group is IST1903I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2187I XCF SEND FAILURE ON TRLE *trlename* MESSAGE TYPE: *type*

Explanation: This message is the first message in a group of messages that VTAM issues when an XCF Message Out (IXCMMSGO) operation fails for a specific XCF connection. This message group is issued to provide the return code and reason code set by the MVS cross-system coupling facility (XCF).

A complete description of the message group follows the example.

```
IST2187I XCF SEND FAILURE ON TRLE trlename MESSAGE TYPE: type
IST1684I RETURN CODE = return_value REASON CODE = errno
IST314I END
```

IST1684I

This message provides the return code and reason code set by the MVS cross-system coupling facility (XCF) in response to an XCF Message Out (IXCMMSGO) invocation.

In the message text:

return_value

The hexadecimal return code returned by the MVS cross-system coupling facility (XCF) in response to the IXCMMSGO invocation.

errno

The hexadecimal reason code returned by the MVS cross-system coupling facility (XCF) in response to the IXCMMSGO invocation.

IST2188I

See z/OS MVS Programming: Sysplex Services Reference for the codes specific to the IXCMSSGO invocation.

IST2187I

In the message text:

trlename

The name of the XCF TRLE. This name displays as ***NA*** if it is unavailable at the time of the failure.

type

The specific XCF message type that VTAM was attempting to send to the partner XCF node when the XCF Message Out operation failed. The message type can be one of the following:

Message type	Activity
DATA	Normal data operation
DISC	Disconnect signal
HELLO	Activation signal
INACT	Inactivation signal
INOP	Inoperative signal
KEEPALIVE	KeepAlive signal
PACING	XCF Pacing signal
XID	XID activation signal

System action: VTAM deactivates the XCF connection because of the inoperative condition. VTAM automatically attempts to re-establish connectivity with the XCF partner.

Operator response: Save the console log for problem determination. Contact the system programmer.

System programmer response: Determine whether the partner node is overloaded or involved in an activity that will prevent the XCF Message Out operation from completing successfully. See z/OS MVS Programming: Sysplex Services Reference for the codes specific to the IXCMSSGO invocation failure. If the XCF Message Out operation failures are unexpected and persistent, take a dump of both nodes at the next occurrence, then contact IBM support.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST2187I XCF SEND FAILURE ON TRLE ISTT0201 MESSAGE TYPE: DATA
IST1684I RETURN CODE = 0000000C REASON CODE = 00000004
IST314I END
```

IST2188I LDLC TIMER OPERANDS ON GROUP *groupname2* IGNORED

Explanation: This is the first message of a message group. VTAM issues this message when the first line of the EE XCA major node GROUP definition statement is activated, and all of the following conditions are true:

- At least one other EE XCA major node GROUP definition statement that specified the same local static VIPA address (IPADDR) or the same domain name (HOSTNAME) keyword was previously activated.
- One or more of the LDLC timer operands (LIVTIME, SRQRETRY, or SRQTIME) associated with this GROUP definition statement differ from those associated with the other GROUP definition statement.

When this error condition occurs, the LDLC timer keyword values for a local static VIPA are set by the first group that is activated. The LDLC timer operands values specified on all other groups with the same local static VIPA address are ignored.

This message is the first message of the following message group:

```
IST2188I LDLC TIMER OPERANDS ON GROUP groupname2 IGNORED
IST2189I LDLC TIMER OPERANDS ALREADY SET BY groupname1
IST1680I type IP ADDRESS ip_address
IST2004I LIVTIME = (init_value,max_value) SRQTIME = srqtime SRQRETRY = srqretry
IST314I END
```

IST1680I

- This message displays the IP address.
- In the message text:

type

The value is always LOCAL for this message group.

ip_address

The IP address associated with the group being activated.

IST2004I

- This message displays the LDLC timer operands that are associated with the local static VIPA address displayed in message IST1680I. These values differ from those specified on the group being activated. See the external communication adapter (XCA) major node information in z/OS Communications Server: SNA Resource Definition Reference for more information about the LIVTIME operand for Enterprise Extender.
- In the message text:

init_value

The initial duration, in seconds, of an Enterprise Extender logical data link control (LDLC) liveness timer interval.

max_value

The maximum duration, in seconds, of an Enterprise Extender LDLC liveness timer interval.

srqtime

The duration, in seconds, of the Enterprise Extender LDLC short request timer interval. The short request timer interval represents the amount of time the LDLC layer waits, without receipt of a response from the connection partner, before sending the LDLC signal again.

srqretry

The number of times the short request timer is tried again before the Enterprise Extender port becomes inoperative.

IST2188I

•

In the message text:

groupname2

The group that has a first line that was activated after the first line of another group with the same IP address. The LDLC timer operands specified on this group are ignored.

IST2189I

- In the message text:

groupname1

The group whose first line that was activated before the other groups with the same IP address. The LDLC timer operands specified on this GROUP definition statement or sifted down from PORT definition statement are set for the group specified by the *groupname2* value in message IST2188I and its associated lines.

System action: Processing continues. The LDLC timer operands were set previously and the new values are ignored.

Operator response: Save the system log for problem determination and contact the system programmer.

IST2189I • IST2191I

System programmer response: To avoid this error, specify the same values on all groups with the same local VIPA address.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST2188I LDLC TIMER OPERANDS ON GROUP GP1A2A IGNORED
IST2189I LDLC TIMER OPERANDS ALREADY SET BY GROUP GP1A2A1
IST1680I LOCAL IP ADDRESS 9.1.1.1
IST2004I LIVTIME = (10,20) SRQTIME = 15 SRQRETRY = 3
IST314I END
```

IST2189I LDLC TIMER OPERANDS ALREADY SET BY GROUP *groupname1*

Explanation: VTAM issues this message as a part of a group of messages when it activates the group and it ignores the LDLC timer operands either coded on the GROUP definition statement or sifted down from the PORT definition statement. The first message in this message group is IST2188I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2190I DEVICEID PARAMETER FOR OSAENTA TRACE COMMAND = *deviceid*

Explanation: VTAM issues this message as part of a message subgroup. The first message in the group is “IST1221I” on page 467. See the explanation of that message for a complete description of the subgroup.

Routing code: 2

Descriptor code: 5

IST2191I HPR PATH SWITCH SUMMARY FROM *date* AT *time*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. This message is the first in a group of messages. The message group displays summary information about path switch events that occurred during the current HPR path switch message reduction interval. The full description of the message group follows the example.

```
IST2191I HPR PATH SWITCH SUMMARY FROM date AT time
IST2192I STARTED = started
IST2193I TGINOP = tginop SRQTIMER = srqtimer PSRETRY = psretry
IST2194I PARTNER = partner MNPS = mnps UNAVAILABLE = unavailable
IST2336I STALLED = stalled
IST2195I NETWORK = network HIGH = high MEDIUM = medium LOW = low
IST924I -----
IST2196I COMPLETED = completed
IST2195I NETWORK = network HIGH = high MEDIUM = medium LOW = low
IST924I -----
IST2197I FAILED = failed
IST2195I NETWORK = network HIGH = high MEDIUM = medium LOW = low
IST924I -----
IST2198I NETID          STARTED          COMPLETED          FAILED
IST2199I CPNAME      NET HI MED LOW  NET HI MED LOW  NET HI MED LOW
IST2205I -----
```

```

IST2200I netid      snn snh snm snl  cnn cnh cnm cnl  fnn fnh fnm fnl
IST2201I  cpname   scn sch scm scl  ccn cch ccm ccl  fcn fch fcm fcl
[IST2205I ----- ]
[IST2200I netid      snn snh snm snl  cnn cnh cnm cnl  fnn fnh fnm fnl ]
[IST2201I cpname   scn sch scm scl  ccn cch ccm ccl  fcn fch fcm fcl ]
IST924I -----
IST2206I events PATH SWITCH EVENTS FOR cps CPS in netids NETIDS
IST314I END

```

IST924I

This message is a line separator between various sections of the HPR path switch summary.

IST2191I

The *date* and *time* values specify when the HPR path switch event interval was started. The information displayed in this message summary is valid from this date and time. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2192I

In the message text:

started

The total number of RTP pipes that entered path switch.

This is the first message of a subgroup of messages. The complete message subgroup follows:

```

IST2192I STARTED   = started
IST2193I  TGINOP   = tginop  SRQTIMER = srqtimer PSRETRY   = psretry
IST2194I  PARTNER  = partner MNPS      = mnps    UNAVAILABLE = unavailable
IST2336I  STALLED  = stalled
IST2195I  NETWORK  = network HIGH = high MEDIUM = medium LOW = low

```

Messages IST2193I, IST2194I and IST2336I identify the various path switch reasons, along with the number of RTP pipes that entered path switch for each of these reasons. Message IST2195I lists the number of RTP pipes that entered path switch by priority.

Results:

- The *started* value is the sum of the path switch reason counts that are listed in messages IST2193I, IST2194I and IST2336I.
- The *started* value is the sum of the RTP pipe priority counts listed in the message IST2195I in this message subgroup.
- Usually, the HPR path switch started count is the sum of the associated HPR path switch completed and failed counts. The associated HPR path switch completed or failed counts might be listed in this same display, or they might be associated with subsequent HPR path switch summary displays because of different HPRPST time values assigned to each priority. If the partner path switch started reason listed in message IST2194I is a nonzero value, it is possible that the associated HPR path switch completed or failed counts might not add up to the path switch started count. When both RTP partners initiate a path switch at approximately the same time, the started count might display higher by the value listed in the partner field of message IST2194I. This can cause two path switch started events in which only one completes successfully or unsuccessfully.

IST2193I

In the message text:

tginop

The number of RTP pipes that entered path switch because an inoperative condition occurred on the physical TG. See IST1819I for a complete description of this path switch reason.

srqtimer

The number of RTP pipes that entered path switch because the short request retry limit was exhausted. See IST1818I for a complete description of this path switch reason.

IST2191I

psretry

The number of RTP pipes that entered path switch because of the PSRETRY function. See IST1821I for a complete description of this path switch reason.

IST2194I

In the message text:

partner

The number of RTP pipes that entered path switch because the partner initiated path switch. See IST1937I for a complete description of this path switch reason.

mnps

The number of RTP pipes that entered path switch because of the recovery of an MNPS application. See IST2239I for a complete description of this path switch reason."

unavailable

The number of RTP pipes that entered path switch because either the underlying physical connection or the RTP pipe itself is not suitable for RTP traffic. See IST1817I for a complete description of this path switch reason.

IST2195I

This message is included in various message subgroups headed by message IST2192I, IST2196I, or IST2197I. See the description of those messages for a complete description.

In the message text:

network

The number of network priority RTP pipes that started, successfully completed, or failed to path switch.

high

The number of high priority RTP pipes that started, successfully completed, or failed to path switch.

medium

The number of medium priority RTP pipes that started, successfully completed, or failed to path switch.

low

The number of low priority RTP pipes that started, successfully completed, or failed to path switch.

IST2196I

In the message text:

completed

The total number of RTP pipes that successfully completed a path switch.

This is the first message of a subgroup of messages. The complete message subgroup follows:

IST2196I COMPLETED = completed

IST2195I NETWORK = network HIGH = high MEDIUM = medium LOW = low

Message IST2195I lists the number of RTP pipes by priority that successfully completed a path switch.

Results:

- The *completed* value is the sum of the RTP pipe priority counts listed in the message IST2195I in this message subgroup.
- Usually, the HPR path switch started count is the sum of the associated HPR path switch completed and failed counts. The associated HPR path switch completed or failed counts might be listed in this same display, or they might be associated with subsequent HPR path switch summary displays because of different HPRPST time values assigned to each priority. If the partner path switch started reason listed in message IST2194I is a nonzero value, it is possible that the associated HPR path switch completed or failed counts might not add up to the path switch started count. When both RTP partners initiate a path switch at approximately the same time, the started count might display higher by the value listed in the partner field of message IST2194I. This might cause two path switch started events in which only one completes successfully or unsuccessfully.

IST2197I

In the message text:

failed

The total number of RTP pipes that failed to path switch.

This is the first message of a subgroup of messages. The complete message subgroup follows:

```
IST2197I FAILED      = failed
IST2195I NETWORK = network HIGH = high MEDIUM = medium LOW = low
```

Message IST2195I lists the number of RTP pipes by priority that failed to path switch.

Results:

- The *failed* value is the sum of the RTP pipe priority counts listed in message IST2195I in this message subgroup.
- Usually, the HPR path switch started count is the sum of the associated HPR path switch completed and failed counts. The associated HPR path switch completed or failed counts might be listed in this same display, or they might be associated with subsequent HPR path switch summary displays because of different HPRPST time values assigned to each priority. If the partner path switch started reason listed in message IST2194I is a nonzero value, it is possible that the associated HPR path switch completed or failed counts might not add up to the path switch started count. When both RTP partners initiate a path switch at approximately the same time, the started count might display higher by the value listed in the partner field of message IST2194I. This might cause two path switch started events in which only one completes successfully or unsuccessfully.

IST2198I

This message is the first of two header messages for the information displayed in messages IST2200I and IST2201I.

IST2199I

This message is the second of two header messages for the information displayed in messages IST2200I and IST2201I.

IST2200I

This is the first message of a subgroup of messages. One IST2200I message is issued for each partner NETID affected by the reported HPR path switch events. This message subgroup provides HPR path switch information unique to the reported NETID. This message subgroup can be issued for up to 10 partner NETIDs.

The complete message subgroup follows the example.

```
IST2200I netid   snn snh snm snl   cnn cnh cnm cnl   fnn fnh fnm fnl
[IST2201I cpname scn sch scm scl   ccn cch ccm ccl   fcn fch fcm fcl]
```

In the message text:

netid

The name of the partner NETID.

Results:

- Usually, the NETID-specific HPR path switch counts are the sum of CP-specific counts reported in the associated IST2201I messages. However, when the HPR path switch events are associated with more than 50 partner CPs, the NETID-specific counts might report higher values than the sum of the CP-specific counts.
- If any of the reported counts display as 999, this indicates that at least 999 RTP pipes started, successfully completed, or failed to path switch.

The following describes the contents of the STARTED, COMPLETED and FAILED columns under message IST2196I:

- **STARTED:**

The *snn* value is the total number of network-priority RTP pipes that entered path switch.

The *snh* value is the total number of high-priority RTP pipes that entered path switch.

IST2191I

The *snm* value is the total number of medium-priority RTP pipes that entered path switch.

The *snl* value is the total number of low-priority RTP pipes that entered path switch.

- **COMPLETED:**

The *cnm* value is the total number of network-priority RTP pipes that successfully completed path switch.

The *cnh* value is the total number of high-priority RTP pipes that successfully completed path switch.

The *cmm* value is the total number of medium-priority RTP pipes that successfully completed path switch.

The *cnl* value is the total number of low-priority RTP pipes that successfully completed path switch.

- **FAILED:**

The *fnm* value is the total number of network-priority RTP pipes that failed to path switch.

The *fnh* value is the total number of high-priority RTP pipes that failed to path switch.

The *fnm* value is the total number of medium-priority RTP pipes that failed to path switch.

The *fnl* value is the total number of low-priority RTP pipes that failed to path switch.

IST2201I

This message is included in a message group headed by message IST2200I. One IST2201I message is issued for each partner CP affected by the reported HPR path switch events. The IST2200I message preceding this message identifies the NETID of this partner CP. This message provides HPR path switch information unique to this partner CP. This message subgroup can be issued for up to 50 partner CPs in 10 NETIDs.

In the message text:

cpname

The name of the partner CP.

Results:

- If any of the reported counts display as 999, it indicates that at least 999 RTP pipes started, successfully completed, or failed to path switch.

The following describes the contents of the STARTED, COMPLETED and FAILED columns under message IST2196I:

- **STARTED:**

The *scn* value is the total number of network-priority RTP pipes that entered path switch.

The *sch* value is the total number of high-priority RTP pipes that entered path switch.

The *scm* value is the total number of medium-priority RTP pipes that entered path switch.

The *scl* value is the total number of low-priority RTP pipes that entered path switch.

- **COMPLETED:**

The *ccn* value is the total number of network-priority RTP pipes that successfully completed path switch.

The *cch* value is the total number of high-priority RTP pipes that successfully completed path switch.

The *ccm* value is the total number of medium-priority RTP pipes that successfully completed path switch.

The *ccl* value is the total number of low-priority RTP pipes that successfully completed path switch.

- **FAILED:**

The *fcn* value is the total number of network-priority RTP pipes that failed to path switch.

The *fch* value is the total number of high-priority RTP pipes that failed to path switch.

The *fcn* value is the total number of medium-priority RTP pipes that failed to path switch.

The *fcl* value is the total number of low-priority RTP pipes that failed to path switch.

IST2205I

This message is a line separator between various sections of the HPR path switch summary.

IST2206I

In the message text:

events

The sum of the values displayed as started, completed, and failed in messages IST2192I, IST2196I and IST2197I, respectively.

cps

The total number of RTP partner CPs affected by the reported HPR path switch events. If the *cps* value displays > 50, more than 50 partner CPs were associated with the reported HPR path switch events.

netids

The total number of partner NETIDs affected by the reported HPR path switch events. If the *netids* value displays > 10, more than 10 partner NETIDs were associated with the reported HPR path switch events.

IST2336I

In the message text:

stalled

The number of RTP pipes that entered path switch because VTAM entered the transmit (XMIT) stalled state. An XMIT stall condition occurs after VTAM retransmits an NLP for the sixth time and at least 10 seconds has elapsed since the NLP was first retransmitted.

System action: Processing continues.

Operator response: Save the system log for problem determination and contact the system programmer.

System programmer response: Review the system log associated with the HPR path switch events. The IST2191I message group is being issued as part of the HPR path switch message reduction function. Obtain the date and time from message IST2191I to identify the beginning of the current HPR path switch message reduction interval. Review the system log generated near this date and time to locate other relevant information that might identify the reason for the HPR path switch activity (for example, INOPs or ABENDs).

User response: Not applicable.

Problem determination: See the System Programmer Response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```

IST2191I HPR PATH SWITCH SUMMARY FROM 03/21/06 AT 09:45:14
IST924I -----
IST2192I STARTED = 20
IST2193I   TGINOP = 20 SRQTIMER = 0 PSRETRY = 0
IST2194I   PARTNER = 0 MNPS = 0 UNAVAILABLE = 0
IST2336I   STALLED = 0
IST2195I   NETWORK = 5 HIGH = 5 MEDIUM = 5 LOW = 5
IST924I -----
IST2196I COMPLETED = 20
IST2195I   NETWORK = 5 HIGH = 5 MEDIUM = 5 LOW = 5
IST924I -----
IST2197I FAILED = 0
IST2195I   NETWORK = 0 HIGH = 0 MEDIUM = 0 LOW = 0
IST924I -----
IST2198I NETID STARTED COMPLETED FAILED
IST2199I   CPNAME NET HI MED LOW NET HI MED LOW NET HI MED LOW
IST2205I -----
IST2200I NETA 5 5 5 5 5 5 5 5 0 0 0 0
IST2201I   SSCP7A 1 1 1 1 1 1 1 1 0 0 0 0
IST2201I   SSCP3A 1 1 1 1 1 1 1 1 0 0 0 0
IST2201I   SSCP7B 1 1 1 1 1 1 1 1 0 0 0 0
IST2201I   SSCP2AB 1 1 1 1 1 1 1 1 0 0 0 0

```

IST2192I • IST2197I

```
IST2201I  SSCP99 1 1 1 1 1 1 1 1 0 0 0 0
IST924I  -----
IST2206I 40 PATH SWITCH EVENTS FOR 5 CPS IN 1 NETIDS
IST314I  END
```

IST2192I **STARTED** = *started*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2193I **TGINOP** = *tginop* **SRQTIMER** = *srqtimer* **PSRETRY** = *psretry*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2194I **PARTNER** = *partner* **MNPS** = *mnps* **UNAVAILABLE** = *unavailable*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2195I **NETWORK** = *network* **HIGH** = *high* **MEDIUM** = *medium* **LOW** = *low*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2196I **COMPLETED** = *completed*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2197I **FAILED** = *failed*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2198I NETID STARTED COMPLETED FAILED

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2199I CPNAME NET HI MED LOW NET HI MED LOW NET HI MED LOW

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2200I *netid snn snh snm snl cnn cnh cnm cnl fun fnh fum ful*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2201I *cpname scn sch scm scl ccn cch ccm ccl fcn fch fcm fcl*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2202I GREXIT = *gredit* WLM = *wlm* LOCLU = *loclu*

Explanation: This message is part of a subgroup of messages that is issued in the following situations:

- In response to a D NET,ID=*name*,IDTYPE=GENERIC command. The first message in this message group is IST1359I. See the explanation of that message for a complete description.
- In response to a D NET,GRPREFS command. See the explanation of IST2210I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2203I CHARACTER SET *Char_Set* - CODE PAGE *Code_Page*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY TSOUSER command for an application, CDRSC, or LU resource. This message contains the character set and code page values in use for this TSO user. The value *NA* indicates that character set and code page values were not available when the session was initiated or CODEPAGE=NO is specified in TSOKEY00. A character set and code page combination is commonly referred to as a coded graphic character set global identifier (CGCSGID). The CGCSGID values are documented in the 3174 *Character Set Reference GA27-3831*.

In the message text:

Char_Set

The hexadecimal value of the Character Set.

IST2204I • IST2206I

Code_Page

The hexadecimal value of the Code Page.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST097I DISPLAY ACCEPTED
IST075I NAME = USER1, TYPE = TSO USERID
IST486I STATUS= ACTIV, DESIRED STATE= N/A
IST576I TSO TRACE = OFF
IST262I ACBNAME = TS00001, STATUS = ACT/S
IST262I LUNAME = TCPM1011, STATUS = ACT/S----Y
IST1727I DNS NAME: ASDF127.TCP.YOURCITY.YOURNAME.COM
IST1669I IPADDR..PORT 2001:0DB8::1234..1027
IST2203I CHARACTER SET 0065 - CODE PAGE 0025
IST314I END
```

IST2204I **LOCAPPL = *locappl* PASSOLU = *passolu***

Explanation: This message is part of a subgroup of messages that is issued in the following situations:

- In response to a D NET,ID=*name*,IDTYPE=GENERIC command. The first message in this message group is IST1359I. See the explanation of that message for a complete description.
- In response to a D NET,GRPREFS command. See the explanation of IST2210I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2205I *dashed_line*

Explanation: This message is a line separator and is part of several different message groups. It is used to improve readability or to separate types of information. See the explanation of the first message in the group for an example of how this message is used in each group.

Routing code: 2

Descriptor code: 5

IST2206I *events* **PATH SWITCH EVENTS FOR *cps* CPS in *netids* NETIDS**

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2207I *table* TABLE FOR *netid*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ADJCLUST command. A complete description of the message group follows the example.

```

IST350I  DISPLAY TYPE = ADJACENT CLUSTER TABLE
IST2207I  table TABLE FOR netid
[IST2208I  sc_option = sc_value FROM START OPTION]
[IST2209I  sc_option = sc_value FROM ADJCLUST TABLE]
IST1326I  CP NAME          TYPE      STATE  STATUS  SNVC
IST1327I  cpname           type     state  status  snvc
:
:
IST314I  END

```

The IST2207I subgroup is repeated for each target network.

IST350I

This message identifies the type of information shown in the display. The DISPLAY TYPE value is always ADJACENT CLUSTER TABLE for this message group.

IST2207I

- In the message text:

table

The type of table being displayed. The *table* values depend on the extent to which you have defined entries for the adjacent cluster table. Possible values are:

DEFINED

The user defined entries for the specified NETID in the adjacent cluster table.

DEFAULT

The user did not define any entries for the displayed NETID, but a DEFAULT_NETID entry was defined.

DYNAMIC

The user did not define any entries for the displayed NETID, no default table was coded, but dynamics are allowed (BNDYN=FULL or BNDYN=LIMITED).

netid

The network identifier of the network that the search is targeting. The default is DEFAULT_NETID. VTAM uses DEFAULT_NETID if the NETID operand is omitted from the network definition statement. See the adjacent cluster routing definitions information in z/OS Communications Server: SNA Resource Definition Reference for more information about the network definition statement.

IST2208I or IST2209I

- In the message text:

sc_option

A search control option associated with the search being displayed. Possible values are: BNORD and BNDYN.

When VTAM is enabled as a border node, both search control options are displayed. Either message IST2208I or IST2209I is issued for each search control option displayed.

sc_value

The value of the search control option associated with the table being displayed. When the option is BNORD, possible values are: PRIORITY and DEFINED. When the option is BNDYN, possible values are: NONE, LIMITED and FULL. See the z/OS Communications Server: SNA Resource Definition Reference for a description of the values.

IST1326I and IST1327I

- These messages provide status information about the border nodes that can be used to reach the target network.
- In the message text:

cpname

The network-qualified name of the border node in the form *netid.name*.

type

The type of CP being displayed. Possible values are: DEFINED or DYNAMIC.

- If the *table* value in message IST2207I is DEFINED or DEFAULT, then the *type* value is either DEFINED or DYNAMIC.
- If the *table* value in message IST2207I is DYNAMIC, then the *type* value can be only DYNAMIC.

state

The current state of the border node. Possible values are: ACTIVE, NOT ACTIVE, or OMITTED.

status

The result of the most recent search for this particular border node. Possible values are: FOUND, NOT FOUND, or NOT SEARCHED.

snvc

The APPN topology subnetwork visit count. The *snvc* value indicates the maximum number of subnetworks that can be crossed while attempting to locate the target resource. An APPN topology subnetwork is a collection of nodes that share the same topology database.

- Message IST1327I is repeated for each border node that exists in the adjacent cluster table.

System action: Processing continues.

Operator response: No action needed.

System programmer response: No action needed.

User response: No action needed.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

d net,adjclust,netid=neta

```
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = ADJACENT CLUSTER TABLE
IST2207I DEFINED TABLE FOR NETA
IST2208I BNDYN = FULL FROM START OPTION
IST2209I BNORD = PRIORITY FROM ADJCLUST TABLE
IST1326I CP NAME      TYPE      STATE      STATUS      SNVC
IST1327I NETA.BN3     DEFINED  ACTIVE     FOUND       003
IST1327I NETA.BN2     DEFINED  NOT ACTIVE NOT SEARCHED 003
IST1327I NETA.BN1     DYNAMIC  ACTIVE     NOT SEARCHED N/A
IST314I END
```

IST2208I *sc_option = sc_value* FROM START OPTION

Explanation: This message is displayed as part of several message groups. These message groups begin with IST2207I or IST663I. See the explanations of these messages for a complete description.

Routing code: 2

Descriptor code: 5

IST2209I *sc_option = sc_value* FROM ADJCLUST TABLE

Explanation: This message is displayed as part of several message groups. These message groups begin with IST2207I or IST663I. See the explanations of these messages for a complete description.

Routing code: 2

Descriptor code: 5

IST2210I GR PREFERENCE TABLE ENTRY = *entryname*

Explanation: This message is part of a group of messages that VTAM issues in the following situations:

- In response to a D NET, ID=*name*, IDTYPE=GENERIC command. The first message in this message group is IST1359I. See the explanation of that message for a complete description.
- In response to a D NET, GRPREFS command.

A complete description of the message group follows.

D NET, GRPREFS

```

IST075I NAME = GRPREF03, TYPE = GR PREFERENCES
IST924I -----
IST2210I GR PREFERENCE TABLE ENTRY = **DEFAULT**
IST2202I GREXIT = NO      WLM      = YES      LOCLU    = YES
IST2204I LOCAPPL = YES    PASSOLU = NO
IST924I -----
IST2210I GR PREFERENCE TABLE ENTRY = APPLGR
IST2202I GREXIT = NO      WLM      = YES      LOCLU    = NO
IST2204I LOCAPPL = NO    PASSOLU = YES
IST314I END

```

IST075I

- This message identifies the type of information in the display. The type is always GR PREFERENCES for this message group.
- In the message text:

tablename

The name of the Generic Resources Preferences Table that is displayed. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for more information.

IST350I

This message identifies the type of information in the display and is always GR PREFERENCES TABLE for this message group.

IST924I

This message is a line separator between subgroups.

IST2202I

- This message lists the generic resource preferences for GREXIT, WLM, and LOCLU.
- In the message text:

grexit

Indicates whether the Generic Resource exit is called during generic resource resolution. Valid values are:

YES

The Generic Resource exit is called during generic resource resolution.

NO

The Generic Resource exit is not called during generic resource resolution.

wlm

Indicates whether the MVS Workload Manager is called during generic resource resolution. Valid values are:

YES

The MVS Workload Manager is called during generic resource resolution.

NO

The MVS Workload Manager is not called during generic resource resolution.

loclu

Indicates whether generic resource resolution for sessions initiated from a local LU that is part of a local SNA or local non-SNA major node on this host prefers generic resource instances on this host. Valid values are:

IST2210I

YES

Generic resource resolution for sessions initiated from a local LU that is part of a local SNA or local non-SNA major node on this host prefers generic resource instances on this host.

NO Generic resource resolution for sessions initiated from a local LU that is part of a local SNA or local non-SNA major node on this host does not prefer generic resource instances on this host.

IST2204I

- This message lists the generic resource preferences for LOCAPPL and PASSOLU.
- In the message text:

locappl

Indicates whether generic resource resolution for sessions initiated from an application on this host prefers generic resource instances on this host. Valid values are:

YES

Generic resource resolution for sessions initiated from an application on this host prefers generic resource instances on this host.

NO Generic resource resolution for sessions initiated from an application on this host does not prefer generic resource instances on this host.

passolu

Indicates whether generic resource resolution for third-party-initiated (CLSDST PASS) sessions prefers generic resource instances located on the OLU host. Valid values are:

YES

Generic resource resolution for third-party-initiated (CLSDST PASS) sessions prefers generic resource instances located on the OLU host.

NO Generic resource resolution for third-party-initiated (CLSDST PASS) sessions does not prefer generic resource instances located on the OLU host.

IST2210I

- This message is the first line of a subgroup. This message is a header message for messages IST2202I and IST2204I. One subgroup is issued for either the VTAM or nameless default generic resource preferences and each named entry in the Generic Resource Preferences Table.
- In the message text:

entryname

The name of the Generic Resource Preferences Table entry that defines the subsequent GR preferences. Valid values are:

****DEFAULT****

The VTAM default generic resource preferences.

****NAMELESS****

The defined nameless Generic Resource Preferences Table entry that identifies the default generic resource preferences.

entryname

The defined name of the Generic Resource Preferences Table entry. This name also corresponds to the generic resource to which the generic resource preferences apply.

System action: Processing continues.

Operator response: See the z/OS Communications Server: SNA Operation for more information about the Generic Resource Preference Table.

System programmer response: None.

User response: None.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

D NET,GRPREFS

```

IST075I NAME = GRPREF03, TYPE = GR PREFERENCES
IST924I -----
IST2210I GR PREFERENCE TABLE ENTRY = **DEFAULT**
IST2202I GREXIT   = NO      WLM      = YES      LOCLU   = YES
IST2204I LOCAPPL  = YES     PASSOLU  = NO
IST924I -----
IST2210I GR PREFERENCE TABLE ENTRY = APPLGR
IST2202I GREXIT   = NO      WLM      = YES      LOCLU   = NO
IST2204I LOCAPPL  = NO     PASSOLU  = YES
IST314I END

```

IST2211I ACK QUEUE MAX

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2212I *ackqmax*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2213I LAST BACKPRESSURE APPLIED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2214I BACKPRESSURE REASON: PATHSWITCH

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2215I BACKPRESSURE REASON: SEND QUEUE MAXIMUM REACHED

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2216I BACKPRESSURE REASON: STORAGE FAILURE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2217I BACKPRESSURE REASON: STALLED PIPE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2218I BACKPRESSURE REASON: WAITING-FOR-ACK QUEUE MAXIMUM REACHED

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2219I *resource* ACTIVATION WAITING FOR MINIMUM NUMBER OF DEVICES

Explanation: This message is issued during the activation of a Multipath Channel (MPC) group because VTAM could not allocate at least one read device and one write device.

In the message text:

resource

The name of the TRLE or MPC subarea line that defines the MPC group.

VTAM also issues this message as part of a message group in response to the following:

- A DISPLAY ID command for an MPC line or a transport resource list entry (TRLE).
- A DISPLAY TRL command for an active TRL entry.

See "IST1221I" on page 467 for a description of those displays.

System action: Activation of the MPC group is suspended until either the minimum required number of devices comes online or the MPC group is deactivated. In the former case, message IST2220I is issued to signal that activation of the MPC group has resumed.

Operator response: Issue the D NET,ID=*resource*,E command. If message IST2219I does not appear in the display output, no further response is needed. Otherwise, review all of the IST1221I messages that contained in the display that have the *chtyp* value WRITE or READ. For each *chtyp* value that lacks a subchannel with the *system_state* value ONLINE, make at least one of those subchannels in the offline system state available. See "IST1221I" on page 467 for more information about the *chtyp* value.

Issue the MVS VARY ONLINE command to make a subchannel available. If the result indicates that the channel is already online, then ensure that a valid path to the connecting host exists.

When the minimum required number of subchannels is available, VTAM automatically allocates the devices and resumes activation of the MPC group.

System programmer response: If you do not want automatic recovery of MPC group activations, modify the

MPCACT start option to a value of NOWAIT to enable you to try the activation of MPC groups again manually; this message will no longer appear.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
V NET,ACT,ID=MPCLN1,E
IST097I VARY ACCEPTED
IST2219I MPCLN1 ACTIVATION WAITING FOR MINIMUM NUMBER OF DEVICES
:
:
D NET,ID=MPCLN1,E
IST097I DISPLAY ACCEPTED
IST075I NAME = MPCLN1, TYPE = LINE
:
:
IST2219I MPCLN1 ACTIVATION WAITING FOR MINIMUM NUMBER OF DEVICES
:
:
IST314I END
```

IST2220I *resource* ACTIVATION RESUMING - ONLINE DEVICES DETECTED

Explanation: This message is issued during activation of a Multipath Channel (MPC) that had previously been suspended because VTAM could not allocate at least one read device and one write device. When the minimum required number of devices comes online, this message is issued to signal that activation of the MPC group has automatically resumed.

In the message text:

resource

The name of the TRLE or MPC subarea line that defines the MPC group.

System action: Activation of the MPC group resumes.

Operator response: Not applicable.

System programmer response: If you do not want automatic recovery of MPC group activations, modify the MPCACT start option to a value of NOWAIT to enable you to try activation of MPC groups again manually; this message will no longer appear.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
V NET,ACT,ID=MPCLN1,E
IST097I VARY ACCEPTED
IST2219I MPCLN1 ACTIVATION WAITING FOR MINIMUM NUMBER OF DEVICES
:
:
IST2220I MPCLN1 ACTIVATION RESUMING - ONLINE DEVICES DETECTED
```

IST2221I **EXPLICITBINDPORTRANGE - START:** *begin_port* **END:** *end_port*

Explanation: This message is part of a group of messages VTAM issues in response to a DISPLAY STATS,TYPE=CFS command. The first message in the group is IST1370I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2222I **QDIOSYNC CAPTURE INITIATED FOR TRLE** *trlename*

Explanation: VTAM issues this message immediately after a capture signal has been sent to an armed OSA-Express2 or later adapter. The OSA-Express2 or later adapter is expected to capture its diagnostic data by creating a console log on the service element (SE).

In the message text:

trlename

The name of the OSA-Express2 or later adapter, as defined on the TRLE definition statement in the TRL major node.

System action: Processing continues.

Operator response: Contact system programmer.

System programmer response: Use the timestamp of the message to correlate with the OSA-Express2 or later documentation (console logs) on the SE. Collect the diagnostic data from the SE and contact IBM OSA system support services.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

IST2222I QDIOSYNC CAPTURE INITIATED FOR TRLE NSQDI011

IST2223I **QDIOSYNC STATE ARMED FOR TRLE** *trlename* **AT TIME OF INOP**

Explanation: VTAM issues this message when an OSA-Express2 or later adapter enters an inoperative condition and that adapter is armed for QDIOSYNC. IST2223I always follows IST2222I. The OSA-Express2 or later adapter is expected to capture its diagnostic data by creating a console log on the service element (SE).

In the message text:

trlename

The name of the OSA-Express2 or later adapter, as defined on the TRLE definition statement in the TRL major node.

System action: Processing continues.

Operator response: Contact system programmer.

System programmer response: Use the timestamp of the VTAM INOP messages to correlate with the OSA-Express2 or later documentation (console logs) on the SE. Collect the diagnostic data from the SE and contact IBM OSA system support services.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST2223I QDIOSYNC STATE ARMED FOR TRLE NSQDI011 AT TIME OF INOP
```

IST2224I ENTERPRISE EXTENDER ROUTING POLICY INFORMATION

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2225I PORT ROUTE TABLE ROUTING RULE

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2226I *port route_table routing_rule*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2227I CONNECTIVITY NOT TESTED - ROUTE NOT APPLICABLE PORT: *port*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EEDIAG,TEST=YES command. The first message in the group is IST2130I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2229I REFIFO TIMER = *refifo* MILLISECONDS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2230I MAXIMUM NUMBER OF NLPS ON OUT-OF-SEQUENCE QUEUE = *maxoutofsequence*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2231I CURRENT HPR CLOCK RATE = *current*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Descriptor code: 2

IST2232I HPR CLOCK RATE LAST SET TO HIGH ON *date AT time*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2233I HPR CLOCK RATE LAST EXITED HIGH ON *date AT time*

Explanation: VTAM issues this message as part of a group in response to a DISPLAY EE command. The first message in the group is IST2000I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2234I MESSAGE TRIGGER: TCPNAME = *tcpjobname*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2235I REMOTE DUMP FOR XCF LINK INOP: *remote_dump*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2236I LAST NLP RETRANSMITTED ON *date AT time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route when HPRDIAG=YES is specified. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2237I *puname* CURRENTLY REPRESENTS A LIMITED RESOURCE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 representing a Rapid Transport Protocol (RTP) route. See IST1476I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2238I **DISCNT** = *discntval* - **FINAL USE** = *finalval*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a switched PU type 2 or 2.1.

In the message text:

discntval

The DISCNT value coded on the PU statement for the PU being displayed. This operand specifies when VTAM should terminate its SSCP-LU and SSCP-PU sessions and whether to indicate final-use status in the DACTPU request unit when it deactivates a PU.

finalval

The associated final-use setting:

- If F is coded as part of the DISCNT operand, the *finalval* value is FINAL.
- If NF is coded as part of the DISCNT operand, the *finalval* value is NOT FINAL.
- If the final-use setting is not applicable, the *finalval* value is *NA*.

The associated delay time setting, if applicable, is displayed in message IST1392I. See the description of that message for more information.

See the DISCNT parameter information in z/OS Communications Server: SNA Resource Definition Reference for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

IST2238I DISCNT = DELAY - FINAL USE = NOT FINAL

IST2239I **PATH SWITCH REASON: MNPS ENDPOINT RECOVERY**

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST2240I **SENSE TRIGGER: TCPNAME** = *tcpjobname*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See IST1871I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IST2241I TIME ISL

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn command. See IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2242I SIGMCNTO = *sigmcnto* SIGMCNT = *sigmcnt*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is "IST1230I" on page 479. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2243I CP-CP SESSION WITH *cp_name* ENDING DUE TO MAXLOCAT

Explanation: This unsolicited message is issued when VTAM initiates the inactivation of the CP-CP session with an adjacent control point (CP) because the number of queued requests plus the number of queued replies to the adjacent CP exceeds 200% of the MAXLOCAT value after a minimum time interval elapsed.

Before VTAM issues this message, it issues message IST1601I to indicate that it suspended routing to the adjacent node because of severe network congestion and that VTAM ceased sending APPN search requests to the adjacent CP. Although VTAM suspends sending APPN search requests to an adjacent CP, it continues to queue APPN search replies to the adjacent CP.

For information about the minimum and maximum congestion thresholds or the minimum time interval, see the MAXLOCAT start option information in z/OS Communications Server: SNA Resource Definition Reference.

In the message text:

cp_name

The name of the adjacent CP.

System action: VTAM deactivates the CP-CP session to the adjacent CP with sense code 80030004 and tries the CP-CP session again.

Operator response: Notify the system programmer about the adjacent CP and monitor the adjacent CP to verify that the CP-CP session is recovered. The following sequence of messages related to the adjacent CP indicates that the CP-CP session has recovered:

```
IST2243I CP-CP SESSION WITH cp_name ENDING DUE TO MAXLOCAT
```

```
.....
```

```
IST1097I CP-CP SESSION WITH cp_name TERMINATED
IST1280I SESSION TYPE = CONWINNER - SENSE = 80030004
IST314I END
IST1097I CP-CP SESSION WITH cp_name TERMINATED
IST1280I SESSION TYPE = CONLOSER - SENSE = 80030004
IST314I END
```

```
...
```

```
IST1096I CP-CP SESSIONS WITH cp_name ACTIVATED
```

System programmer response: Determine whether there are network connectivity problems between this node and the adjacent CP and, if possible, correct the problems. If connectivity is not a problem, determine whether the maximum threshold value is appropriate for the network. If the value needs to be adjusted, change the value of the MAXLOCAT start option.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

Automation: Not applicable.

Example:

```
IST2243I CP-CP SESSION WITH NETA.SSCP2A ENDING DUE TO MAXLOCAT
```

IST2244I HPRDIAG DISPLAY ISSUED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command. This message is issued when both HPRDIAG=YES is specified and when the value of the ID parameter is a PU type 2.1 that represents a Rapid Transport Protocol (RTP) pipe.

The *date* and *time* values specify when this DISPLAY ID command was issued. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2244I HPRDIAG DISPLAY ISSUED ON 03/30/07 AT 10:30:19
```

IST2245I XMIT STALL DETECTED FOR RTP *puname* TO *cpname*

Explanation: This unsolicited message is issued when HPR detects a transmission stall for an RTP pipe. A transmission stall occurs when the RTP partner continuously requests transmission of the same network layer packet (NLP). VTAM honors the request each time by transmitting the NLP, but the partner does not receive it. This message is issued after VTAM retransmits the NLP for the sixth time and at least 4-10 seconds has elapsed since the NLP was first retransmitted.

In the message text:

puname

The name of the HPR PU.

cpname

The name of the CP at the other end of the pipe.

System action: When a specific NLP is retransmitted 6 times without being acknowledged by the RTP partner, and at least 10 seconds has elapsed since the NLP was first retransmitted, VTAM notifies the operator with this message. The system actions vary depending on whether the RTP pipe traverses an Enterprise Extender (EE) link.

- If the RTP pipe traverses EE, VTAM provides RTP transmission stall recovery support. If the RTP connection is multiple hops with at least one refifo connection, an HPR path switch is started. If the RTP connection is one hop over EE or an EE connection network, the RTP endpoint immediately lowers its NLP size to the minimum 768 bytes allowed by the HPR architecture. All outbound data is then re-segmented to this value to resolve the

IST2245I

transmission stall. If the stall persists, VTAM issues message IST2246I every 30 seconds until the stall is alleviated. If a path switch was initiated to alleviate the stall and the stall persists, VTAM lowers the NLP size to 768 bytes when message IST2246I is issued. If the stall is alleviated, VTAM issues message IST2247I and normal data flow resumes. After 20 minutes of operating with the reduced NLP size, the original NLP size of the RTP pipe is restored to increase RTP throughput. If the network still does not allow transport of the larger packets, the stall detection and alleviation process repeats.

- If the RTP pipe does not traverse EE, VTAM does not provide RTP transmission stall recovery support. In these configurations, the maximum NLP size is calculated for the path when the RTP pipe is established. The underlying NLP size for the RTP path should not change during the life of the RTP pipe, unless a path switch occurs. VTAM alerts the operator of a transmission stall and continues to honor the retransmission requests sent by the RTP partner. If the stall persists, VTAM issues message IST2246I every 30 seconds until the stall is alleviated. If the stall is alleviated, VTAM issues message IST2247I and normal data flow resumes.

If the stall persists beyond the time limit specified by the HPRSTALL start option, VTAM automatically deactivates the RTP pipe. See the information about the HPRSTALL start option in *z/OS Communications Server: SNA Resource Definition Reference*.

Operator response: Perform the following steps to alleviate the transmission stall:

1. If the RTP pipe traverses EE and the following conditions are true, verify that the firewalls are configured to allow ICMP errors to flow on all hops of the connection:
 - Path MTU discovery is enabled for either IPv4 or IPv6 EE connections. See the PMTUD start option information in *z/OS Communications Server: SNA Resource Definition Reference*.
 - Firewalls are used in the configuration.

If the firewalls are not allowing ICMP errors to flow, this could be the cause of the transmission stall. Disable path MTU discovery for EE connections until the firewalls are configured to allow ICMP errors to flow:

- Issue the `MODIFY procname,VTAMOPTS,PMTUD=NO` command to temporarily disable path MTU discovery.
 - Contact the system programmer to permanently disable path MTU discovery for IPv4 and IPv6 EE connections.
2. If the transmission stall persists, consider ending the stalled sessions by issuing the `VARY net,INACT,ID=rtp_pu_name,TYPE=FORCE` command to deactivate the HPR PU. If you want VTAM to automatically end stalled RTP pipes after a specified amount of time, use the HPRSTALL start option. See the HPRSTALL start option information in *z/OS Communications Server: SNA Resource Definition Reference*.

System programmer response: If you want path MTU discovery for IPv4 and IPv6 Enterprise Extender connections to be permanently disabled, specify `PMTUD=NO` in the appropriate `ATCSTRxx` VTAM start list. If you want path MTU discovery for IPv4 and IPv6 Enterprise Extender connections to be enabled, ensure that all firewalls in the network path are configured to allow ICMP errors to flow.

User response: Not applicable.

Problem determination: If transmission stalls are prevalent and persistent, contact VTAM support for instructions about gathering documentation for problem determination.

- If you have access to IBMLink, search for known problems with similar symptoms.
- If no applicable matches are found, or if you do not have access to IBMLink, obtain a diagnostic dump for this error and report the problem to IBM. If you have access to IBMLink, the problem can be reported to IBM using the Electronic Technical Report (ETR) option on IBMLink.

Source: *z/OS Communications Server SNA*

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

Automation: Not applicable.

Example:

```
IST2245I XMIT STALL DETECTED FOR RTP CNR0002F TO NETA.SSCP1A
```

IST2246I XMIT STALL CONTINUES FOR RTP puname TO cpname

Explanation: This unsolicited message is issued at 30 second intervals as long as data flow continues to be stalled for an RTP pipe.

In the message text:

puname

The name of the HPR PU.

cpname

The name of the CP at the other end of the pipe.

System action: HPR continues to wait for the RTP partner to acknowledge receipt of the network layer packets (NLPs) identified as causing the transmission stall. When all of those NLPs are acknowledged, the transmission stall is considered alleviated and message IST2247I is issued.

Operator response: Perform the following steps to alleviate the transmission stall:

1. If the RTP pipe traverses EE and the following conditions are true, verify that the firewalls are configured to allow ICMP errors to flow on all hops of the connection:
 - Path MTU discovery is enabled for either IPv4 or IPv6 EE connections. See the PMTUD start option information in z/OS Communications Server: SNA Resource Definition Reference.
 - Firewalls are used in the configuration.

If the firewalls are not allowing ICMP errors to flow, this could be the cause of the transmission stall. Disable path MTU discovery for EE connections until the firewalls are configured to allow ICMP errors to flow:

- Issue the MODIFY *procname*,VTAMOPTS, PMTUD=NO command to temporarily disable path MTU discovery.
 - Contact the system programmer to permanently disable path MTU discovery for IPv4 and IPv6 EE connections.
2. If the transmission stall persists, force an RTP path switch by issuing the MODIFY *procname*,RTP, ID=rtp_pu_name command.
 3. If the RTP path switch does not relieve the transmission stall, consider ending the stalled sessions by issuing the VARY *procname*,INACT,ID=rtp_pu_name,TYPE=FORCE command to deactivate the HPR PU. If you want VTAM to automatically end stalled RTP pipes after a specified amount of time, use the HPRSTALL start option. See the HPRSTALL start option information in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: If you want path MTU discovery for IPv4 and IPv6 Enterprise Extender connections permanently disabled, specify PMTUD=NO in the appropriate ATCSTRxx VTAM start list.

User response: Not applicable.

Problem determination: If transmission stalls are prevalent and persistent, contact VTAM support for instructions about gathering documentation for problem determination.

- If you have access to IBMLink, search for known problems with similar symptoms.
- If no applicable matches are found, or if you do not have access to IBMLink, obtain a diagnostic dump for this error and report the problem to IBM. If you have access to IBMLink, the problem can be reported to IBM using the Electronic Technical Report (ETR) option on IBMLink.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

Automation: Not applicable.

Example:

```
IST2246I XMIT STALL CONTINUES FOR RTP CNR0002F TO NETA.SSCP1A
```

IST2247I XMIT STALL ALLEVIATED FOR RTP *puname* TO *cpname*

Explanation: This unsolicited message is issued when HPR detects that a transmission stall for an RTP pipe has been alleviated. The RTP pipe data flow is back to normal.

In the message text:

puname

The name of the HPR PU.

cpname

The name of the CP at the other end of the pipe.

System action: The system action varies depending on whether the RTP pipe traverses an Enterprise Extender (EE) link.

If the RTP pipe traverses EE, after 20 minutes of normal operation with the reduced MTU size, the original NLP size of this RTP pipe is restored to increase RTP throughput. If the network still does not allow transport of the larger packets, the stall detection and alleviation process repeats.

If the RTP pipe does not traverse EE, processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

Automation: Not applicable.

Example:

IST2247I XMIT STALL ALLEVIATED FOR RTP CNR0002F TO NETA.SSCP1A

IST2248I ALL DIAGNOSTIC COUNTERS CLEARED FOR number RTP PIPES

Explanation: VTAM issues this message in response to one of the following:

- A DISPLAY ID command for a Rapid Transport Protocol PU that specifies HPRDIAG=YES and CLEAR=ALL
- A DISPLAY RTPS command that specifies CLEAR=ALL

If the DISPLAY ID command was specified, this message is part of a group of messages that begins with message IST1968I. If the DISPLAY RTPS command was specified with the REXMIT operand, this message is part of a group of messages that begins with message IST1695I. See the explanations of those messages for complete descriptions.

If the DISPLAY RTPS command was specified without the REXMIT operand, this message is issued alone.

In the message text:

number

The total number of RTP pipes whose diagnostic counters are cleared.

System action: For the RTP pipes affected by the scope of the DISPLAY command, all associated diagnostic counters are cleared. Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2248I ALL DIAGNOSTIC COUNTERS CLEARED FOR 4 RTP PIPES
```

IST2249I NLP RETRANSMIT RATE = percentage

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command. This message is issued when both HPRDIAG=YES is specified and when the value of the ID parameter is a PU type 2.1 that represents a Rapid Transport Protocol (RTP) pipe. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2250I ALL DIAGNOSTIC COUNTERS CLEARED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command. This message is issued when both HPRDIAG=YES is specified and when the value of the ID parameter is a PU type 2.1 that represents a Rapid Transport Protocol (RTP) pipe. The first message in the group is IST1968I. See the description of that message for more information.

Routing code: 2

Descriptor code: 5

IST2251I AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID=*adjacent_CP_major_node_name* command or a DISPLAY ADJCP command.

- For a DISPLAY ID=*adjacent_CP_major_node_name* command, see the explanation of message IST1100I for a complete description of this message group.
- For a DISPLAY ADJCP command, see the explanation of message IST1101I and message IST1197I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST2252I *netid* [*netid*] [*netid*] [*netid*] [*netid*] [*netid*]

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID=*adjacent_CP_major_node_name* command or a DISPLAY ADJCP command.

- For a DISPLAY ID=*adjacent_CP_major_node_name* command, see the explanation of message IST1100I for a complete description of this message group.
- For a DISPLAY ADJCP command, see the explanation of message IST1101I and message IST1197I for a complete description of possible message groups.

Routing code: 2

Descriptor code: 5

IST2253I

IST2253I HPRSTALL TIME EXCEEDED FOR RTP *puname* TO *cpname*

Explanation: This unsolicited message is issued when HPR has determined that an RTP pipe has encountered a stall condition that could not be alleviated in the time period specified by the HPRSTALL start option. The RTP pipe had been stalled for one of the following reasons:

- The partner RTP requested retransmission of at least one network layer packet (NLP), but the request could not be honored. This condition is known as a data flow stall.
- The partner RTP repeatedly requested transmission of the same NLP. This condition is known as a transmission stall.

In the message text:

puname

The name of the HPR PU.

cpname

The name of the CP at the other end of the pipe.

See the HPRSTALL start option information in *z/OS Communications Server: SNA Resource Definition Reference*.

System action: HPR deactivates the RTP pipe to end the hung sessions.

Operator response: For information about why the RTP pipe was stalled and to possibly prevent future stalls, refer to the related messages that were issued for the *puname* and *cpname* combination:

- To check for a data flow stall, find an occurrence of message IST1955I that is not followed by an associated IST1957I message to indicate that the stall was alleviated.
- To check for a transmission stall, find an occurrence of message IST2245I that is not followed by an associated IST2247I message to indicate that the stall was alleviated.

If both conditions are found, the one that occurs first caused the timeout indicated by this message.

If you no longer want VTAM to automatically deactivate stalled RTP pipes or if you want VTAM to wait longer before doing so, use the MODIFY VTAMOPTS command to change the value of the HPRSTALL start option.

If stalls are prevalent and persistent, save the system log and request a dump for problem determination, then contact the system programmer.

System programmer response: If you no longer want VTAM to automatically deactivate stalled RTP pipes or if you want VTAM to wait longer before doing so, change the value of HPRSTALL in the appropriate ATCSTRxx start list.

User response: Not applicable.

Problem determination: If transmission stalls are prevalent and persistent, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no similar problems are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Source: *z/OS Communications Server SNA*

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 4

Automation: Not applicable.

Example:

```
IST2253I HPRSTALL TIME EXCEEDED FOR RTP CNR0002F TO NETA.SSCP1A
```

IST2254I TOPOLOGY RESOURCE ERROR FOR NODE: ID = *node_name*

Explanation: This unsolicited message is issued when an internal error is detected for a topology resource that represents a node.

In the message text:

node_name

The CP name of the node with the internal error.

System action: Processing continues.

Operator response: Save the system log and request a dump for problem determination. Contact the system programmer.

System programmer response: See problem determination.

User response: Not applicable.

Problem determination: Take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no similar problems are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2,10

Descriptor code: 4

Automation: Not applicable.

Example:

```
IST2254I TOPOLOGY RESOURCE ERROR FOR NODE: ID = NETA.CPS05
```

IST2255I TOPOLOGY RESOURCE ERROR FOR TG: TGN = *tg_number*

Explanation: This message is the first of a group of messages that is issued when an internal error is detected for a topology resource that represents a transmission group (TG). A complete description of the message group follows the example.

```
IST2255I TOPOLOGY RESOURCE ERROR FOR TG: TGN = tg_number
```

```
IST2256I ORIG = origin_node - DEST = dest_node
```

```
IST314I END
```

IST2255I

- This message identifies the TG number of the TG with the internal error.
- In the message text:

tg_number

The TG number of the TG with the internal error.

IST2256I

- This message identifies the origin and destination of the TG with the internal error.
- In the message text:

origin_node

The CP name of the origin node of the TG with the internal error.

dest_node

The CP name of the destination node of the TG with the internal error.

System action: Processing continues.

IST2256I • IST2257I

Operator response: Save the system log and request a dump for problem determination. Contact the system programmer.

System programmer response: See problem determination.

User response: Not applicable.

Problem determination: Take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no similar problems are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2,10

Descriptor code: 4

Automation: Not applicable.

Example:

```
IST2255I TOPOLOGY RESOURCE ERROR FOR TG: TGN = 21
IST2256I ORIG = NETA.CPS05 - DEST = NETA.CPS10
```

IST2256I **ORIG = *origin_node* - DEST = *dest_node***

Explanation: VTAM issues this message as part of a group of messages under the following conditions:

- An internal topology resource error is detected. See IST2255I for a complete description of this message group.
- A TG reaches the TDUDIAG threshold. See IST2299I for a complete description of this message group.
- In response to a DISPLAY TOPO,LIST=TDUDIAG,ORIG=*orig_cp_name*,DEST=*dest_cp_name*,TGN=*tgn* command. See IST2311I for a complete description of this message group.

Routing code: 2,10

Descriptor code: 4

IST2257I **CSDUMP MUST BE FOLLOWED BY MESSAGE OR SENSE OPERAND**

Explanation: VTAM issues this message when the CSDUMP start option was specified and an operand other than the MESSAGE or SENSE operand was specified as the first operand after CSDUMP. The CSDUMP start option is ignored.

System action: The CSDUMP start option is ignored. VTAM issues message IST1311A to prompt you to enter the CSDUMP start option again with the correct format.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Modify the VTAM start options in ATCSTRxx to add a MESSAGE operand for the message trigger or a SENSE operand for the sense code trigger to the CSDUMP start option.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2257I CSDUMP MUST BE FOLLOWED BY MESSAGE OR SENSE OPERAND

IST2258I *operand* **CAN ONLY BE SPECIFIED AFTER CSDUMP OPTION**

Explanation: VTAM issues this message when a CSDUMP start option operand is specified and it is not preceded by the CSDUMP start option. CSDUMP start option operands can be specified only after the CSDUMP start option.

In the message text:

operand

The CSDUMP start option operand that was specified incorrectly. Possible values are:

MESSAGE
SENSE
MATCHLIM
REMOTE
RU
TCPNM

System action: The operand is ignored. VTAM issues message IST1311A to prompt you for the correct format of the CSDUMP start option.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Take one of the following actions to modify the VTAM start options in ATCSTRxx:

- Specify the operand after the CSDUMP start option.
- Remove the failing operand from the start option list.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2258I MATCHLIM CAN ONLY BE SPECIFIED AFTER CSDUMP OPTION

IST2259I *operand1* **OPERAND MUST BE SPECIFIED AFTER** *operand2*

Explanation: VTAM issues this message when two operands of the CSDUMP start option are specified out of order.

In the message text:

operand1

Possible values are:

MATCHLIM
REMOTE
RU

IST2260I

TCPNM

operand2

Possible values are:

MESSAGE

SENSE

System action: The CSDUMP start option is ignored. VTAM issues message IST1311A to prompt you to enter the CSDUMP start option again with the correct format.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Modify the VTAM start options in ATCSTRxx; move the operand *operand1* after the operand *operand2* of the CSDUMP start option.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2259I RU OPERAND MUST BE SPECIFIED AFTER SENSE OPERAND
```

IST2260I CSDUMP *operand* OPERAND VALUE *value* IS NOT VALID

Explanation: VTAM issues this message when the value specified for the CSDUMP start option operand is not valid.

In the message text:

operand

Possible values are:

- MESSAGE
- RU
- SENSE

value

Possible values are:

- An invalid message ID
- A long message variable text
- An invalid RU
- An invalid SENSE code

System action: The CSDUMP start option is ignored. VTAM issues message IST1311A to prompt you to enter the CSDUMP start option again with the correct format.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Modify the VTAM start options contained in ATCSTRxx and correct the value of the operand on the CSDUMP start option.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2260I CSDUMP MESSAGE OPERAND VALUE L7201A12345 IS NOT VALID
```

IST2261I CSDUMP MESSAGE OPERAND HAS TOO MANY VALUES

Explanation: VTAM issues this message when more values are specified for the CSDUMP start option MESSAGE operand than there are variable text fields in the message.

System action: The CSDUMP start option is ignored. VTAM issues message IST1311A to prompt you to enter the CSDUMP start option again with the correct format.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Modify the VTAM start options in ATCSTRxx and correct the number of values for the MESSAGE operand of the CSDUMP start option.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2261I CSDUMP MESSAGE OPERAND HAS TOO MANY VALUES
```

IST2262I REMOTE OPERAND NOT VALID WITH CSDUMP MESSAGE *msgid*

Explanation: VTAM issues this message when the REMOTE operand was specified on the CSDUMP start option with a message other than IST1504I.

In the message text:

msgid

The VTAM message that was specified.

System action: The CSDUMP start option is ignored. VTAM issues message IST1311A to prompt you to enter the CSDUMP start option again with the correct format.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by

IST2263I • IST2264I

entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Modify the CSDUMP start option in ATCSTRxx:

- If you want message IST1504I to be the trigger message, change the message ID on the MESSAGE operand to IST1504I.
- If you want the *msgid* value to be the trigger message, remove the REMOTE operand from the MESSAGE operand.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2262I REMOTE OPERAND NOT VALID WITH CSDUMP MESSAGE IST089I
```

IST2263I PORTNAME = *port_name* PORTNUM = *port_num* OSA CODE LEVEL = *code_level*

Explanation: VTAM issues this message as part of a message subgroup. See "IST1221I" on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST2264I CSDUMP OPTION SPECIFIED MULTIPLE TRIGGERS

Explanation: VTAM issues this message when the CSDUMP start option is specified with multiple triggers.

System action: The CSDUMP start option is ignored. VTAM issues message IST1311A to prompt you to enter the CSDUMP start option again with the correct format.

Operator response: Correct the CSDUMP start option by responding to message IST1311A or ignore the error by entering a blank. If the CSDUMP start option was specified in an ATCSTRxx file, contact the system programmer. See the information about the CSDUMP start option in z/OS Communications Server: SNA Resource Definition Reference.

System programmer response: Modify the VTAM start options contained in ATCSTRxx to specify the trigger you want. Only one trigger can be specified on the CSDUMP start option. You can specify the CSDUMP start option twice to set both message and sense code triggers.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2264I CSDUMP OPTION SPECIFIED MULTIPLE TRIGGERS

IST2265I *resource service* **FAILED FOR** *device_address* **CODE =** *return_code* **REASON =** *reason_code*

Explanation: This message is issued during activation of a multipath channel (MPC) when a system service that was invoked for a particular subchannel fails.

In the message text:

resource

The name of the TRLE or MPC subarea line that defines the MPC group.

service

The name of the system service that failed.

device_address

The hexadecimal subchannel address for which the system service was invoked.

return_code

The return code received from the service.

reason_code

The reason code received from the service.

System action: If this message is followed by message IST1631I for the address specified by the *device_address* value, activation of the subchannel fails; otherwise, activation of the subchannel continues.

Operator response: If message IST1631I is issued for the address specified by the *device_address* value, see that message for additional instructions; otherwise, no further action is necessary.

System programmer response: If message IST1631I is issued for the address specified by the *device_address* value, use the output from this IST2265I message to assist you in correcting the problem. See the z/OS MVS Programming: Authorized Assembler Services Guide for a description of the *service*, *return_code*, and *reason_code* values. If you cannot determine the reason for the failure, take the following actions:

- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Example:

```
IST2265I TRLE1A IOSPTHV FAILED FOR 050A CODE 04 REASON = 0004
```

IST2266I **STORAGE POOL** *poolname* **AT PAGE ALLOCATION LIMIT**

Explanation: VTAM issues this message when a storage request fails because the allocation storage limit of x'FFFF' pages was reached for the storage pool.

In the message text:

poolname

The name of the storage pool.

System action: Processing continues. Future storage requests for the specified pool will continue to fail until storage is available.

Operator response: Issue the DISPLAY STORUSE command to display the storage usage of storage pools. Save the

IST2267I • IST2270I

system log and request a dump for problem determination. See the DISPLAY STORUSE command in z/OS Communications Server: SNA Operation .

System programmer response: See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps and about analyzing storage using the VIT analysis tool, if external trace is active.

User response: Not applicable.

Problem determination: If you cannot determine the cause of the problem from the output provided, take the following actions:

- If you have access to IBMLink, search for known problems with similar symptoms. If no similar problems are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 6

Example:

```
IST2266I STORAGE POOL UECB AT PAGE ALLOCATION LIMIT
```

IST2267I RTP PACING ALGORITHM = ARB PROGRESSIVE MODE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 that represents a Rapid Transport Protocol (RTP) route. The first message in the group is either IST1476I or IST1968I. See IST1476I or IST1968I for more information.

Routing code: 2

Descriptor code: 5

IST2268I NUMBER OF BYTES ON WAITING-FOR-ACK QUEUE = *waitforackbytes*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 that represents a Rapid Transport Protocol (RTP) route. The first message in the group is IST1968I. See IST1968I for more information.

Routing code: 2

Descriptor code: 5

IST2269I MAXIMUM NUMBER OF BYTES ON WAITING-FOR-ACK QUEUE = *maxwaitforack*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 that represents a Rapid Transport Protocol (RTP) route. The first message in the group is IST1968I. See IST1968I for more information.

Routing code: 2

Descriptor code: 5

IST2270I `debug_text`

Explanation: This solicited message is for IBM internal use only. This message has various formats that have meaning only to the IBM personnel that develop and service z/OS Communications Server.

System action: Processing continues.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2271I **PATH SWITCH DELAY =** *ps_delay_value*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 that represents a Rapid Transport Protocol (RTP) route. The first message in the group is IST1968I. See IST1968I for more information.

Routing code: 2

Descriptor code: 5

IST2272I **PATH SWITCH DELAYED UNTIL** *date AT time*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 that represents a Rapid Transport Protocol (RTP) route. The first message in the group is IST1968I. See IST1968I for more information.

Routing code: 2

Descriptor code: 5

IST2273E **PACKETS DISCARDED FOR** *jobname* - **READ QUEUE CONGESTION**

Explanation: This unsolicited message is issued when a storage block address list (SBAL) is discarded as the result of congestion on the inbound data staging queue. An SBAL is a read buffer that can contain up to 64 KB of TCP/IP packets. SBALs are discarded to protect against the overuse of system resources, specifically ECSA storage. This message might mean that there is a TCP/IP stack contention or dispatching problem.

This message remains on the screen until congestion is alleviated or until the message is manually deleted.

In the message text:

jobname

The 1–8 character TCP/IP job name used to start the TCP/IP address space.

System action: If congestion subsides for at least 30 seconds, this message is automatically deleted. If congestion persists, message IST2273E is deleted and re-issued every 5 minutes.

Operator response: You can use the DISPLAY NET,TRL and DISPLAY NET,TRL,TRLE=*trlename* commands to determine which interfaces or devices are experiencing congestion. Message IST2305I provides the number of SBALs that are discarded. These interfaces or devices can be stopped or recycled in an attempt to eliminate the congestion.

System programmer response: If the condition is persistent, take the following actions:

1. Study and possibly adjust the TCP/IP dispatching priority
2. If the condition continues to persist:
 - If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, take a dump of the TCP/IP address space and the VTAM address space and report the problem to IBM using the Electronic Technical Report (ETR) option on IBMLink.
 - If you do not have access to IBMLink, take a dump of the TCP/IP address space and the VTAM address space and report the problem to the IBM software support center.

IST2274I

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 11

Automation: Automation is recommended because persistent discarding of inbound data can have a significant impact on latency and throughput.

Example:

```
IST2273E PACKETS DISCARDED FOR TCPCS - READ QUEUE CONGESTION
```

IST2274I TDU DIAGNOSTIC SUMMARY:

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUDIAG summary command. Possible message groups follow:

- This message group is issued if you allow the FORMAT command to default or you specify FORMAT=SHORT:

```
IST350I DISPLAY TYPE = TDU DIAGNOSTICS
IST2274I TDU DIAGNOSTIC SUMMARY:
IST1780I TOPOLOGY RESOURCES WITH MOST FREQUENT TDU ACTIVITY
IST2308I THAT HAVE SAVED TDUDIAG RSN UPDATES
IST2275I TDU INFORMATION SINCE LAST RESET ON date AT time
IST2290I TDUDIAG START OPTION = tdudiag_value
[IST2283I NO TDUDIAG RSN UPDATES EXIST]
[IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
[IST924I -----]
[IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
[IST2278I SINCE VTAM START ON start_date AT start_time]
[IST2284I FOR THE FOLLOWING NODES AND TGS]
[IST2279I CP NAME          DESTINATION CP    TGN    TIME DETECTED]
[IST2280I cp_name          destination_cp   tgn    date_detected time_detected]
:
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2283I NO TDUDIAG RSN UPDATES EXIST]
[IST2286I TDUS RECEIVED:]
[IST1777I CP NAME          RSN          DESTINATION CP    TGN ACC  REJ]
[IST1778I cp_name          rsn          destination_cp    tgn count1 count2]
:
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2287I TDUS SENT:]
[IST2288I CP NAME          RSN          DESTINATION CP    TGN SENT REC]
[IST1778I cp_name          rsn          destination_cp    tgn count1 count2]
:
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:]
[IST2292I CP NAME          RSN          DESTINATION CP    TGN UPDATED]
[IST2293I cp_name          rsn          destination_cp    tgn updated]
:
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST314I END
```

- If you specify FORMAT=LONG on the DISPLAY TOPO command, the display sections for TDUs received, TDUs sent, and RSNs updated by this node are replaced with the following:

```

[IST924I -----]
[IST2283I NO TDUDIAG RSN UPDATES EXIST]
[IST2286I TDUS RECEIVED:]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn         destination_cp    tgn]
[IST2353I  ACCEPTED = accepted    REJECTED = rejected]
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2287I TDUS SENT:]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn         destination_cp    tgn]
[IST2352I  SENT      = sent      RECEIVED = received]
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
[IST924I -----]
[IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:]
[IST2357I CP NAME          RSN          DESTINATION CP    TGN]
[IST2358I cp_name         rsn         destination_cp    tgn]
[IST2291I  UPDATED  = updated]
.
[IST2301I num OF total TOPOLOGY RESOURCES DISPLAYED]
IST314I END

```

IST350I

This message identifies the type of information in the display and is always TDU DIAGNOSTICS for this message group.

IST1777I

This is a header message for the information about topology resources in the TDUs that were received most frequently and that have TDUDIAG resource sequence number (RSN) update information saved in the topology database. The topology resources are displayed in the IST1778I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

ACC is the abbreviation for ACCEPTED.

REJ is the abbreviation for REJECTED.

IST1778I

- One IST1778I is issued for each topology resource that is displayed in a subgroup when the FORMAT=SHORT operand is specified or the default FORMAT value is taken.
- The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the TDU information and TDU counters were last reset is smaller than the number requested on the display command, the number of IST1778I messages that are displayed in the subgroup will be smaller than the NUM value that was specified.
- *cp_name* is the network-qualified CP name of the node, if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.
- *rsn* is the resource sequence number (RSN) expressed in decimal.
- *destination_cp* is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, *****NA***** is displayed.
- *tgn* is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.
- If the subgroup displays the information about topology resources in the TDUs that were received most frequently:
 - *count1* is the total number of inbound TDUs that were accepted for this resource at the time that the displayed TDU was received. Inbound TDUs are accepted when they contain new information that causes the resource record to be updated.
 - *count2* is the total number of inbound TDUs that were rejected for this resource at the time that the displayed TDU was received. Inbound TDUs are rejected when they contain inconsistent information that causes outbound TDUs to be sent as corrections.

IST2274I

- If the subgroup displays the information about topology resources in the TDUs that were sent most frequently:
 - *count1* is the total number of outbound TDUs that were sent for this resource at the time that the displayed TDU was sent.
 - *count2* is the total number of inbound TDUs that were received for this resource at the time that the displayed TDU was sent.

Tip: A RSN value of ********* or TDU counter values of ******** indicates that the values are greater than the available space for those values to be displayed in message IST1778I. You can enter the command with the **FORMAT=LONG** operand to display these values in a format that includes two lines of output for each resource.

IST1780I, IST2308I

These messages indicate that the TDU diagnostic information is about topology resources that were included in topology database updates (TDUs) most frequently, and that have saved TDUDIAG resource sequence number (RSN) update information.

IST2274I

This is a header message for TDU diagnostic summary information.

IST2275I

This message contains the date and time when all the TDU information and TDU counters were reset. All TDU information and TDU counters are reset every 24 hours when garbage collection runs, or when a **DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES** or a **DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES** command is entered. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2276I

This message indicates that no corruption of topology control vectors was detected since VTAM was started.

IST2277I

This is a header message for a message subgroup that displays information about topology resources that have control vectors in the topology database that have possibly been corrupted.

Because the topology control vectors contain the resource sequence number (RSN) for a node or TG, which determines the processing of a TDU, it is possible that control vector corruption could cause a TDU war. The most probable cause of control vector corruption is a storage overlay.

IST2278I

This message displays the date and time that VTAM was started. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

Unlike the lists of topology resources in the TDUs that were received or sent most frequently, or with RSNs that were updated by this node, the list of topology resources with possible topology control vector corruption is never cleared and includes any possible corruption detection since the start of VTAM.

IST2279I

This is a header message for the information about topology resources with possible topology control vector corruption that is displayed in the IST2280I messages that follow.

IST2280I

One IST2280I is displayed for each topology resource that has control vectors that have possibly been corrupted. Information about possible corrupted control vectors is maintained from the start of VTAM and is not deleted when TDU information is reset. All topology resources with possible corrupted control vectors are displayed in this subgroup, regardless of the reset of TDU information.

The **NUM** operand can be specified on the **DISPLAY** command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the start of VTAM is smaller than the number requested on the display command, the number of IST2280I messages that are displayed in the subgroup will be smaller than the **NUM** value that was specified.

cp_name is the network-qualified CP name of the node, if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource that is displayed is a node, ***NA*** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.

Time detected is the date and time possible corruption of control vectors for the topology resource was detected. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2283I

This message is displayed when no TDUDIAG RSN update information exists for any of the topology resources that have been received, sent, or had RSNs updated since the TDU information and TDU counters were last reset. Message IST2275I displays the date and time of the last reset.

IST2284I

This message indicates that possible topology control vector corruption was detected for a node or TG.

IST2286I

This is a header message for message subgroups that display information about topology resources in the TDUs that were received in inbound TDUs most frequently and have TDUDIAG RSN update information saved in the topology database.

The first topology resource that is displayed in the subgroup is the resource with the most frequent TDU activity. The last topology resource that is displayed in the subgroup is the resource with the least frequent TDU activity.

IST2287I

This is a header message for message subgroups that display information about topology resources in the TDUs that were sent most frequently and have TDUDIAG RSN update information saved in the topology database.

The first topology resource that is displayed in the subgroup is the resource with the most frequent TDU activity. The last topology resource that is displayed in the subgroup is the resource with the least frequent TDU activity.

IST2288I

This is a header message for the information about topology resources in the TDUs that were sent most frequently and have TDUDIAG RSN update information saved in the topology database. The topology resources are displayed in the IST1778I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

REC is the abbreviation for RECEIVED.

IST2289I

This is a header message for information about topology resources with RSNs that were updated by this node and that have TDUDIAG RSN update information saved in the topology database.

The first topology resource that is displayed in the subgroup is the resource with a RSN that was updated most frequently. The last topology resource that is displayed in the subgroup is the resource with a RSN that was updated least frequently.

IST2290I

- *tdudiag_value* is the user-defined TDUDIAG start option value, specified on the START command or in the start list, and specifies when TDU diagnostic information is included with node or TG control vectors within a TDU. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference. Possible values can be one of the following:

A decimal value in the range of 1-65535

This is a threshold number of times that this network node has updated the resource sequence number (RSN) for a topology resource since the last time that TDU information was reset. When this threshold value is reached for a node or TG, TDU diagnostic information is included in the outbound TDU if the RSN is updated.

ALWAYS

TDU diagnostic information is always appended with the topology control vectors included in a TDU for a topology resource when the RSN for that resource is updated by this network node.

IST2274I

NEVER

TDU diagnostic information is never appended with the topology control vectors included in a TDU.

IST2291I

This message follows message IST2358I and this message pair displays the information about topology resources that have a RSN that was updated by this node and have TDUDIAG RSN update information saved in the topology database, when the FORMAT=LONG operand is specified.

updated is the number of times the topology resource had been updated at the time of the last RSN update.

IST2292I

This is a header message for the information about topology resources with RSNs that were updated by this node and that have TDUDIAG RSN update information saved in the topology database. The topology resources are displayed in the IST2293I messages that follow. These messages are displayed when FORMAT=SHORT is specified or the default FORMAT value is taken.

IST2293I

One IST2293I is issued for each topology resource that has a RSN that was updated by this node and has TDUDIAG RSN update information saved in the topology database. The first IST2293I message in this message subgroup describes the topology resource whose RSN was updated by this node most frequently.

The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of topology resources on the list since the TDU information and TDU counters were last reset is smaller than the number requested on the display command, the number of IST2293I messages that are displayed in the subgroup will be smaller than the NUM value that was specified.

cp_name is the network-qualified CP name of the nod, if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

rsn is the updated RSN expressed in decimal.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, ***NA*** is displayed.

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.

updated is the number of times that the topology resource has been updated at the time of the last RSN update.

Tip: A RSN value of ***** or update counter value of ***** indicates the value is greater than the available space for the value to be displayed in message IST2293I. You can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

IST2301I

This message displays the number of topology resources that are in a message subgroup.

num is the total number of topology resources that are displayed.

total is the total number of topology resource records that are on the displayed list.

IST2352I

This message follows message IST2358I when the FORMAT=LONG operand is specified. This message pair displays the information about topology resources in the TDUs that were sent most frequently and have TDUDIAG RSN update information saved in the topology database.

sent is the total number of TDUs that were sent for this resource at the time that the displayed TDU was sent.

received is the total number of TDUs that were received for this resource at the time that the displayed TDU was sent.

IST2353I

This message follows message IST2358I when the FORMAT=LONG operand is specified. The message pair displays the information about topology resources in the TDUs that were received most frequently and have TDUDIAG RSN update information saved in the topology database.

accepted is the total number of inbound TDUs that were accepted for this resource at the time that the displayed TDU was received. Inbound TDUs are accepted when they contain new information that causes the resource record to be updated.

rejected is the total number of inbound TDUs that were rejected for this resource at the time that the displayed TDU was received. Inbound TDUs are rejected when they contain inconsistent information that causes outbound TDUs to be sent as corrections.

IST2357I

- This is a header message for the information about topology resources that is displayed in message pairs when FORMAT=LONG is specified. The information is displayed in three sections:
 - topology resources in the TDUs that were received most frequently and have TDUDIAG RSN update information saved in the topology database
 - topology resources in the TDUs that were sent most frequently and have TDUDIAG RSN update information saved in the topology database
 - topology resources with RSNs that were updated by this node and have TDUDIAG RSN update information saved in the topology database

IST2358I

This is the first of two messages that display the information about a topology resource when the FORMAT=LONG operand is specified.

The NUM operand can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 topology resources, or message pairs, and the maximum value is 50. If the number of topology resources on the list since the last TDU count reset is smaller than the number requested on the display command, the number of topology resources that are displayed in the subgroup will be smaller than the NUM value that was specified.

cp_name is the network-qualified CP name of the node if the resource that is displayed is a node. If the resource that is displayed is a TG, *cp_name* is the network-qualified CP name of the TG origin node.

rsn is the resource sequence number (RSN) expressed in decimal.

destination_cp is the network-qualified CP name of the TG's destination node if the resource that is displayed is a TG. If the resource is a node, ***NA*** is displayed .

tgn is the transmission group number that is associated with the TG that is displayed. If the resource is a node, NA is displayed.

System action: Processing continues.

Operator response: If you are displaying TDU diagnostic information because of performance degradation of the APPN network, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures, and do the following:

1. Repeat the display several times to see if there is a pattern of excessive TDU activity for a topology resource.
2. Enter the DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=ACTIVITY command to see the topology resources that have the most frequent TDU activity.
3. If a node or TG is identified that has excessive TDU activity, the following displays might provide information about the network nodes that are causing the performance degradation (TDU war):
 - DISPLAY NET,TOPO,LIST=TDUDIAG provides a summary of nodes and TGs that have saved TDU diagnostic information.
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ID=*cp_name* provides details about the saved TDU diagnostic information for a node.
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ORIG=*orig_cp*,DEST=*dest_cp*,TGN=*tgn* provides details about saved TDU diagnostic information for a TG.
4. If you can identify the network nodes that are involved in the TDU war, bring down the CP-CP sessions from one of the network nodes involved to all other network nodes in the network or subnetwork.
5. If you cannot stop the TDU war, save the system log and request a dump for problem determination. Contact the system programmer.

Tip: On the DISPLAY NET,TOPO,LIST=TDUDIAG summary command output, a RSN value of ***** or TDU counter values of ***** indicates that the value is greater than the available space for the value to be displayed in message IST1778I or IST2293I. You can clear the TDU counters, but not the RSN, with the CLEAR=YES operand

IST2274I

specified on either the DISPLAY TOPO,LIST=TDUINFO command or the DISPLAY TOPO,LIST=TDUDIAG summary command. Alternately, you can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

System programmer response: Take the following actions:

- If the operator provides output from the DISPLAY NET,TOPO,LIST=TDUINFO and the DISPLAY NET,TOPO,LIST=TDUDIAG commands, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to analyze the TDU activity. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not recommended.

Example: The following is an example of the display output from a DISPLAY NET,TOPO,LIST=TDUDIAG,NUM=5,FORMAT=SHORT command:

```
IST350I DISPLAY TYPE = TDU DIAGNOSTICS
IST2274I TDU DIAGNOSTIC SUMMARY:
IST1780I TOPOLOGY RESOURCES WITH MOST FREQUENT TDU ACTIVITY
IST2308I THAT HAVE SAVED TDUDIAG RSN UPDATES
IST2275I TDU INFORMATION SINCE LAST RESET ON 01/29/10 AT 11:43:05
IST2290I TDUDIAG START OPTION = 1000
IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED
IST924I -----
IST2286I TDUS RECEIVED:
IST1777I CP NAME           RSN      DESTINATION CP   TGN ACC  REJ
IST1778I NETA.SSCP2A       6        NETA.SSCP1A     21  2    0
IST1778I CNRA.LVRN4A      2        NETA.SSCP2A     21  1    0
IST1778I NETA.SSCP2A       2        CNRA.LVRN4A     21  1    0
IST1778I NETA.SSCPAA       4        NETA.SSCP1A     21  1    0
IST1778I NETA.SSCPAA       2        ***NA***        NA  1    0
IST2301I 5 OF 6 TOPOLOGY RESOURCES DISPLAYED
IST924I -----
IST2287I TDUS SENT:
IST2288I CP NAME           RSN      DESTINATION CP   TGN SENT REC
IST1778I NETA.SSCP2A       6        NETA.SSCP1A     21  3    3
IST1778I NETA.SSCP1A       6        NETA.SSCP2A     21  3    1
IST1778I NETA.SSCP2A       2        ***NA***        NA  2    1
IST1778I NETA.SSCP1A       2        ***NA***        NA  2    0
IST1778I CNRA.LVRN4A      2        NETA.SSCP2A     21  1    1
IST2301I 5 OF 11 TOPOLOGY RESOURCES DISPLAYED
IST924I -----
IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:
IST2292I CP NAME           RSN      DESTINATION CP   TGN  UPDATED
IST2293I NETA.SSCP1A       6        NETA.SSCP2A     21   1
IST2293I CNRA.LVRN4A      2        NETA.SSCP1A     21   1
IST2293I NETA.SSCP1A       2        CNRA.LVRN4A     21   1
IST2301I 3 OF 3 TOPOLOGY RESOURCES DISPLAYED
IST314I END
```

IST2275I TDU INFORMATION SINCE LAST RESET ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2276I NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2278I **SINCE VTAM START ON** *start_date* **AT** *start_time***Explanation:** VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2**Descriptor code:** 5

IST2279I **CP NAME DESTINATION CP TGN TIME DETECTED****Explanation:** VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2**Descriptor code:** 5

IST2280I *cp_name destination_cp tgn date_detected time_detected***Explanation:** VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2**Descriptor code:** 5

IST2281I **LAST TDU SENT** - *date time***Explanation:** VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2**Descriptor code:** 5

IST2282I TDU COUNTS:

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2283I NO TDUDIAG RSN UPDATES EXIST

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2284I FOR THE FOLLOWING NODES AND TGS

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2285I TDUS SENT BETWEEN *first_tdu_date first_tdu_time - last_tdu_date last_tdu_time*

Explanation: VTAM issues this message as part of a group of messages in response to the DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT command. See message IST1776I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2286I TDUS RECEIVED:

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2287I TDUS SENT:

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2288I CP NAME RSN DESTINATION CP TGN SENT REC

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I (hotlink) for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2289I RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2290I TDUDIAG START OPTION = *tdudiag_value*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2291I UPDATED = *updated*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,FORMAT=LONG. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,FORMAT=LONG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2292I CP NAME RSN DESTINATION CP TGN UPDATED

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2293I *cp_name rsn destination_cp tgn updated*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2294I TDUDIAG RSN UPDATES:

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2295I TIME HEX RSN HEX RSN

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2296I CP NAME UPDATED BEFORE AFTER REASON

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2297I *cp_name time before_rsn after_rsn reason*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name*. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*orig_cp_name*,DEST=*dest_cp_name*,TGN=*tgn*. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2298I **TDUDIAG THRESHOLD REACHED FOR NODE: ID = *cp_name***

Explanation: VTAM issues this unsolicited message when the TDUDIAG threshold is reached for a node. The TDUDIAG threshold is a numeric value specified on the TDUDIAG start option.

Three counters are monitored to determine when the threshold is reached for a node:

- A count of the number of times that the host network node updates the resource sequence number (RSN) for the node.
- A count of TDUs that are received and accepted for the node. A TDU is accepted when it contains new information about the node, and the topology database is updated with the new information.
- A count of TDUs that are received and rejected for the node. A TDU is rejected when it contains outdated information about the node. A new TDU is built from the local topology database and is sent to correct the information.

When the node identified in this message reaches the threshold value, TDU diagnostic information is appended to the node record in the topology database. This action occurs every time the RSN is updated by the host network node or when a TDU that contains TDU diagnostic information is received for that node.

See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference.

In the message text:

cp_name

The network-qualified CP name of the node that reached the TDUDIAG threshold.

System action: Processing continues.

Operator response: To determine whether this node might be a topology resource that is in contention in a TDU war, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures, and do the following:

1. Issue the DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=ACTIVITY command to determine whether the node is one of the topology resources with the most frequent TDU activity.
2. Repeat the display several times to determine whether there is a pattern of excessive TDU activity for the node.
3. Issue the DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=RECENT command to determine whether the node is one of the topology resources with the most recent TDU activity.
4. If the previous displays indicate excessive TDU activity for the node, the following displays might provide information about the network nodes that are causing the performance degradation (TDU war):
 - DISPLAY NET,TOPO,LIST=TDUDIAG provides a summary of nodes and TGs with saved TDU diagnostic information.
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ID=*cp_name* provides details about saved TDU diagnostic information for the node.
5. If you can identify the network nodes that are involved in the TDU war, end the CP-CP sessions between one of the network nodes involved and all other network nodes in the network or subnetwork.
6. If you cannot stop the TDU war, save the system log and request a dump for problem determination. Contact the system programmer.

Tip: On the DISPLAY TOPO,LIST=TDUINFO and DISPLAY TOPO,LIST=TDUDIAG summary command output, a RSN value of ***** or TDU counter values of ***** indicates the value is greater than the available space for the

value to be displayed in messages IST1778I or IST2293I. You can clear the TDU counters, but not the RSN, with the CLEAR=YES operand specified on either the DISPLAY TOPO,LIST=TDUINFO command or the DISPLAY TOPO,LIST=TDUDIAG summary command. Alternately, you can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

System programmer response: Take the following actions:

- If the operator provides output from the DISPLAY TOPO,LIST=TDUINFO or DISPLAY TOPO,LIST=TDUDIAG, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to analyze the TDU activity. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2,8

Descriptor code: 4

Automation: If the TDUDIAG start option is set to the default of 1000 or higher, this message might be an indication of a TDU war and automation is suggested.

Example:

```
IST2298I TDUDIAG THRESHOLD REACHED FOR NODE: ID = NETA.CPS05
```

IST2299I TDUDIAG THRESHOLD REACHED FOR TG: TGN = *tg_num*

Explanation: This message is the first of a group of unsolicited messages that VTAM issues when the TDUDIAG threshold is reached for a TG. The TDUDIAG threshold is a numeric value specified on the TDUDIAG start option. If you receive this message, it might be an indication of a TDU war, which is an endless exchange of TDUs in contention over the same topology resource, resulting in continuous performance degradation of the APPN network.

Three counters are monitored to determine when the threshold is reached for a TG:

- A count of the number of times that the host network node updates the resource sequence number (RSN) for the TG.
- A count of TDUs that are received and accepted for the TG. A TDU is accepted when it contains new information about the TG, and the topology database is updated with the new information.
- A count of TDUs that are received and rejected for the TG. A TDU is rejected when it contains outdated information about the TG. A new TDU is built from the local topology database and is sent to correct the information.

When the TG identified in this message reaches the threshold value, TDU diagnostic information is appended to the TG record in the topology database. This action occurs every time the RSN is updated by the host network node or when a TDU that contains TDU diagnostic information is received for that TG.

See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference.

A complete description of the message group follows the example.

```
IST2299I TDUDIAG THRESHOLD REACHED FOR TG: TGN = tg_num
IST2256I ORIG = origin_node - DEST = dest_node
IST314I END
```

IST2299I

This message identifies the TG number of the TG that reached the TDUDIAG threshold.

IST2299I

The *tg_num* value is the TG number of the TG that reached the TDUDIAG threshold.

IST2256I

This message identifies the origin and destination of the TG that reached the TDUDIAG threshold.

The *origin_node* value is the network-qualified CP name of the origin node of the TG that reached the TDUDIAG threshold.

The *dest_node* value is the network-qualified CP name of the destination node of the TG that reached the TDUDIAG threshold.

System action: Processing continues.

Operator response: To determine whether this TG might be a topology resource that is in contention in a TDU war, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures and do the following:

1. Issue the DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=ACTIVITY command to determine whether the TG is one of the topology resources with the most frequent TDU activity.
2. Repeat the display several times to determine whether there is a pattern of excessive TDU activity for the TG.
3. Issue the DISPLAY NET,TOPO,LIST=TDUINFO,SCOPE=RECENT command to determine whether the TG is one of the topology resources with the most recent TDU activity.
4. If the previous displays indicate excessive TDU activity for the TG, the following displays might provide information about the network nodes that are causing the performance degradation (TDU war):
 - The DISPLAY NET,TOPO,LIST=TDUDIAG command provides a summary of nodes and TGs with saved TDU diagnostic information.
 - The DISPLAY NET,TOPO,LIST=TDUDIAG,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_num* command provides details about saved TDU diagnostic information for the TG.
5. If you can identify the network nodes that are involved in the TDU war, end the CP-CP sessions between one of the network nodes involved and all other network nodes in the network or subnetwork.
6. If you cannot stop the TDU war, save the system log and request a dump for problem determination. Contact the system programmer.

Tip: On the DISPLAY TOPO,LIST=TDUINFO and DISPLAY TOPO,LIST=TDUDIAG summary command output, a RSN value of ***** or TDU counter values of ***** indicates the value is greater than the available space for the value to be displayed in messages IST1778I or IST2293I. You can clear the TDU counters, but not the RSN, with the CLEAR=YES operand specified on either the DISPLAY TOPO,LIST=TDUINFO command or the DISPLAY TOPO,LIST=TDUDIAG summary command. Alternately, you can enter the command with the FORMAT=LONG operand to display these values in a format that includes two lines of output for each resource.

System programmer response: Take the following actions:

- If the operator provides output from the DISPLAY TOPO,LIST=TDUINFO or DISPLAY TOPO,LIST=TDUDIAG, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to analyze the TDU activity. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2,8

Descriptor code: 4

Automation: If the TDUDIAG start option is set to the default value 1000 or higher, this message might be an indication of a TDU war and automation is suggested.

Example:

```
IST2299I TDUDIAG THRESHOLD REACHED FOR TG: TGN = 21
IST2256I ORIG = NETA.CPS05 - DEST = NETA.CPS10
IST314I END
```

IST2300I RECEIVED FROM: *adjacent_node*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name*. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*orig_cp_name*,DEST=*dest_cp_name*,TGN=*tgn*. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2301I *num* OF total TOPOLOGY RESOURCES DISPLAYED

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2302I MODEL *modelname* IS THE BEST ACTIVE MATCH FOR *applname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY MODELS,APPL= command. The full description of the message group follows:

```
IST350I DISPLAY TYPE = MODELS
[IST2302I MODEL modelname IS THE BEST ACTIVE MATCH FOR applname]
[IST2303I THERE IS NO ACTIVE MODEL MATCH FOR applname]
[IST2304I rscname ALREADY EXISTS, TYPE=type]
IST314I END
```

IST350I

This message serves as a header message for the display and identifies the type of information shown in the display.

IST2302I

This message is issued if an active model application definition is found that is a match for the name specified on the APPL operand. The best active match is displayed.

modelname is the name of the model application definition.

applname is the name specified on the APPL operand.

IST2303I

This message is issued when no active model application definition is found that would be a match for the name specified on the APPL operand.

applname is the name specified on the APPL operand.

IST2304I

This message is issued when the name specified on the APPL operand is already defined to VTAM.

IST2303I • IST2305I

rscname is the name of the resource using the name specified by the APPL operand. See Chapter 17, "Node and ID types in VTAM messages," on page 1137 for a description of *type*.

System action: Processing continues.

Operator response: If IST2304I is issued, investigate whether the existence of this resource will cause a conflict when trying to open an application with the same name.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: When the model application definition that will be used by a specific application is displayed, even if the application name is already in use:

```
d net,models,appl=applany
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST2302I MODEL APPL* IS THE BEST ACTIVE MATCH FOR APPLANY
IST2304I APPLANY ALREADY EXISTS, TYPE=APPL SEGMENT
IST314I END
```

When the model application definition that will be used by a specific application is displayed, when no model can be found:

```
d net,models,appl=applany
IST097I DISPLAY ACCEPTED
IST350I DISPLAY TYPE = MODELS
IST2303I THERE IS NO ACTIVE MODEL MATCH FOR APPLANY
IST314I END
```

IST2303I THERE IS NO ACTIVE MODEL MATCH FOR *applname*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY MODELS,APPL= command. See IST2302I for a complete description.

Routing code: 2

Descriptor code: 5

IST2304I *rscname* ALREADY EXISTS, TYPE = *type*

Explanation: This message is part of a group of messages that VTAM issues in response to a DISPLAY MODELS,APPL= command. See IST2302I for a complete description.

Routing code: 2

Descriptor code: 5

IST2305I NUMBER OF DISCARDED INBOUND READ BUFFERS = *sbalcnt*

Explanation: This message is part of several message groups that VTAM issues in response to a DISPLAY ID or DISPLAY TRL command for a TRLE that is configured with the MPC level QDIO, which represents an OSA-Express adapter, and for HiperSockets. See "IST1221I" on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST2306I TDU DIAGNOSTIC INFORMATION FOR NODE: ID = *cp_name*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name*. A complete description of the message group follows:

```

IST350I DISPLAY TYPE = TDU DIAGNOSTICS
IST2306I TDU DIAGNOSTIC INFORMATION FOR NODE: ID = cp_name
IST2312I CURRENT RSN = decimal_rsn - HEX RSN = hex_rsn
IST2356I PLATFORM = platfor
[IST2355I TDUDIAG THRESHOLD REACHED ON date AT time]
[IST2307I THIS NODE DOES NOT SUPPORT UNKNOWN TOPOLOGY VECTORS]
[IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
IST924I -----
IST2275I TDU INFORMATION SINCE LAST RESET ON date AT time
[IST1769I LAST TDU RECEIVED - date time FROM adjacent_cp]
[IST1784I LAST TDU RECEIVED - NONE]
[IST2281I LAST TDU SENT - date time]
[IST2315I LAST TDU SENT - NONE]
IST2282I TDU COUNTS:
IST2352I SENT = sent RECEIVED = received
IST2353I ACCEPTED = accepted REJECTED = rejected
IST2354I IGNORED = ignored
IST2313I TOTAL RSN UPDATES BY LOCAL HOST NODE = rsn_count
[IST2283I NO TDUDIAG RSN UPDATES EXIST]
[IST924I -----]
[IST2294I TDUDIAG RSN UPDATES:]
[IST2295I TIME HEX RSN HEX RSN]
[IST2296I CP NAME UPDATED BEFORE AFTER REASON]
[IST2297I cp_name time befor_rsn after_rsn reason]
[IST2300I RECEIVED FROM: adjacent_node]
.
.
[IST2314I num OF total RSN UPDATES DISPLAYED]
IST314I END

```

IST350I

This message identifies the type of information in the display and is always TDU DIAGNOSTICS for this message group.

IST1769I

The *date* and *time* values specify when the last topology database update (TDU) was received for this node. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

adjacent_cp is the network-qualified CP name of the adjacent node that sent the last TDU that was received.

IST1784I

This message is issued if no TDU about this resource was received.

IST2275I

- The *date* and *time* values specify when all the TDU information and TDU counters were reset. The TDU information and TDU counters for a node are reset every 24 hours when garbage collection runs, or when one of the following commands is entered:
 - DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES
 - DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ID=*cpname*,CLEAR=YES

See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2277I

IST2306I

This message indicates that possible topology control vector corruption was detected for the node. Because the topology control vectors contain the resource sequence number (RSN) for the node, which determines how a TDU is processed, it is possible that control vector corruption could cause a TDU war. The most probable cause of control vector corruption is a storage overlay.

IST2281I

The *date* and *time* values specify when the last topology database update (TDU) was sent for this node. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2282I, IST2352I, IST2353I, IST2354I

- This message subgroup displays topology database update (TDU) counts for this node. A description of the message subgroup follows:

```
IST2282I TDU COUNTS:
IST2352I SENT      = sent      RECEIVED = received
IST2353I ACCEPTED = accepted  REJECTED = rejected
IST2354I IGNORED  = ignored
```

- **IST2282I**

This is a header message for topology database update (TDU) counts for this node.

- **IST2352I**

This message displays the counts of TDUs that were sent and received for this node.

sent is the number of TDUs about the node that were sent since the last time that the TDU counts were reset.

received is the number of TDUs about the node that were received since the last time that the TDU counts were reset.

- **IST2353I**

This message displays counts of TDUs that were accepted and rejected for this node.

accepted is the number of TDUs about the node that were accepted since the last time that the TDU counts were reset. The TDUs contain new information about the node and the topology database was updated.

rejected is the number of TDUs about the node that were rejected since the last time that the TDU counts were reset. The TDUs were rejected because the TDUs contain outdated information about the node. TDUs that are built from the local topology database information for the node were sent as corrections.

- **IST2354I**

This message displays counts of TDUs ignored for this node.

ignored is the number of TDUs about the node that were ignored since the last time that TDU counts were reset. The TDUs were discarded because the TDUs contained no new information.

IST2283I

This message indicates that no resource sequence number (RSN) updates exist for this node.

IST2294I, IST2295I, IST2296I, IST2297I, IST2300I, IST2314I

- This message subgroup displays information about the TDUDIAG resource sequence number (RSN) update information that was saved in the topology database for this node. A description of the message subgroup follows:

```
IST2294I TDUDIAG RSN UPDATES:
IST2295I TIME      HEX RSN  HEX RSN
IST2296I CP NAME   UPDATED  BEFORE  AFTER   REASON
IST2297I cp_name   time     befor_rsn after_rsn reason
IST2300I RECEIVED FROM: adjacent_node
IST2314I num OF total RSN UPDATES DISPLAYED
```

- **IST2294I**

This is a header message for information about the TDUDIAG resource sequence number (RSN) update information that was saved in the topology database for this node.

- **IST2295I, IST2296I**

These are header messages for the information that is displayed in the IST2297I and IST2300I subgroup messages that follow.

- **IST2297I**

- One IST2297I message is issued for each TDUDIAG RSN update that was saved in the topology database for this node. The first IST2297I in this message subgroup describes the most recent TDUDIAG RSN update.
- The NUM keyword can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of TDUDIAG RSN updates that are saved for this node is smaller than the number of RSN updates that were requested on the display command, the number of IST2297I messages that are displayed in this subgroup can be smaller than the value that was specified in the NUM keyword.
- *cp_name* is the network-qualified CP name of the network node that updated the RSN for this node.
- *time* is the time when the TDUDIAG RSN update for this node was saved in the topology database. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.
- *before_rsn* is the RSN for the node before the RSN update. It is expressed in hexadecimal.
- *after_rsn* is the RSN for the node after the RSN update. It is expressed in hexadecimal.
- *reason* is the reason that the RSN was updated for this node. Possible values are:

****NA****

RSN update reason is unknown.

BN EXCHANGE

The RSN was updated for a non-native border node that was sent in a topology exchange.

BN STATUS

The RSN was updated for the host node when an intersubnet link (ISL) was activated or deactivated, changing the border node (BN) status of the host node.

CHANGE ROLE

The RSN was updated for an adjacent node when the node type changed from an NN to an EN.

COMMAND

The RSN was updated for the node as the result of a command other than those specifically listed.

F DELETE

The RSN was updated when a MODIFY TOPO,FUNCTION=DELETE,SCOPE=NETWORK command was entered to delete the node.

F NORMAL

The RSN was updated when a MODIFY TOPO,FUNCTION=NORMAL,SCOPE=NETWORK command was entered to change the node status from quiesced to normal.

F QUIESCE

The RSN was updated when a MODIFY TOPO,FUNCTION=QUIESCE,SCOPE=NETWORK command was entered to change the node status to quiesced.

NODE UPDATE

The RSN was updated when one of the following occurred:

- A MODIFY VTAMOPTS,ROUTERES=value command was entered to change the node's route resistance.
- A CDRM-CDRM session was activated, changing the node from a pure APPN node to an interchange node (ICN).

GARBAGE

The RSN was updated during topology garbage collection to inform the rest of the network of the impending node deletion.

TDU EQUAL

The RSN was updated when an input TDU was received for the node with a RSN equal to the RSN in the topology database, but with inconsistent information included.

TDU GREATER

The RSN was updated when an input TDU was received for the host node with a RSN greater than the RSN in the topology database. Because the receiving host node maintains the RSN, this is inconsistent information.

TDU VECTOR

The RSN for the node was updated from an input TDU vector.

IST2306I

WEEKLY

The RSN for the host node was updated during the weekly broadcast of the node and all TGs owned by the node.

• IST2300I

One IST2300I message is issued following each IST2297I message that describes a TDUDIAG RSN update that was made by a node other than the host node.

adjacent_node is the network-qualified CP name of the adjacent node that sent the input TDU that contains the TDUDIAG RSN update information. This might not be the same node that updated the RSN.

Result: Only the first copy of a TDUDIAG RSN update that was made by a node other than the host node is displayed. Duplicate RSN updates received from other adjacent nodes are not saved unless the host node must update the RSN in response to the input TDU information.

• IST2314I

This message displays the number of TDUDIAG RSN updates that are displayed in this message subgroup.

num is the total number of IST2297I messages that are displayed in the message subgroup.

total is the total number of TDUDIAG RSN updates that currently exist for this node.

IST2306I

This is a header message for the topology database update (TDU) diagnostic information for a node.

cp_name is the network-qualified CP name of the node.

IST2307I

This message indicates that the displayed node is an adjacent node that does not support the receipt of unknown topology vectors in TDUs. Network nodes adjacent to the displayed node can send only the originally architected control vectors, X'44', X'45', X'46', and X'47', in TDUs to the displayed node.

IST2312I

This message displays the current resource sequence number (RSN) for this node.

decimal_rsn is the current RSN in decimal format.

hex_rsn is the current RSN in hexadecimal format.

IST2313I

This message displays information about resource sequence number (RSN) updates made for this node.

rsn_count is the total number of times that the host node has updated the RSN for this node since the last time that the TDU counts were reset.

IST2315I

This message is issued if no TDU about this resource was sent.

IST2355I

This message contains the date and time when the TDUDIAG threshold was reached for this resource. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference for more information about the TDUDIAG threshold. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2356I

- *platform* is the platform identifier this node. Possible values are:

****NA****

Platform identifier is unknown

****NA****

Platform identifier is unknown

CS/2

IBM Communications Server for OS/2

CS/AIX

IBM Communications Server for AIX

CS/LINUX Z

IBM Communications Server for Linux on z Systems

CS/LINUX I

IBM Communications Server for Linux on Intel

CS/WINDOWS

IBM Communications Server for Windows

ISERIES

IBM iSeries

SNAPLUS2

Hewlett-Packard SNAplus2

Z/OS VTAM

IBM z/OS Communications Server (VTAM)

Z/VM VTAM

IBM z/VM VTAM

Z/VSE VTAM

IBM z/VSE VTAM

System action: Processing continues.**Operator response:** If you are displaying TDU diagnostic information because of performance degradation of the APPN network, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures , and do the following:

1. If the DISPLAY TOPO,LIST=TDUINFO commands indicate that this node has excessive TDU activity, and TDUDIAG RSN update information is saved for the node in the topology database, this display might provide information about the network nodes that are causing the performance degradation (TDU war).
2. If you can identify the network nodes that are involved in the TDU war, bring down the CP-CP sessions from one of the network nodes involved to all other network nodes in the network or subnetwork.
3. If you cannot stop the TDU war, save the system log and request a dump for problem determination. Contact the system programmer.

System programmer response: Take the following actions:

- If the operator provides output from the DISPLAY TOPO,LIST=TDUINFO or DISPLAY TOPO,LIST=TDUDIAG, use the display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to learn how to diagnose a TDU war. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.**Problem determination:** See the system programmer response.**Source:** z/OS Communications Server SNA**Module:** You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.**Routing code:** 2**Descriptor code:** 5**Automation:** Not recommended.**Example:** The following is an example of the display output from a DISPLAY TOPO,LIST=TDUDIAG,ID=SSCP1A,NUM=6 command:

IST2307I • IST2310I

```
IST350I DISPLAY TYPE = TDU DIAGNOSTICS
IST2306I TDU DIAGNOSTIC INFORMATION FOR NODE: ID = NETA.SSCP1A
IST2312I CURRENT RSN = 1024100 - HEX RSN = 000FA064
IST2356I PLATFORM = Z/OS VTAM
IST2355I TDUDIAG THRESHOLD REACHED ON 01/29/10 AT 15:42:08
IST924I -----
IST2275I TDU INFORMATION SINCE LAST RESET ON 01/29/10 AT 11:43:47
IST1769I LAST TDU RECEIVED - 01/29/10 15:43:25 FROM NETA.SSCP2A
IST2281I LAST TDU SENT - 01/29/10 15:43:25
IST2282I TDU COUNTS:
IST2352I SENT = 496565 RECEIVED = 541498
IST2353I ACCEPTED = 42795 REJECTED = 450422
IST2354I IGNORED = 48281
IST2313I TOTAL RSN UPDATES BY LOCAL HOST NODE = 502059
IST924I -----
IST2294I TDUDIAG RSN UPDATES:
IST2295I TIME HEX RSN HEX RSN
IST2296I CP NAME UPDATED BEFORE AFTER REASON
IST2297I NETA.SSCP1A 15:43:25 000FA062 000FA064 TDU GREATER
IST2297I NETA.SSCP1A 15:43:25 000FA060 000FA062 TDU GREATER
IST2300I RECEIVED FROM: NETA.SSCP2A
IST2297I NETA.SSCP1A 15:43:19 000FA05E 000FA060 TDU GREATER
IST2297I NETA.SSCP1A 15:43:18 000FA05C 000FA05E TDU GREATER
IST2300I RECEIVED FROM: NETA.SSCPAA
IST2297I NETA.SSCP1A 15:43:02 000FA05A 000FA05C TDU GREATER
IST2297I NETA.SSCP1A 15:43:02 000FA058 000FA05A TDU GREATER
IST2300I RECEIVED FROM: NETA.SSCPAA
IST2314I 6 OF 50 RSN UPDATES DISPLAYED
IST314I END
```

IST2307I THIS NODE DOES NOT SUPPORT UNKNOWN TOPOLOGY VECTORS

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name*. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,ID=*cp_name*,LIST=ALL. See message IST1295I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2308I THAT HAVE SAVED TDUDIAG RSN UPDATES

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUDIAG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2309I ACCELERATED ROUTING ENABLED

Explanation: This message is part of several message groups that VTAM issues in response to a DISPLAY ID or DISPLAY TRL command. See "IST1221I" on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST2310I ACCELERATED ROUTING DISABLED

Explanation: This message is part of several message groups that VTAM issues in response to a DISPLAY ID or DISPLAY TRL command. See "IST1221I" on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST2311I TDU DIAGNOSTIC INFORMATION FOR TG: TGN = *tg_number*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY TOPO,LIST=TDUDIAG,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number*. A complete description of the message group follows:

```

IST350I DISPLAY TYPE = TDU DIAGNOSTICS
IST2311I TDU DIAGNOSTIC INFORMATION FOR TG: TGN = tg_number
IST2256I ORIG = origin_node - DEST = dest_node
IST2312I CURRENT RSN = decimal_rsn - HEX RSN = hex_rsn
[IST2355I TDUDIAG THRESHOLD REACHED ON date AT time]
[IST2277I POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED]
IST924I -----
IST2275I TDU INFORMATION SINCE LAST RESET ON date AT time
[IST1769I LAST TDU RECEIVED - date time FROM adjacent_cp]
[IST1784I LAST TDU RECEIVED - NONE]
[IST2281I LAST TDU SENT - date time]
[IST2315I LAST TDU SENT - NONE]
IST2282I TDU COUNTS:
IST2352I SENT = sent RECEIVED = received
IST2353I ACCEPTED = accepted REJECTED = rejected
IST2354I IGNORED = ignored
IST2313I TOTAL RSN UPDATES BY LOCAL HOST NODE = rsn_count
[IST2283I NO TDUDIAG RSN UPDATES EXIST]
[IST924I -----]
[IST2294I TDUDIAG RSN UPDATES:]
[IST2295I TIME HEX RSN HEX RSN]
[IST2296I CP NAME UPDATED BEFORE AFTER REASON]
[IST2297I cp_name time befor_rsn after_rsn reason]
[IST2300I RECEIVED FROM: adjacent_node]
.
.
[IST2314I num OF total RSN UPDATES DISPLAYED]
IST314I END

```

IST350I

This message identifies the type of information in the display and is always TDU DIAGNOSTICS for this message group.

IST1769I

The *date* and *time* values specify when the last topology database update (TDU) was received for this TG. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

adjacent_cp is the network-qualified CP name of the adjacent node that sent the last TDU that was received.

IST1784I

This message is issued if no TDU about this resource was received.

IST2275I

- The *date* and *time* values specify when all the TDU information and TDU counters were reset. The TDU information and TDU counters for a TG are reset every 24 hours when garbage collection runs, or when one of the following commands is entered:
 - DISPLAY NET,TOPO,LIST=TDUINFO,CLEAR=YES or a
 - DISPLAY NET,TOPO,LIST=TDUDIAG,CLEAR=YES
 - DISPLAY NET,TOPO,LIST=TDUDIAG,ORIG=*cpname*,DEST=*destcpname*,TGN=*ign*,CLEAR=YES

See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2277I

IST2311I

This message indicates that possible topology control vector corruption was detected for the TG. Because the topology control vectors contain the resource sequence number (RSN) for the node, which determines how a TDU is processed, it is possible that control vector corruption could cause a TDU war. The most probable cause of control vector corruption is a storage overlay.

IST2281I

The *date* and *time* values specify when the last topology database update (TDU) was sent for this TG. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2282I, IST2352I, IST2353I, IST2354I

- This message subgroup displays topology database update (TDU) counts for this TG. A description of the message subgroup follows:

```
IST2282I TDU COUNTS:
IST2352I SENT      = sent      RECEIVED = received
IST2353I ACCEPTED = accepted  REJECTED = rejected
IST2354I IGNORED  = ignored
```

- **IST2282I**

This is a header message for topology database update (TDU) counts for this TG.

IST2313I

This message displays information about resource sequence number (RSN) updates made for this TG.

rsn_count is the total number of times that the host node has updated the RSN for this TG since the last time that the TDU counts were reset.

IST2315I

This message is issued if no TDU about this resource was sent.

- **IST2352I**

This message displays the counts of TDUs that were sent and received for this TG

sent is the number of TDUs about the TG that were sent since the last time that the TDU counts were reset.

received is the number of TDUs about the TG that were received since the last time that the TDU counts were reset.

- **IST2353I**

This message displays counts of TDUs that were accepted and rejected for this TG.

accepted is the number of TDUs about the TG that were accepted since the last time that the TDU counts were reset. The TDUs contain new information about the node and the topology database was updated.

rejected is the number of TDUs about the node that were rejected since the last time that the TDU counts were reset. The TDUs were rejected because the TDUs contain outdated information about the node. TDUs that are built from the local topology database information for the node were sent as corrections.

- **IST2354I**

This message displays counts of TDUs ignored for this TG.

ignored is the number of TDUs about the TG that were ignored since the last time that TDU counts were reset. The TDUs were discarded because the TDUs contained no new information.

IST2283I

This message indicates that no resource sequence number (RSN) updates exist for this TG.

IST2294I, IST2295I, IST2296I, IST2297I, IST2300I, IST2314I

- This message subgroup displays information about the TDUDIAG resource sequence number (RSN) update information that was saved in the topology database for this TG. A description of the message subgroup follows:

```
IST2294I TDUDIAG RSN UPDATES:
IST2295I TIME      HEX RSN  HEX RSN
IST2296I CP NAME   UPDATED  BEFORE  AFTER  REASON
IST2297I cp_name   time     befor_rsn after_rsn reason
IST2300I RECEIVED FROM: adjacent_node
IST2314I num OF total RSN UPDATES DISPLAYED
```

- **IST2294I**

This is a header message for information about the TDUDIAG resource sequence number (RSN) update information that was saved in the topology database for this TG.

- **IST2295I, IST2296I**

These are header messages for the information that is displayed in the IST2297I and IST2300I subgroup messages that follow.

- **IST2297I**

- One IST2297I message is issued for each TDUDIAG RSN update that was saved in the topology database for this TG. The first IST2297I in this message subgroup describes the most recent TDUDIAG RSN update.
- The NUM keyword can be specified on the DISPLAY command to limit the number of topology resources that are displayed. The default value is 10 and the maximum value is 50. If the number of TDUDIAG RSN updates that are saved for this TG is smaller than the number of RSN updates that were requested on the display command, the number of IST2297I messages that are displayed in this subgroup can be smaller than the value that was specified in the NUM keyword.
- *cp_name* is the network-qualified CP name of the network node that updated the RSN for this TG.
- *time* is the time when the TDUDIAG RSN update for this TG was saved in the topology database. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.
- *before_rsn* is the RSN for the TG before the RSN update. It is expressed in hexadecimal.
- *after_rsn* is the RSN for the TG after the RSN update. It is expressed in hexadecimal.
- *reason* is the reason that the RSN was updated for this TG. Possible values are:

****NA****

RSN update reason is unknown.

COMMAND

The RSN was updated for the TG as the result of a command other than those specifically listed.

CW ACTIVE

The RSN was updated when the contention winner CP-CP session was activated over the TG.

CW INACTIVE

The RSN was updated when the contention winner CP-CP session over the TG was deactivated.

F CLRNRCH

The RSN was updated when a MODIFY TOPO,FUNCTION=CLRNRCH,SCOPE=NETWORK command was entered to clear unreachable partner records.

F DELETE

The RSN was updated when a MODIFY TOPO,FUNCTION=DELETE,SCOPE=NETWORK command was entered to delete the TG.

F NORMAL

The RSN was updated when a MODIFY TOPO,FUNCTION=NORMAL,SCOPE=NETWORK command was entered to change the TG status from quiesced to normal.

F QUIESCE

The RSN was updated when a MODIFY TOPO,FUNCTION=QUIESCE,SCOPE=NETWORK command was entered to change the TG status to quiesced.

GARBAGE

The RSN was updated during topology garbage collection to inform the rest of the network of the impending TG deletion.

TDU EN TG

The RSN was updated when an input TDU was received for a TG owned by the receiving host node because the partner node changed from an NN to an EN. The host node sets the TG to an INOP status and broadcasts it to all adjacent nodes to prevent the use of the endpoint TG for intermediate routing.

TDU EQUAL

The RSN was updated when an input TDU was received for the TG with a RSN equal to the RSN in the topology database, but with inconsistent information included.

IST2311I

TDU GREATER

The RSN was updated when an input TDU was received for the TG owned by the receiving host node with a RSN greater than the RSN in the topology database. Because the TG's owning node maintains the RSN, this is inconsistent information.

TDU ISL/BEX

The RSN was updated when an input TDU was received for an intersubnet link (ISL) or branch extender (BEX) TG that is owned by the receiving host node and the input status of the TG was rejected for one of the following reasons:

- The input TDU has the garbage collection indicator (GCI) on, but the TG in the local database is operational and its RSN has an even value.
- The input status of the TG is not quiesced; an ISL or BEX TG is always broadcast to non-owning nodes as quiesced.

The host node broadcasts the correct status of the TG to all adjacent nodes.

TDU NEW TG

The RSN was updated when an input TDU was received for a TG that is owned by the receiving host node, but that TG does not exist. The host node broadcasts the TG with an INOP status to all adjacent nodes to prevent the use of the non-existent TG.

TDU VECTOR

The RSN for the TG was updated from an input TDU vector.

TG ACTIVE

The RSN was updated when the TG was activated.

TG CREATE

The RSN was set to the start RSN when the TG record was created at TG activation.

TG INACTIVE

The RSN was updated when the TG was deactivated.

TG LOCAL

The RSN was updated for a TG that originates in the host node, with a destination partner node that changed its node type from NN to EN.

TG REVERSE

The RSN was updated for a TG that originates in a partner node that changed its node type from NN to EN. This is the reverse TG of a TG that originates in the host node.

WEEKLY

The RSN for the TG was updated during the weekly broadcast of the host node and all TGs owned by the host node.

- **IST2300I**

One IST2300I message is issued following each IST2297I message that describes a TDUDIAG RSN update for the TG that was made by a node other than the host node.

adjacent_node is the network-qualified CP name of the adjacent node that sent the input TDU that contains the TDUDIAG RSN update information. This might not be the same node that updated the RSN.

Result: Only the first copy of a TDUDIAG RSN update that was made by a node other than the host node is displayed. Duplicate RSN updates received from other adjacent nodes are not saved unless the host node must update the RSN in response to the input TDU information.

- **IST2314I**

This message displays the number of TDUDIAG RSN updates that are displayed in this message subgroup.

num is the total number of IST2297I messages that are displayed in the message subgroup.

total is the total number of TDUDIAG RSN updates that currently exist for this node.

IST2311I, IST2256I

- This is a header message subgroup for the topology database update (TDU) diagnostic information for the TG. A description of the message subgroup follows:

IST2311I TDU DIAGNOSTIC INFORMATION FOR TG: TGN = *tg_number*
 IST2256I ORIG = *origin_node* - DEST = *dest_node*

- **IST2311I**

This header message displays the TG number for the TG.

tg_number is the TG number of the TG.

- **IST2256I**

This header message displays the origin and destination of the TG.

origin_node is the network-qualified CP name of the origin node of the TG.

dest_node is the network-qualified CP name of the destination node of the TG.

IST2312I

This message displays the current resource sequence number (RSN) for this TG.

decimal_rsn is the current RSN in decimal format.

hex_rsn is the current RSN in hexadecimal format.

IST2355I

This message contains the date and time when the TDUDIAG threshold was reached for this TG. See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference for more information about the TDUDIAG threshold. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

System action: Processing continues.

Operator response: If you are displaying TDU diagnostic information because of performance degradation of the APPN network, use the information about display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures , and do the following:

1. If the DISPLAY TOPO,LIST=TDUINFO commands indicate that this TG has excessive TDU activity, and TDUDIAG RSN update information is saved for the TG in the topology database, this display might provide information about the network nodes that are causing the performance degradation (TDU war).
2. If you can identify the network nodes that are involved in the TDU war, bring down the CP-CP sessions from one of the network nodes involved to all other network nodes in the network or subnetwork.
3. If you cannot stop the TDU war, save the system log and request a dump for problem determination. Contact the system programmer.

System programmer response: Take the following actions:

- If the operator provides output from the DISPLAY TOPO,LIST=TDUINFO or DISPLAY TOPO,LIST=TDUDIAG, use the display TDU information in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures to learn how to diagnose a TDU war. If possible, identify the topology resource that is in contention and the network nodes that are involved in the TDU war.
- If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, report the problem to the IBM software support center.

User response: Not applicable.

Problem determination: See the system programmer response.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not recommended.

Example: The following is an example of the display output from a DISPLAY TOPO,LIST=TDUDIAG,ORIG=SSCP1A,DEST=SSCPBA,TGN=2,NUM=3 command:

IST2312I • IST2314I

```
IST350I DISPLAY TYPE = TDU DIAGNOSTICS
IST2311I TDU DIAGNOSTIC INFORMATION FOR TG: TGN = 21
IST2256I ORIG = NETA.SSCP1A - DEST = NETA.SSPCBA
IST2312I CURRENT RSN = 3128 - HEX RSN = 00000C38
IST2355I TDUDIAG THRESHOLD REACHED ON 02/11/10 AT 13:37:08
IST924I -----
IST2275I TDU INFORMATION SINCE LAST RESET ON 02/11/10 AT 10:48:52
IST1769I LAST TDU RECEIVED - 02/11/10 13:40:14 FROM NETA.SSCP1A
IST2281I LAST TDU SENT - 02/11/10 13:40:20
IST2282I TDU COUNTS:
IST2352I SENT = 3890 RECEIVED = 5101
IST2353I ACCEPTED = 793 REJECTED = 4260
IST2354I IGNORED = 48
IST2313I TOTAL RSN UPDATES BY LOCAL HOST NODE = 4260
IST924I -----
IST2294I TDUDIAG RSN UPDATES:
IST2295I TIME HEX RSN HEX RSN
IST2296I CP NAME UPDATED BEFORE AFTER REASON
IST2297I NETA.SSCP1A 13:40:20 00000C36 00000C38 TDU GREATER
IST2300I RECEIVED FROM: NETA.SSCP1A
IST2297I NETA.SSCP1A 13:40:20 00000C34 00000C36 TDU GREATER
IST2300I RECEIVED FROM: NETA.SSCP2A
IST2297I NETA.SSCP1A 13:40:19 00000C32 00000C34 TDU GREATER
IST2300I RECEIVED FROM: NETA.SSCP1A
IST2314I 3 OF 50 RSN UPDATES DISPLAYED
IST314I END
```

IST2312I CURRENT RSN = *decimal_rsn* - HEX RSN = *hex_rsn*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2313I TOTAL RSN UPDATES BY LOCAL HOST NODE = *rsn_count*

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2314I *num* OF *total* RSN UPDATES DISPLAYED

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2315I LAST TDU SENT - NONE

Explanation: VTAM issues this message as part of a group of messages in response to the following commands:

- DISPLAY TOPO,LIST=TDUDIAG,ID=cp_name. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=orig_cp_name,DEST=dest_cp_name,TGN=tgn. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,ID=cp_name,LIST=ALL. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=orig_cp_name,DEST=dest_cp_name or DISPLAY TOPO,ORIG=orig_cp_name,TGN=tgn. See message IST1299I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2316I EARLYINO = *earlyino* EARLYINT = *earlyint*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See "IST1230I" on page 479 for more information.

Routing code: 2

Descriptor code: 5

IST2317I ULPRETUO = *ulpretuo* ULPRETU = *ulpretu*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for multipath channel (MPC) attached resources. The first message in the group is IST1230I. See "IST1230I" on page 479 for more information.

Routing code: 2

Descriptor code: 5

IST2318I UNABLE TO OPEN *applname* - NETWORK ADDRESS LIMIT REACHED

Explanation: While creating a dynamic APPL RDTE during an OPEN ACB, VTAM attempted to allocate a network address for the resource. However, VTAM had already allocated the maximum number of network addresses in the host subarea. Therefore, VTAM failed to define a new network address for the resource.

System action: VTAM fails the OPEN ACB. The ACBERFLG field is set to X'14'.

Operator response: Deactivate any unneeded major nodes in the host subarea to free network addresses, and then have the application OPEN the ACB again. If VTAM continues to issue this message, save the system log for problem determination. See the VARY INACT command in z/OS Communications Server: SNA Operation for more information.

System programmer response: Check the output provided by the operator to ensure that all requirements for VTAM are correct for your system.

Because the maximum number of elements that can be assigned by VTAM in the host subarea has been reached, examine the possibility of allocating devices and applications to other subareas.

You can increase the number of available host subarea element addresses by allowing the use of high-order element addresses for some resources. To enable the use of high-order element addresses, specify YES for the ENHADDR start option. Modify the start options file (ATCSTRxx) and restart VTAM to use the start option. See the information about increasing host subarea element addresses in z/OS Communications Server: SNA Network Implementation Guide.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server TCP/IP: SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start

IST2319I • IST2321I

option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2318I UNABLE TO OPEN APPL1 - NETWORK ADDRESS LIMIT REACHED
```

IST2319I IQD NETWORK ID = *netid*

Explanation: This message is part of several message groups that VTAM issues in response to a DISPLAY ID or DISPLAY TRL command. See message “IST1221I” on page 467 for a complete description.

Routing code: 2

Descriptor code: 5

IST2320I WTOR *msg_num* FROM CONSOLE *console* DELETED DUE TO VTAM HALT

Explanation: VTAM issues this unsolicited message when a HALT or HALT,QUICK command was entered to end VTAM; however, HALT processing detected an outstanding write-to-operator with reply (WTOR) message that is waiting for a reply. The outstanding WTOR message is deleted so that VTAM HALT processing can continue.

In the message text:

msg_num

The message number of the WTOR message that is deleted.

console

The console ID of the operating system console that is waiting for the response to the WTOR message. If the console ID is not available, ***NA*** is displayed.

System action: VTAM HALT processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 7,12

Automation: Not recommended.

Example:

```
IST2320I WTOR IST1660A FROM CONSOLE 01000040 DELETED DUE TO VTAM HALT
```

IST2321I TDUDIAG VALUE MUST BE NUMERIC, 'ALWAYS', OR 'NEVER'

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the value of the TDUDIAG start option is not correct. Valid values for TDUDIAG are ALWAYS, NEVER, or a numeric value.

See the TDUDIAG start option information in z/OS Communications Server: SNA Resource Definition Reference.

System action:

- If the error occurred during START processing, VTAM issues message IST1311A to prompt you for the correct value of the TDUDIAG start option.
- If the error occurred in response to a MODIFY VTAMOPTS command, VTAM ignores the TDUDIAG start option and processing continues

Operator response:

1. If the error occurred during START processing, enter a valid value for the TDUDIAG start option in response to IST1311A. You can also enter a blank if you want to accept the default value for the TDUDIAG start option.
2. If the error occurred in response to a MODIFY VTAMOPTS command, enter the command again with a valid value for the TDUDIAG start option.

System programmer response:

1. If the error occurred during START processing, correct the value for the TDUDIAG start option if TDUDIAG is coded in an ATCSTRxx file.
2. If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not recommended.

Example:

```
IST2321I TDUDIAG VALUE MUST BE NUMERIC, 'ALWAYS', OR 'NEVER'
```

IST2322I **WTOR** *msg_num* FROM POA *poa_name* DELETED DUE TO VTAM HALT

Explanation: VTAM issues this unsolicited message when a HALT or HALT,QUICK command was entered to end VTAM; however, HALT processing detected an outstanding write-to-operator with reply (WTOR) message that is waiting for a reply. The outstanding WTOR message is deleted so that VTAM HALT processing can continue.

In the message text:

msg_num

The message number of the WTOR message that is deleted.

poa_name

The program operator application (POA) that is waiting for the response to the WTOR message. If the POA name is not available, ***NA*** is displayed.

System action: VTAM HALT processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 7,12

IST2323E • IST2324I

Automation: Not recommended.

Example:

```
IST2322I WTOR IST1660A FROM POA A0600PPT DELETED DUE TO VTAM HALT
```

IST2323E EE HEALTH VERIFICATION FAILED FOR ONE OR MORE CONNECTIONS

Explanation: VTAM sent a Logical Data Link Control (LDLC) probe to the remote partner on one or more active EE connections to verify the health of the EE connection. VTAM did not receive the response from one or more remote partners of the LDLC probe. This message remains on the system console until all active EE connections receive successful EE health verifications or until the message is manually deleted.

System action: Processing continues.

Operator response: Use the DISPLAY NET,EE,LIST=EEVERIFY command to determine which EE connections are experiencing EE health verification failures. Message IST2325I will be displayed for each line or PU that failed health verification on last LDLC probe to their remote partner. Use the DISPLAY NET,ID=*linename* or DISPLAY NET,ID=*puname* command for more information about local and remote IP addresses. If you cannot determine the cause of the problem, contact the system programmer.

System programmer response: Determine the network connectivity problems between this node and the remote partners. Use the DISPLAY NET,EEDIAG,TEST=YES command to determine the reason for the failure. See the information about the DISPLAY EEDIAG,TEST=YES command in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures and the information about troubleshooting EE problems in z/OS Communications Server: SNA Network Implementation Guide.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 11

Automation: This message is a good candidate for automation.

Example:

```
IST2323E EE HEALTH VERIFICATION FAILED FOR ONE OR MORE CONNECTIONS
```

IST2324I EE HEALTH VERIFICATION: FAILED CONNECTION INFORMATION

Explanation: This message is displayed in response to the D NET,EE,LIST=EEVERIFY command. A complete description of the message group follows.

```
IST2324I EE HEALTH VERIFICATION: FAILED CONNECTION INFORMATION  
[IST2325I LINE linename PU puname ON date AT time]  
IST2326I EE HEALTH VERIFICATION TOTAL CONNECTION FAILURES = number
```

IST2324I

This message is displayed in response to a D NET,EE,LIST=EEVERIFY command

IST2325I

This message is displayed to show each failed EE connection.

In the message text:

linename

The name of the line for the EE connection that failed health verification.

puname

The name of the PU that is associated with the EE connection that failed health verification

date and time

The date and time when the EE health verification failed. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values.

IST2326I

This message provides the total number of EE connections that failed health verification

In the message text:

number

The number of EE lines that failed verification. A value of 0 indicates that no EE lines failed verification.

System action: Processing continues

Operator response: If IST2326I shows that there are failed EE connections then contact the system programmer.

System programmer response: Issue the DISPLAY NET,EE,DIAG,ID=*linename*,TEST=YES command to test the EE connection. See the information about understanding the EE connectivity test output in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2324I EE HEALTH VERIFICATION FAILED CONNECTION INFORMATION
IST2325I LINE LNEE1000 PU PU1000 ON 04/16/09 AT 14:01:00
IST2325I LINE LNEE2000 PU PU2000 ON 04/16/09 AT 14:02:00
IST2326I EE HEALTH VERIFICATION TOTAL CONNECTION FAILURES = 2
```

IST2325I **LINE** *linename* **PU** *puname* **ON** *date* **AT** *time*

Explanation: This message is part of a group of messages displayed in response to the D NET,EE,LIST=EEVERIFY command. The first message in the group is IST2324I. See IST2324I for a complete description.

Routing code: 2

Descriptor code: 5

IST2326I **EE HEALTH VERIFICATION TOTAL CONNECTION FAILURES =** *number*

Explanation: This message is part of a group of messages displayed in response to the D NET,EE,LIST=EEVERIFY command. The first message in the group is IST2324I. See IST2324I for a complete description.

Routing code: 2

Descriptor code: 5

IST2327I

IST2327I EE HEALTH VERIFICATION OPTION - EEVERIFY = *mmm* MINUTES

Explanation: VTAM issues this message subgroup to report the results of the last EE health verification on the displayed line or PU that represent an EE connection. This subgroup is a part of the IST2001I message group. This subgroup is issued when a DISPLAY EE command that uses the ID parameter with the line or PU that has an active EE connection, and VTAM is verifying the health of the EE connection periodically. This message group is not issued if VTAM is not verifying the health of the EE connection periodically or the PU/line does not support EE health verification function with an active EE connection.

The following is the subgroup that is issued when the most recent EE health verification indicated a failure:

```
IST2327I EE HEALTH VERIFICATION OPTION - EEVERIFY = number MINUTES
[IST2328I EE HEALTH VERIFICATION FAILED ON date AT time]
[IST2339I EE HEALTH VERIFICATION LAST SUCCESS ON date AT time]
```

The following is the subgroup that is issued when the most recent EE health verification indicated a success and we have had a previous failure:

```
IST2327I EE HEALTH VERIFICATION OPTION - EEVERIFY = number MINUTES
[IST2329I EE HEALTH VERIFICATION SUCCESSFUL ON date AT time]
[IST2340I EE HEALTH VERIFICATION LAST FAILED ON date AT time]
```

The following is the subgroup that is issued when the most recent EE health verification indicated a success and we have never had a previous failure:

```
IST2327I EE HEALTH VERIFICATION OPTION - EEVERIFY = number MINUTES
[IST2329I EE HEALTH VERIFICATION SUCCESSFUL ON date AT time]
[IST2341I EE HEALTH VERIFICATION HAS NEVER FAILED FOR THIS CONNECTION]
```

IST2327I

This message is displayed if EE health verification is active for the displayed PU or line.

In the message text:

number

The *number* value indicates, in minutes, how often VTAM performs a health verification on the EE connection.

IST2328I

This message is issued to report the date and time that the most recent EE health verification failed.

In the message text:

date and time

The date and time when the most recent EE health verification failed. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values.

IST2329I

This message is issued to report the date and time that the most recent EE health verification was successful.

In the message text:

date and time

The date and time that the most recent EE health verification was successful. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values. The *time* value is in the 24 hour format.

IST2339I

This message is issued to report the date and time that the most recent EE health verification failed.

date and time

The date and time that the most recent EE health verification failed. See "DATE and TIME formats" on page 6 for information about the *date* and *time* values. The *time* value is in the 24 hour format.

IST2340I

This message is issued to report the date and time that the most recent EE health verification attempt failed.

date and time

The date and time that the that the most recent EE health verification attempt failed. See “DATE and TIME formats” on page 6 for information about the *date* and *time* values. The *time* value is in the 24 hour format.

IST2341I

This message is issued to report that the EE health verification never failed for this connection.

System action: Processing continues.

Operator response: If IST2329I is issued, then no action is necessary. If IST2328I is issued, then contact the system programmer.

System programmer response: Issue the DISPLAY NET,EE DIAG,ID=*resource_name*,TEST=YES to test the EE connection. The *resource_name* is the same value that was used in the DISPLAY NET,ID= command that generated the IST2328I message. See the information about understanding the EE connectivity test output in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2328I EE HEALTH VERIFICATION FAILED ON *date* AT *time*

Explanation: This message is part of a subgroup of messages that is displayed in response to a DISPLAY EE command for a line or PU that has an active EE connection, and VTAM is verifying the health of the EE connection periodically. The first message is IST2327I. See IST2327I for a complete description.

Routing code: 2

Descriptor code: 5

IST2329I EE HEALTH VERIFICATION SUCCESSFUL ON *date* AT *time*

Explanation: This message is part of a subgroup of messages that is displayed in response to a DISPLAY EE command for a line or PU with an active EE connection, and VTAM is verifying the health of the EE connection periodically. The first message is IST2327I. See IST2327I for a complete description.

Routing code: 2

Descriptor code: 5

IST2330I EE HEALTH VERIFICATION FAILED FOR *puname* AT *time*

Explanation: This message is the first in a group of messages that VTAM issues when the activation of an EE connection fails EE health verification. EE health verification is specified with the EEVERIFY start option. See the EEVERIFY start option information in z/OS Communications Server: SNA Resource Definition Reference .

VTAM sends a Logical Data Link Control (LDLC) probe to the remote partner to determine if all ports are accessible during the activation of the EE connection. EE health verification for this connection activation failed because VTAM

IST2330I

did not receive a response, or received an error response, from the remote partner.

A complete description of the message group follows:

```
IST2330I EE HEALTH VERIFICATION FAILED FOR puname AT time
IST1680I type IP ADDRESS ip_address
IST1680I type IP ADDRESS ip_address
IST314I END
```

IST2330I

- In the message text:

puname

The name of the switched physical unit.

time

The time when the EE health verification failed. See “DATE and TIME formats” on page 6 for information about the *time* value. The *time* value is in the 24 hour format.

IST1680I

- In the message text:

type

The *type* value identifies the IP address that is displayed. Possible values are LOCAL and REMOTE.

ip_address

Either the remote IP address or the local IP address. The first instance of message IST1680I displays the local IP address, and the second instance of message IST1680I displays the remote IP address.

System action: The EE connection is not established. An INOP is generated when EE health verification fails and the EE connection is not established.

Operator response: Issue the DISPLAY EEDIAG,TEST=YES command using the local and remote IP addresses to determine the Enterprise Extender connectivity. Review the Enterprise Extender Connectivity Test output for any unsuccessful test results. If the reason for the failure could not be determined, contact the system programmer with the DISPLAY EEDIAG,TEST=YES command output.

System programmer response: Review the Enterprise Extender Connectivity Test output for any unsuccessful test results further. See Display EEDIAG in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing the test output.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: The automation tool can issue the DISPLAY EEDIAG,TEST=YES command when it detects the message IST2330I.

Example:

```
IST2330I EE HEALTH VERIFICATION FAILED FOR SWPU0001 AT 10:20:02
IST1680I LOCAL IP ADDRESS 2000::67:1:1
IST1680I REMOTE IP ADDRESS 2000::67:1:2
IST314I END
```

IST2331I QUEUE QUEUE READ QUEUE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID or DISPLAY TRL command. See message “IST1221I” on page 467 for a complete description of the message group.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2332I ID TYPE STORAGE STATUS

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID or DISPLAY TRL command. See message “IST1221I” on page 467 for a complete description of the message group.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2333I *qid qtype storage_amount qstat*

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID or DISPLAY TRL command. See message “IST1221I” on page 467 for a complete description of the message group.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

IST2334I EEVERIFY MUST BE 'ACTIVATE', 'NEVER', OR A NUMERIC VALUE

Explanation: VTAM issues this message during START processing or in response to a MODIFY VTAMOPTS command when the value of the EEVERIFY start option is not correct. Valid values for EEVERIFY are ACTIVATE, NEVER or a numeric value.

See the EEVERIFY start option information in z/OS Communications Server: SNA Resource Definition Reference .

System action: One of the following occurred:

- If the error occurred during START processing, VTAM issues message IST1311A to prompt you for the correct value of the EEVERIFY start option.
- If the error occurred in response to a MODIFY VTAMOPTS command, VTAM ignores the EEVERIFY VALUE and processing continues.

Operator response: Take one of the following actions:

- If the error occurred during START processing, enter a valid value for the EEVERIFY start option in response to IST1311A. You can also enter a blank if you want to accept the default value of ACTIVATE for the EEVERIFY start option or an earlier valid value of the EEVERIFY start option.
- If the error occurred in response to a MODIFY VTAMOPTS command, enter the command again with a valid value for the EEVERIFY start option.

System programmer response: Take one of the following actions:

IST2335I • IST2338I

- If the error occurred during START processing, correct the value for the EEVERIFY start option if EEVERIFY is coded in an ATCSTRxx file.
- If the error occurred in response to a MODIFY VTAMOPTS command, no further action is required.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2334I EEVERIFY MUST BE 'ACTIVATE', 'NEVER', OR A NUMERIC VALUE
```

IST2335I PATH SWITCH REASON: XMIT STALL RECOVERY

Explanation: This message is part of a group of messages that VTAM issues in response to an RTP path switch. The first message in the group is either IST1494I or IST1968I. See the description of those messages for more information.

Routing code: 2

Descriptor code: 5

IST2336I STALLED = *stalled*

Explanation: VTAM issues this message as part of an HPR path switch summary message group. This message group is issued only if the HPR path switch message reduction function is enabled. The first message in this message group is IST2191I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IST2337I CHPID TYPE = *chpid_type* CHPID = *chpid_num* PNETID = *net_id*

Explanation: This message is part of several message groups that VTAM issues in response to a DISPLAY ID or DISPLAY TRL command. See “IST1221I” on page 467 for a complete description.

| VTAM also issues this message as part of a group of messages that the adapter interrupt monitoring function
| generates. The first message in the group is IST2419I. See “IST2419I” on page 1042 for a complete description.

Routing code: 2

Descriptor code: 5

IST2338I NACPROBE MUST BE 'DUMP', 'NODUMP', OR A NUMERIC VALUE

Explanation: VTAM issues this message during START processing or in response to a **MODIFY VTAMOPTS** command when the value of the NACPROBE start option is not correct. Valid values for NACPROBE are DUMP, NODUMP, or a numeric value.

See NACPROBE start option in z/OS Communications Server: SNA Resource Definition Reference.

System action: One of the following occurred:

- If the error occurred during START processing, VTAM issues message IST1311A to prompt you for the correct value of the NACPROBE start option.
- If the error occurred in response to a **MODIFY VTAMOPTS** command, VTAM ignores the NACPROBE value and processing continues.

Operator response: Take one of the following actions:

- If the error occurred during START processing, enter a valid value for the NACPROBE start option in response to message IST1311A. You can also enter a blank if you want to accept the default value of NODUMP for the NACPROBE start option or an earlier valid value of the NACPROBE start option.
- If the error occurred in response to a **MODIFY VTAMOPTS** command, enter the command again with a valid value for the NACPROBE start option.

System programmer response: Take one of the following actions:

- If the error occurred during START processing and NACPROBE is coded in an ATCSTRxx file, correct the value for the NACPROBE start option.
- If the error occurred in response to a **MODIFY VTAMOPTS** command, no further action is required.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2338I NACPROBE MUST BE 'DUMP', 'NODUMP', OR A NUMERIC VALUE
```

IST2339I EE HEALTH VERIFICATION LAST SUCCESS ON *date* AT *time*

Explanation: This message is part of a subgroup of messages that is displayed in response to a DISPLAY EE command for a line or PU that has an active EE connection, and VTAM is verifying the health of the EE connection periodically. See message IST2327I for a complete description.

Routing code: 2

Descriptor code: 5

IST2340I EE HEALTH VERIFICATION LAST FAILED ON *date* AT *time*

Explanation: This message is part of a subgroup of messages that is displayed in response to a DISPLAY EE command for a line or PU with an active EE connection, and VTAM is verifying the health of the EE connection periodically. See message IST2327I for a complete description.

Routing code: 2

Descriptor code: 5

IST2341I EE HEALTH VERIFICATION HAS NEVER FAILED FOR THIS CONNECTION

Explanation: This message is part of a subgroup of messages that is displayed in response to a DISPLAY EE command for a line or PU that has an active EE connection, and VTAM is verifying the health of the EE connection periodically. See message IST2327I for a complete description.

Routing code: 2

Descriptor code: 5

IST2342I EE HEALTH VERIFICATION NOT SUPPORTED BY *puname*

Explanation: During the activation of the EE connection, VTAM sent Logical Data Link Control (LDLC) probes to the remote partner to determine if all five ports are accessible. VTAM did not receive a response to any of the LDLC probe requests. VTAM continued with the activation of the EE connection between this node and the remote partner. Because VTAM received no replies to its LDLC probe requests, VTAM determined that the remote partner does not support EE health verification.

In the message text:

puname

The name of the switched physical unit.

System action: VTAM continues with the activation of the EE connection.

Operator response: Contact the system programmer.

System programmer response: If EE health verification is required for this PU, contact the remote PU owner about upgrading the PU to support EE health verification probes.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA: SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: None

Example:

IST2342I EE HEALTH VERIFICATION NOT SUPPORTED BY SWIP1A1

IST2343I EE HEALTH VERIFICATION NOT SUPPORTED BY REMOTE EE PARTNER

Explanation: This message is part of a group of messages that is issued in response to a DISPLAY EE command for Enterprise Extender connection information. See message IST2001I for a complete description.

Routing code: 2

Descriptor code: 5

IST2344I NODE ROLE CHANGE FROM *from_role* TO *to_role* FAILED - SENSE: *sense*

Explanation: This message is part of a group of unsolicited messages that VTAM issues when an attempt is made to change the role of an APPN node. Valid APPN node roles are network node (NN), end node (EN), virtual routing node (VRN), and global virtual routing node (GVRN). The role of a node can be changed in two ways:

- A link is activated to another node that has changed roles. In this case, it is the role of the destination node of a TG that changes.
- A topology database update (TDU) is received and the role of the node identified in the TDU does not match the role of the node in the topology database.

A complete description of the message group follows:

```
[IST2344I NODE ROLE CHANGE FROM from_type TO to_type FAILED - SENSE: sense]
[IST2345I NODE ROLE CHANGE FROM from_type TO to_type SUCCEEDED]
```

```
IST2346I CP NAME = cp_name
[IST2347I TDU RECEIVED FROM ADJACENT NODE adj_cp]
```

IST2344I

- This message identifies the roles involved in a node role change that failed.

- In the message text:

from_role

The existing role of the node in the topology database. Values can be EN, NN, VRN, or GVRN.

to_role

The role of the node in the input TDU or the new role of the destination node of the TG being activated. Values can be EN, NN, VRN, or GVRN.

sense_code

The sense code set for the node role change failure.

- A node role change is not valid and will fail when the following changes are attempted:
 - The change in roles is for the host node.
 - The change in roles is from a virtual node (VRN or GVRN) to a real node (NN or EN).
 - The change in roles is from a real node to a virtual node.
 - The change in roles is attempted with a TDU, but there is already an active link to that node.
 - The change in roles is attempted with a TDU for a non-adjacent DLUR EN, but the new role is not an EN.
- In addition to the messages, an alert with ID X'A6C6D1D5' is generated for the failed node role change.

IST2345I

- This message identifies the roles involved in a node role change that succeeded.
- In the message text:

from_role

The existing role of the node in the topology database. Values can be EN or NN.

to_role

The role of the node in the input TDU or the new role of the destination node of the TG that is being activated. Values can be EN or NN.

IST2346I

- This message identifies the node whose role change succeeded or failed.
- In the message text:

cp_name

The network-qualified CP name of the node.

IST2347I

- This message is issued when VTAM attempts to change the role of an APPN node because VTAM received a TDU with a node role that differs from the role in the topology database. This TDU contains the control vectors that identify the node for the role change. The message identifies the adjacent node from which the TDU was received.
- In the message text:

adj_cp

The network-qualified CP name of the adjacent node.

System action: Processing continues.

Operator response: If these messages are not expected, do the following:

1. Message IST2346I identifies the node of concern. Enter a command to obtain additional information about the node.
2. Save the system log and request a dump for problem determination.
3. Contact the system programmer.

System programmer response:

- If message IST2347I was issued, then VTAM attempted to change the role of the node from an input TDU.
- If message IST2347I was not issued, then VTAM attempted to change the role of the node as the result of activating a link to an adjacent node.
- This problem is often the result of user definitions that are not valid.

IST2345I • IST2346I

- When message IST2344I indicates that the role change is from a real node (EN or NN) to a virtual routing node (VRN or GVRN), the new virtual node name is defined in the XCA major node. Ensure that the VRNNAME operand on the PORT definition statement or the GROUP definition statement (EE XCA major node only) specifies a unique CP name.
- When message IST2344I indicates that the role change is from a virtual routing node to a real node, you must determine the correct role of the node with the CP name in IST2346I.
- When IST2344I is issued indicating that the role change for a node failed and the node is known throughout the network with an incorrect role, or if you cannot resolve the problem, you need to contact IBM for assistance.
- If you have access to IBMLink, contact IBM for assistance by using the Electronic Technical Report (ETR) option on IBMLink.
- If you do not have access to IBMLink, contact IBM for assistance through the IBM software support center.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2,8

Descriptor code: 12

Automation: Automation on these messages can aid in the detection of unauthorized node role changes.

Example:

```
IST2344I NODE ROLE CHANGE FROM EN TO VRN FAILED - SENSE: 08954409
IST2346I CP NAME = NETA.CPAA
IST2347I TDU RECEIVED FROM ADJACENT NODE NETA.CP2A
IST314I END
```

IST2345I NODE ROLE CHANGE FROM *from_role* TO *to_role* SUCCEEDED

Explanation: This message is part of a group of unsolicited messages that VTAM issues when an attempt is made to change the role of an APPN node. See IST2344I for a complete description.

System action: Processing continues.

Operator response: Not applicable.

System programmer response: Not Applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2,8

Descriptor code: 12

Automation: Not applicable.

Example: None.

IST2346I CP NAME = *cp_name*

Explanation: VTAM issues this message as part of a group of unsolicited messages in response to an attempt to change the role of an APPN node during APPN topology update processing. See IST2344I for a complete description.

VTAM also issues this message as part of a group of messages in response to a DISPLAY EE command. See IST2001I for a complete description.

System action: Processing continues.

Operator response: Not applicable.

System programmer response: Not Applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2,8

Descriptor code: 12

Automation: Not applicable.

Example: None.

IST2347I TDU RECEIVED FROM ADJACENT NODE *adj_cp*

Explanation: This message is part of a group of unsolicited messages that VTAM issues when an attempt is made to change the role of an APPN node. See IST2344I for a complete description.

System action: Processing continues.

Operator response: Not applicable.

System programmer response: Not Applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2,8

Descriptor code: 12

Automation: Not applicable.

Example: None.

IST2348I ACTIVATED BY SHARED ACB *shared_ACB_name*

Explanation: VTAM issues this message in response to a DISPLAY ID command for a subordinate application that was activated by an application program that is using a shared ACB.

In the message text:

shared_ACB_name

The name of the shared ACB that is used by the application program to activate this subordinate application. For Telnet, the format of shared ACB names is *ypppp-tt* where:

y is an internal index that uniquely identifies the Telnet server that opened the ACB.

pppp is the Telnet server port number expressed in hexadecimal.

tt is a task instance number.

System action: Processing continues.

IST2349I

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See "Adding the originating module to the message text" on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2348I ACTIVATED BY SHARED ACB I0017-01
```

IST2349I SUBORDINATE APPLICATIONS SHARING THIS ACB:

Explanation: VTAM issues this message as part of a subgroup in response to a DISPLAY ID command for an application program that activates subordinate applications that use a shared ACB. A complete description of the message subgroup follows.

```
[IST2349I SUBORDINATE APPLICATIONS SHARING THIS ACB:]  
[IST080I  nodename status nodename status nodename status]  
.  
.  
[IST2350I count SUBORDINATE APPLICATIONS SHARE THIS ACB]  
[IST2351I MULTIPLE SUBORDINATE APPLICATIONS SHARE THIS ACB]
```

IST080I

This message lists the subordinate applications that share this ACB and that match the SCOPE operand specified on the D ID command. If there are more than three subordinate applications, this message is repeated as many times as necessary to display all the subordinate applications.

nodename is the name of a subordinate application that is activated by this shared ACB.

status is the status of the subordinate application that is displayed. See Resource Status Codes and Modifiers in z/OS Communications Server: IP and SNA Codes for a description of these status codes.

IST2349I

This message is a header for message IST080I. If there are no subordinate applications that share this ACB and match the SCOPE operand specified on the D ID command, this message and message IST080I are not issued.

IST2350I

This message indicates the number of subordinate applications that share this ACB with the application that opened the ACB. This message is issued whenever there are less than two subordinate applications that share this ACB or when SCOPE=ALL, SCOPE=ACT, SCOPE=ACTONLY, SCOPE=ACTSESS, or SCOPE=PENDING are used on the DISPLAY ID command. Otherwise, message IST2351I is issued.

count is the number of subordinate applications that share this ACB.

IST2351I

This message indicates that two or more subordinate applications share this ACB. This message is issued if SCOPE=ONLY, SCOPE=CONCT, SCOPE=INACT, SCOPE=INACTONLY, SCOPE=RELSID, or SCOPE=RESET are used on the DISPLAY ID. Otherwise, message IST2350I is issued with the count of subordinate applications that share this ACB.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: When you display an application program that activates subordinate applications using a shared ACB when there are five subordinate applications:

- The status of all five subordinate applications match the SCOPE specified:

d net,id=I0017-04,scope=all

```
IST2349I SUBORDINATE APPLICATIONS SHARING THIS ACB:
IST080I TCPM1006 ACTIV      TCPM1005 ACTIV      TCPM1004 ACTIV
IST080I TCPM1003 ACT/S     TCPM1002 ACT/S
IST2350I 5 SUBORDINATE APPLICATIONS SHARE THIS ACB
```

- The status of two subordinate applications match the SCOPE specified:

d net,id=I0017-04,scope=actsess

```
IST2349I SUBORDINATE APPLICATIONS SHARING THIS ACB:
IST080I TCPM1003 ACT/S     TCPM1002 ACT/S
IST2350I 5 SUBORDINATE APPLICATIONS SHARE THIS ACB
```

- The status of subordinate applications do not match the SCOPE specified:

d net,id=I0017-04,scope=pending

```
IST2350I 5 SUBORDINATE APPLICATIONS SHARE THIS ACB
```

- The SCOPE that is specified does not cause the status of the subordinate applications to be checked:

d net,id=I0017-04,scope=only

```
IST2351I MULTIPLE SUBORDINATE APPLICATIONS SHARE THIS ACB
```

IST2350I *count* **SUBORDINATE APPLICATIONS SHARE THIS ACB**

Explanation: VTAM issues this message as part of a subgroup in response to a DISPLAY ID command for an application program that activates subordinate applications using a shared ACB. See message IST2349I for a complete description.

Routing code: 2

Descriptor code: 5

IST2351I **MULTIPLE SUBORDINATE APPLICATIONS SHARE THIS ACB**

Explanation: VTAM issues this message as part of a subgroup in response to a DISPLAY ID command for an application program that activates subordinate applications using a shared ACB. See message IST2349I for a complete description.

Routing code: 2

Descriptor code: 5

IST2352I SENT = *sent* RECEIVED = *received*

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,ID=*cp_name*,LIST=ALL command for a node. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command. See message IST1299I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name* command for a node. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command for a TG. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,FORMAT=LONG. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT,FORMAT=LONG. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,FORMAT=LONG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2353I ACCEPTED = *accepted* REJECTED = *rejected*

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,ID=*cp_name*,LIST=ALL command for a node. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command. See message IST1299I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name* command for a node. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command for a TG. See message IST2311I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,FORMAT=LONG. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT,FORMAT=LONG. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,FORMAT=LONG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2354I IGNORED = *ignored*

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,ID=*cp_name*,LIST=ALL command for a node. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command. See message IST1299I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name* command for a node. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command for a TG. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2355I TDUDIAG THRESHOLD REACHED ON *date* AT *time*

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,ID=*cp_name*,LIST=ALL command for a node. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command. See message IST1299I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name* command for a node. See message IST2306I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ORIG=*origin_node*,DEST=*dest_node*,TGN=*tg_number* command for a TG. See message IST2311I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2356I PLATFORM = *platform*

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,ID=*cp_name*,LIST=ALL command for a node. See message IST1295I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,ID=*cp_name* command for a node. See message IST2306I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2357I CP NAME RSN DESTINATION CP TGN

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,FORMAT=LONG. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT,FORMAT=LONG. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,FORMAT=LONG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2358I *cp_name rsn destination_cp tgn*

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,FORMAT=LONG. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT,FORMAT=LONG. See message IST1776I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUDIAG,FORMAT=LONG summary command. See message IST2274I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2359I NO TDU INFORMATION EXISTS

Explanation: VTAM issues this message as part of a group of messages in response to the following DISPLAY TOPO commands:

- DISPLAY TOPO,LIST=TDUINFO,SCOPE=ACTIVITY,FORMAT=LONG. See message IST1780I for a complete description of this message group.
- DISPLAY TOPO,LIST=TDUINFO,SCOPE=RECENT,FORMAT=LONG. See message IST1776I for a complete description of this message group.

Routing code: 2

Descriptor code: 5

IST2360I ROUTING TREES LAST CLEARED AT *clear_date clear_time* BY *clear_process*

Explanation: VTAM issues this message as part of a group messages in response to a DISPLAY TOPO, LIST=SUMMARY command. See IST1306I for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2361I SMCR PFID = *pfid* PCHID = *pchid* PNETID = *network_id*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID or DISPLAY TRL command for a TRLE that is associated with an IBM 10 GbE RoCE Express interface.

| VTAM also issues this message as part of a group of messages generated by the adapter interrupt monitoring
| function. The first message in the group is IST2419I. See message IST2419I for a complete description.

A complete description of the message group follows the example:

```
IST075I NAME = nodename, TYPE = TRLE
IST1954I TRL MAJOR NODE = trl_major_node_name
IST486I STATUS= current_status, DESIRED STATE= desired_state
IST087I TYPE = *NA* , CONTROL = ROCE , HPDT = *NA*
IST2361I SMCR PFID = pfid PCHID = pchid PNETID = network_id
IST2362I PORTNUM = port RNIC CODE LEVEL = code_level
IST2389I PFIP = pci_path
[IST2417I VFN = virtual_function_number]
IST924I -----
IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface
IST1724I I/O TRACE = iotrc TRACE LENGTH = length
[IST924I -----]
[IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface]
[IST1724I I/O TRACE = iotrc TRACE LENGTH = length]
```

IST075I

This message displays the resource name and resource type.

nodename

The name of the resource that was entered on the DISPLAY command.

nodetype

The resource type of the major or minor node. The *nodetype* value is always **TRLE** for this message group.

IST087I

This message displays line information associated with *nodename*.

line_type

The *line_type* value is always ***NA*** for this message group.

line_control

The *line_control* value is always **ROCE** (RDMA over Converged Ethernet) for this message group.

hpdvalue

The *hpdvalue* is always ***NA*** for this message group.

IST486I

This message displays status information for *nodename*.

current_status

The current status of the node. See the z/OS Communications Server: IP and SNA Codes for status information.

desired_state

The node state that is desired. See the z/OS Communications Server: IP and SNA Codes for status information. If VTAM cannot determine the desired state, *desiredstate* is *****NA*****.

IST1717I

This message is displayed for all TRLEs that are currently being used by at least one Upper-layer Protocol (ULP). A separate IST1717I message is displayed for each ULP that is using the 10 GbE RoCE Express TRLE.

ulp_id The name of a z/OS Communications Server ULP that is using the 10 GbE RoCE Express TRLE. In this message group, the *ulp_id* value is always the TCP/IP job name.

ulp_interface

The name of the interface associated with the 10 GbE RoCE Express TRLE.

IST1724I

This message displays trace information for *nodename*.

iotrc Specifies whether I/O Trace is active for this 10 GbE RoCE Express interface TRLE(ON or OFF).

length Specifies the number of bytes being recorded for I/O Trace for this 10 GbE RoCE Express interface.

IST1954I

This message displays the TRL major node name.

trl_major_node_name

The name of the TRL major node defining the 10 GbE RoCE Express TRLE.

IST2361I

This message provides configuration information for the featureadapter associated with *nodename*.

IST2361I

pfid The 2-byte hexadecimal Peripheral Component Interconnect Express (PCIe) function ID for the 10 GbE RoCE Express feature associated with *nodename*.

pchid The 2-byte hexadecimal physical channel ID (PCHID) for the 10 GbE RoCE Express feature associated with *nodename*.

network_id

The physical network identifier for the 10 GbE RoCE Express interface associated with *nodename*.

IST2362I

This message provides configuration and operational information about the featureadapter associated with *nodename*.

port A decimal representation of the 10 GbE RoCE Express port number associated with *nodename*.

code_level

The processor code level of the 10 GbE RoCE Express feature. The code level is in the form *xxxxx.yyyyy.zzzzz* if the 10 GbE RoCE Express feature is operating in a dedicated RoCE environment.

xxxxx Major version.

yyyyy Minor version.

zzzzz Subminor version.

The code level is ****NA**** if the 10 GbE RoCE Express feature is operating in a shared RoCE environment.

IST2389I

This message displays additional configuration information for the adapter feature associated with *nodename*.

pci_path

The PCI-function internal path (PFIP) value for the 10 GbE RoCE Express feature associated with *nodename*.

IST2417I

This message displays the virtual function number (VFN) that is associated with *nodename*. This message is displayed only when the 10 GbE RoCE Express feature operates in a shared RoCE environment.

virtual_function_number

The VFN value for the 10 GbE RoCE Express feature that is associated with *nodename*.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST097I DISPLAY ACCEPTED
IST075I NAME = IUT2001D, TYPE = TRLE
IST1954I TRL MAJOR NODE = ISTTRL
IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
```

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```

IST087I TYPE = *NA*           , CONTROL = ROCE, HPDT = *NA*
IST2361I SMCR PFID = 001D  PCHID = 0138  PNETID = NETWORK1
IST2362I PORTNUM = 2  RNIC CODE LEVEL = *NA*
IST2389I PFIP = 08040101
IST2417I VFN = 0002
IST924I -----
IST1717I ULPID = TCPCS ULP INTERFACE = EZARIUT2001D
IST1724I I/O TRACE = OFF  TRACE LENGTH = *NA*
IST314I END

```

IST2362I PORTNUM = *port* RNIC CODE LEVEL = *code_level*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID or DISPLAY TRL command for a TRLE that is associated with the 10 GbE RoCE Express interface.

See “IST2361I” on page 1000 for an explanation of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2362I PORTNUM = 1 RNIC CODE LEVEL = 2.8.4822
```

IST2364I CLOSE ACB OF *applname* DID NOT COMPLETE IN A TIMELY MANNER

Explanation: VTAM issues this message when the VTAM application program *applname* issued a CLOSE ACB macro, but CLOSE ACB processing did not complete in a timely manner, and one of the following is true for the NACPROBE start option:

- The value NODUMP was specified.
- The default value of NODUMP was used.
- A numeric value was specified on the NACPROBE start option and the time since the last FFST probe dump for a CLOSE ACB timeout does not exceed the number of minutes specified.

applname is the ACBNAME if ACBNAME is coded in the APPL definition. If ACBNAME is not coded, *applname* is the NAME as coded on the APPL definition statement.

The NACPROBE start option controls whether this message or the FFST probe ISTNAC01 dump is produced. For more information about the NACPROBE start option, see z/OS Communications Server: SNA Resource Definition Reference.

System action: Processing continues and VTAM forces the completion of the CLOSE ACB.

Operator response: Contact the system programmer. If the system programmer determines that a dump is required, use the **MODIFY VTAMOPTS** command to change the value of the NACPROBE start option.

System programmer response: If the probe dump is needed, add or modify the value for the NACPROBE start

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option in the ATCSTRxx file. See NACPROBE start option in z/OS Communications Server: SNA Resource Definition Reference.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2364I CLOSE ACB OF VTAMAPPL DID NOT COMPLETE IN A TIMELY MANNER
```

IST2365I MODIFY TRACE COMMAND REJECTED - DSPSIZE NO LONGER SUPPORTED

Explanation: VTAM issues this message in response to a MODIFY TRACE,TYPE=VTAM,DSPSIZE= command.

System action: The MODIFY TRACE command is rejected. Processing continues.

Operator response: Reenter the MODIFY TRACE,TYPE=VTAM command without the DSPSIZE operand. See z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2365I MODIFY TRACE COMMAND REJECTED - DSPSIZE NO LONGER SUPPORTED
```

IST2366I POLLEQO = polleqo POLLEQ = polleq

Explanation: VTAM issues this message as part of a group of messages that display tuning statistics for 10 GbE RoCE Express ports.

A complete description of the message group follows:

```
IST1230I TIME = time DATE = date ID = trlname
IST1719I PCIREALO = pcirealo PCIREAL = pcireal
IST1751I PCIUNPRO = pciunpro PCIUNPRD = pciunprd
IST2366I POLLEQO = polleqo POLLEQ = polleq
IST2367I POLLEQEO = polleqeo POLLEQE = polleqe
IST924I -----
IST2368I ULP_ID = tcpname
IST2369I POLLCQO = pollcqo POLLCQ = pollcq
IST2370I POLLCQUO = pollcquo POLLCQU = pollcqu
IST2371I POLLCQEO = pollcqeo POLLCQE = pollcqe
IST2372I SRBSCHDO = srbschdo SRBSCHD = srbschd
```

```

IST2373I SRBRSCO = srbrscho  SRBRSD = srbrschd
IST2374I INBBYTLO = bytecntlo INBBYTEL = bytecntl
IST2375I INBBYTMO = bytecntmo INBBYTEM = bytecntm
IST2376I INBBYTNO = bytecntno INBBYTEN = bytecntn
IST2377I DATAREQO = datareqo  DATAREQ = datareq
IST2378I POSTO   = posto      POST    = post
IST2379I POSTEO  = postelemo  POSTELEM = postelem
IST2380I POSTQUEO = postqueo   POSTQUED = postqued
IST2381I OUTBYTLO = bytecntlo  OUTBYTEL = bytecntl
IST2382I OUTBYTMO = bytecntmo  OUTBYTEM = bytecntm
IST2383I OUTBYTNO = bytecntno  OUTBYTEN = bytecntn

```

Message subgroup IST2368I - IST12383I is repeated for each TCP/IP stack that has activated the 10 GbE RoCE Express port.

Many messages in this group contain both a count and an overflow. Both the count and overflow are maintained in unsigned 32-bit variables, unless otherwise indicated. Because an unsigned 32-bit variable can contain only a value up to and including 4294967295 ('FFFFFFFF'X), the variable will wrap through 0 if an increment results in exceeding this value. When such a wrap occurs, the overflow is incremented by 1. Therefore the total count is determined as follows:

$$\text{Total} = (\text{overflow} * 4294967296) + \text{count}$$

IST1230I

In the message text:

date and time

The date and time values specify when the record was reported. See DATE and TIME formats for information about the *date* and *time* values.

trlename

The name of the internally generated TRLE name that represents the 10 GbE RoCE Express port for which tuning statistics are being recorded. See Resources automatically activated by VTAM in z/OS Communications Server: SNA Network Implementation Guide for information about the TRLE name.

IST1719I

In the message text:

pcirealo The real program controlled interrupt (PCI) overflow.

pcireal

The real PCI count. This value represents the accumulated number of real PCI interrupts that are fielded by the device interrupt exit for the 10 GbE RoCE Express port.

A real PCI interrupt is a dispatch of the device interrupt exit as a result of a call from the system interrupt handler.

IST1751I

In the message text:

pciunpro

The unproductive RDMA over converged Ethernet (RoCE) polls of the 10 GbE RoCE Express event queue (Poll_EQ) overflow.

pciunprd

The unproductive RoCE Poll_EQ count. This value represents the accumulated number of unproductive RoCE Poll_EQ requests for this 10 GbE RoCE Express port.

An unproductive RoCE Poll_EQ request is a request for which the 10 GbE RoCE Express port did not provide any event notifications. An event notification indicates that data was received on this 10 GbE RoCE Express port and can be processed. An unproductive RoCE Poll_EQ indicates unnecessary processing by the system interrupt handler.

IST2366I

IST2366I

In the message text:

polleqo The RoCE Poll_EQ overflow.

polleq

The RoCE Poll_EQ count. This value represents the accumulated number of productive RoCE Poll_EQ requests for this 10 GbE RoCE Express port.

A productive RoCE Poll_EQ request is a request for which at least one event notification was returned. A higher ratio of productive RoCE Poll_EQ requests to real PCIs indicates that VTAM is minimizing unnecessary processing by the system interrupt handler required to service the 10 GbE RoCE Express port, resulting in more efficient CPU utilization.

IST2367I

In the message text:

polleqo The RoCE Poll_EQ overflow.

polleqe

The RoCE Poll_EQ event notification count. This value represents the accumulated number of event notifications that are returned on all productive RoCE Poll_EQ requests for this 10 GbE RoCE Express port.

A higher ratio of RoCE Poll_EQ entries to real PCIs indicates that more data is being processed per real interrupt, which results in more efficient CPU utilization.

IST2368I

In the message text:

tcpname The name of a TCP/IP stack that activated the 10 GbE RoCE Express port for which tuning statistics are being reported.

IST2369I

In the message text:

pollcqo The RoCE Poll of the 10 GbE RoCE Express completion queue (Poll_CQ) overflow.

pollcq

The RoCE Poll_CQ count. This value represents the accumulated number of productive RoCE Poll_CQ requests by *tcpname* for this 10 GbE RoCE Express port.

A productive RoCE Poll_CQ request is a request for which at least one completion event was returned. A completion event represents the receipt of TCP connection notification data or Shared Memory Communication (SMC) link control data.

IST2370I

In the message text:

pollcquo The unproductive RoCE Poll_CQ overflow.

pollcqu

The unproductive RoCE Poll_CQ count. This value represents the accumulated number of unproductive RoCE Poll_CQ requests by *tcpname* for this 10 GbE RoCE Express port.

An unproductive RoCE Poll_CQ request is a request for which no completion events were returned. An unproductive RoCE Poll_CQ indicates that *tcpname* was dispatched to process data when no data was available to be processed.

IST2371I

In the message text:

pollcqeo The RoCE Poll_CQ operations overflow.

pollcqe

The RoCE Poll_CQ operations count. This value represents the accumulated number of completion events returned for all productive RoCE Poll_CQ requests initiated by *tcpname* for this 10 GbE RoCE Express port.

A higher ratio of RoCE Poll_CQ operations to service request block (SRB) dispatches indicates that more data is being processed per dispatch of *tcpname*, which results in more efficient CPU utilization.

IST2372I

In the message text:

srbschdo

The interrupt handler SRB dispatch overflow.

srbschd The interrupt handler SRB dispatch count. This value represents the accumulated number of times an SRB was scheduled by the interrupt handler for *tcpname* to process inbound data for this 10 GbE RoCE Express port.

IST2373I

In the message text:

srbrscho The additional SRB dispatch overflow.

srbrschd

The additional SRB dispatch count. This value represents the accumulated number of times that an additional SRB was scheduled from within an existing SRB on *tcpname*. The additional SRB was scheduled because more inbound data is available to be processed for this 10 GbE RoCE Express port than the existing SRB could efficiently manage.

A high additional SRB dispatch value indicates that multiple processors are required to process all inbound data from this 10 GbE RoCE Express port for *tcpname*.

IST2374I

In the message text:

bytecntlo

The inbound RoCE inline data bytes overflow.

bytecntl The inbound RoCE inline data bytes count. This value represents the accumulated number of bytes of SMC link control data that was received by *tcpname* for this 10 GbE RoCE Express port.

IST2375I

In the message text:

bytecntmo

The inbound RoCE immediate data bytes overflow.

bytecntm

The inbound RoCE immediate data bytes count. This value represents the accumulated number of bytes of TCP connection notification data that was received by *tcpname* for this 10 GbE RoCE Express port.

IST2376I

In the message text:

bytecntno

The inbound RDMA bytes overflow.

IST2366I

bytecntn

The inbound RDMA bytes count. This value represents the accumulated number of bytes of TCP connection data that was received by *tcpname* for this 10 GbE RoCE Express port.

IST2377I

In the message text:

datareqo The outbound data request overflow.

datareq The outbound data request count. This value represents the accumulated number of data requests received by VTAM from *tcpname* over this 10 GbE RoCE Express port. Data requests are used to send TCP connection data or TCP connection notification data.

IST2378I

In the message text:

posto The RoCE Post request overflow.

post The RoCE Post request count. This value represents the accumulated number of RoCE Post requests processed to transfer data sent by *tcpname* for this 10 GbE RoCE Express port.

IST2379I

In the message text:

postelemo

The RoCE Post operation overflow.

postelem

The RoCE Post operation count. This value represents the accumulated number of RoCE Post operations that successfully transferred data provided by *tcpname* for this 10 GbE RoCE Express port.

A RoCE Post operation represents a discreet transfer of TCP connection data, TCP connection notification data, or SMC link control data. A single RoCE Post request might require two or more RoCE Post operations to transfer the data provided by *tcpname* on an outbound data request. A higher ratio of RoCE Post operations to RoCE Post requests indicates more efficient utilization of CPU resources when transferring data.

IST2380I

In the message text:

postqueo

The queued RoCE Post request overflow.

postqued

The queued RoCE Post request count. This value represents the accumulated number of queued RoCE Post requests initiated by *tcpname* for this 10 GbE RoCE Express port.

A queued RoCE Post request is a request that was not transmitted on the first attempt because of hardware resource constraints.

IST2381I

In the message text:

bytecntlo

The outbound RoCE inline data bytes overflow.

bytecntl

The outbound RoCE inline data bytes count. This value represents the accumulated number of bytes of SMC link control data that was sent by *tcpname* for this 10 GbE RoCE Express port.

IST2382I

In the message text:

bytecntmo

The outbound RoCE immediate data bytes overflow.

bytecntm

The outbound RoCE immediate data bytes count. This value represents the accumulated number of bytes of TCP connection notification data that was sent by *tcpname* for this 10 GbE RoCE Express port.

IST2383I

In the message text:

bytecntno

The outbound RDMA bytes overflow.

bytecntn

The outbound RDMA bytes count. This value represents the accumulated number of bytes of TCP connection data that was sent by *tcpname* for this 10 GbE RoCE Express port.

System action: Processing continues.

Operator response: To discontinue recording of statistics, issue the **MODIFY NOTNSTAT** command.

System programmer response: For additional information about tuning and analyzing tuning statistics, see z/OS Communications Server: SNA Network Implementation Guide.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message group is not a suitable candidate for automation.

Example: This message group displays tuning statistics for the 10 GbE RoCE Express port with Peripheral Component Interconnect Express (PCIe) function ID (PFID) 0018:

```

IST1230I TIME      = 18051835   DATE      = 09182       ID   = IUT10018
IST1719I PCIREALO = 0          PCIREAL   = 5
IST1751I PCIUNPRO = 0          PCIUNPRD  = 3
IST2366I POLLEQO  = 0          POLLEQ    = 15
IST2367I POLLEQEO = 0          POLLEQE   = 25
IST924I -----
IST2368I ULP_ID   = TCPCS1
IST2369I POLLCQO  = 0          POLLCQ    = 250
IST2370I POLLCQUO = 0          POLLCQU   = 50
IST2371I POLLCQEO = 0          POLLCQE   = 1800
IST2372I SRBSCHDO = 0          SRBSCHD   = 15
IST2373I SRBRSCO  = 0          SRBRSCHD  = 0
IST2374I INBBYTLO = 0          INBBYTEL  = 176
IST2375I INBBYTMO = 0          INBBYTEM  = 7200
IST2376I INBBYTNO = 1          INBBYTEN  = 305306
IST2377I DATAREQO = 0          DATAREQ   = 60
IST2378I POSTO    = 0          POST      = 70
IST2379I POSTEO   = 0          POSTELEM  = 178

```

IST2367I • IST2369I

IST2380I POSTQEO = 0	POSTQUED = 10
IST2381I OUTBYTLO = 0	OUTBYTEL = 176
IST2382I OUTBYTMO = 0	OUTBYTEM = 4000
IST2383I OUTBYTNO = 1	OUTBYTEN = 58950

IST2367I POLLEQEO = *polleqo* POLLEQE = *polleq*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2368I ULP_ID = *tcpname*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2369I POLLCQO = *pollcqo* POLLCQ = *pollcq*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2370I **POLLCQUO** = *pollcquo* **POLLCQU** = *pollcqu*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2371I **POLLCQEO** = *pollcqe* **POLLCQE** = *pollcqe*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server:

IST2372I • IST2373I

SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2372I **SRBSCHDO** = *srbschdo* **SRBSCHD** = *srbschd*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2373I **SRBRSCO** = *srbrscho* **SRBRSCD** = *srbrschd*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2374I **INBBYTLO** = *bytecntlo* **INBBYTEL** = *bytecntl*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2375I **INBBYTMO** = *bytecntmo* **INBBYTEM** = *bytecntm*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2376I **INBBYTNO** = *bytecntno* **INBBYTEN** = *bytecntn*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

IST2377I • IST2378I

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2377I **DATAREQO** = *datareqo* **DATAREQ** = *datareq*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2378I **POSTO** = *posto* **POST** = *post*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2379I **POSTEO** = *postelemo* **POSTELEM** = *postelem*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2380I **POSTQUEO** = *postqueo* **POSTQUED** = *postqued*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2381I **OUTBYTLO** = *bytecntlo* **OUTBYTEL** = *bytecntl*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

IST2382I • IST2383I

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2382I **OUTBYTMO** = *bytecntmo* **OUTBYTEM** = *bytecntm*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2383I **OUTBYTNO** = *bytecntno* **OUTBYTEN** = *bytecntn*

Explanation: VTAM issues this message as part of a group of messages that displays tuning statistics for 10 GbE RoCE Express resources. The first message in the group is IST1230I. See message IST2366I for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2384E PACKETS DISCARDED FOR *jobname* - *trlename* is CONGESTED

Explanation: This unsolicited message is issued when a write buffer is discarded as the result of congestion on the outbound data staging queue. A write buffer can contain up to 64 KB of TCP/IP packets. Write buffers are discarded to protect against the overuse of system resources, specifically ECSA storage. This message might mean that a TCP/IP stack contention or dispatching problem exists.

This message remains on the screen until congestion is alleviated or until the message is manually deleted.

In the message text:

jobname

The 1 – 8 character TCP/IP job name that is used to start the TCP/IP address space.

trlename

The name of the TRLE that is experiencing congestion.

System action: If congestion subsides for at least 30 seconds, this message is automatically deleted. If congestion persists, message IST2384E is deleted and reissued every 5 minutes.

Operator response: You can use the **DISPLAY NET,TRL** and **DISPLAY NET,TRL,TRLE=*trlename*** commands to determine which interfaces or devices are experiencing congestion. Message IST2386I provides the number of write buffers that are discarded. These interfaces or devices can be stopped or recycled in an attempt to eliminate the congestion.

System programmer response: If the condition is persistent, take the following actions:

1. Study and possibly adjust the TCP/IP dispatching priority.
2. If the condition continues to persist, take the following actions:
 - If you have access to IBMLink, search for known problems in this area. If no applicable matches are found, take a dump of the TCP/IP address space and the VTAM address space, and report the problem to IBM by using the Electronic Technical Report (ETR) option on IBMLink.
 - If you do not have access to IBMLink, take a dump of the TCP/IP address space and the VTAM address space, and report the problem to the IBM software support center.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 11

Automation: Automation is recommended because persistent discarding of outbound data can have a significant impact on latency and throughput.

Example:

IST2384E PACKETS DISCARDED FOR TCPCS - NSQDIO11 IS CONGESTED

IST2386I NUMBER OF DISCARDED OUTBOUND WRITE BUFFERS = *wbufcnt*

Explanation: This message is part of several message groups that VTAM issues in response to a DISPLAY ID or DISPLAY TRL command for a TRLE that is configured with the MPC level QDIO, which represents an OSA-Express adapter, and for HiperSockets. See IST1221I for a complete description.

IST2387I

System action: Processing continues.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2386I NUMBER OF DISCARDED OUTBOUND WRITE BUFFERS = 5
```

IST2387I DIAL FAILED - DUPLICATE IP ADDRESSES ON EXISTING CONNECTION

Explanation: This message is the first in a group of messages that VTAM issues when a dial fails for an Enterprise Extender (EE) connection across a connection network. The complete description of the message group follows:

```
IST2387I DIAL FAILED - DUPLICATE IP ADDRESSES ON EXISTING CONNECTION
IST2388I EE VRN = vrn_name
IST1680I type IP ADDRESS ip_address
IST1680I type IP ADDRESS ip_address
IST314I END
```

IST1680I

This message displays the IP addresses of the failing connection. In the message text:

type Indicates which IP address is being displayed. The value is either LOCAL or REMOTE.

ip_address
The IP address.

IST2387I

This message is issued when a dial request for an EE connection across a connection network fails. An existing connection network was found with the same local and remote IP addresses. For a connection network, the IP address applies to one of the following conditions:

- Specified on the IPADDR operand on the EE XCA GROUP statement that defines the connection network (VNNAME)
- Inherited from the IPADDR start option
- Resolved from the HOSTNAME value specified on the EE XCA GROUP statement that defines the connection network

IST2388I

This message displays the name of the virtual routing node (VRN) of the existing EE connection network that has the same local and remote IP addresses. In the message text:

vrn_name
The name of the VRN of the existing EE connection network found with the duplicate IP addresses.

System action: The EE dial request fails, but the existing EE connection is unaffected.

Operator response: Contact the system programmer.

System programmer response: Correct the EE XCA major node GROUP definitions so that multiple connection networks do not have the same local and remote IP addresses between two EE hosts. If you are using the TCP/IP resolver to perform name-to-address resolution, ensure that the HOSTNAME value on the GROUP definition for each connection network resolves to a unique IP address. See Configuring the EE connection network in z/OS Communications Server: SNA Network Implementation Guide for more information about defining multiple EE connection networks between two adjacent CPs. See z/OS Communications Server: IP Configuration Guide for more information about defining name servers to the resolver.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

Descriptor code: 5

Automation: Not recommended.

Example:

```
IST2387I DIAL FAILED - DUPLICATE IP ADDRESSES ON EXISTING CONNECTION
IST2388I EE VRN = NET2.VN2
IST1680I LOCAL IP ADDRESS 9.67.1.1
IST1680I REMOTE IP ADDRESS 9.67.1.2
IST314I END
```

```
IST590I CONNECTOUT FAILED FOR PU CNV00004 ON LINE LNIPVN1B
IST380I ERROR FOR ID = CNV00004 - REQUEST: CONNOUT, SENSE: FFC80004
IST1903I FAILURE OVER VRN NET1.VN1 TO CP NETA.SSCP2A
IST105I CNV00004 NODE NOW INACTIVE
IST871I RESOURCE CNV00004 DELETED
IST663I AM RESUME REQUEST FAILED, SENSE=08060027
IST664I REAL OLU=NETA.APPL1          REAL DLU=NETA.NETAPPL1
IST889I SID = EAABEEC364101D14
IST2103I RSCV TOWARDS SLU
IST1460I TGN CPNAME          TG TYPE      HPR
IST1461I 21 NET1.VN1        APPN          RTP
IST1461I 21 NETA.SSCP2A     APPN          RTP
IST314I END
```

IST2388I EE VRN = *vrn_name*

Explanation: VTAM issues this message when a dial fails for an Enterprise Extender connection request across a connection network. This message group begins with message IST2387I. See the explanation of IST2387I for a complete description.

System action: None.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: You can display the module that issues a SNA message in the message by setting the MSGMOD start option to YES. See “Adding the originating module to the message text” on page 5 for more information about the MSGMOD start option.

Routing code: 2

IST2389I • IST2390I

Descriptor code: 5

Automation: None.

Example: Not applicable.

IST2389I PFIP = *pci_path*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY ID or DISPLAY TRL command for a TRLE that is associated with an IBM 10 GbE RoCE Express interface.

See message IST2361I for an explanation of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2389I PFIP = 08040101
```

IST2390I IQP1REG PCIE SERVICE FAILURE

Explanation: This is the first message in a message group that VTAM issues when an attempt to register a Peripheral Component Interconnect Express (PCIe) device fails. VTAM uses PCIe services as part of managing PCIe devices, and part of that management is registering the devices. VTAM uses PCIe services to manage these devices:

- IBM 10 GbE RoCE Express interfaces
- Internal shared memory (ISM) interfaces

A complete description of the message group follows:

```
IST2390I IQP1REG PCIE SERVICE FAILURE
IST1684I RETURN CODE = return_code REASON CODE = reason_code
IST314I END
```

IST1684I

This message provides the specific return code and reason code information that the failing PCIe service returns.

In the message text:

return_code

The hexadecimal return code that the PCIe IQP1REG invocation returns.

reason_code

The hexadecimal reason code that the PCIe IQP1REG invocation returns.

IST2390I

This message is the first message in the message group.

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| **System action:** Processing continues. VTAM will again attempt to register the PCIe devices the next time a TCP/IP
| stack issues an activation request for a 10 GbE RoCE Express interface or an ISM interface.

Operator response: Contact the system programmer.

System programmer response: Collect VTAM internal traces at the VTAM that issued this message and contact IBM service to determine the reason for the registration failure.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

| **Automation:** This message is a candidate for automation to detect errors that occur during activation of PCIe
| devices.

Example:

```
IST2390I IQP1REG PCIE SERVICE FAILURE
IST1684I RETURN CODE = 18 REASON CODE = 5035
IST314I END
```

IST2391I *service_name* PCIE SERVICE FAILURE ON TRLE *trle_name*

| **Explanation:** This is the first message in a message group that VTAM issues when an attempt to use a Peripheral
| Component Interconnect Express (PCIe) service fails. VTAM uses PCIe services to manage these devices:

- | • IBM 10 GbE RoCE Express interfaces
- | • Internal shared memory (ISM) interfaces

A complete description of the message group follows:

```
IST2391I service_name PCIE SERVICE FAILURE ON TRLE trlename
IST1684I RETURN CODE = return_code REASON CODE = reason_code
IST314I END
```

IST1684I

This message provides the specific return code and reason code information that the failing PCIe service returns.

In the message text:

return_code

The hexadecimal return code that the PCIe *service_name* invocation returns.

reason_code

The hexadecimal reason code that the PCIe *service_name* invocation returns.

IST2391I

This message identifies the PCIe service that failed.

In the message text:

service_name

The PCIe service that failed.

trle_name

The name of the associated transport resource list entry (TRLE) that VTAM was managing when the PCIe service

IST2392I

failed. The TRLE name represents an individual 10 GbE RoCE Express port or ISM device. VTAM automatically generates the TRLE name when the TCP/IP stack starts the interface.

System action: Processing continues.

Operator response: Contact the system programmer.

System programmer response: Collect VTAM internal traces at the VTAM that is issuing this message and contact IBM service to determine the reason for the PCIe service failure.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is a candidate for automation to detect errors that occur during activation of PCIe devices.

Example:

```
IST2391I IQP4ALL PCIE SERVICE FAILURE ON TRLE IUT10018
IST1684I RETURN CODE = 18 REASON CODE = 5035
IST314I END
```

IST2392I PFID *pfid_value* ALLOCATION FAILURE - PFID IS NOT DEFINED

Explanation: VTAM issues this message when it attempts to activate a Peripheral Component Interconnect Express (PCIe) device, but the PCIe function ID (PFID) value is not defined for this LPAR. VTAM uses PCIe services to manage these devices:

- IBM 10 GbE RoCE Express interfaces
- Internal shared memory (ISM) interfaces

In the message text:

pfid_value

The PFID value that VTAM used in the failed activation attempt.

System action: Processing continues.

Operator response: Issue the **D PCIE** command and generate a Netstat CONFIG/-f report, and then provide the output to the system programmer.

System programmer response:

1. Determine the correct PFID value for this system.
2. Use the **D PCIE** command output to verify that the PFID value has been correctly defined in the HCD. If the PFID is not defined properly, update the HCD configuration to include the correct PFID value.
3. If the PFID is defined correctly in the HCD and represents a 10 GbE RoCE Express interface, use the Netstat CONFIG/-f report to verify that the correct PFID is defined to TCP/IP. If the PFID is not defined correctly, change the SMCR parameter on the GLOBALCONFIG statement in the TCP/IP profile of the TCP/IP stack that is attempting to activate this 10 GbE RoCE Express interface to specify the correct PFID value.
4. If the PFID is defined correctly in the HCD and represents an ISM interface, then verify that the physical network ID (PNetID) attributes of the PFID and the corresponding OSD or HiperSockets interfaces match in the HCD. If they do not match, correct the definitions so that the proper PNetID is used.
5. Instruct the operator to issue the necessary commands to activate the changes that were made to the HCD or the TCP/IP profile.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

| **Automation:** This message is a candidate for automation to detect errors that occur during activation of PCIe devices.

Example:

IST2392I PFID 0018 ALLOCATION FAILURE - PFID IS NOT DEFINED

IST2393I PFID *pfid_value* ALLOCATION FAILURE - PFID IS NOT ONLINE

| **Explanation:** VTAM issues this message when it attempts to activate a Peripheral Component Interconnect Express (PCIe) device using the correct PCIe function ID (PFID) value, but the device that is associated with that PFID is not online. VTAM uses PCIe services to manage these devices:

- | • IBM 10 GbE RoCE Express interfaces
- | • Internal shared memory (ISM) interfaces

In the message text:

pfid_value

The PFID value that VTAM used in the failed activation attempt.

System action: Processing continues.

Operator response:

- | 1. Issue the **CF PFID** command to bring the PCIe device that is associated with the *pfid_value* online.
- | 2. Issue the **VARY START** command to start the 10 GbE RoCE Express or ISM interface.

System programmer response: None.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is a candidate for automation to detect errors that occur during initialization of your system.

Example:

IST2393I PFID 0018 ALLOCATION FAILURE - PFID IS NOT ONLINE

IST2394I PFID *pfid_value* IS ALREADY ACTIVE ON *stack_name* USING TRLE *trle_name*

Explanation: VTAM issues this message when it attempts to activate an RDMA Network Interface Card (RNIC) adapter, but the interface that this Peripheral Component Interconnect Express (PCIe) function ID (PFID) value represents has been activated by a different TCP/IP stack. Only one stack can activate an individual PFID at a time.

In the message text:

IST2395I

pfid_value

The PFID value that VTAM used in the failed activation attempt.

stack_name

The TCP/IP stack that has previously activated the interface that is associated with this PFID value.

trle_name

The name of the transport resource list entry (TRLE) that is associated with *pfid_value*. VTAM automatically generates the TRLE name when an RNIC adapter is activated.

System action: Processing continues.

Operator response: Contact the system programmer.

System programmer response:

1. Determine which TCP/IP stack is using the incorrect PFID value.
2. Correct the SMCR parameter on the GLOBALCONFIG statement in the TCP/IP profile of the TCP/IP stack that is using the incorrect PFID value.
3. Instruct the operator to first issue the **VARY OBEFYFILE** command to enable the profile changes, and then to issue the **VARY START** command to start the RNIC adapter.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is a candidate for automation to detect errors that occur during initialization of your system.

Example:

```
IST2394I PFID 0018 IS ALREADY ACTIVE ON TCPCS1 USING TRLE IUT10018
```

IST2395I RTP PACING ALGORITHM = ARB BASE MODE

Explanation: VTAM issues this message as part of a group of messages in response to a DISPLAY ID command for a PU type 2.1 that represents a Rapid Transport Protocol (RTP) route. The first message in the group is IST1476I or IST1968I. See IST1476I or IST1968I for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IST2396I RNIC STATISTICS FOR *trlename*

Explanation: VTAM issues this group of messages in response to a DISPLAY TRL,TRLE=*trlename*,DEVSTATS command when *trlename* represents an IBM 10 GbE RoCE Express interface.

A complete description of the message group follows:

```
IST2396I RNIC STATISTICS FOR trlename
IST2397I DESCRIPTION OVERFLOW COUNT
IST2398I description overflow count
...
IST314I END
```

Many of the statistics reported using message IST2398I have both a count and an overflow. Both the count and overflow are maintained in unsigned 32-bit variables (unless otherwise indicated). Because an unsigned 32-bit variable can contain only a value up to and including 4294967295 ('FFFFFFFF'X), the variable will wrap through 0 if an increment results in exceeding this value. When such a wrap occurs, the overflow is incremented by 1. Therefore, the total count is determined as follows:

$$\text{Total} = (\text{overflow} * 4294967296) + \text{count}$$

IST2396I

This is the first message in the message group.

trlename

The name of the resource that was specified on the DISPLAY TRL command. Use this value to correlate the 10 GbE RoCE Express statistics in this message group with the message group IST2361I output generated by the DISPLAY TRL,TRLE=*trlename* command.

IST2397I

This message is a header message for the statistics displayed with message IST2398I.

IST2398I

This message displays the number of occurrences for the statistic described by *description*. The possible combinations of *overflow*, *count*, and *description* are:

- **INBOUND FRAMES DROPPED** = *overflow count*
Represents the number of inbound Ethernet frames that were dropped on this 10 GbE RoCE Express interface.
- **INBOUND FRAME ERRORS** = *overflow count*
Represents the number of inbound Ethernet frames that had errors on this 10 GbE RoCE Express interface.

Restriction: This value is always 0 when the 10 GbE RoCE Express adapter operates in a shared RoCE environment.

- **INBOUND RDMA FRAMES** = *overflow count*
Represents the number of Ethernet frames received on this 10 GbE RoCE Express interface.
- **INBOUND RDMA OCTETS** = *overflow count*
Represents the number of Ethernet octets received on this 10 GbE RoCE Express interface.
- **OUTBOUND FRAMES DROPPED** = *overflow count*
Represents the number of outbound Ethernet frames that were dropped on this 10 GbE RoCE Express interface.
- **OUTBOUND FRAME ERRORS** = *overflow count*
Represents the number of outbound Ethernet frames that had errors on this 10 GbE RoCE Express interface.

Restriction: This value is always 0 when the 10 GbE RoCE Express adapter operates in shared RoCE environment.

- **OUTBOUND RDMA FRAMES** = *overflow count*
Represents the number of Ethernet frames sent on this 10 GbE RoCE Express interface.

IST2397I

- **OUTBOUND RDMA OCTETS** = *overflow count*

Represents the number of Ethernet octets sent on this 10 GbE RoCE Express interface.

- **LINK OUTAGE NOTIFICATIONS** = *overflow count*

Represents the number of times that VTAM was notified of lost connectivity to the 10 GbE RoCE Express port.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: This message group displays statistics for the 10 GbE RoCE Express port 2 on the adapter that operates in a dedicated RoCE environment and is represented by Peripheral Component Interconnect Express (PCIe) function ID (PFID) 001D:

```
IST2396I RNIC STATISTICS FOR IUT2001D
IST2397I DESCRIPTION                                OVERFLOW      COUNT
IST924I -----
IST2398I INBOUND RDMA FRAMES                        1              65535
IST2398I INBOUND RDMA OCTETS                       65535         4294967295
IST2398I INBOUND FRAME ERRORS                       0              1
IST2398I INBOUND DROPPED FRAMES                    0              3
IST2398I OUTBOUND RDMA FRAMES                       3         4042322160
IST2398I OUTBOUND RDMA OCTETS                       1         1414812756
IST2398I OUTBOUND FRAME ERRORS                      0              2
IST2398I OUTBOUND DROPPED FRAMES                    0              4
IST2398I LINK OUTAGE NOTIFICATIONS                  0              3
IST314I END
```

IST2397I DESCRIPTION OVERFLOW COUNT

Explanation: VTAM issues this message as part of a group of messages that displays statistics for the IBM 10 GbE RoCE Express interfaces in response to a DISPLAY TRL,TRLE=*trlename*,DEVSTATS command. The first message in the group is IST2396I. See message "IST2396I" on page 1025 for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2397I DESCRIPTION	OVERFLOW	COUNT
----------------------	----------	-------

IST2398I *Description overflow count*

Explanation: VTAM issues this message as part of a group of messages that displays statistics for the IBM 10 GbE RoCE Express interfaces in response to a DISPLAY TRL,TRLE=*trlename*,DEVSTATS command. The first message in the group is IST2396I. See message "IST2396I" on page 1025 for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2398I INBOUND RDMA FRAMES	1	65535
IST2398I INBOUND RDMA OCTETS	65535	4294967295
IST2398I INBOUND FRAME ERRORS	0	1
IST2398I INBOUND DROPPED FRAMES	0	3
IST2398I OUTBOUND RDMA FRAMES	3	4042322160
IST2398I OUTBOUND RDMA OCTETS	1	1414812756
IST2398I OUTBOUND FRAME ERRORS	0	2
IST2398I OUTBOUND DROPPED FRAMES	0	4
IST2398I LINK OUTAGE NOTIFICATIONS	0	3

IST2399I **MESSAGE TRIGGER:** RNICTRLE = *rnic_trlename*

Explanation: VTAM issues this message as part of a message group in response to a DISPLAY CSDUMP command. See "IST1871I" on page 769 for an explanation of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

IST2400I

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

IST2399I MESSAGE TRIGGER: RNICTRLE = IUT1001D

IST2400I NO ADAPTER DIAGNOSTICS PRODUCED FOR *resource: reason*

Explanation: VTAM issues this message when a CSDUMP was taken but diagnostics for the associated IBM 10 GbE RoCE Express interface could not be taken.

In the message text:

resource The value specified as the RNICTRLE trigger for CSDUMP processing.

reason The reason the diagnostics could not be taken and can be one of the following:

TRLE NOT FOUND

resource does not exist.

TRLE NOT AN RNIC

resource exists and was found, but the TRLE does not represent a 10 GbE RoCE Express interface. Diagnostics can be produced only when at least one TCP/IP stack has an active connection to the 10 GbE RoCE Express interface.

TRLE NOT ACTIVE

resource represents a 10 GbE RoCE Express TRLE, but the TRLE is not in a state where diagnostics can be produced.

UNSUPPORTED ENVIRONMENT

The message specified as a trigger for a CSDUMP and a 10 GbE RoCE Express diagnostic dump is issued in an execution environment which prevents VTAM from generating the 10 GbE RoCE Express diagnostic dump.

System action: Processing continues.

Operator response: Depending on the value of *reason*, take the following action:

- **TRLE NOT FOUND, TRLE NOT AN RNIC, and UNSUPPORTED ENVIRONMENT**

Contact the system programmer.

- **TRLE NOT ACTIVE**

Ensure that the CSDUMP is requested when at least one stack has connectivity to the 10 GbE RoCE Express interface.

System programmer response: Depending on the value of *reason*, take the following action:

TRLE NOT FOUND and TRLE NOT AN RNIC

1. Determine the correct TRLE name to use for the 10 GbE RoCE Express interface.
2. Instruct the operator to correct the RNICTRLE trigger value by using the MODIFY CSDUMP command.

UNSUPPORTED ENVIRONMENT

Diagnostics for the 10 GbE RoCE Express interface cannot be produced if the message that triggers a CSDUMP and a 10 GbE RoCE Express diagnostic dump is issued in certain environments.

- If an alternate message can be used as the trigger, instruct the operator to issue a MODIFY CSDUMP,MESSAGE=*alternate_message*, RNICTRLE=*resource* command to change the message trigger.
- If only this message can be used as the trigger, instruct the operator to issue a MODIFY CSDUMP,RNICTRLE=*resource* command to take an immediate 10 GbE RoCE Express diagnostic dump, or create automation to take the immediate dump, when the message is seen.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

IST2400I NO ADAPTER DIAGNOSTICS PRODUCED FOR IUT1001D: TRLE NOT FOUND

IST2401I DEVSTATS REJECTED FOR TRLE *trlename* - DEVICE NOT ACTIVE

Explanation: VTAM issues this message in response to a DISPLAY TRL,TRLE=*trlename*,DEVSTATS command when *trlename* represents an IBM 10 GbE RoCE Express interface, but the 10 GbE RoCE Express interface is not in use by a z/OS Communications Server upper-layer protocol (ULP).

In the message text:

trlename

The name of the resource that was specified on the DISPLAY TRL command.

System action: Processing continues. No 10 GbE RoCE Express statistics for *trlename* are displayed.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: None.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2401I DEVSTATS REJECTED FOR TRLE IUT2001D - DEVICE NOT ACTIVE

IST2402I DEVSTATS FAILED FOR TRLE *trlename* - DEVICE NOT OPERATIONAL

Explanation: VTAM issues this message in response to a DISPLAY TRL,TRLE=*trlename*,DEVSTATS command when *trlename* represents an IBM 10 GbE RoCE Express interface. VTAM attempted to collect 10 GbE RoCE Express statistics for *trlename*, but failed to do so because of timing conditions or because the hardware could not successfully process the request.

In the message text:

trlename

The name of the resource that was specified on the DISPLAY TRL command.

System action: Processing continues. No 10 GbE RoCE Express statistics for *trlename* are displayed.

Operator response: Take the following actions:

1. Save the console log.
2. Review the network activity when the DISPLAY TRL,TRLE=*trlename*,DEVSTATS command was issued.
3. Perform the problem determination steps below.

IST2403I

System programmer response: None.

User response: None.

Problem determination: Review the console log to see whether you can determine the reason for the command failure.

- The problem might be that the last TCP/IP stack that was using the 10 GbE RoCE Express interface issued a VARY TCPIP,,STOP command for the 10 GbE RoCE Express interface. If this is the case, activate the 10 GbE RoCE Express interface and issue the DISPLAY TRL,TRLE=*trlename*,DEVSTATS command again.
- Other command failures might indicate a hardware failure. If this problem is persistent, perform the following steps:
 1. If a VTAM internal trace is not active, start a VTAM internal trace by using the MODIFY TRACE,TYPE=VTAM,OPT=TCPOPTS,MODE=INT command.
 2. Enable a CSDUMP trigger for the next occurrence of message IST2402I by using the MODIFY CSDUMP,MESSAGE=IST2402I command.
 3. Issue the DISPLAY TRL,TRLE=*trlename*,DEVSTATS command to cause message IST2402I to be issued again.
 4. Save the console log and the dump generated by CSDUMP. Contact the IBM support center.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2402I DEVSTATS FAILED FOR TRLE IUT2001D - DEVICE NOT OPERATIONAL
```

IST2403I 64-BIT STORAGE TYPE CURRENT MAXIMUM LIMIT

Explanation: This message is the first message in a message group that VTAM issues in response to a DISPLAY BFRUSE command. This message is a header message for the 64-bit storage usage display of storage above the bar. A complete description of the message follows.

```
| IST924I -----  
| IST2403I 64-BIT STORAGE TYPE          CURRENT MAXIMUM LIMIT  
| IST2404I HVCOMMON                     curhvcomm maxhvcomm limhvcomm  
| IST2405I TRACE HVCOMMON               chvcommtr mhvcommtr lhvcommtr  
| IST2413I PRIVATE                       curhvpriv maxhvpriv limhvpriv  
| IST2412I FIXED HVCOMMON               chvcfixed mhvcfixed lhvcfixed  
| IST2414I FIXED PRIVATE                 cpvtfixed mpvtfixed lpvtfixed  
| IST2415I TOTAL FIXED                   ctotfixed mtotfixed **NA**
```

IST2403I

This message is a header message for the 64-bit storage information displayed in the messages that follow this message.

IST2404I

In the message text:

curhvcomm

The current amount of 64-bit high virtual common (HVCOMM) storage above the bar allocated by VTAM.

maxhvcomm

The maximum amount of 64-bit HVCOMM storage above the bar allocated by VTAM.

limhvcomm

The maximum amount of 64-bit HVCOMM storage above the bar that can be allocated by VTAM.

Tip: The message IST2404I is not applicable in z/OS V1R13 Communications Server. It will not be displayed if the DISPLAY BFRUSE command is issued on a z/OS V1R13 Communications Server system.

IST2405I

In the message text:

| *chvcommtr*

The current amount of HVCOMM storage allocated for the VTAM internal trace table.

| *mhvcommtr*

The maximum amount of HVCOMM storage allocated for the VTAM internal trace table since the last DISPLAY BFRUSE command.

| *lhvcommtr*

The maximum amount of HVCOMM storage that can be allocated for the VTAM internal trace table.

| **IST2412I**

In the message text:

| *chvcfixed*

The current amount of 64-bit HVCOMM fixed storage allocated by VTAM.

| *mhvcfixed*

The maximum amount of 64-bit HVCOMM fixed storage allocated by VTAM.

| *lhvcfixed*

The maximum amount of 64-bit HVCOMM fixed storage that VTAM can allocate.

| **IST2413I**

In the message text:

| *curhvpriv*

The current amount of 64-bit high virtual private storage allocated by VTAM.

| *maxhvpriv*

The maximum amount of 64-bit high virtual private storage allocated by VTAM.

| *limhvpriv*

The maximum amount of 64-bit high virtual private storage that VTAM can allocate.

| **IST2414I**

In the message text:

| *cpvtfixed*

The current amount of 64-bit high virtual private fixed storage allocated by VTAM.

| *mpvtfixed*

The maximum amount of 64-bit high virtual private fixed storage allocated by VTAM.

| *lpvtfixed*

The maximum amount of 64-bit high virtual private fixed storage that VTAM can allocate.

| **IST2415I**

In the message text:

| *ctotfixed*

The current total amount of 64-bit high virtual fixed storage allocated by VTAM. *ctotfixed* is the sum of the *chvcfixed* value from the message IST2412I and the *cpvtfixed* value from the message IST2414I.

IST2404I

| *mtotfixed*

| The maximum amount of 64-bit high virtual fixed storage allocated by VTAM.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
| IST924I -----  
| IST2403I 64-BIT STORAGE TYPE CURRENT MAXIMUM LIMIT  
| IST2404I HVCOMMON 1M 2M NOLIMIT  
| IST2405I TRACE HVCOMMON 2M 4M 2048M  
| IST2413I PRIVATE 2M 8M NOLIMIT  
| IST2412I FIXED HVCOMMON 1M 1M NOLIMIT  
| IST2414I FIXED PRIVATE 1M 1M NOLIMIT  
| IST2415I TOTAL FIXED 2M 2M **NA**
```

IST2404I HVCOMMON *curhvcomm maxhvcomm limhvcomm*

Explanation: This message is part of a message group that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the group is IST2403I. See message "IST2403I" on page 1030 for a complete description of the message group.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2404I HVCOMMON 1M 1M NOLIMIT
```

IST2405I TRACE HVCOMMON *chvcommtr mhvcommtr lhvcommtr*

Explanation: This message is part of a message group that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the group is IST2403I. See message "IST2403I" on page 1030 for a complete description of the message group.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IST2405I          TRACE HVCOMMON          2M          4M          2048M
```

IST2406I SMC-R LINK FAILURE ON TRLE *trlename* CODE = *rsn_code*

Explanation: VTAM issues this group of messages when a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link failure is detected.

A complete description of the message group follows:

```
IST2406I SMC-R LINK FAILURE ON TRLE trlename CODE = rsn_code
IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface
IST2407I LOCAL LINK ID = local_id REMOTE LINK ID = remote_id
IST2408I LOCAL MAC = local_mac REMOTE MAC = remote_mac
IST2409I type GID = gid_value
IST2410I LOCAL QP = local_qp_num REMOTE QP = remote_qp_num
[IST2411I VLAN = vlan_id]
IST314I END
```

IST1717I

This message is displayed to identify the Upper-layer Protocol (ULP) associated with the failing SMC-R link.

ulp_id The name of a z/OS Communications Server ULP. In this message group, the *ulp_id* value is always the TCP/IP job name.

ulp_interface
The name of the 10 GbE RoCE Express interface that was used by the failing SMC-R link.

IST2406I

This is the first message in the message group.

trlename
The name of the TRLE that represents the 10 GbE RoCE Express interface that was used by the failing SMC-R link.

rsn_code
The reason code generated by z/OS Communications Server to assist in identifying the reason for the SMC-R link failure.

IST2407I

This message displays the SMC-R link identification values assigned to the failing SMC-R link.

local_id The SMC-R link ID value assigned by this node for the failing SMC-R link.

remote_id

The SMC-R link ID value assigned by the remote SMC-R peer for the failing SMC-R link.

IST2408I

This message displays the Media Access Control (MAC) address values for the failing SMC-R link.

local_mac

The MAC value assigned by this node for the 10 GbE RoCE Express interface that was used by the failing SMC-R link.

remote_mac

The MAC value assigned by the remote SMC-R peer for 10 GbE RoCE Express interface that was used by the failing SMC-R link.

IST2409I

This message displays a group ID (GID) value for the failing SMC-R link.

type Indicates which SMC-R link peer generated this GID value. Possible values are:

LOCAL

The GID value was assigned by this node.

REMOTE

The GID value was assigned by the remote SMC-R peer.

gid_value

The GID value assigned by the SMC-R peer for the failing SMC-R link.

IST2410I

This message displays the queue pair (QP) values for the failing SMC-R link.

local_qp_num

The QP number assigned by this node for the failing SMC-R link.

remote_qp_num

The QP number assigned by the remote SMC-R peer for the failing SMC-R link.

IST2411I

This optional message is displayed when a virtual LAN (VLAN) is associated with the failing SMC-R link.

vlan_id The VLAN value associated with the failing SMC-R link.

System action: Processing continues. The TCP/IP stack attempts to switch the TCP connections that are using the failing SMC-R link to another SMC-R link, if one exists, within the SMC-R link group. This switch occurs automatically and the TCP connections continue over the alternate SMC-R link. If no alternate SMC-R link exists within the link group, the TCP connections end.

Operator response: Contact the system programmer.

System programmer response: For more information about Data Link Control (DLC) status codes and about the error that the value of *rsn_code* reports, see z/OS Communications Server: IP and SNA Codes. Perform the necessary corrections, if any. If there are no corrections to make, or the corrections do not fix the condition, take these steps:

1. If the error occurs infrequently and the TCP connections switch successfully to the alternate SMC-R link in the link group, the error might be a transient network condition. These errors can be ignored.

2. If the error occurs repeatedly during SMC-R link activation with *rsn_code= X'0830500C'*, the error might be a configuration issue with the Ethernet switch. For suggestions on how to correct the switch configuration issues, see *z/OS Communications Server: IP Diagnosis Guide* in *z/OS Communications Server: IP Diagnosis Guide*.
3. If the error occurs repeatedly, or the TCP connections do not switch to the alternate SMC-R link in the link group, instruct the operator to issue either of these commands:
 - `MODIFY CSDUMP,MESSAGE=IST2406I` to collect a VTAM dump the next time this message group is displayed.
 - `MODIFY CSDUMP,MESSAGE=IST2406I,RNICTRL=trlename` to collect both a VTAM dump and a 10 GbE RoCE Express diagnostic dump the next time this message group is generated for an SMC-R link associated with *trlename*. The diagnostic dump is disruptive to all TCP/IP stacks that activate the 10 GbE RoCE Express interface, so this option should be used only when a VTAM dump provides insufficient information to diagnose the problem. In addition, you should ensure that an alternate SMC-R link is available so that the TCP connections remain active when the diagnostic dump is taken.

When the diagnostic information is collected, contact IBM Service.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option `MSGMOD=YES` (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See *z/OS Communications Server: SNA Operation* and *z/OS Communications Server: SNA Resource Definition Reference* for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a good candidate for automation.

Example:

```
IST2406I SMC-R LINK FAILURE ON TRLE IUT10018 CODE = 8014510B
IST1717I ULPID = TCPCS1 ULP INTERFACE = EZARIUT10018
IST2407I LOCAL LINK ID = 2D8F0100 REMOTE LINK ID = 729D0101
IST2408I LOCAL MAC = 02000012F030 REMOTE MAC = 02000112F030
IST2409I LOCAL GID = FE80::200:1FF:FE12:F030
IST2409I REMOTE GID = FE80::200:FF:FE12:F030
IST2410I LOCAL QP = 40 REMOTE QP = 41
IST2411I VLAN = 100
IST314I END
```

IST2407I LOCAL LINK ID = *local_id* REMOTE LINK ID = *remote_id*

Explanation: VTAM issues this message as part of a group of messages when a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link or Shared Memory Communications - Direct Memory Access (SMC-D) link failure is detected. VTAM issues message group IST2406I for SMC-R link failures and message group IST2421I for SMC-D link failures. See message "IST2406I" on page 1033 or "IST2421I" on page 1045 for an explanation of the message group.

System action: See message group for details.

Operator response: See message group for details.

System programmer response: See message group for details.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option `MSGMOD=YES` (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See *z/OS Communications Server: SNA Operation* and *z/OS Communications Server: SNA Resource Definition Reference* for more information about start options.

IST2408I • IST2409I

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2407I LOCAL LINK ID = 2D8F0100 REMOTE LINK ID = 729D0101
```

IST2408I LOCAL MAC = *local_mac* REMOTE MAC = *remote_mac*

Explanation: VTAM issues this message as part of a group of messages when a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link failure is detected. See message "IST2406I" on page 1033 for an explanation of the message group.

System action: See message IST2406I for details.

Operator response: See message IST2406I for details.

System programmer response: See message IST2406I for details.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2408I LOCAL MAC = 02000012F030 REMOTE MAC = 02000112F030
```

IST2409I *type* GID = *gid_value*

Explanation: VTAM issues this message as part of a group of messages when a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link or Shared Memory Communications - Direct Memory Access (SMC-D) link failure is detected. VTAM issues message group IST2406I for SMC-R link failures and message group IST2421I for SMC-D link failures. See message "IST2406I" on page 1033 or "IST2421I" on page 1045 for an explanation of the message group.

| **System action:** See message group for details.

| **Operator response:** See message group for details.

| **System programmer response:** See message group for details.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2409I LOCAL GID = FE80::200:1FF:FE12:F030
```

IST2410I LOCAL QP = *local_qp_num* REMOTE QP = *remote_qp_num*

Explanation: VTAM issues this message as part of a group of messages when a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link failure is detected. See message “IST2406I” on page 1033 for an explanation of the message group.

System action: See message IST2406I for details.

Operator response: See message IST2406I for details.

System programmer response: See message IST2406I for details.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2410I LOCAL QP = 40 REMOTE QP = 41
```

IST2411I VLAN = *vlan_id*

Explanation: VTAM issues this message as part of a group of messages when a Shared Memory Communications - Remote Direct Memory Access (SMC-R) link or Shared Memory Communications - Direct Memory Access (SMC-D) link failure is detected. VTAM issues message group IST2406I for SMC-R link failures and message group IST2421I for SMC-D link failures. See message “IST2406I” on page 1033 or “IST2421I” on page 1045 for an explanation of the message group.

System action: See message group for details.

Operator response: See message group for details.

System programmer response: See message group for details.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

```
IST2411I VLAN = 100
```

IST2412I • IST2414I

| **IST2412I** **FIXED HVCOMMON** *chvcfixed mhvcfixed lhvcfixed*

| **Explanation:** This message is the part of a message group that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the subgroup is IST2403I. See message IST2403I for a complete description of the message group.

| **System action:** Not Applicable.

| **Operator response:** Not Applicable.

| **System programmer response:** Not Applicable.

| **User response:** Not Applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** Not Applicable.

| **Example:**

| IST2412I FIXED HVCOMMON 1M 1M NOLIMIT

| **IST2413I** **PRIVATE** *curhvpriv maxhvpriv linhvpriv*

| **Explanation:** This message is the part of a message group that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the subgroup is IST2403I. See message IST2403I for a complete description of the message group.

| **System action:** Not Applicable.

| **Operator response:** Not Applicable.

| **System programmer response:** Not Applicable.

| **User response:** Not Applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** Not Applicable.

| **Example:**

| IST2413I PRIVATE 1M 1M NOLIMIT

| **IST2414I** **FIXED PRIVATE** *cpvtfixed mpvtfixed lpvtfixed*

| **Explanation:** This message is the part of a message group that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the subgroup is IST2403I. See message IST2403I for a complete description of the message group.

| **System action:** Not Applicable.

| **Operator response:** Not Applicable.
 | **System programmer response:** Not Applicable.
 | **User response:** Not Applicable.
 | **Problem determination:** Not applicable.
 | **Source:** z/OS Communications Server SNA
 | **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.
 | **Routing code:** 2
 | **Descriptor code:** 5
 | **Automation:** Not Applicable.
 | **Example:**

IST2414I	FIXED PRIVATE	1M	1M	NOLIMIT
----------	---------------	----	----	---------

| **IST2415I** TOTAL FIXED *ctotfixed mtotfixed* ****NA****

| **Explanation:** This message is the part of a message group that VTAM issues in response to a DISPLAY BFRUSE command. The first message in the subgroup is IST2403I. See message IST2403I for a complete description of the message group.
 | **System action:** Not Applicable.
 | **Operator response:** Not Applicable.
 | **System programmer response:** Not Applicable.
 | **User response:** Not Applicable.
 | **Problem determination:** Not applicable.
 | **Source:** z/OS Communications Server SNA
 | **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.
 | **Routing code:** 2
 | **Descriptor code:** 5
 | **Automation:** Not Applicable.
 | **Example:**

IST2415I	TOTAL FIXED	1M	1M	**NA**
----------	-------------	----	----	--------

IST2416I *count type* PROCESSED

Explanation: VTAM issues this message to respond to a VARY INACT,TYPE=GIVEBACK command where wildcard values are used for the ID operand. The ID operand specifies the dependent LU requesters (DLURs) that will be deactivated. This message is issued only when the GVBKDLY and VARYWLD start options are both enabled.

count The number of resources that the command processes.

type The same type as in the INACT command that is issued. The following value is valid:

GIVEBACKS

VARY INACT,TYPE=GIVEBACK processing for DLURs was performed.

System action: Processing continues.

Operator response: Use the IST2416I message as an indicator that VTAM has finished scheduling the last batch of

IST2417I • IST2418I

subcommands for processing. If additional wildcard ID values will be processed, issue another VARY INACT,TYPE=GIVEBACK command and specify the next wildcard pattern on the ID operand.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IST2416I 1852 GIVEBACKS PROCESSED

IST2417I VFN = *virtual_function_number*

| **Explanation:** VTAM issues this message as part of several message groups in response to a DISPLAY ID or DISPLAY TRL command.

| See message IST2361I for an explanation of the message group when the TRLE represents an IBM 10 GbE RoCE Express interface, or message IST2418I when the TRLE represents an internal shared memory (ISM) interface.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: This message is not a candidate for automation.

Example:

IST2417I VFN = 0002

| **IST2418I** SMCD PFID = *pfid* VCHID = *vchid* PNETID = *network_id*

| **Explanation:** VTAM issues this message as part of a message group in response to a DISPLAY ID or DISPLAY TRL command for a TRLE that is associated with an internal shared memory (ISM) device.

| VTAM also issues this message as part of a group of messages that the adapter interrupt monitoring function generates. The first message in the group is IST2419I. See "IST2419I" on page 1042 for a complete description.

| A complete description of the message group follows the example:

| IST075I NAME = *nodename*, TYPE = *nodetype*

| IST1954I TRL MAJOR NODE = *trl_major_node_name*

| IST486I STATUS= *current_status*, DESIRED STATE= *desired_state*

```

| IST087I TYPE = line_type, CONTROL = line_control, HPDT = hpdvalue
| IST2418I SMCD PFID = pfid VCHID = vchid PNETID = network_id
| IST2417I VFN = virtual_function_number
| [IST924I -----]
| [IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface]
| [IST1724I I/O TRACE = iotrc TRACE LENGTH = length]

```

IST075I

This message displays the resource name and resource type.

nodename

The name of the resource that was entered on the DISPLAY command.

nodetype

The resource type of the major or minor node. The *nodetype* value is always **TRLE** for this message group.

IST087I

This message displays line information associated with *nodename*.

line_type

The *line_type* value is always ***NA*** for this message group.

line_control

The *line_control* value is always **ISM** (internal shared memory) for this message group.

hpdvalue

The *hpdvalue* value is always ***NA*** for this message group.

IST486I

This message displays status information for *nodename*.

current_status

The current status of the node. See the z/OS Communications Server: IP and SNA Codes for status information.

desired_state

The node state that is desired. See the z/OS Communications Server: IP and SNA Codes for status information. If VTAM cannot determine the desired state, *desired_state* is *****NA*****.

IST1717I

This message is displayed when the ISM TRLE is currently being used by a upper-layer protocol (ULP). Only one ULP can use an ISM TRLE at a time.

ulp_id The name of a z/OS Communications Server ULP that is using the ISM TRLE. In this message group, the *ulp_id* value is always the TCP/IP job name.

ulp_interface

The name of the interface associated with the ISM TRLE.

IST1724I

This message displays trace information for *nodename*.

iotrc Specifies whether I/O Trace is active for *nodename*. In this message group, the *iotrc* value is always **OFF**.

length Specifies the number of bytes being recorded for I/O Trace for *nodename*. In this message group, the *length* value is always ***NA***.

IST1954I

This message displays the TRL major node name.

IST2419I

| *trl_major_node_name*
| The name of the TRL major node defining the ISM TRLE. The *trl_major_node_name* value is always ISTTRL
| for this message group.

IST2417I

| This message displays the virtual function number (VFN) associated with *nodename*.

| *virtual_function_number*
| The virtual function number.

IST2418I

| This message provides configuration information for the ISM device represented by *nodename*.

| *pfid* The 2-byte hexadecimal Peripheral Component Interconnect Express (PCIe) function ID.

| *vchid* The 2-byte hexadecimal virtual channel ID (VCHID).

| *network_id*
| The physical network identifier.

| **System action:** Processing continues.

| **Operator response:** Not applicable.

| **System programmer response:** Not applicable.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is not a good candidate for automation.

Example:

```
| IST097I DISPLAY ACCEPTED
| IST075I NAME = IUT0001D, TYPE = TRLE
| IST1954I TRL MAJOR NODE = ISTTRL
| IST486I STATUS= ACTIV, DESIRED STATE= ACTIV
| IST087I TYPE = *NA*, CONTROL = ISM, HPDT = *NA*
| IST2418I SMCD PFID = 001D VCHID = 0178 PNETID = NETWORK1
| IST2417I VFN = 0002
| IST924I -----
| IST1717I ULPID = TCPCS ULP INTERFACE = EZAISM03
| IST1724I I/O TRACE = OFF TRACE LENGTH = *NA*
| IST314I END
```

IST2419I VIRTUAL INTERRUPT DRIVEN FOR TRLE *trlename*

| **Explanation:** VTAM issues this message as part of a group of messages generated by the adapter interrupt monitoring function. This message group indicates VTAM detected that no interrupt had been generated for the interface associated with *trlename* even though there was data waiting to be processed, and that VTAM then initiated a virtual interrupt to resume activity on the interface. The adapter interrupt monitoring function is enabled using the AIMON start option.

| A complete description of the message group follows the example:

```

| IST2419I VIRTUAL INTERRUPT DRIVEN FOR TRLE trlename
| [ IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface ]
| [ IST2337I CHPID TYPE = chpid_type CHPID = chpid_num PNETID = network_id ]
| [ IST2361I SMCR PFID = pfid PCHID = pchid PNETID = network_id ]
| [ IST2418I SMCD PFID = pfid VCHID = vchid PNETID = network_id ]
| IST314I END

```

IST1717I

This message is displayed to identify the upper-layer protocol (ULP) associated with the failing QDIO or iQDIO link.

ulp_id The name of a z/OS Communications Server ULP. In this message group, the *ulp_id* value is always the TCP/IP job name.

IST2337I

This message provides configuration information for the OSA-Express adapter that is associated with *trlename*.

chpid_type

The type of channel path identifier that this TRLE uses:

OSD Channel type for an OSA-Express CHPID that is configured in QDIO mode.

OSM Channel type for an OSA-Express CHPID that is configured for attachment to the intranode management network.

OSX Channel type for an OSA-Express CHPID that is configured for attachment to the intraensemble network.

chpid_num

The 2-byte hexadecimal virtual channel path identifier (CHPID) for the OSA-Express adapter.

network_id

The physical network identifier for the OSA-Express adapter that is associated with *trlename*.

IST2361I

This message provides configuration information for the adapter associated with *trlename*.

pfid The 2-byte hexadecimal Peripheral Component Interconnect Express (PCIe) function ID for the 10 GbE RoCE Express feature associated with *trlename*.

pchid The 2-byte hexadecimal physical channel ID (PCHID) for the 10 GbE RoCE Express feature associated with *trlename*.

network_id

The physical network identifier for the 10 GbE RoCE Express interface associated with *trlename*.

IST2418I

This message provides configuration information for the device that is associated with *trlename*.

pfid The 2-byte hexadecimal Peripheral Component Interconnect Express (PCIe) function ID for the internal shared memory (ISM) device that is associated with *trlename*.

vchid The 2-byte hexadecimal virtual channel ID (VCHID) for ISM device that is associated with *trlename*.

network_id

The physical network identifier for the ISM interface that is associated with *trlename*.

IST2419I

This is the first message in the message group.

trlename

The name of the resource for which VTAM drove a virtual interrupt.

IST2420I

| **System action:** Processing continues.

| **Operator response:** Contact the system programmer.

| **System programmer response:** If this error occurs repeatedly, instruct the operator to issue this command:

| **MODIFY CSDUMP,MESSAGE=IST2419I**

| Issue this command to collect a VTAM dump the next time this message group is displayed. When the diagnostic information is collected, contact IBM Service.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is not a good candidate for automation.

| **Example:**

```
| IST2419I VIRTUAL INTERRUPT DRIVEN FOR TRLE IUT10010  
| IST2361I SMCR PFID = 0010 PCHID = 01A0 PNETID = NETID1  
| IST314I END
```

IST2420I ISM NOT SUPPORTED, REQUIRED HARDWARE NOT AVAILABLE

| **Explanation:** VTAM issues this message when it detects that internal shared memory (ISM) processing cannot be performed because the necessary hardware is not available. VTAM uses ISM processing as part of Shared Memory Communications - Direct Memory Access (SMC-D) processing.

| **System action:** Processing continues. Future attempts to activate the ISM device will fail.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Ensure that the TCP/IP stack configured to use SMC-D processing is operating on an IBM z13™ GA2/MR or later processor.

| You can configure a TCP/IP stack to use SMC-D by specifying the SMCD parameter on the GLOBALCONFIG statement.

| If you cannot operate the TCP/IP stack on an IBM z13 GA2/MR or later processor, make one of the following changes to the GLOBALCONFIG statement for the TCP/IP stack:

- | • Remove the SMCD operand.
- | • Specify the NOSMCD operand.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is a candidate for automation to detect errors that occur during activation of PCIe devices.

| **Example:**

| IST2420I ISM NOT SUPPORTED, REQUIRED HARDWARE NOT AVAILABLE

| **IST2421I** SMC-D LINK FAILURE ON TRLE *trlename* CODE = *rsn_code*| **Explanation:** VTAM issues this group of messages when a Shared Memory Communications - Direct Memory Access (SMC-D) link failure is detected.

| A complete description of the message group follows:

```

| IST2421I SMC-D LINK FAILURE ON TRLE trlename CODE = rsn_code
| IST1717I ULPID = ulp_id ULP INTERFACE = ulp_interface
| IST2407I LOCAL LINK ID = local_id REMOTE LINK ID = remote_id
| IST2409I type GID = gid_value
| [IST2411I VLAN = vlan_id]
| IST314I END

```

| **IST1717I**

| This message is displayed to identify the upper-layer protocol (ULP) associated with the failing SMC-D link.

| *ulp_id* The name of a z/OS Communications Server ULP. In this message group, the *ulp_id* value is always the TCP/IP job name.| *ulp_interface*
| The name of the internal shared memory (ISM) interface that was used by the failing SMC-D link.| **IST2407I**

| This message displays the SMC-D link identification values assigned to the failing SMC-D link.

| *local_id* The SMC-D link ID value assigned by this node for the failing SMC-D link.| *remote_id*
| The SMC-D link ID value assigned by the remote SMC-D peer for the failing SMC-D link.| **IST2409I**

| This message displays a group ID (GID) value for the failing SMC-D link.

| *type* Indicates which SMC-D link peer generated this GID value. Possible values are:| **LOCAL**
| The GID value was assigned by this node.| **REMOTE**
| The GID value was assigned by the remote SMC-D peer.| *gid_value*
| The GID value assigned by the SMC-D peer for the failing SMC-D link.| **IST2411I**

| This optional message is displayed when a virtual LAN (VLAN) is associated with the failing SMC-D link.

| *vlan_id* The VLAN value associated with the failing SMC-D link.| **IST2421I**

| This is the first message in the message group.

| *trlename*
| The name of the TRLE that represents the ISM interface that was used by the failing SMC-D link.

IST2422I

| *rsn_code*
| The reason code generated by z/OS Communications Server to assist in identifying the reason for the
| SMC-D link failure.

| **System action:** Processing continues. The TCP connections that are using the failing SMC-D link end.

| **Operator response:** Contact the system programmer.

| **System programmer response:** For more information about Data Link Control (DLC) status codes and about the
| error that the value of *rsn_code* reports, see z/OS Communications Server: IP and SNA Codes. Perform the necessary
| corrections, if any.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f*
| *procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server:
| SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about
| start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is not a good candidate for automation.

| **Example:**

```
| IST2421I SMC-D LINK FAILURE ON TRLE IUT00018 CODE = 80145701  
| IST1717I ULPID = TCPCS1 ULP INTERFACE = EZAISM01  
| IST2407I LOCAL LINK ID = 00010000 REMOTE LINK ID = 00000000  
| IST2409I LOCAL GID = 8002000A000A0061  
| IST2409I REMOTE GID = 8002000A000A0062  
| IST2411I VLAN = 100  
| IST314I END
```

IST2422I NO ISM PFIDS DEFINED FOR PNETID *pnetid_value*

| **Explanation:** VTAM issues this message when it attempts to activate an internal shared memory (ISM) device
| associated with a physical network ID (PNetID), but no Peripheral Component Interconnect Express (PCIe) function
| ID (PFID) values are defined for this PNetID.

| In the message text:

| *pnetid_value*
| The physical network ID that VTAM used in the failed activation attempt.

| **System action:** ISM interface activation fails.

| **Operator response:** Issue the D PCIE command and provide the output to the system programmer.

| **System programmer response:** Determine if *pnetid_value* is a valid physical network ID for this system, and perform
| one of the following steps:

- | • If the *pnetid_value* is not valid, correct the OSD or HiperSockets definitions in the HCD. VTAM learns the PNetID
| of the OSD and Hipersockets devices during activation processing. These PNetID values are subsequently used to
| attempt to activate internal shared memory (ISM) interfaces associated with Shared Memory Communications -
| Direct Memory Access (SMC-D) capable OSD or HiperSockets devices.
- | • If the *pnetid_value* is valid, correct the HCD definitions for the PFID values that should be used for *pnetid_value*
| interfaces.

| After the corrections have been made, instruct the operator to issue the necessary commands to activate the changes
| that were made to the HCD configuration.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is a candidate for automation to detect errors that occur during activation of ISM devices.

| **Example:**

| IST2422I NO ISM PFIDS DEFINED FOR PNETID NETID2

| **IST2423I** NO ISM PFIDS AVAILABLE FOR PNETID *pnetid_value*

| **Explanation:** VTAM issues this message when it attempts to activate an internal shared memory (ISM) interface associated with a physical network ID (PNetID). Peripheral Component Interconnect Express (PCIe) function ID (PFID) values are defined for this PNetID, but none of the PCIe devices associated with the PFID values are available.

| In the message text:

| *pnetid_value*

| The physical network ID that VTAM used in the failed activation attempt.

| **System action:** ISM interface activation fails.

| **Operator response:** Take the following steps to correct the problem:

- | 1. Issue the D PCIE command to identify the PFID values that are associated with *pnetid_value*.
- | 2. If any PCIe devices associated with *pnetid_value* are offline, take the following steps:
 - | • Issue the CF PFID command to bring the PCIe devices associated with the PFID values online.
 - | • Issue the VARY START command to start the internal shared memory (ISM) interface.
- | 3. If all PCIe devices associated with *pnetid_value* are online, contact the system programmer.

| **System programmer response:** If all PCIe devices associated with *pnetid_value* are online and in use, and you want additional TCP/IP stacks to activate ISM interfaces for this *pnetid_value*, take the following steps:

- | 1. Update the HCD configuration to define additional virtual functions (VF) for the virtual channel ID (VCHID) representing the ISM device used by *pnetid_value*.
- | 2. After the corrections have been made, instruct the operator to issue the necessary commands to activate the changes that were made to the HCD configuration and to issue the VARY START command to start the ISM interface.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is a candidate for automation to detect errors that occur during activation of ISM devices.

| **Example:**

| IST2423I NO ISM PFIDS AVAILABLE FOR PNETID NETID2

IST2424I

IST2424I 3270 DATA STREAM ERROR – netid.pluname netid.sluname

Explanation: This is the first of a group of messages that VTAM issues when a 3270 data stream error is found by the 3270 Intrusion Detection Services. A complete description of the message group follows.

```
IST2424I 3270 DATA STREAM ERROR – netid.pluname netid.sluname
IST2425I {PLU|SLU} SUBAREA = X'saHex' INDEX = X'indHex' ELEMENT = X'elHex'
IST2441I JOBNAME = jobname SID = session_id
[IST2426I IPADDR = ipaddress..port]
IST2427I DATE = date TIME = time ID = id
IST2428I ROW = row COLUMN = col
IST2429I OUTBOUND – SEQ = X'seq_num' OFF = offset LEN = len
IST2431I hex_data1 hex_data2 hex_data3 hex_data4 *EBCDIC_data*
IST2430I INBOUND – SEQ = X'seq_num' OFF = offset LEN = len
IST2431I hex_data1 hex_data2 hex_data3 hex_data4 *EBCDIC_data*
IST314I END
```

IST2424I

pluname
The network-qualified primary session partner name.

sluname The network-qualified secondary session partner name.

netid The ID of the network that contains the session partner.

IST2425I

IST2425I will be displayed once for the PLU resource and once for the SLU resource.

saHex The subarea of the primary or secondary logical unit in hexadecimal.

indHex The element index number of the primary or secondary logical unit in hexadecimal.

elHex The element address of the primary or secondary logical unit in hexadecimal.

IST2426I

ipaddress
The IP address associated with the SLU.

port The port number associated with the SLU.

This message is issued when the control vector CV64 has been provided.

IST2427I

date and time
Specify when the last outbound data was sent.

id The incident token associated with this event.

IST2428I

row The row number of the 3270 presentation space where the field modification was detected.

col The column number of the 3270 presentation space where the field modification was detected.

IST2429I

seq_num
The sequence number of the last outbound PIU that set the field in question in hexadecimal.

offset The offset in the outbound PIU of the field that was overlaid.

len The length of the outbound field that was overlaid.

IST2430I

| *seq_num*
 | The sequence number of the inbound PIU in hexadecimal.
 | *offset* The offset in the inbound PIU of the field that was overlaid.
 | *len* The length of the inbound field that was overlaid.

| **IST2431I**

| *hexdata_1, hex_data2, hex_data3 and hex_data4*
 | Show up to 16 bytes of outbound or inbound data around the area of the detected violation (in hex).
 | *EBCDIC_data*
 | Show up to 16 bytes of outbound or inbound data around the area of the detected violation (in EBCDIC).

| **IST2441I**

| *jobname* The 1 to 8 character job name of the VTAM application that was active when the incident occurred. If
 | *jobname* is not available, VTAM issues *****NA*****.

| *session_id*
 | The session ID that provides a unique identifier for the session. If the session ID is unknown, VTAM
 | displays *****NA*****.

| **System action:** Depending on the value of the DSACTION defined on the APPL statement, the connection will be
 | continued or will be terminated. The outbound and inbound PIUs have been written to the Generalized Trace Facility
 | (GTF), if available.

| **Operator response:** Notify the security administrator that a possible intrusion has been detected.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Start the Generalized Trace Facility (GTF) to collect trace records of event type 'F90'x. These
 | trace records can be formatted with Interactive Problem Control System (IPCS).

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f*
 | *procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server:
 | SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about
 | start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **Automation:** An automation tool can start GTF and buffer trace for the SLU when it detects the message IST2424I.

| **Tips:**

- | • When you use DSACTION=SYSLOG, a single IST2424I message is written to the console and the entire message
 | group for IST2424I is written to SYSLOG. This message is displayed twice for the same incident during
 | automation.
- | • When the application is TSO, the *jobname* in IST2441I is the TSO user ID.

| **Example:**

```
| IST2424I 3270 DATA STREAM ERROR - NETA.TS010001 NETA.L7201A 056
| IST2425I PLU SUBAREA = X'0001' INDEX = X'0001' ELEMENT = X'0076'
| IST2425I SLU SUBAREA = X'0001' INDEX = X'0000' ELEMENT = X'003A'
| IST2441I JOBNAME = USER1 SID = EAABEEC33D18556F
| IST2426I IPADDR = 10.10.101.4..50208
| IST2427I DATE = 2016/04/01 TIME = 14:07:04 ID = 1
| IST2428I ROW = 4 COLUMN = 14
| IST2429I OUTBOUND - SEQ = X'000A' OFF = 350 LEN = 66
| IST2431I 00000000 00000000 00000000 00000000 *.....*
| IST2430I INBOUND - SEQ = X'0006' OFF = 6 LEN = 66
| IST2431I 92939293 91A28400 00000000 00000000 *KLKLSJSD.....*
| IST314I END
```

IST2425I {PLU|SLU} SUBAREA = X'saHex' INDEX = X'indHex' ELEMENT = X'eIHex'

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 8, 9

Descriptor code: 4

IST2426I IPADDR = ipaddress..port

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 8, 9

Descriptor code: 4

IST2427I DATE = date TIME = time ID = id

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 8, 9

Descriptor code: 4

IST2428I ROW = row COLUMN = col

Explanation: VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

Source: z/OS Communications Server SNA

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 8, 9

Descriptor code: 4

| **IST2429I** **OUTBOUND – SEQ = X'seq_num' OFF = offset LEN = len**

| **Explanation:** VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **IST2430I** **INBOUND - SEQ = X'seq_num' OFF = offset LEN = len**

| **Explanation:** VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

| **System action:** None.

| **Operator response:** None.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **Automation:** Not applicable for automation.

| **IST2431I** **hex_data1 hex_data2 hex_data3 hex_data4 *EBCDIC_data***

| **Explanation:** VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **IST2432I** **3270 ERROR SUMMARY FROM date AT time**

| **Explanation:** VTAM issues this message as part of a 3270 Intrusion Detection Services summary message group. This message group is issued only if message suppression has been enabled by setting the *error_msg_count* DSACTION start option to a nonzero value. VTAM suppresses the logging of the IST2424I message events if the number of message events logged in a 60-second interval exceeds the value of the DSACTION start option. Logging

IST2432I

| resumes after the 60-second interval ends. Message IST2439I is a column header for IST2440I, which is repeated for each session. The full description of the message group follows the example.

```
| IST2432I 3270 ERROR SUMMARY FROM date AT time
| IST2438I SESSIONS = sesscnt ERRORS = errcnt
| IST924I -----
| IST2439I PLU          SLU          SID          ERRORS
| [IST2440I pluname      sluname      sessionid    count]
| .
| .
| .
| IST314I END
```

IST2432I

| In the message text:

| *date and time*
| Specify when the message suppression event interval was started. This summary message group displays information about messages that were suppressed since this date and time.

IST2438I

| In the message text:

| *sesscnt* The number of sessions recorded in the summary. This does not include sessions that could not be saved in the summary table. If *sesscnt* displays > 50, more than 50 sessions were associated with the IST2424I message groups.

| *errcnt* The total number of errors that have occurred since message group IST2424I was suppressed. This does include the sessions that could not be saved in the summary table.

IST924I

| VTAM issues this message to improve the readability of the display.

IST2439I

| This message is a message header for the information displayed in message IST2440I.

IST2440I

| In the message text:

| *pluname*
| The network-qualified primary session partner name.

| *sluname* The network-qualified secondary session partner name.

| *sessionid*
| The session identifier. For additional information on the session, enter a DISPLAY SESSIONS,SID=*sessionid* command.

| *count* The number of IST2424I message groups that was suppressed for the session.

| If the *pluname* and *sluname* values contain N/A, this is the overflow entry and the *count* value contains the number of incidents that could not be recorded in the summary table.

| **System action:** Processing continues. PIUs that are associated with the event are still written to GTRACE.

| **Operator response:** Notify the security administrator that possible intrusions have been detected.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Start the Generalized Trace Facility (GTF) to collect trace records of event type 'F90'x. These trace records can be formatted with Interactive Problem Control System (IPCS).

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **Automation:** An automation tool can start GTF and buffer trace for the secondary logical unions when it detects the message IST2432I.

| **Example:**

```
| IST2432I 3270 ERROR SUMMARY FROM 2016/01/07 AT 09:19:17 976
| IST2438I SESSIONS = 1 ERRORS = 25
| IST924I -----
| IST2439I PLU                SLU                SID                ERRORS
| IST2440I NETA.TS010001     NETA.L7201A     EAABEEC32FB66595    25
| IST314I END
```

| **IST2433I** **DSMONITR = YES, DSCOUNT = count, DSACTION = string**

| **Explanation:** VTAM issues this message in response to a DISPLAY ID command for a VTAM application when the 3270 Intrusion Detection Services is active for this application.

| In the message text:

| *count* The number of outbound buffers to be saved. *count* is the current value of the DSCOUNT operand specified on the APPL statement or the VTAM DSCOUNT start option.

| *string* The current value of the DSACTION operand specified on the APPL statement or the VTAM DSACTION start option.

| **System action:** Processing continues.

| **Operator response:** None.

| **System programmer response:** None.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** Not applicable for automation.

| **Example:**

```
| IST2433I DSMONITR = YES, DSCOUNT = 1, DSACTION = (SYSLOG,NONE)
```

| **IST2434I** **DSTRUST = string**

| **Explanation:** VTAM issues this message in response to a DISPLAY ID command for a VTAM application when the 3270 Intrusion Detection Services is active for this application.

| In the message text:

| *string* The current value of the DSTRUST operand specified on the APPL statement or the VTAM DSTRUST start option.

IST2435I • IST2436I

- | **System action:** Processing continues.
- | **Operator response:** None.
- | **System programmer response:** None.
- | **User response:** Not applicable.
- | **Problem determination:** Not applicable.
- | **Source:** z/OS Communications Server SNA
- | **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.
- | **Routing code:** 2
- | **Descriptor code:** 5
- | **Automation:** Not applicable for automation.
- | **Example:**
- | IST2434I DSTRUST = NONE

IST2435I SESSIONS MONITORED = *count*, ERRORS DETECTED = *errors*

- | **Explanation:** VTAM issues this message in response to a DISPLAY ID command for an application program when the 3270 Intrusion Detection Services is monitoring this application.
- | In the message text:
- | *count* The number of sessions currently being monitored by the 3270 Intrusion Detection Services. When the 3270 Intrusion Detection Services is no longer actively monitoring sessions, ***N/A*** is displayed.
- | *errors* The number of errors that have been found by the 3270 Intrusion Detection Services for this application.
- | **System action:** Processing continues.
- | **Operator response:** None.
- | **System programmer response:** None.
- | **User response:** Not applicable.
- | **Problem determination:** Not applicable.
- | **Source:** z/OS Communications Server SNA
- | **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.
- | **Routing code:** 2
- | **Descriptor code:** 5
- | **Automation:** Not applicable for automation.

IST2436I DSMONITR = NO

- | **Explanation:** VTAM issues this message in response to the following commands:
 - DISPLAY ID command for an application program when the 3270 Intrusion Detection Services is not active for the application.
 - DISPLAY SESSIONS,SID= command for a session when the 3270 Intrusion Detection Services is not active for the session.
- | **System action:** Processing continues.

| **Operator response:** None.

| **System programmer response:** Not applicable.

| **User response:** Not applicable.

| **Problem determination:** None.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** Not applicable for automation.

| **Example:**

| IST2436I DSMONITR = NO

| **IST2437I** **DSMONITR = [YES|NO], ERRORS DETECTED = errors**

| **Explanation:** This message is part of a group of messages that VTAM issues in response to a DISPLAY SESSIONS,SID command. The first message of the group is IST879I. See the explanation of that message for a complete description.

| **System action:** Processing continues.

| **Operator response:** None.

| **System programmer response:** None.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** Not applicable for automation.

| **Example:**

| IST2437I DSMONITR = YES, ERRORS DETECTED = 0

| **IST2438I** **SESSIONS = sesscnt ERRORS = errcnt**

| **Explanation:** VTAM issues this message as part of a 3270 Intrusion Detection Services summary message group. This message group is issued only if message suppression has been enabled by setting the *error_msg_count* DSACTION start option to a nonzero value. The first message in this message group is IST2432I. See the explanation of that message for a complete description.

| **System action:** Processing continues.

| **Operator response:** Notify the security administrator that possible intrusions have been detected.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Start the Generalized Trace Facility (GTF) to collect trace records of event type 'F90'x. These

IST2439I • IST2440I

| trace records can be formatted with Interactive Problem Control System (IPCS).

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **Automation:** An automation tool can start GTF and buffer trace for the SLU when it detects the message IST2424I or IST2432I.

IST2439I	PLU	SLU	SID	ERRORS
-----------------	------------	------------	------------	---------------

| **Explanation:** VTAM issues this message as part of a 3270 Intrusion Detection Services summary message group. This message group is issued only if message suppression has been enabled by setting the *error_msg_count* DSACTION start option to a nonzero value. The first message in this message group is IST2432I. See the explanation of that message for a complete description.

| **System action:** Processing continues.

| **Operator response:** Notify the security administrator that possible intrusions have been detected.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Start the Generalized Trace Facility (GTF) to collect trace records of event type 'F90'x. These trace records can be formatted with Interactive Problem Control System (IPCS).

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **Automation:** An automation tool can start GTF and buffer trace for the SLU when it detects the message IST2424I or IST2432I.

IST2440I	<i>pluname</i>	<i>sluname</i>	<i>sessionid</i>	<i>count</i>
-----------------	----------------	----------------	------------------	--------------

| **Explanation:** VTAM issues this message as part of a 3270 Intrusion Detection Services summary message group. This message group is issued only if message suppression has been enabled by setting the *error_msg_count* DSACTION start option to a nonzero value. The first message in this message group is IST2432I. See the explanation of that message for a complete description.

| **System action:** Processing continues.

| **Operator response:** Notify the security administrator that possible intrusions have been detected.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Start the Generalized Trace Facility (GTF) to collect trace records of event type 'F90'x. These trace records can be formatted with Interactive Problem Control System (IPCS).

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server:

| SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **Automation:** An automation tool can start GTF and buffer trace for the SLU when it detects the message IST2424I or IST2432I.

| **IST2441I** **JOBNAME = *jobname* SID = *session_id***

| **Explanation:** VTAM issues this message as part of a group of messages. The first message of the group is IST2424I. See the explanation of that message for a complete description. IST2424I is issued when a 3270 data stream error is detected.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 8, 9

| **Descriptor code:** 4

| **IST2445I** **VTAM INTERNAL TRACE CONTROL IS IN FULL MODE**

| **Explanation:** VTAM issues this message when a value of FULL is coded for the VITCTRL Start Option in z/OS Communications Server: SNA Resource Definition Reference. VTAM® issues this message as part of a group of messages. The first message in the group is IST315I. See the explanation of that message for a complete description.

| **System action:** None.

| **Operator response:** If the VIT options are not what are expected then the operator can choose to issue a MODIFY TRACE command to set the desired values. For additional information refer to the VITCTRL Start Option in z/OS Communications Server: SNA Resource Definition Reference.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** None.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is not a candidate for automation.

| **IST2446I** **DISABLING A VIT OPTION IN STDOPPTS GROUP WHILE CSDUMP ACTIVE**

| **Explanation:** VTAM issues this message when disabling a VIT option contained in the STDOPPTS group with both VITCTRL=FULL in effect and an active CSDUMP with either a message or sense code trigger. For this scenario all trace options except for MSG may be disabled by the user. It is recommended that all the VIT options in the STDOPPTS group remain enabled while an active CSDUMP waiting on a trigger exists for later problem analysis.

| **System action:** None.

| **Operator response:** If the VIT options are not what are expected, the operator can choose to issue a MODIFY

IST2446I

| TRACE command to set the desired values, although VTAM will continue to force the MSG trace option to be active
| as long as an active CSDUMP trigger exists.

| **System programmer response:** None.

| **User response:** None.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server SNA

| **Module:** Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f
| procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server:
| SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about
| start options.

| **Routing code:** 2

| **Descriptor code:** 5

| **Automation:** This message is not a candidate for automation.

| **Example:**

| IST2446I DISABLING A VIT OPTION IN STDOPPTS GROUP WHILE CSDUMP ACTIVE

Chapter 11. ISTH messages for IBM Health Checker for z/OS

This chapter lists the messages beginning with ISTH. These messages are issued by IBM Health Checker for z/OS.

ISTH001I Communications storage manager (CSM) storage maximums satisfy the *deftype* specified limits

Explanation: Check CSVTAM_CSM_STG_LIMIT ran successfully and found no exceptions. The check determined that the value specified for the maximum amount of CSM storage in the CSM Parmlib member IVTPRM00 for FIXED, ECSA and HVCOMM storage is in the limit specified for this check.

In the message text:

deftype

One of the following:

owner The check parameters for this check have not been overridden.

installation

The check parameters for this check have been overridden.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: ISTH001I Communications storage manager (CSM) storage maximums satisfy the owner specified limits

ISTH002I Communications storage manager (CSM) *stor_type* storage max *max_val* is less than the *def_type* specified value *min_val*

Explanation: Check CSVTAM_CSM_STG_LIMIT determined that the value specified for the maximum CSM storage of the type specified as defined in the CSM Parmlib member IVTPRM00 is less than the minimum value specified for the check. If the MAX ECSA value from the CSM PARMLIB member IVTPRM00 is higher than 90% of the system ECSA value, CSM adjusts the MAX ECSA value to 90% of the system ECSA value. This message is followed by message ISTH017E in the message buffer.

In the message text:

stor_type

The type of CSM storage. The *stor_type* value is either FIXED, ECSA or HVCOMM.

max_val

The current maximum value specified for the CSM storage type in the IVTPRM00 PARMLIB member.

def_type

One of the following:

owner The check parameters for this check have not been overridden.

installation

The check parameters for this check have been overridden.

ISTH005I • Isth006E

min_val

The check parameter value against which the maximum *stor_type* value is compared.

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: See the System programmer response in message Isth017E.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: IsthCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Isth002I Communications storage manager (CSM) ECSA storage max 80M is less than the installation specified value 120M

| **ISTH005I** VTAM Internal Trace (VIT) *vit_opt* option is active. IBM prefers that this option is always active, but if CPU is constrained then you can elect to stop this trace option.

| **Explanation:** Check CSVTAM_VIT_OPT_STDOPTS ran successfully and found no exceptions. All of the trace options defined in the *vit_opt* option are active.

| In the message text:

| *vit_opt*

| Can be one of the following values:

| **PSS**

| VTAM start option VITCTRL has a value of BASE (either specified or defaulted) and the VIT PSS option is currently active.

| **STDOPTS**

| VTAM start option VITCTRL has a current value of FULL and the all of the VIT options in the STDOPTS group are currently active.

| **System action:** The system continues processing.

| **Operator response:** Not applicable.

| **System programmer response:** Not applicable.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server

| **Module:** IsthCCK1

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Example:** Not applicable.

| **ISTH006E** VTAM Internal Trace (VIT) option *vit_opt* is not active

| **Explanation:** Check CSVTAM_VIT_OPT_STDOPTS determined that the VIT *vit_opt* option is not active. IBM suggests that this option should always be active for VIT tracing for optimal problem determination.

| In the message text:

| *vit_opt*

| Can be one of the following values:

| **PSS**
 | VTAM start option VITCTRL has a value of BASE (either specified or defaulted) and the VIT PSS option is
 | not currently active.

| **STDOPTS**
 | VTAM start option VITCTRL has a value of FULL and the VIT options in the STDOPTS group are not all
 | currently active.

| **System action:** The system continues processing.

| **Operator response:** Issue a MODIFY TRACE,TYPE=VTAM,MODE=INT,OPTION=PSS command to activate PSS
 | tracing. You should use the MODIFY NOTRACE command to deactivate the PSS option only if requested to do so by
 | IBM support.

| See the MODIFY TRACE command information in z/OS Communications Server: SNA Operation for information
 | about the MODIFY TRACE command.

| See the TRACE for MODULE, STATE (with OPTION), or VTAM internal trace information in z/OS Communications
 | Server: SNA Resource Definition Reference for more information about setting the VIT start option values.

| **System programmer response:** Not applicable.

| **User response:** Not applicable.

| **Problem determination:** To display the VIT trace options that are currently active, issue the D
 | NET,TRACES,TYPE=VTAM command.

| **Source:** z/OS Communications Server

| **Module:** ISTHCCK1

| **Routing code:** Not applicable.

| **Descriptor code:** 12

| **Example:** Not applicable.

ISTH009I Not all VTAM Internal Trace (VIT) options are active. When all VIT options are concurrently active, performance might be less than optimal.

Explanation: Check CSVTAM_VIT_OPT_ALL ran successfully and found no exceptions. The check determined that not all VIT options are concurrently active.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH010E All VTAM Internal Trace (VIT) options are active

Explanation: Check CSVTAM_VIT_OPT_ALL determined that all the VIT options are active. IBM suggests that having all VIT options active is not required for optimal problem analysis, unless it was requested by IBM service, because it might affect system performance.

System action: The system continues processing.

Operator response: Use the MODIFY NOTRACE,TYPE=VTAM,MODE=INT,OPTION= command to deactivate

ISTH011I • ISTH012I

unnneeded trace options. Only the default trace options (API, CIO, MSG, NMR, PIU, and SSCP) cannot be deactivated.

If all trace options are active when VTAM is started, contact the system programmer. See the MODIFY TRACE command information in z/OS Communications Server: SNA Operation for information about the MODIFY TRACE command.

System programmer response: Change the VTAM start options to not specify OPTION=ALL for the VTAM trace. See the TRACE for MODULE, STATE (with OPTION), or VTAM internal trace information in z/OS Communications Server: SNA Resource Definition Reference for more information about setting the VIT start option values.

User response: Not applicable.

Problem determination: To display the currently active VIT options, issue D NET,TRACES,TYPE=VTAM.

Source: z/OS Communications Server

Module: ISTHCCK1

Routing code: Not applicable.

Descriptor code: 12

Example: Not applicable.

ISTH011I **The T1BUF and T2BUF buffer pool allocations are set above their default values, which is recommended for use with Enterprise Extender (EE). When the size of the T1BUF or T2BUF pool is too small, excessive buffer pool expansions and contractions might occur.**

Explanation: Check CSVTAM_T1BUF_T2BUF_EE ran successfully and found no exceptions. This check determined that the T1BUF and T2BUF buffer pool allocations are greater than the defaults for those pools. The default values assigned to these pools might cause performance degradation as a result of excessive buffer pool expansions and contractions when Enterprise Extender (EE) is being used.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH012I *buf_pool* **buffer pool allocation of *buf_num* might be too low for use with Enterprise Extender**

Explanation: Check CSVTAM_T1BUF_T2BUF_EE determined that Enterprise Extender (EE) is being used and the allocation for the *buf_pool* buffer pool specified by the *buf_num* value is at its default value. This message is followed by message ISTH013E in the message buffer.

The default value might not be optimal for your system when using EE. Such a value assigned to this pool might cause performance degradation because of excessive buffer pool expansions and contractions.

In the message text:

buf_pool

The name of the buffer pool. Possible values are: T1BUF or T2BUF.

buf_num

The buffer allocation value assigned to the buffer pool on the start option for that buffer pool.

System action: The system continues processing.

Operator response: Not applicable. .

System programmer response: See the System programmer response in message Isth013E.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: IsthCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH013E T1BUF/T2BUF buffer pool allocation might not be optimal for use with Enterprise Extender

Explanation: Check CSVTAM_T1BUF_T2BUF_EE determined that Enterprise Extender (EE) is being used (or is intended to be used) on this system and the T1BUF or T2BUF (or both) buffer pool allocation is at its default value.

The default value might not be optimal for your system when using EE. Such a value assigned to this pool might cause performance degradation as a result of excessive buffer pool expansions and contractions. The default value for the T1BUF buffer pool is 18. The default value for the T2BUF buffer pool is 8.

Message Isth012I is issued prior to this message for each buffer pool (T1BUF, T2BUF, or both) that has failed this check.

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: IBM suggests that the T1BUF and T2BUF buffer pools be monitored and tuned to minimize the number of expansions. Minimizing buffer pool expansions will decrease internal buffer overhead processing which should increase throughput while reducing CPU consumption. These buffer pools can be monitored using the D NET,BFRUSE,BUF=(T1,T2) command. Once the appropriate allocation values for the T1BUF and T2BUF buffer pools have been determined, you can change the T1BUF and T2BUF Start option allocation values before next starting VTAM. See the buffer pool information in z/OS Communications Server: SNA Resource Definition Reference for more information about the T1BUF and T2BUF Start Options. See the Display BFRUSE command information in z/OS Communications Server: SNA Operation for more information on the D NET,BFRUSE command.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: IsthCCK1

Routing code: Not applicable.

Descriptor code: 12

Example: Not applicable.

ISTH014I T1BUF and T2BUF buffer pool allocations are sufficient for use without Enterprise Extender

Explanation: Check CSVTAM_T1BUF_T2BUF_NOEE ran successfully and found no exceptions. This check determined that the T1BUF and T2BUF buffer pool allocations are set to the default value for those pools, which is considered sufficient when Enterprise Extender is not being used.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

ISTH015I • Isth016E

Source: z/OS Communications Server

Module: ISTHCKK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH015I *buf_pool* **buffer pool allocation of *buf_num* might be too high if Enterprise Extender is not being used**

Explanation: Check CSVTAM_T1BUF_T2BUF_NOEE determined that Enterprise Extender (EE) might not be in use on this system and the allocation for the *buf_pool* buffer pool specified by the *buf_num* value is greater than its default value. This message is followed by message ISTH016E in the message buffer.

A value greater than the default value might not be optimal for your system when not using EE. The T1BUF and T2BUF buffer pools are designed to optimize HPR flows over Enterprise Extender connections. When EE is not being used, the buffer allocation for these pools does not need to be set greater than the default values.

In the message text:

buf_pool

The name of the buffer pool. Possible values are: T1BUF or T2BUF.

buf_num

The buffer allocation value assigned to the buffer pool on the start option for that buffer pool.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: See the system programmer response in ISTH016E.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCKK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH016E **T1BUF/T2BUF buffer pool allocation might not be optimal if Enterprise Extender is not being used**

Explanation: Check CSVTAM_T1BUF_T2BUF_NOEE determined that Enterprise Extender (EE) might not be in use on this system and the T1BUF or T2BUF (or both) buffer pool allocation is set above its default value.

A value above the default value might not be optimal for your system when not using EE. The T1BUF and T2BUF buffer pools are designed to optimize HPR flows over Enterprise Extender connections. When EE is not being used, the buffer allocation for these pools does not need to be set above the default values. The default value for the T1BUF buffer pool is 18. The default value for the T2BUF buffer pool is 8.

Message ISTH015I is issued prior to this message for each buffer pool (T1BUF, T2BUF, or both) that failed this check.

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: If you intend to use EE on this system, IBM suggests that the T1BUF and T2BUF buffer pools be monitored and tuned to minimize the number of expansions. Minimizing buffer pool expansions will decrease internal buffer overhead processing which should increase throughput while reducing CPU consumption. These buffer pools can be monitored using the D NET,BFRUSE,BUF=(T1,T2) command. Once the appropriate allocation values for the T1BUF and T2BUF buffer pools have been determined, you can change the T1BUF and T2BUF Start option allocation values before next starting VTAM. If you do not intend to use EE on this system, you can change the T1BUF and T2BUF Start option allocation values to the default values before next starting VTAM.

See the buffer pool information in z/OS Communications Server: SNA Resource Definition Reference for more information about the T1BUF and T2BUF Start Options. See the Display BFRUSE command information in z/OS Communications Server: SNA Operation for more information on the D NET,BFRUSE command.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: IsthCCK1

Routing code: Not applicable.

Descriptor code: 12

Example: Not applicable.

ISTH017E Communications storage manager (CSM) storage allocation definitions might not be optimal.

Explanation: Check CSVTAM_CSM_STG_LIMIT determined that the value specified for the maximum CSM storage for the FIXED, ECSA, or HVCOMM storage types as defined in the CSM Parmlib member IVTPRM00 is less than the minimum value specified for the check. If the MAX ECSA value from the CSM PARMLIB member IVTPRM00 is higher than 90% of the system ECSA value, CSM adjusts the MAX ECSA value to 90% of the system ECSA value. Change the CSA ECSA subparameter in IEASYSxx to at least 20% more than the ECSA value specified for CSM use in IVTPRM00.

Message Isth002I is displayed prior to this message for each CSM storage type that failed the check.

System action: The system continues processing. However, eventual action might need to be taken to prevent a critical depletion of CSM storage resources.

Operator response: Contact the system programmer.

System programmer response: The default values for CSM are 200M for FIXED, 100M for ECSA and 2000M for HVCOMM. However, IBM suggests that they be initially coded in IVTPRM00 using the following values: 120M for ECSA, 240M for FIXED and 2000M for HVCOMM. Monitor the system for one week with DISPLAY CSM command to determine peak usage. Adjust IVTPRM00 MAX ECSA, MAX FIXED and HVCOMM values to 1.5 times the highest value indicated in the DISPLAY CSM outputs. You must adjust your IEASYSxx CSA ECSA subparameter to include the additional amounts of ECSA that CSM will be using. It is recommended that the CSA ECSA subparameter in IEASYSxx be at least 20% more than the ECSA value specified for CSM use in IVTPRM00.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: IsthCCK1

Routing code: Not applicable.

Descriptor code: 12

Example: Not applicable.

ISTH018I This check is not applicable in the current VTAM environment. Enterprise Extender (EE) lines have not been activated on this system and no VTAM Start Options associated with EE have been specified.

Explanation: Check CSVTAM_T1BUF_T2BUF_EE is not applicable in the current VTAM environment. This check compares the T1BUF and T2BUF buffer pool allocation values against the default values for each pool only if EE has been activated on this VTAM or the VTAM start options associated with EE (IPADDR or TCPNAME) have been specified.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

ISTH019I • ISTH020I

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH019I This check is not applicable in the current VTAM environment. Enterprise Extender (EE) lines have been activated on this system or VTAM Start Options associated with EE have been specified.

Explanation: Check CSVTAM_T1BUF_T2BUF_NOEE is not applicable in the current VTAM environment. This check compares the T1BUF and T2BUF buffer pool allocation values against the default values for each pool only if EE has not been activated on this VTAM and the VTAM start options associated with EE (IPADDR or TCPNAME) have not been specified.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCCK1

Routing code: Not applicable.

Descriptor code: Not applicable.

Example: Not applicable.

ISTH020I All active FTP servers correctly prevent anonymous users from submitting jobs.

Explanation: Check CSAPP_FTPD_ANONYMOUS_JES ran successfully and found no exceptions. The check determined that no active FTP servers are configured to allow anonymous users to submit jobs.

IBM suggests that ANONYMOUSLEVEL be set to 3 and ANONYMOUSFILETYPEJES be set to FALSE when ANONYMOUS is configured on the FTP server. Specifying ANONYMOUSLEVEL less than 3 or ANONYMOUSFILETYPEJES TRUE allows anonymous users to submit jobs.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: ISTHCCK2

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation: Not applicable.

Example:

| ISTH020I All FTP servers correctly prevent anonymous users from
| submitting jobs.

| **ISTH021E One or more FTP servers allow anonymous users to submit jobs.**

| **Explanation:** Check CSAPP_FTPD_ANONYMOUS_JES determined that one or more FTP servers allow anonymous
| users to submit jobs.

| IBM suggests that ANONYMOUSLEVEL be set to 3 and ANONYMOUSFILETYPEJES be set to FALSE when
| ANONYMOUS is configured on the FTP server. Specifying ANONYMOUSLEVEL less than 3 or
| ANONYMOUSFILETYPEJES TRUE allows anonymous users to submit jobs.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Examine the report that was produced by CSAPP_FTPD_ANONYMOUS_JES health
| check. To assist in identifying the server instance, the report contains the FTP server jobname in the first column and
| the ASID value in hexadecimal format in the second column. The FTP server FTP.DATA file includes the
| ANONYMOUS configuration statement. The ANOYMOUSLEVEL configuration statement is explicitly configured
| with a value less than 3 or allowed to default to the value 1, or ANONYMOUSLEVEL is configured with a value of 3
| and ANONYMOUSFILETYPEJES is configured with a value of TRUE.

| To disable the ability for anonymous users to submit jobs on this server, take one of the following actions:

- | • Disable ANONYMOUS access if it is not required. To do this, remove the ANONYMOUS statement from the
| server FTP.DATA configuration file.
- | • Prevent job submission by anonymous users. To do this, set ANONYMOUSLEVEL 3 and
| ANONYMOUSFILETYPEJES FALSE in the server FTP.DATA configuration file.

| **Note:** ANONYMOUSLEVEL 3 enables control of individual filetypes by allowing them to default or explicitly
| configuring them. If you are setting ANONYMOUSLEVEL 3 as a corrective action ensure the default values for all
| filetypes are appropriate or explicitly configure them. The anonymous filetype configuration statements are listed
| below with the default value and the allowed values.

ANONYMOUS TYPE	DEFAULT	ALLOWED VALUES
ANONYMOUSFILETYPESEQ	TRUE	FALSE TRUE
ANONYMOUSFILETYPEJES	FALSE	FALSE TRUE
ANONYMOUSFILETYPESQL	FALSE	FALSE TRUE
ANONYMOUSFILEACCESS	HFS	BOTH MVS HFS
ANONYMOUSHFSFILEMODE	000	nnn
ANONYMOUSHFSDIRMODE	333	nnn

| **User response:** Not applicable.

| **Problem determination:** See ANONYMOUS (FTP server) statement, ANONYMOUSLEVEL (FTP server) statement,
| and ANONYMOUSFILETYPEJES (FTP server) statement under File Transfer Protocol in z/OS Communications
| Server: IP Configuration Reference for more information about the ANONYMOUS, ANONYMOUSLEVEL, and
| ANONYMOUSFILETYPEJES statements.

| **Source:** z/OS Communications Server Health Checker

| **Module:** ISTHCCK2

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTH021E One or more FTP servers allow anonymous users to submit jobs.

ISTH029I No MVRSHD servers are active

Explanation: Check CSAPP_MVRSHD_RHOSTS_DATA ran successfully and found no exceptions. The check determined that no MVRSHD servers are active.

IBM suggests avoiding the use of MVRSHD servers. The MVRSHD server supports the RSH and REXEC protocols which transfer user ID and password information in the clear. There is also the potential of weak authentication for RSH clients using RHOSTS.DATA datasets. This authentication method allows remote command execution without requiring the RSH client to supply a password.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS CS Health Checker

Module: IsthCCK2

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation: Not applicable.

Example:

ISTH029I There are no MVRSHD servers active

ISTH030E One or more MVRSHD servers are active

Explanation: Check CSAPP_MVRSHD_RHOSTS_DATA determined that one or more MVRSHD servers are active.

IBM suggests avoiding the use of MVRSHD servers. The MVRSHD server supports the RSH and REXEC protocols which transfer user ID and password information in the clear. There is also the potential of weak authentication for RSH clients using RHOSTS.DATA datasets. This authentication method allows remote command execution without requiring the RSH client to supply a password.

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: Examine the report that was produced by check CSAPP_MVRSHD_RHOSTS_DATA.

This report lists all the active MVRSHD server address spaces. To assist in identifying the server instance, the report contains the MVRSHD server job name in the first column, the ASID value in hexadecimal format in the second column, and a data value in hexadecimal format in the third column. The following indicates the meaning of the data value:

0 – This MVRSHD server is active and no attempts to authenticate using RHOSTS.DATA have occurred.

1 – This MVRSHD server is active and there have been one or more attempts to authenticate using RHOSTS.DATA.

To obtain more information regarding future attempts of RSH clients attempting to use RHOSTS.DATA datasets for authentication, take the following action:

Enable internal RHOSTS level MVRSHD server tracing by issuing `MODIFY proc_name,TRACE=(LOG,RHOSTS)`. When a new RSH client using a RHOSTS.DATA dataset for authentication is detected, an EZA4443I message will be recorded in the MVRSHD server joblog. The message will read:

EZA4443I Attempt to open USER1.RHOSTS.DATA requested by user2 on sys209.pok.im.com

For more information on the EZA4443I message, see EZA4443I in z/OS Communications Server: IP Messages Volume 1 (EZA).

| To disable the RHOSTS level MVRSHD server tracing, issue the MODIFY *proc_name*,TRACE=(LOG,NORHOSTS) command. To disable all tracing in addition to the RHOSTS level MVRSHD server tracing, issue the MODIFY *proc_name*,TRACE=(NOLOG,NORHOSTS) command.

| To disable the ability for RSH clients to use RHOSTS.DATA datasets for authentication, take the following action:

| Identify and delete all specified *userid*.RHOSTS.DATA datasets.

| The EZA4443I message can help identify which datasets are in use.

| To disable the support for RSH and REXEC protocols, take the following action:

| Stop all active instances of MVRSHD server.

| For more information on the RHOSTS.DATA dataset, see Step 3: Permit remote users to access MVS resources (optional) in z/OS Communications Server: IP Configuration Guide.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS CS Health Checker

| **Module:** ISTHCCK2

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTH030E One or more MVRSHD servers are active

| **ISTH031I** No active SMTP servers are configured as mail relays

| **Explanation:** Check CSAPP_SMTPD_MAIL_RELAY ran successfully and found no exceptions. The check determined that no active SMTP servers are configured as mail relays.

| IBM suggests that the INBOUNDOPENLIMIT configuration statement be set to 0 for SMTP servers. Specifying the INBOUNDOPENLIMIT statement with a valid non-zero value or allowing it to default to the value of 256 causes the SMTP server to open a listening port and implicitly become exploitable by remote users as a mail relay.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Not applicable.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS CS Health Checker

| **Module:** ISTHCCK2

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTH031I No active SMTP servers are configured as mail relays

ISTH032E • Isth033I

| Isth032E One or more active SMTP servers are configured as mail relays

| **Explanation:** Check CSAPP_SMTPD_MAIL_RELAY determined that one or more active SMTP servers are configured as mail relays.

| IBM suggests that the INBOUNDOPENLIMIT configuration statement be set to 0 for SMTP servers. Specifying the INBOUNDOPENLIMIT statement with a valid non-zero value or allowing it to default to the value of 256 causes the SMTP server to open a listening port and implicitly become exploitable by remote users as a mail relay.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Examine the report that was produced by check CSAPP_SMTPD_MAIL_RELAY.

| This report lists all the SMTP server address spaces configured as mail relays. To assist in identifying the server instance, the report contains the SMTP server job name in the first column and the ASID value in hexadecimal format in the second column. The SMTP server configuration file includes the INBOUNDOPENLIMIT configuration statement. The INBOUNDOPENLIMIT statement is explicitly configured with a value other than 0 or was allowed to default to the value 256.

| To disable the ability for the SMTP server to be used as a mail relay, take the following action:

| Disable the listener port on the SMTP server.

| To do this, set INBOUNDOPENLIMIT 0 statement in the SMTP server configuration file.

| For more information, see INBOUNDOPENLIMIT statement in z/OS Communications Server: IP Configuration Reference.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS CS Health Checker

| **Module:** IsthCCK2

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| Isth032E One or more active SMTP servers are configured as mail relays

| Isth033I No active SNMP agents are configured with a community name of public

| **Explanation:** Check CSAPP_SNMPAGENT_PUBLIC_COMMUNITY ran successfully and found no exceptions. The check determined that no active SNMP agents are configured with a community name of public.

| IBM suggests not configuring a community name of public, nor permitting the SNMP agent to use the default community name of public. Because the SNMP community name of public is a well-known name, it should not be used with community-based security due to security considerations.

| **System action:** The system continues processing.

| **Operator response:** Not applicable.

| **System programmer response:** Not applicable.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS CS Health Checker

| **Module:** IsthCCK2

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| Isth033I No active SNMP agents are configured with a community name of public

| **ISTH034E One or more active SNMP agents are configured with a community name of public**

| **Explanation:** Check CSAPP_SNMPAGENT_PUBLIC_COMMUNITY determined that one or more active SNMP agents are configured with a community name of public.

| IBM suggests not configuring a community name of public, nor permitting the SNMP agent to use the default community name of public. Because the SNMP community name of public is a well-known name, it should not be used with community-based security due to security considerations.

| **System action:** The system continues processing.

| **Operator response:** Not applicable.

| **System programmer response:** Examine the report that was produced by check CSAPP_SNMPAGENT_PUBLIC_COMMUNITY. This report lists all the SNMP agent address spaces for which a community name of public is configured. To assist in identifying the server instance, the report contains the SNMP agent job name in the first column and the ASID value in hexadecimal format in the second column.

| To remove the community name of public associated with the SNMP agent, take one of the following actions:

- | • If no SNMP agent configuration files are being used, explicitly define a community name other than public as the value of the -c start parameter.
| For more information on the -c start parameter, see OSNMPD parameters in z/OS Communications Server: IP Configuration Reference.
- | • If you are using a PW.SRC configuration file, rename the community named public to something else by specifying the associated PW.SRC statement.
| For more information on defining a community via the PW.SRC configuration file, see PW.SRC statement syntax in z/OS Communications Server: IP Configuration Reference.
- | • If you are using a SNMPD.CONF configuration file, rename the community named public by specifying the COMMUNITY or SNMP_COMMUNITY statements.
| For more information on the COMMUNITY statement and the SNMP_Community statement, see SNMPD.CONF statements in z/OS Communications Server: IP Configuration Reference.

| You can also migrate your SNMP configuration from community-based security to user-based security using SNMPv3 protocols. SNMPv3 provides a more powerful and flexible framework for message security and access control. SNMPv3 user-based security can be used only when all your SNMP manager and network management applications support it. For an introduction to user-based security using SNMPv3, see User-based security in z/OS Communications Server: IP Configuration Guide.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS CS Health Checker

| **Module:** IsthCCK2

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| Isth034E One or more active SNMP agents are configured with a community name of public

Chapter 12. ISTM messages for migration checks for IBM Health Checker for z/OS

This chapter lists the messages beginning with ISTM. These messages are issued by migration checks for IBM Health Checker for z/OS.

Messages deleted in V2R2:

- ISTM013I
- ISTM014E

ISTM013I GATEWAY statement is not in use on this system

Explanation: Check ZOSMIGV2R1_CS_GATEWAY ran successfully and found no exceptions. The check determined that the GATEWAY statement is not in use on this system. Support for the GATEWAY statement will be removed in a future release of IBM z/OS Communications Server.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation:

| This message was deleted in z/OS V2R2.

Example:

```
ISTM013I GATEWAY statement is not in use on this system
```

ISTM014E GATEWAY statements are in use on this system during this IPL

Explanation: Check ZOSMIGV2R1_CS_GATEWAY determined that GATEWAY statements are in use on this system during this IPL. Support for the GATEWAY statement will be removed in a future release of IBM z/OS Communications Server.

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: Because the GATEWAY configuration statement will no longer be supported in the TCP/IP profile in a future release of z/OS Communications Server, IBM suggests that customers who currently use the GATEWAY statement migrate to the BEGINROUTES/ENDROUTES configuration block. One way to convert GATEWAY configuration statements to a BEGINROUTES/ENDROUTES configuration block is to use the TCPIP CS PROFILE command on a dump of the TCPIP address space. See TCPIP CS PROFILE in z/OS Communications Server: IP Diagnosis Guide for more information.

User response: Not applicable.

ISTM015I

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation:

This message was deleted in z/OS V2R2.

Example:

ISTM014E GATEWAY statements are in use on this system during this IPL

ISTM015I Legacy device statements are not in use on this system

Explanation: Check ZOSMIGV2R1_CS_LEGACYDEVICE ran successfully and found no exceptions. The check determined that there are no legacy device type profile statements in use by any TCP/IP stacks on this system. Support for the DEVICE and LINK profile statements for the following TCP/IP legacy device types will be eliminated in a future release of IBM z/OS Communications Server:

- ATM
- CDLC
- CLAW
- HYPERchannel
- SNALINK (LU0 and LU6.2)
- X.25

Because support will be eliminated for the ATM device type in a future release, the following associated TCP/IP profile statements will no longer be supported:

- ATMARPSV
- ATMLIS
- ATMPVC

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation:

This message was deleted in z/OS V2R2.

Example:

ISTM015I Legacy device statements are not in use on this system

ISTM016E Legacy device statements are in use on this system during this IPL

Explanation: Check ZOSMIGV2R1_CS_LEGACYDEVICE determined that legacy device type profile statements are in use on this system during this IPL. Support for the DEVICE and LINK profile statements for the following TCP/IP legacy device types will be eliminated in a future release of IBM z/OS Communications Server:

- ATM
- CDLC
- CLAW
- HYPERchannel
- SNALINK (LU0 and LU6.2)
- X.25

Because support will be eliminated for the ATM device type in a future release, the following associated TCP/IP profile statements will no longer be supported:

- ATMARPSV
- ATMLIS
- ATMPVC

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: When the TCP/IP stack processes a legacy device type profile statement, the stack issues message EZZ0717I. For information about the profile data set that contains the statements, see the EZZ0717I message and the associated profile processing messages. Because the profile statements for legacy device types will not be supported in the TCP/IP profile in a future release of z/OS Communications Server, it is recommended that you migrate to a later interface type, such as OSA-Express QDIO or HiperSockets. For more information about using OSA-Express QDIO or HiperSockets interfaces, see Considerations for networking hardware attachment in z/OS Communications Server: IP Configuration Guide.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes or f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation:

This message is deleted in z/OS V2R2.

Example:

ISTM016E Legacy device statements are in use on this system during this IPL

ISTM017I The sendmail client is not in use on this system

Explanation: Check ZOSMIGV2R2_Next_CS_SENDMAILCLIEN ran successfully and found no exceptions. The check determined that the sendmail client is not in use on this system.

IBM has indicated in statements of direction that support for the sendmail client on z/OS will be withdrawn in a future release of the IBM z/OS Communications Server.

System action: The system continues processing.

Operator response: None.

System programmer response: None.

ISTM018E • ISTM019I

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM017I The sendmail client is not in use on this system

| ISTM018E The sendmail client is in use on this system

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILCLIEN determined that the sendmail client is in use on this system.

| IBM has indicated in statements of direction that support for the sendmail client on z/OS will be withdrawn in a future release of the IBM z/OS Communications Server.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Because sendmail on z/OS will no longer be supported in a future release of the IBM z/OS Communications Server, IBM suggests that customers who currently use or plan to use sendmail for sending email migrate to the CSSMTP daemon that was introduced in z/OS V1R11 or use a compatible third-party solution.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM018E The sendmail client is in use on this system

| ISTM019I The sendmail mail transfer agent is not in use on this system

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILMTA ran successfully and found no exceptions. The check determined that the sendmail mail transfer agent (MTA) is not in use on this system.

| IBM has indicated in statements of direction that support for sendmail will be withdrawn in a future release of the IBM z/OS Communications Server and the MTA function will not be available on z/OS.

| **System action:** The system continues processing.

| **Operator response:** None.

| **System programmer response:** None.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM019I The sendmail mail transfer agent is not in use on this system

| **ISTM020E The sendmail mail transfer agent is in use on this system**

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILMTA determined that the sendmail mail transfer agent (MTA) is in use on this system.

| IBM has indicated in statements of direction that support for running sendmail on z/OS will be withdrawn in a future release of the IBM z/OS Communications Server and the MTA function will not be available on z/OS.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Because sendmail will no longer be supported on z/OS in future releases, IBM suggests that customers who currently use or plan to use sendmail as a mail transfer agent (MTA), migrate that function to a compatible third-party solution or to other operating system platforms that continue to support MTA functions, such as Linux on z Systems.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM020E The sendmail mail transfer agent is in use on this system

| **ISTM021I The sendmail MSA function is not in use on this system**

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILMSA ran successfully and found no exceptions. The check determined that the sendmail mail submission agent (MSA) is not in use on this system.

| IBM has indicated in statements of direction that support for sendmail will be withdrawn in a future release of the IBM z/OS Communications Server and the MSA function will not be available on z/OS.

| **System action:** The system continues processing.

| **Operator response:** None.

| **System programmer response:** None.

ISTM022E • ISTM023I

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM021I The sendmail MSA function is not in use on this system

| ISTM022E The sendmail MSA function is in use on this system

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILMSA determined that the sendmail mail submission agent (MSA) is in use on this system.

| IBM has indicated in statements of direction that support for running sendmail on z/OS will be withdrawn in a future release of the IBM z/OS Communications Server and the MTA function will not be available on z/OS.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Because sendmail will no longer be supported in a future release of the IBM z/OS Communications Server, IBM suggests that customers who currently use or are planning to use sendmail's MSA functions, migrate those functions to a compatible third-party solution or to other operating system platforms that continue to support sendmail, such as Linux on z Systems.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM022E The sendmail MSA function is in use on this system

| ISTM023I The SMTPD daemon is not in use on this system

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SMTPDDAEMON ran successfully and found no exceptions. The check determined that the SMTPD daemon is not in use on this system.

| IBM has indicated in statements of direction that support for the SMTPD daemon will be withdrawn in a future release of the IBM z/OS Communications Server.

| **System action:** The system continues processing.

| **Operator response:** None.

| **System programmer response:** None.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM023I The SMTPD daemon is not in use on this system

| **ISTM024E The SMTPD daemon is in use on this system**

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SMTPDDAEMON determined that the SMTPD daemon is in use on this system.

| IBM has indicated in statements of direction that support for the SMTPD daemon will be withdrawn in a future release of the IBM z/OS Communications Server.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Because SMTPD on z/OS will no longer be supported in future releases, IBM suggests that customers who currently use or plan to use SMTPD to send mail from the z/OS JES spool, migrate to the CSSMTP daemon that was introduced in z/OS V1R11. Customers who currently use or plan to use SMTPD for purposes other than sending mail from the z/OS JES spool, are encouraged to migrate those mail functions to other operating system platforms that continue to support full email functionality, such as Linux on z Systems.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM024E The SMTPD daemon is in use on this system

| **ISTM025I The SMTPD mail transfer agent is not in use on this system**

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SMTPDMA ran successfully and found no exceptions. The check determined that the SMTPD mail transfer agent (MTA) is not in use on this system.

| IBM has indicated in statements of direction that support for SMTPD will be withdrawn in a future release of the IBM z/OS Communications Server and the MTA function will not be available on z/OS.

| **System action:** The system continues processing.

| **Operator response:** None.

| **System programmer response:** None.

ISTM026E • ISTM027I

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM025I The SMTPD mail transfer agent is not in use on this system

| ISTM026E The SMTPD mail transfer agent is in use on this system

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SMTPDMTA determined that the SMTPD mail transfer agent (MTA) is in use on this system.

| IBM has indicated in statements of direction that support for SMTPD will be removed in a future release of the IBM z/OS Communications Server and the MTA function will not be available on z/OS.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Because SMTPD will no longer be supported on z/OS in future releases, and its MTA function will not be available on z/OS, IBM suggests that customers who are currently using or plan to use SMTPD as an MTA, migrate that function to other operating system platforms that continue to provide MTA support, such as Linux on z Systems.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM026E The SMTPD mail transfer agent is in use on this system

| ISTM027I The sendmail daemon is not in use on this system

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILDAEMN ran successfully and found no exceptions. The check determined that the sendmail daemon is not in use on this system.

| IBM has indicated in statements of direction that support for the sendmail daemon will be withdrawn in a future release of the IBM z/OS Communications Server.

| **System action:** The system continues processing.

| **Operator response:** None.

| **System programmer response:** None.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM027I The sendmail daemon is not in use on this system

| **ISTM028E The sendmail daemon is in use on this system**

| **Explanation:** Check ZOSMIGV2R2_Next_CS_SENDMAILDAEMN determined that the sendmail daemon is in use on this system.

| IBM has indicated in statements of direction that support for the sendmail daemon on z/OS will be withdrawn in a future release of the IBM z/OS Communications Server.

| **System action:** The system continues processing.

| **Operator response:** Contact the system programmer.

| **System programmer response:** Because the ability to run sendmail on z/OS will no longer be supported in future releases, IBM suggests that customers who currently use or plan to use sendmail on z/OS for sending email from z/OS, migrate to the CSSMTP daemon that was introduced in z/OS V1R11. Customers who currently use or plan to use sendmail on z/OS for purposes other than sending email from z/OS, are encouraged to migrate those functions to a compatible third-party solution or to other operating system platforms that continue to support sendmail, such as Linux on z Systems.

| **User response:** Not applicable.

| **Problem determination:** Not applicable.

| **Source:** z/OS Communications Server Health Checker

| **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** Not applicable.

| **Descriptor code:** Not applicable.

| **Automation:** Not applicable.

| **Example:**

| ISTM028E The sendmail daemon is in use on this system

| **ISTM029I Legacy device statements are not in use on this system**

| **Explanation:** Check ZOSMIGV2R2_NEXT_CS_LEGACYDEVICE ran successfully and found no exceptions. The check determined that there are no legacy device type profile statements in use by any TCP/IP stacks on this system. DEVICE and LINK profile statements for the following TCP/IP legacy device types will not be supported in a future release of IBM z™/OS Communications Server:

- | • FDDI and Token Ring (LCS with LINKs FDDI and IBMTR)
- | • Token Ring (MPCIPA with LINK IPAQTR)
- | • Ethernet and FDDI (MPCOSA with LINKs OSAENET and OSAFDDI)

ISTM030E

- | **System action:** The system continues processing.
- | **Operator response:** Not applicable.
- | **System programmer response:** Not applicable.
- | **User response:** Not applicable.
- | **Problem determination:** Not applicable.
- | **Source:** z/OS Communications Server Health Checker
- | **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.
- | **Routing code:** Not applicable.
- | **Descriptor code:** Not applicable.
- | **Automation:**
| Not applicable.
- | **Example:**
| ISTM029I Legacy device statements are not in use on this system

ISTM030E Legacy device statements are in use on this system during this IPL

- | **Explanation:** Check ZOSMIGV2R2_NEXT_CS_LEGACYDEVICE determines that legacy device type profile statements are in use on this system during this IPL. DEVICE and LINK profile statements for the following TCP/IP legacy device types will not be supported in a future release of IBM z/OS Communications Server:
 - FDDI and Token Ring (LCS with LINKs FDDI and IBMTR)
 - Token Ring (MPCIPA with LINK IPAQTR)
 - Ethernet and FDDI (MPCOSA with LINKs OSAENET and OSAFDDI)
- | **System action:** The system continues processing.
- | **Operator response:** Contact the system programmer.
- | **System programmer response:** When the TCP/IP stack processes a legacy device type profile statement, it issues message EZZ0717I. For information about the profile data set that contains the statements, see the EZZ0717I message and the associated profile processing messages. Because the profile statements for legacy device types will not be supported in the TCP/IP profile in a future release of z/OS Communications Server, it is recommended that users who currently use these statements migrate to a later interface types, such as OSA-Express QDIO or HiperSockets. For more information about using OSA-Express QDIO or HiperSockets interfaces, see Considerations for networking hardware attachment in z/OS Communications Server: IP Configuration Guide.
- | **User response:** Not applicable.
- | **Problem determination:** Not applicable.
- | **Source:** z/OS Communications Server Health Checker
- | **Module:** Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.
- | **Routing code:** Not applicable.
- | **Descriptor code:** Not applicable.
- | **Automation:**
| Not applicable.
- | **Example:**
| ISTM030E Legacy device statements are in use on this system during this IPL

ISTM031I The TFTP daemon is not in use on this system

Explanation: Check ZOSMIGV2R2_Next_CS_TFTP ran successfully and found no exceptions. The check determined that the TFTP daemon is not in use on this system. IBM has indicated in statements of direction that support for the TFTP daemon will be withdrawn in a future release of the IBM z/OS Communications Server.

System action: The system continues processing.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation:

Not applicable.

Example:

ISTM031I The TFTP daemon is not in use on this system

ISTM032E The TFTP daemon is in use on this system

Explanation: Check ZOSMIGV2R2_Next_CS_TFTP determined that the TFTP daemon is in use on this system. IBM has indicated in statements of direction that support for the TFTP daemon on z/OS will be withdrawn in a future release of the IBM z/OS Communications Server.

System action: The system continues processing.

Operator response: Contact the system programmer.

System programmer response: Because the ability to run the TFTP daemon on z/OS will no longer be supported in future releases, IBM suggests that customers who currently use or plan to use the TFTP daemon on z/OS use an alternate file transfer program.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server Health Checker

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation:

Not applicable.

Example:

ISTM032E The TFTP daemon is in use on this system

ISTM900I

ISTM900I **Function:** *mhc_function* last *mhc_usage* on *mhc_date* at *mhc_time*.

Explanation: A preceding exception message of type ISTMxxxE was generated. See those messages for more information.

In the message text:

mhc_function

The name of the function that was being checked.

mhc_usage

Possible values are:

started

This value is displayed when checking applications.

used

This value is displayed when checking configuration statements or functions.

mhc_date

The date that the function was last started or used.

mhc_time

The time that the function was last started or used.

System action: The system continues processing.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server

Module: ISTHCCK2

Routing code: Not applicable.

Descriptor code: Not applicable.

Automation: Not applicable.

Example: Not applicable.

Chapter 13. IUT messages for VTAM network operators

This chapter lists the VTAM messages beginning with IUT that can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

IUT5000I *trlename* STILL ACTIVE: VTAM TERMINATION WAITING FOR *ulpid*

Explanation: VTAM issues this message when VTAM termination processing is waiting for the deactivation of a service access point (SAP).

System action: VTAM termination waits until all SAPs have been deactivated. VTAM will periodically reissue this message as long as the *trlename* remains active.

ulpid is the SAP owner.

trlename is the name of the TRLE being used by the *ulpid*.

Operator response: For the VTAM HALT command (without QUICK OR CANCEL), have the *trlename* deactivated by the owning program named in *ulpid*.

System programmer response: None.

Routing code: 2

Descriptor code: 4

IUT5001I VTAM MPC CONNECTION MANAGER PROCESSING TERMINATED

Explanation: VTAM issues this message when VTAM MPC connection manager processing has terminated. This message is issued during VTAM HALT command processing.

System action: VTAM MPC connection manager functions are no longer available.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 6

IUT5002I TASK FOR ULPID *ulpid* USING TRLE *trlename* TERMINATING

Explanation: VTAM issues this message when a z/OS Communications Server upper-layer protocol (ULP) task or memory terminates and causes VTAM to deactivate the ULP's service access point (SAP).

ulpid is the SAP owner.

trlename is the name of the TRLE being used by *ulpid*.

System action: VTAM deactivates all ULP SAPs associated with the terminating task.

When this is the last or only ULP SAP using this data link control (DLC), VTAM also deactivates the DLC associated with the *trlename* and deallocates the corresponding I/O devices.

Operator response: To determine the status or progress of SAP termination, issue a DISPLAY TRL command and determine the status of each I/O device.

System programmer response: None.

Routing code: 2

Descriptor code: 4

Chapter 14. IVT messages for VTAM network operators

This chapter lists the VTAM messages beginning with IVT that can appear on a network operator's console.

See Appendix E, "Message text for VTAM operator messages," on page 1217 for a list of the text of all VTAM operator messages.

IVT5501I CSM PARMLIB MEMBER *membername* NOT FOUND - DEFAULT VALUES USED

Explanation: This message is issued during CSM initialization.

membername is the name of the CSM parmlib member.

System action: Processing continues using the following default values:

- | • Maximum fixed storage – 200M
- | • Maximum ECSA storage – 100M
- | • Maximum high virtual common (HVCOMM) storage above the 2 GB bar – 2000M

Operator response: If the default values for CSM storage limits are not acceptable, issue the **MODIFY CSM** command to update the parameter values.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5502I READ ERROR ON PARMLIB MEMBER *membername* - DEFAULT VALUES USED

Explanation: An I/O error occurred while CSM was trying to read the CSM parmlib member. This message is issued during CSM initialization.

membername is the name of the CSM parmlib member.

System action: Processing continues using the following default values:

- | • Maximum fixed storage – 200M
- | • Maximum ECSA storage – 100M
- | • Maximum high virtual common (HVCOMM) storage above the 2 GB bar – 2000M

Operator response: If the default values for CSM storage limits are not acceptable, issue the **MODIFY CSM** command to update the parameter values. Save the system log for problem determination.

System programmer response: See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information.

Routing code: 2

Descriptor code: 5

IVT5503I CSM PARMLIB PARAMETER NOT VALID - *parametername*

Explanation: CSM issues this message as part of a message group. See IVT5507I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5504I ABEND *abendcode* OCCURRED IN *modulename* - SDUMP HAS BEEN ISSUED

Explanation: An abend occurred while processing a CSM request.

abendcode is the abend code. The values for *abendcode* are found in the applicable operating system documentation.

modulename is the name of the CSM module.

System action: The system attempts an SDUMP. CSM takes the dump if the system dump data set is usable. If the dump fails, message IVT5505I is issued with a return code of the dump request.

Operator response: Save the system log and the dump for problem determination.

System programmer response: Review the dump to determine the cause of the problem.

Routing code: 2

Descriptor code: 5

IVT5505I CSM SDUMP FAILED WITH RETURN CODE *code* REASON *X'reason'*

Explanation: CSM attempts an SDUMP for an abend and the system could not complete the dump successfully.

code indicates the reason for the failure and can be one of the following:

04 The system obtained only a partial dump. The dump data set or file is too small.

08 The system was unable to take an SDUMP. All dump data sets or files are full, a dump is already in progress, or the dump analysis elimination (DAE) function of MVS has determined that a dump has already been taken for the system string.

reason indicates the cause of the SDUMP failure.

For more information about return and reason codes for the SDUMP macro, see z/OS MVS Programming: Authorized Assembler Services Reference LLA-SDU.

System action: CSM takes no further action to obtain a dump. Other processing continues.

Operator response: Save the system log for problem determination.

System programmer response: If *code* is 4, increase the size of the dump data set.

If *code* is 8, check the availability of dump data sets and purge any unnecessary dumps.

Routing code: 2

Descriptor code: 5

IVT5506I *modulename* STORAGE ALLOCATION FAILED IN CSM

Explanation: This message is issued when CSM is unable to satisfy a request for storage.

modulename is the CSM module name where the request failed.

System action: CSM might not be able to continue. If this message is issued during CSM initialization, CSM issues abend code 4C4, return code 1001, and issues an FFST dump.

Operator response: Save the system log for problem determination.

System programmer response: See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information.

Routing code: 2

Descriptor code: 5

IVT5507I CSM PARMLIB INFORMATION FOUND IN MEMBER *membername*

Explanation: This message is part of a group of messages that is issued either during CSM initialization or as the result of a **MODIFY CSM** command with no parameters specified. A complete description of the message group follows the example.

```
IVT5507I CSM PARMLIB INFORMATION FOUND IN MEMBER membername
[IVT5503I CSM PARMLIB PARAMETER NOT VALID - parametername]
[IVT5599I END]
```

IVT5507I

membername is the name of the CSM parmlib member.

IVT5503I

CSM issues this message when it finds a CSM storage parameter value in the parmlib that is not valid.

parametername is the first 26 characters of the line where the error occurred in the CSM parmlib member.

System action: If only IVT5507I is displayed, CSM storage limits from *membername* are used.

If IVT5503I is displayed in response to **MODIFY CSM** command with no parameters specified, the storage limits are unchanged.

If IVT5503I is displayed during CSM initialization, then storage limits are determined as follows:

- If the error was generated by the first CSM storage parameter, the following default values are used:
 - Maximum fixed storage – 200M
 - Maximum ECSA storage – 100M
 - Maximum high virtual common (HVCOMM) storage above the 2 GB bar – 2000M
- If the error was generated by the second CSM storage parameter, only the second and third parameter values are replaced by the default values.
- If the error was generated by the third CSM storage parameter, only the third parameter value is replaced by the default value.

Operator response: If IVT5503I is displayed and the default values for CSM storage parameters are not acceptable, issue the **MODIFY CSM** command to update CSM start parameters. Save the system log for problem determination.

System programmer response: If IVT5503I is displayed, edit the CSM parameter data set and correct the parameter that is in error.

Routing code: 2

Descriptor code: 5

IVT5508I DISPLAY ACCEPTED

Explanation: CSM accepted the DISPLAY CSM command for initial processing.

System action: The syntax of the command is correct and VTAM begins processing the DISPLAY CSM command.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5510I MODIFY ACCEPTED

Explanation: CSM accepted the MODIFY CSM command for initial processing.

System action: The syntax of the command is correct and VTAM begins processing the MODIFY CSM command.

Operator response: None.

IVT5511I • IVT5516I

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5511I *command* CSM COMMAND SYNTAX NOT VALID

Explanation: The *command* failed because of one or more of the following syntax errors:

- An operand is specified incorrectly
- A operand is specified more than once
- A keyword might be missing

command is one of the following CSM command types:

- **DISPLAY**
- **MODIFY**

System action: VTAM rejects the command. Other processing continues.

Operator response: Reenter the command with the correct syntax. See z/OS Communications Server: SNA Operation for correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5512I **FIXED PARAMETER VALUE NOT VALID**

Explanation: This message is issued when the **FIXED** value of a **MODIFY** CSM command is out of range or not valid.

System action: Processing continues. CSM fixed storage limits are not changed.

Operator response: Reenter the command with the correct syntax. See z/OS Communications Server: SNA Operation for correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5513I **ECSA PARAMETER VALUE NOT VALID**

Explanation: This message is issued when the requested **ECSA** value of a **MODIFY** CSM command is out of range or not valid.

System action: Processing continues. CSM **ECSA** storage limits are not changed.

Operator response: Reenter the command with the correct syntax. See z/OS Communications Server: SNA Operation for correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5516I **ERROR OBTAINING CSM PARMLIB INFORMATION - LIMITS UNCHANGED**

Explanation: This message is issued in response to a **MODIFY CSM** command with no operands specified. CSM could not read the storage limits defined in the CSM parmlib member and could not change the limits.

System action: Processing continues. CSM storage limits are not changed.

Operator response: To change the current storage limits, reissue the command and specify new storage limits on the FIXED, ECSA, or HVCOMM operands.

System programmer response: Edit the CSM parmlib member to determine the source of the problem.

Routing code: 2

Descriptor code: 5

IVT5517I CSM LIMITS PRIOR TO MODIFY CSM PROCESSING:

Explanation: This message is the first in a group of messages that is issued in response to a **MODIFY CSM** command with at least one operand specified. It displays the CSM storage limits before and after the **MODIFY CSM** command is issued. A complete description of the message group follows the example.

```
IVT5517I CSM LIMITS PRIOR TO MODIFY CSM PROCESSING:
IVT5519I ECSA MAXIMUM = maxecsa, FIXED MAXIMUM = maxfix
IVT5595I HVCOMM MAXIMUM = maxhvcomm
IVT5518I CSM LIMITS AFTER MODIFY CSM PROCESSING:
IVT5519I ECSA MAXIMUM = maxecsa, FIXED MAXIMUM = maxfix
IVT5595I HVCOMM MAXIMUM = maxhvcomm
IVT5599I END
```

IVT5517I and IVT5518I

These messages are header messages for the information displayed in the message that follow these messages.

IVT5519I

maxecsa is the maximum amount of ECSA storage, in megabytes (M) or kilobytes (K), that can be allocated by CSM.

maxfix is the maximum amount of fixed storage, in megabytes (M) or kilobytes (K), that can be allocated by CSM.

IVT5595I

maxhvcomm is the maximum amount of high virtual common (HVCOMM) storage above the 2 GB address bar, in megabytes (M), that can be allocated by CSM.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5518I CSM LIMITS AFTER MODIFY CSM PROCESSING:

Explanation: CSM issues this message as part of a message group. See IVT5517I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5519I ECSA MAXIMUM = *maxecsa* FIXED MAXIMUM = *maxfix*

Explanation: CSM issues this message as part of a message group. See IVT5517I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5520I • IVT5529I

IVT5520I OWNERID VALUE NOT VALID

Explanation: This message is issued when a DISPLAY CSM command is issued with an OWNERID that is not a valid address space identifier (ASID).

System action: VTAM rejects the command. Other processing continues.

Operator response: Issue a display of all active jobs to obtain a list of valid ASIDs.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5521I NO CSM STORAGE IS CURRENTLY ALLOCATED TO OWNERID *asid*

Explanation: This message is issued for a DISPLAY CSM command with OWNERID specified.

If *asid* is the name of a valid address space, the ASID exists, but does not have any storage allocated from the communications storage manager (CSM).

If *asid* is ALL, there is no CSM storage allocated to any address space.

System action: Processing continues.

Operator response: To determine the ASID that has storage allocated in CSM, reissue the DISPLAY CSM command and specify OWNERID=ALL.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5529I PROCESSING DISPLAY CSM COMMAND - OWNERID NOT SPECIFIED

Explanation: This message is the first in a group of messages that CSM issues in response to a DISPLAY CSM command when OWNERID is not specified. A complete description of the message group follows.

```
IVT5529I PROCESSING DISPLAY CSM COMMAND - OWNERID NOT SPECIFIED
IVT5530I BUFFER BUFFER
IVT5531I SIZE SOURCE INUSE FREE TOTAL
IVT5532I -----
IVT5533I 4K ECSA 8K 248K 256K
IVT5533I 16K ECSA 32K 224K 256K
IVT5533I 32K ECSA 64K 448K 512K
IVT5533I 60K ECSA 120K 840K 960K
IVT5533I 180K ECSA 360K 2520K 2880K
IVT5535I TOTAL ECSA 584K 4280K 4864K
IVT5532I -----
IVT5533I 4K DATA SPACE 31 8K 248K 256K
IVT5533I 16K DATA SPACE 31 32K 224K 256K
IVT5533I 32K DATA SPACE 31 64K 448K 512K
IVT5533I 60K DATA SPACE 31 120K 840K 960K
IVT5533I 180K DATA SPACE 31 360K 2520K 2880K
IVT5535I TOTAL DATA SPACE 31 584K 4280K 4864K
IVT5532I -----
IVT5533I 4K DATA SPACE 64 8K 248K 256K
IVT5533I 16K DATA SPACE 64 32K 224K 256K
IVT5533I 32K DATA SPACE 64 64K 448K 512K
IVT5533I 60K DATA SPACE 64 120K 840K 960K
IVT5533I 180K DATA SPACE 64 360K 2520K 2880K
IVT5535I TOTAL DATA SPACE 64 584K 4280K 4864K
IVT5532I -----
IVT5535I TOTAL DATA SPACE 1168K 8560K 9728K
IVT5532I -----
IVT5533I 4K HVCOMM 8K 1016K 1M
IVT5533I 16K HVCOMM 32K 992K 1M
IVT5533I 32K HVCOMM 64K 960K 1M
```

```

IVT5533I  60K  HVCOMM           120K    900K    1020K
IVT5533I 180K  HVCOMM           360K    540K    900K
IVT5535I TOTAL HVCOMM           584K    4408K   4992K
IVT5532I -----
IVT5536I TOTAL ALL SOURCES           2336K   17248K   19584K
IVT5538I FIXED MAXIMUM =      2048M  FIXED CURRENT =      3089K
IVT5541I FIXED MAXIMUM USED =      3089K SINCE LAST DISPLAY CSM
IVT5594I FIXED MAXIMUM USED =      3089K SINCE IPL
IVT5539I ECSA  MAXIMUM =        100M  ECSA  CURRENT =      5071K
IVT5541I ECSA  MAXIMUM USED =      5071K SINCE LAST DISPLAY CSM
IVT5594I ECSA  MAXIMUM USED =      5071K SINCE IPL
IVT5604I HVCOMM MAXIMUM =     1000M  HVCOMM CURRENT =         8M
IVT5541I HVCOMM MAXIMUM USED =         8M SINCE LAST DISPLAY CSM
IVT5594I HVCOMM MAXIMUM USED =         8M SINCE IPL
IVT5559I CSM DATA SPACE 1 NAME: CSM64001
IVT5559I CSM DATA SPACE 2 NAME: CSM31002
IVT5599I END

```

Note: To determine the actual number of buffers in use for a pool, divide *curused* by *bufsiz*.

IVT5529I

The message group that follows this message displays storage information for every possible combination of CSM buffer size and buffer source.

IVT5530I and IVT5531I

These messages are header messages for the information displayed in the messages that follow these messages.

IVT5533I

This message displays information about a CSM pool.

bufsiz is the size of the buffers in the pool. The values for *bufsiz* are 4K, 16K, 32K, 60K, and 180K.

bufsource is the storage source from which buffers are allocated. The values for *bufsource* are:

ECSA

Buffers are allocated from ECSA storage.

DATA SPACE 31

Buffers are allocated from 31-bit backed data space storage.

DATA SPACE 64

Buffers are allocated from 64-bit backed data space storage.

HVCOMM

Buffers are allocated from 64-bit common storage.

curused is the amount of storage in the pool that is currently being used. The value is expressed in either megabytes (M) or kilobytes (K).

Note: When a problem with a pool extent is detected, this value might include buffer storage that is not actually allocated to a CSM user. The buffer storage in the extent can not be allocated to a CSM user.

curfree is the amount of storage in the pool that is not being used. The value is expressed in either megabytes (M) or kilobytes (K).

curtotal is the total amount of storage allocated for the pool. The value is expressed in either megabytes (M) or kilobytes (K).

IVT5534I

This message is displayed only when the pool represented by *bufsiz* and *bufsource* has not been created.

IVT5529I

IVT5535I

This message displays the total storage allocated for all CSM pools of a particular buffer source.

bufsource is the storage source from which buffers are allocated. The values for *bufsource* are **ECSA**, **DATA SPACE 31**, **DATA SPACE 64**, and **HVCOMM**.

totused is the total amount of storage that is currently being used for *bufsource*.

totfree is the total amount of storage that is not being used for *bufsource*.

totstor is the total amount of storage allocated for all of the CSM *bufsource* pools.

IVT5536I

This message displays information about all storage allocated for the CSM Pools.

totused is the total amount of CSM storage that is currently being used.

totfree is the total amount of CSM storage that is not being used.

totstor is the total amount of storage allocated for the CSM pools.

IVT5538I

maxfix is the maximum amount of fixed storage that can be allocated by CSM.

curfix is the current amount of fixed storage allocated by CSM.

IVT5539I

maxecsa is the maximum amount of ECSA storage that can be allocated by CSM.

curecsa is the current amount of ECSA storage allocated by CSM.

IVT5604I

maxhvcomm is the maximum amount of 64-bit common storage that can be allocated by CSM.

curhvcomm is the current amount of 64-bit common storage that is allocated by CSM.

IVT5541I

storage_type can be one of the following:

ECSA Common Storage Area.

FIXED Page Fixed Storage includes ECSA and 31-bit and 64-bit backed Data Space.

HVCOMM

64-bit common storage.

storage_value is the maximum amount of storage in use since the last time a **Display CSM** command was issued with OWNERID not specified.

IVT5559I

This message is displayed for each CSM data space that exists. CSM can create up to five data spaces.

n is CSM data space number.

datpname is CSM data space name.

IVT5594I

storage_type can be one of the following:

ECSA Extended Common Storage Area.

FIXED Page Fixed Storage includes ECSA and 31-bit and 64-bit backed Data Space.

HVCOMM

64-bit common storage.

max_storage is the maximum amount of storage in use since the last IPL.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5530I BUFFER BUFFER

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5531I SIZE SOURCE INUSE FREE TOTAL

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5532I -----

Explanation: This message is a line separator and is part of several different message groups. It is used to improve readability or to separate types of information. See the explanation of the first message in the group for an example of how this message is used in each group.

Routing code: 2

Descriptor code: 5

IVT5533I *bufsiz bufsource curused curfree curttotal*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5534I *bufsiz bufsource* POOL DOES NOT EXIST

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

IVT5535I • IVT5549I

Descriptor code: 5

IVT5535I TOTAL *bufsource totused totfree totstor*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5536I TOTAL ALL SOURCES *totused totfree totstor*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5538I FIXED MAXIMUM = *maxfix* FIXED CURRENT = *curfix*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5539I ECSA MAXIMUM = *maxecsa* ECSA CURRENT = *curecsa*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5541I *storage_type* MAXIMUM USED *max_storage* SINCE LAST DISPLAY CSM

Explanation: CSM issues this message as part of a message group in response to a **DISPLAY CSM** command when OWNERID is not specified. The first message in the group is IVT5529I. See the explanation of IVT5529I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5549I PROCESSING DISPLAY CSM COMMAND - OWNERID SPECIFIED

Explanation: This message is the first in a group of messages that CSM issues in response to a **DISPLAY CSM** command when OWNERID is specified. A complete description of the message group follows.

```
IVT5508I DISPLAY ACCEPTED
IVT5549I PROCESSING DISPLAY CSM COMMAND - OWNERID SPECIFIED
IVT5530I BUFFER BUFFER
IVT5551I SIZE SOURCE STORAGE ALLOCATED TO OWNER
IVT5532I -----
IVT5553I 4K ECSA 256K
IVT5554I TOTAL ECSA 256K
IVT5532I -----
IVT5553I 4K DATA SPACE 64 128K
IVT5554I TOTAL DATA SPACE 64 128K
IVT5532I -----
IVT5554I TOTAL DATA SPACE 128K
```

```

IVT5532I -----
IVT5556I TOTAL   FOR OWNERID                384K
IVT5557I OWNERID: ASID = 01F6  JOBNAME = VTAMAPPL
IVT5599I END

```

IVT5549I

This message group displays information about CSM buffers and storage that belong to the OWNERID.

IVT5530I and IVT5551I

These messages are header messages for the information displayed in the messages that follow these messages.

IVT5553I

This message displays information about storage allocated to the OWNERID from a CSM buffer pool.

bufsiz is the size of the buffers in the pool. The values for *bufsiz* are 4K, 16K, 32K, 60K, and 180K.

bufsource is the storage source from which buffers are allocated. The values for *bufsource* are:

ECSA

buffers are allocated from ECSA storage.

DATA SPACE 31

buffers are allocated from 31-bit backed data space storage.

DATA SPACE 64

buffers are allocated from 64-bit backed data space storage.

HVCOMM

Buffers are allocated from 64-bit common storage.

totstor is the total amount of CSM storage in the pool that has been allocated to the ASID. The value is expressed in either megabytes (M) or kilobytes (K).

IVT5554I

This message displays information about all the CSM storage allocated to the ASID for *bufsource*.

bufsource is the storage source from which buffers are allocated. The values for *bufsource* are **ECSA**, **DATA SPACE 31**, **DATA SPACE 64**, and **HVCOMM**.

totstor is the total amount of storage allocated to this ASID for *bufsource*. The value is expressed in either megabytes (M) or kilobytes (K).

IVT5556I

totstor is the total amount of CSM storage allocated to the ASID. The value is expressed in either megabytes (M) or kilobytes (K).

Note: The sum of the total of the storage allocated to all users of a pool might be greater than the total amount of storage allocated from the pool. This is due to multiple owners of a buffer resulting from the creation of shared instances using IVTCSM ASSIGN_BUFFER request. The information by OWNERID indicates the amount of storage that must be freed by the user to enable the storage to be returned to the buffer pool.

IVT5557I

asid is the address space identifier (ASID) of the owner of the CSM storage, as specified on the OWNERID operand of the **DISPLAY CSM** command or on an IVTCSM GET_BUFFER, ASSIGN_BUFFER or CHANGE_OWNER request.

jobname is the name of the job associated with the ASID. If *jobname* cannot be determined, this field contains *****NA*****.

IVT5551I • IVT5558I

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5551I **SIZE SOURCE STORAGE ALLOCATED TO OWNER**

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5549I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5553I *bufsiz bufsource totstor*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5549I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5554I **TOTAL** *bufsource totstor*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5549I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5556I **TOTAL FOR OWNERID** *totstor*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5549I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5557I **OWNERID: ASID = asid JOBNAME = jobname**

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5549I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5558I *bufsiz bufsource* **UNABLE TO DETERMINE BUFFER VALUES**

Explanation: This message is displayed only when CSM detects a problem in a pool which prevents information about the buffer from being determined.

Routing code: 2

Descriptor code: 5

IVT5559I CSM DATA SPACE *n* NAME: *datspname*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

System action: None.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5560I CSM ECSA STORAGE LIMIT EXCEEDED

Explanation: A CSM request for storage from extended common service area (ECSA) storage could not be satisfied. It would exceed the CSM ECSA storage limit value.

System action: The action depends on why the requested storage was needed. Other messages might follow identifying the effect this storage condition has on CSM and its applications. Subsequent requests for CSM storage might fail.

Operator response: Issue the DISPLAY CSM command without the OWNERID operand to determine current storage limits and usage. Issue a DISPLAY CSM command with OWNERID=ALL to determine how much storage is in use by each application. Save the system log and request a dump for problem determination.

System programmer response: Verify the ECSA storage limit value is correct. Increase storage as required using a MODIFY CSM command.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY CSM and MODIFY CSM commands.

See z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps.

Routing code: 2

Descriptor code: 5

IVT5561I CSM FIXED STORAGE LIMIT EXCEEDED

Explanation: A CSM request for storage from the fixed (REAL) storage could not be satisfied. It would exceed the CSM FIXED storage limit value.

System action: The action depends on how much storage is available for subsequent requests for storage. Other messages might follow identifying the effect this storage condition has on CSM and its applications. Subsequent requests for CSM storage might fail.

Operator response: Issue the DISPLAY CSM command without the OWNERID operand to determine current storage limits and usage. Issue a DISPLAY CSM command with OWNERID=ALL to determine how much storage is in use by each application. Save the system log and request a dump for problem determination.

System programmer response: Verify the FIXED storage limit value is correct. Increase storage as required using a MODIFY CSM command.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY CSM and MODIFY CSM commands.

See z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for information about analyzing dumps.

Routing code: 2

Descriptor code: 5

IVT5562I CSM ECSA STORAGE AT CRITICAL LEVEL

Explanation: This message is issued when CSM ECSA storage usage is at or higher than the CSM ECSA critical value (90% of CSM ECSA storage limit value).

System action: Processing continues. Subsequent requests for CSM storage might fail.

Operator response: Issue the DISPLAY CSM command without the OWNERID operand to determine current storage limits and usage. Issue a DISPLAY CSM command with OWNERID=ALL to determine how much storage is in use by each application. Save the system log for problem determination.

System programmer response: Verify the ECSA storage limit value is correct. Increase storage as required using a MODIFY CSM command.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY CSM and MODIFY CSM commands.

Routing code: 2

Descriptor code: 5

IVT5563I CSM FIXED STORAGE AT CRITICAL LEVEL

Explanation: This message is issued when CSM fixed storage usage is at or higher than the CSM fixed critical value (90% of CSM fixed storage limit value).

System action: Processing continues. Subsequent requests for storage might fail.

Operator response: Issue the DISPLAY CSM command without the OWNERID operand to determine current storage limits and usage. Issue a DISPLAY CSM command with OWNERID=ALL to determine how much storage is in use by each application. Save the system log for problem determination.

System programmer response: Verify the fixed storage limit value is correct. Increase storage as required using a MODIFY CSM command.

See z/OS Communications Server: SNA Operation for more information on the DISPLAY CSM and MODIFY CSM commands.

Routing code: 2

Descriptor code: 5

IVT5564I CSM ECSA STORAGE SHORTAGE RELIEVED

Explanation: This message is issued when CSM ECSA storage usage has returned back to normal level (at or below 80% of ECSA storage limit value).

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5565I CSM FIXED STORAGE SHORTAGE RELIEVED

Explanation: This message is issued when CSM fixed storage usage has returned to normal level (at or below 80% of fixed storage limit value).

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5566I CSM MONITOR IS ACTIVE

Explanation: CSM issues this message in response to the MODIFY CSM,MONITOR=YES and DISPLAY CSM,MONITOR commands.

When the MODIFY CSM,MONITOR command is issued, this message indicates that CSM has successfully started the CSM monitoring of the CSM buffer storage.

When the DISPLAY CSM,MONITOR command is issued, this message indicates that CSM monitoring of the CSM buffer storage is already in progress.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5567I CSM MONITOR IS NOT ACTIVE

Explanation: CSM issues this message in response to the MODIFY CSM,MONITOR=NO and DISPLAY CSM,MONITOR commands.

When the MODIFY CSM,MONITOR=NO command is issued, this message indicates that CSM has successfully ended the CSM monitoring of the CSM buffer storage.

When the DISPLAY CSM,MONITOR command is issued, this message indicates that CSM monitoring of the CSM buffer storage is not in progress.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5568I MONITOR PARAMETER VALUE IS NOT VALID

Explanation: This message is issued when the MONITOR value of a MODIFY CSM command is not valid. The correct values for MONITOR are YES, NO or DYNAMIC. CSM MONITOR status is not changed.

System action: Processing continues.

Operator response: Reenter the command with the correct value. See z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5569I CSM MONITOR IS DYNAMIC AND CURRENTLY ACTIVE

Explanation: CSM issues this message in response to the MODIFY CSM,MONITOR=DYNAMIC and DISPLAY CSM,MONITOR commands.

When the MODIFY CSM,MONITOR=DYNAMIC command is issued, this message indicates that CSM has successfully processed the command. The status is dynamic and CSM is monitoring the CSM buffer storage.

When the DISPLAY CSM,MONITOR command is issued, this message indicates that CSM monitoring of the CSM buffer storage is dynamic and CSM is monitoring the CSM buffer storage.

System action: Processing continues.

IVT5570I • IVT5572I

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5570I CSM MONITOR IS DYNAMIC AND CURRENTLY NOT ACTIVE

Explanation: CSM issues this message in response to the MODIFY CSM,MONITOR=DYNAMIC and DISPLAY CSM,MONITOR commands.

When the MODIFY CSM,MONITOR=DYNAMIC command is issued, this message indicates that CSM has successfully processed the command. The status is dynamic and CSM is not monitoring the CSM buffer storage.

When the DISPLAY CSM,MONITOR command is issued, it indicates that CSM monitoring of the CSM buffer storage is dynamic and CSM is not monitoring the CSM buffer storage.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5571I MONITOR PARAMETER IS NOT VALID WITH *parameter*

Explanation: CSM issues this message when it finds a MONITOR parameter with *parameter*. The MONITOR parameter and *parameter* are mutually exclusive.

System action: Processing continues.

Operator response: Reenter the command DISPLAY NET,CSM,MONITOR without *parameter*. If *parameter* is necessary, reenter the command without the MONITOR parameter. See z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5572I PROCESSING DISPLAY CSMUSE COMMAND - OWNERID NOT SPECIFIED

Explanation: This message is the first in a group of messages that CSM issues in response to a **DISPLAY CSMUSE** command when OWNERID is not specified. A complete description of the message group follows the example.

```
IVT5572I PROCESSING DISPLAY CSMUSE COMMAND - OWNERID NOT SPECIFIED
IVT5532I -----
IVT5575I USAGE SUMMARY - poolname POOL TOTAL (ALL USERS) = stoinuse
IVT5576I  AMOUNT  MONITOR ID  OWNERID  JOBNAME
IVT5577I  amount  monitorid  ownerid  jobname
:
:
IVT5578I DISPLAY TOTAL FOR poolname POOL (number USERS) = totamount
IVT5532I -----
:
:
IVT5599I END
```

The messages starting from IVT5575I through IVT5578I are for one CSM storage pool. These messages can be repeated up to 19 more times to include all CSM pools.

IVT5532I

This message is a line separator.

IVT5572I

This message is a header message for a summary of CSM storage usage for one or more storage pools that have buffers in use. The summary information shows storage usage by monitor ID and OWNERID.

IVT5575I

- This message displays summary information about a CSM storage pool. This is the first message of a subgroup of messages issued for each CSM storage pool. The subgroup of messages starting from IVT5575I through IVT5578I are for one CSM storage pool.
- *poolname* is the CSM pool. CSM pool names are as follows:

4KECSA

4KB buffer size ECSA storage pool

16KECSA

16KB buffer size ECSA storage pool

32KECSA

32KB buffer size ECSA storage pool

60KECSA

60KB buffer size ECSA storage pool

180KECSA

180KB buffer size ECSA storage pool

4KDS 4KB buffer size data space storage pool**16KDS** 16KB buffer size data space storage pool**32KDS** 32KB buffer size data space storage pool**60KDS** 60KB buffer size data space storage pool**180KDS**

180KB buffer size data space storage pool

4KDS64

4KB buffer size data space backed by 64-bit real storage pool

16KDS64

16KB buffer size data space backed by 64-bit real storage pool

32KDS64

32KB buffer size data space backed by 64-bit real storage pool

60KDS64

60KB buffer size data space backed by 64-bit real storage pool

180KDS64

180KB buffer size data space backed by 64-bit real storage pool

4KHCOM

4 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

16KHCOM

16 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

32KHCOM

32 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

60KHCOM

60 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

180KHCOM

180 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

- *stoinuse* is the total amount of storage in use in the pool. The value is expressed in either megabytes (M) or kilobytes (K).

IVT5576I

IVT5573I

This is the header message for the information displayed in the IVT5577I messages that follow.

IVT5577I

This message displays the users of CSM storage that have allocated the largest amount of the storage for a pool by monitor ID and OWNERID. The message can be repeated up to four times.

amount is the total amount of CSM storage allocated to the monitor ID and OWNERID. The value is expressed in either megabytes (M) or kilobytes (K).

monitorid is the identifier of the component of z/OS Communications Server using the CSM buffer storage. It can be used by z/OS Communications Server service to diagnose CSM storage problems. The monitor function of CSM allows the operator to track the CSM buffer storage. If the CSM buffer is used by z/OS Communications Server, it will also have an owning component in z/OS Communications Server. This is the unique identifier of the component. See the z/OS Communications Server: IP and SNA Codes for the complete description of Monitor IDs.

ownerid (OWNERID) is the owning address space identifier (ASID) for this CSM buffer storage and it is a hexadecimal value in the range of 0000 - 7FFF.

jobname is the name of the job associated with the OWNERID. If *jobname* cannot be determined, this field contains ***NA***.

IVT5578I

This message displays the total amount of storage listed in the IVT5577I messages for one storage pool.

poolname is the CSM pool. The CSM pool names are listed under the message IVT5575I.

number is the number of users using CSM storage displayed by the IVT5577I messages.

totamount is the sum of *amount* displayed in the IVT5577I messages issued with this group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5573I PROCESSING DISPLAY CSMUSE COMMAND - OWNERID SPECIFIED

Explanation: This message is the first in a group of messages that CSM issues in response to a **DISPLAY CSMUSE** command when OWNERID is specified. A complete description of the message group follows the example.

```
IVT5573I PROCESSING DISPLAY CSMUSE COMMAND - OWNERID SPECIFIED
IVT5575I OWNERID: ASID = 01F6 JOBNAME = TCPCS1
IVT5532I -----
IVT5575I USAGE SUMMARY - poolname POOL TOTAL (ALL USERS) = stoinuse
IVT5576I AMOUNT MONITOR ID OWNERID JOBNAME
IVT5577I amount monitorid ownerid jobname
:
:
IVT5589I DISPLAY TOTAL FOR poolname POOL FOR THIS OWNERID = totamount
IVT5532I -----
:
:
IVT5599I END
```

The messages starting from IVT5575I through IVT5578I are for one CSM storage pool. These messages can repeat up to 19 more times to include all CSM pools.

IVT5532I

This message is a line separator.

IVT5557I

asid is the address space identifier (ASID) of the owner of the CSM storage, as specified on the OWNERID operand of the **DISPLAY CSMUSE** command. *asid* is a hexadecimal value with a range of 0000 - 7FFF.

jobname is the name of the job associated with the OWNERID. If *jobname* cannot be determined, this field contains ***NA***.

IVT5573I

This message is issued when the display CSMUSE command is issued with the OWNERID operand. The message group that follows this message displays the storage usage summary, by monitor ID and OWNERID, of all buffers in use for one or more CSM storage pools. This message is a header message for a summary of CSM storage usage for one or more storage pools that have buffers in use. The summary information shows storage usage by monitor ID for the OWNERID specified on the **DISPLAY CSMUSE** command.

IVT5575I

- This message displays summary information about a CSM storage pool. This is the first message of a subgroup of messages issued for each CSM storage pool. The subgroup of messages starting from IVT5575I through IVT5578I are for one CSM storage pool.
- *poolname* is the CSM pool. CSM pool names are as follows:

4KECSA

4KB buffer size ECSA storage pool

16KECSA

16KB buffer size ECSA storage pool

32KECSA

32KB buffer size ECSA storage pool

60KECSA

60KB buffer size ECSA storage pool

180KECSA

180KB buffer size ECSA storage pool

4KDS 4KB buffer size data space storage pool

16KDS 16KB buffer size data space storage pool

32KDS 32KB buffer size data space storage pool

60KDS 60KB buffer size data space storage pool

180KDS

180KB buffer size data space storage pool

4KDS64

4KB buffer size data space backed by 64-bit real storage pool

16KDS64

16KB buffer size data space backed by 64-bit real storage pool

32KDS64

32KB buffer size data space backed by 64-bit real storage pool

60KDS64

60KB buffer size data space backed by 64-bit real storage pool

180KDS64

180KB buffer size data space backed by 64-bit real storage pool

4KHCOM

4 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

16KHCOM

16 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

32KHCOM

32 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

60KHCOM

60 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

IVT5574I

180KHCOM

180 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

- *stoinuse* is the total amount of storage in use in the pool. The value is expressed in either megabytes (M) or kilobytes (K).

IVT5576I

This is the header message for the information displayed in the IVT5577I messages that follow.

IVT5577I

This message displays the users of CSM storage that have allocated the largest amount of the storage for a pool by monitor ID and OWNERID. The message can be repeated up to four times.

amount is the total amount of CSM storage allocated to the monitor ID and OWNERID. The value is expressed in either megabytes (M) or kilobytes (K).

monitorid is the identifier of the component of z/OS Communications Server using the CSM buffer storage. It can be used by z/OS Communications Server service to diagnose CSM storage problems. The monitor function of CSM allows the operator to track the CSM buffer storage. If the CSM buffer is used by z/OS Communications Server, it will also have an owning component in z/OS Communications Server. This is the unique identifier of the component. See the z/OS Communications Server: IP and SNA Codes for a complete description of Monitor IDs.

ownerid (OWNERID) is the owning address space identifier (ASID) for this CSM buffer storage and it is a hexadecimal value in the range of 0000 - 7FFF.

jobname is the name of the job associated with the OWNERID. If *jobname* cannot be determined, this field contains ***NA***.

IVT5589I

This message displays the total amount of storage listed in the IVT5577I messages for one storage pool.

poolname is the CSM pool. The CSM pool names are listed under the message IVT5575I.

totamount is the sum of *amount* displayed in the IVT5577I messages issued with this group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5574I PROCESSING DISPLAY CSMUSE COMMAND - POOL SPECIFIED

Explanation: This message is the first in a group of messages that CSM issues in response to a **DISPLAY CSMUSE** command when POOL is specified. A complete description of the message group follows.

```
IVT5574I PROCESSING DISPLAY CSMUSE COMMAND - POOL SPECIFIED
IVT5532I -----
IVT5584I USAGE DETAILS - poolname POOL - POOL TOTAL = stoinuse
IVT5532I -----
IVT5576I AMOUNT MONITOR ID OWNERID JOBNAME
IVT5577I amount monitorid ownerid jobname
IVT5579I BUFFER USE FOR mid: USECNT USERDATA MONITOR HISTORY
IVT5580I          usecount userdata monitor history
:
:
IVT5532I -----
:
:
IVT5585I DETAIL TOTAL FOR poolname POOL = totamount
IVT5599I END
```

The messages starting from IVT5576I through IVT5580I are for one CSM monitor ID. These messages can repeat up to 3 more times to include up to four CSM Monitor IDs.

IVT5532I

This message is a line separator.

IVT5574I

This message is issued when the **DISPLAY CSMUSE** command is entered with the POOL operand. The message group that follows this message displays storage usage summary of all buffers in use for the user-specified pool with the buffers in use by monitor ID and OWNERID. This message is a header message for a detailed display of CSM storage usage for the CSM storage pool specified by the POOL operand of the **Display CSMUSE** command. It displays the user data value and history of the monitor ID.

IVT5576I

This is the header message for the information displayed in the IVT5577I messages that follow.

IVT5577I

This message displays the users of CSM storage, by monitor ID and OWNERID, that have allocated the largest amount of storage for a pool. The message can be repeated up to four times.

amount is the total amount of CSM storage allocated to the monitor ID and OWNERID. The value is expressed in either megabytes (M) or kilobytes (K).

monitorid is the identifier of the component of z/OS Communications Server using the CSM buffer storage. It can be used by z/OS Communications Server service to diagnose CSM storage problems. The monitor function of CSM allows the operator to track the CSM buffer storage. If the CSM buffer is used by z/OS Communications Server, it will also have an owning component in z/OS Communications Server. This is the unique identifier of the component. See the z/OS Communications Server: IP and SNA Codes for the complete description of Monitor IDs.

ownerid (OWNERID) is the owning address space identifier (ASID) for this CSM buffer storage and it is a hexadecimal value in the range of 0000 - 7FFF.

jobname is the name of the job associated with the OWNERID. If jobname cannot be determined, this field contains *****NA*****.

IVT5579I

This is the header message for the detail information displayed in the IVT5580I messages that follow.

mid is the current monitor ID of the buffers with the user data fields and monitor history displayed in the messages that follow.

IVT5580I

This message displays the detailed user information and monitor ID history for a buffer in a CSM storage pool. It can be repeated up to four times.

usecount is the number of primary buffers plus the images of buffers associated with the displayed user data field and monitor ID history for the monitor ID specified in the preceding IVT5579I message.

userdata is the user data field associated with this buffer by the monitor identified by the monitor ID specified in the preceding IVT5579I message. The user data field allows IBM service to correlate the current usage and history to a specific resource, such as a device, connection, route, and so on. This is a hexadecimal value.

monitorhistory is a word containing the monitor ID history for a buffer in CSM storage. The first 3 bytes are the previous monitor IDs and the last byte is the current monitor ID. This is a hexadecimal value.

IVT5584I

- This message displays detail information about a CSM storage pool.
- *poolname* is the CSM pool. CSM pool names are as follows:

4KECSA

4KB buffer size ECSA storage pool

16KECSA

16KB buffer size ECSA storage pool

32KECSA

32KB buffer size ECSA storage pool

IVT5574I

60KECSA

60KB buffer size ECSA storage pool

180KECSA

180KB buffer size ECSA storage pool

4KDS 4KB buffer size data space storage pool

16KDS 16KB buffer size data space storage pool

32KDS 32KB buffer size data space storage pool

60KDS 60KB buffer size data space storage pool

180KDS

180KB buffer size data space storage pool

4KDS64

4KB buffer size data space backed by 64-bit real storage pool

16KDS64

16KB buffer size data space backed by 64-bit real storage pool

32KDS64

32KB buffer size data space backed by 64-bit real storage pool

60KDS64

60KB buffer size data space backed by 64-bit real storage pool

180KDS64

180KB buffer size data space backed by 64-bit real storage pool

4KHCOM

4 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

16KHCOM

16 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

32KHCOM

32 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

60KHCOM

60 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

180KHCOM

180 KB buffer size 64-bit high virtual common (HVCOMM) storage pool

- *stoinuse* is the total amount of storage in use in the pool. The value is expressed in either megabytes (M) or kilobytes (K).

IVT5585I

This message displays the total amount of storage listed in the IVT5577I messages for the storage pool.

poolname is the CSM pool. The CSM pool names are listed under the message IVT5575I.

totamount is the total of the amount of storage displayed by all IVT5577I messages of the pool.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5575I **USAGE SUMMARY - *poolname* POOL TOTAL (ALL USERS) = *stoinuse***

Explanation: CSM issues this message as part of several message groups in response to a DISPLAY CSMUSE command. See IVT5572I or IVT5573I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IVT5576I **AMOUNT MONITOR ID OWNERID JOBNAME**

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command. See IVT5572I, IVT5573I or IVT5574I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5577I *amount monitorid ownerid jobname*

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command. See IVT5572I, IVT5573I or IVT5574I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5578I **DISPLAY TOTAL FOR *poolname* POOL (*number* USERS) = *totamount***

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command. See IVT5572I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5579I **BUFFER USE FOR *mid* : USECNT USERDATA MONITOR HISTORY**

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command. See the explanation of message IVT5574I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5580I *usecount userdata monitorhistory*

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command. See the explanation of message IVT5574I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5581I **POOL NAME NOT VALID**

Explanation: This message is issued when a DISPLAY CSMUSE command is entered with a poolname on the POOL operand that is not a valid CSM pool name.

System action: CSM rejects the command. Other processing continues.

Operator response: Reenter the command with a valid pool name. See the z/OS Communications Server: SNA Operation for valid pool names.

System programmer response: None.

Routing code: 2

IVT5582I • IVT5586I

Descriptor code: 5

IVT5582I DISPLAY CSMUSE COMMAND SYNTAX NOT VALID

Explanation: The DISPLAY CSMUSE command failed because one or more of its operands are specified incorrectly.

System action: CSM rejects the DISPLAY CSMUSE command. Other processing continues.

Operator response: Reenter the command with the correct syntax. See the z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5583I NO CSM STORAGE IS CURRENTLY IN USE FOR POOL *poolname*

Explanation: This message is issued for a DISPLAY CSMUSE command with POOL specified.

The specified CSM pool *poolname* does not have any storage allocated to any user.

poolname is the CSM storage pool.

System action: Processing continues.

Operator response: To determine the storage allocated to all CSM pools, issue the DISPLAY CSMUSE command without the POOL operand.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5584I USAGE DETAILS - *poolname* POOL - POOL TOTAL = *stoinuse*

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command. See IVT5574I for a complete description of the message group.

Routing code: 2

Descriptor code: 5

IVT5585I DETAIL TOTAL FOR *poolname* POOL = *totamount*

Explanation: CSM issues this message a part of a message group in response to a DISPLAY CSMUSE command. See IVT5574I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5586I DISPLAY CSMUSE SYNTAX NOT VALID - DUPLICATE OPERAND

Explanation: The DISPLAY CSMUSE command failed because one of the operands is specified twice.

System action: CSM rejects the DISPLAY CSMUSE command. Other processing continues.

Operator response: Reenter the command with the correct syntax. See the z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5587I *parameter* NOT VALID ON DISPLAY CSMUSE COMMAND

Explanation: CSM issues this message when *parameter* was specified on the DISPLAY CSMUSE command and it is not valid.

parameter is the operand specified on the DISPLAY CSMUSE command.

System action: CSM rejects the DISPLAY CSMUSE command. Other processing continues.

Operator response: Reenter the command with the correct syntax. See the z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5588I NO CSM STORAGE IS CURRENTLY IN USE FOR ANY USERS

Explanation: This message is issued for a DISPLAY CSMUSE command without any operands. CSM storage is not used by any users in the system.

System action: Processing continues.

Operator response: To determine the storage allocated to all CSM pools, issue the DISPLAY CSM command without any operands.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5589I DISPLAY TOTAL FOR *poolname* POOL FOR THIS OWNERID = *totamount*

Explanation: CSM issues this message as part of a message group in response to a DISPLAY CSMUSE command when OWNERID is specified. See IVT5573I for a complete description.

Routing code: 2

Descriptor code: 5

IVT5590I MAX ECSA VALUE ADJUSTED TO 90 PERCENT OF SYSTEM ECSA

Explanation: This message is issued if the MAX ECSA value from the CSM PARMLIB member IVTPRM00 is higher than 90% of the system ECSA value or the MAX ECSA value specified on the MODIFY CSM command is higher than 90% of the SYSTEM ECSA value during the following:

- CSM initialization.
- MODIFY CSM command processing.
- DISPLAY CSM command processing.

System action: Processing continues.

Operator response: If the adjusted MAX ECSA value is not acceptable, change the system ECSA value. See the CSA system parameter information z/OS MVS Initialization and Tuning Reference for more information about updating the value of system CSA.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Not applicable.

Routing code: 2

IVT5591I • IVT5592I

Descriptor code: 6

Example: Not applicable.

IVT5591I CSM ECSA STORAGE AT CONSTRAINED LEVEL

Explanation: This message is issued when CSM ECSA storage usage is approaching the CSM ECSA constrained level (85% of CSM ECSA storage limit value) and it is above 80% of CSM ECSA storage limit value. CSM ECSA storage usage might reach the critical level.

System action: Processing continues. Subsequent requests for CSM storage might fail if the current storage growth rate continues.

Operator response: Issue the DISPLAY CSM command without the OWNERID operand to determine current storage limits and usage. Issue a DISPLAY CSM command with OWNERID=ALL to determine how much storage is in use by each application. See the DISPLAY CSM command information in z/OS Communications Server: SNA Operation for more information.

Save the system log for problem determination.

System programmer response: Verify that the ECSA storage limit value is correct. Increase storage as required using a MODIFY CSM command. See the MODIFY CSM command information in z/OS Communications Server: SNA Operation for more information.

User response: Not applicable.

Problem determination: Not applicable.

Source: Not applicable.

Module: Not applicable.

Routing code: 2

Descriptor code: 6

Example: Not applicable.

IVT5592I CSM FIXED STORAGE AT CONSTRAINED LEVEL

Explanation: This message is issued when CSM fixed storage usage is approaching the CSM FIXED constrained level (85% of CSM FIXED storage limit value) and it is above 80% of the CSM FIXED storage limit value. CSM FIXED storage usage might reach the critical level.

System action: Processing continues. Subsequent requests for CSM storage might fail if the current storage growth rate continues.

Operator response: Issue the DISPLAY CSM command without the OWNERID operand to determine current storage limits and usage. Issue a DISPLAY CSM command with OWNERID=ALL to determine how much storage is in use by each application. See the DISPLAY CSM command information in z/OS Communications Server: SNA Operation for more information.

Save the system log for problem determination.

System programmer response: Verify that the fixed storage limit value is correct. Increase storage as required using a MODIFY CSM command. See the MODIFY CSM command information in z/OS Communications Server: SNA Operation for more information.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Not applicable.

Routing code: 2

Descriptor code: 6

Example: Not applicable.

IVT5593I CSM CREATED AN ADDITIONAL DATA SPACE *dspname*

Explanation: CSM creates a CSM64001 data space for 64-bit backed fixed data space storage and a CSM31002 data space for 31-bit backed fixed data space storage. There is not enough storage available in the existing data space. CSM creates another data space, *dspname*, and issues this message.

dspname is the name of the recently created data space.

System action: Processing continues.

Operator response: Issue the **DISPLAY CSM** command without the OWNERID operand to determine current storage limits and usage. Issue a **DISPLAY CSM** command with OWNERID=ALL to determine how much storage is in use by each application. If TCP/IP is available, issue the **D TCPIP,,STOR** command to determine its storage usage. Save the system log and request a dump of VTAM and TCP/IP address spaces and CSM data spaces for problem determination. Contact the system programmer.

Note: CSM data spaces are associated with the address space 1 (Master Scheduler). See DISPLAY CSM command in z/OS Communications Server: SNA Operation for more information.

See DISPLAY TCPIP,,STOR command in z/OS Communications Server: IP System Administrator's Commands for more information.

System programmer response: Look at the **Display CSM** command output and determine which application is using excessive data space storage including 64-bit or 31-bit back fixed data space storage. See the APARs II12657 and II12658 for VTAM and TCP/IP maintenance for CSM storage problems.

If external trace is active, see Analyzing storage in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing storage by using the VIT analysis tool.

See Internal and external trace recording in z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for more information.

If TCP/IP indicates excessive CSM data space storage usage, see Steps for reviewing a storage problem in z/OS Communications Server: IP Diagnosis Guide for more information.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 6

Automation: Automation can be written to complete the following operations when message IVT5593I is detected:

- Issue the **DISPLAY CSM** command without the OWNERID operand
- Issue the **DISPLAY CSM** command with OWNERID=ALL
- Issue the **D TCPIP,,STOR** command
- Request a dump

Example:

```
IVT5593I CSM CREATED AN ADDITIONAL DATA SPACE CSM64003
```

IVT5594I *storage_type* MAXIMUM USED = *max_storage* SINCE IPL

Explanation: CSM issues this message in response to a **DISPLAY CSM** command without OWNERID specified. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

Routing code: 2

Descriptor code: 5

IVT5595I HVCOMM MAXIMUM = *maxhvcomm*

Explanation: CSM issues this message as part of a group of messages in response to a **MODIFY CSM** command with at least one operand specified. See "IVT5517I" on page 1091 for a complete description of the message group.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: Not applicable.

Problem determination: None.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example: Not applicable.

IVT5596I HVCOMM PARAMETER VALUE NOT VALID

Explanation: This message is issued when the HVCOMM value on a **MODIFY CSM** command is not valid.

System action: CSM rejects the command. CSM fixed, ECSA, and HVCOMM storage limits are not changed.

Operator response: Reissue the command with the correct syntax. See z/OS Communications Server: SNA Operation for the correct command syntax.

System programmer response: None.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

IVT5596I HVCOMM PARAMETER VALUE NOT VALID

IVT5598I CSM HVCOMM STORAGE LIMIT EXCEEDED

Explanation: A CSM request for storage from the high virtual common (HVCOMM) storage area could not be satisfied because it would exceed the CSM HVCOMM storage limit.

System action: The storage request failed. Processing continues.

Operator response: Issue the **DISPLAY CSM** command without the OWNERID operand to determine current storage limits and usage. Issue the **DISPLAY CSM** command with OWNERID=ALL to determine how much storage is in use by each application. Save the system log and request a dump for problem determination.

System programmer response: Verify that the HVCOMM storage limit value is correct. Increase storage as required by using a **MODIFY CSM** command.

See z/OS Communications Server: SNA Operation for more information about the **DISPLAY CSM** and **MODIFY CSM** commands.

If external trace is active, see Analyzing storage in z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for information about analyzing storage by using the VIT analysis tool.

See Internal and external trace recording in z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT for more information.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=YES (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IVT5598I CSM HVCOMM STORAGE LIMIT EXCEEDED
```

IVT5599I **END**

Explanation: This message marks the end of a message group. See previous messages in the group for more information.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Routing code: 2

Descriptor code: 5

IVT5600I **PROBE *probname* ATTEMPTED - FFST NOT AVAILABLE**

Explanation: CSM encountered an anomaly and attempted to execute the FFST probe. FFST was not active or available to service the probe request. CSM handled the request by furnishing the identification of the probe.

probname is the name of the probe.

System action: CSM processing continues.

Operator response: Save the System Log for problem determination.

System programmer response: Determine why FFST was not active or available, then start FFST. See the z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT to determine the anomaly encountered.

Routing code: 2

Descriptor code: 5

IVT5603I *modulename* **HVCOMM STORAGE ALLOCATION FAILED IN CSM**

Explanation: This message is issued when CSM cannot satisfy a request for high virtual common (HVCOMM) storage.

modulename is the CSM module name where the request failed.

IVT5604I • IVT5605I

System action: Processing continues. Other messages might follow identifying the effect of the HVCOMM storage requesting applications.

Operator response: Issue the **DISPLAY CSM** command without the OWNERID operand to determine current HVCOMM storage limits and usage. Issue the **DISPLAY CSM** command with OWNERID=ALL to determine how much HVCOMM storage is in use by each application. Save the system log for problem determination.

System programmer response: See z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures for more information.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 5

Automation: Not applicable.

Example:

```
IVT5603I IVTSMCEX HVCOMM STORAGE ALLOCATION FAILED IN CSM
```

IVT5604I HVCOMM MAXIMUM = *maxhvcomm* HVCOMM CURRENT = *curhvcomm*

Explanation: CSM issues this message as part of a message group. The first message in the group is IVT5529I. See the explanation of that message for a complete description.

System action: Not applicable.

Operator response: Not applicable.

System programmer response: Not applicable.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

| **Routing code:** 2

| **Descriptor code:** 5

Automation: Not applicable.

Example:

```
IVT5604I HVCOMM MAXIMUM =      100M HVCOMM CURRENT =      1M
```

IVT5605I CSM HVCOMM STORAGE AT CRITICAL LEVEL

Explanation: This message is issued when CSM HVCOMM storage usage equals or is higher than the CSM HVCOMM critical threshold. The CSM HVCOMM critical threshold is defined as 90% of the CSM HVCOMM storage limit value.

System action: Processing continues. Subsequent requests for CSM HVCOMM storage might fail.

Operator response: Issue the **DISPLAY CSM** command without the OWNERID operand to determine current storage limits and usage. Issue a **DISPLAY CSM** command with OWNERID=ALL to determine how much storage is in use by

each application. Take a console dump of the TCP/IP address space and the VTAM address space. Save the system log and dump for problem determination and contact the system programmer.

System programmer response: Verify that the CSM HVCOMM storage limit value is correct. Increase storage as required by using a **MODIFY CSM** command.

See z/OS Communications Server: SNA Operation for more information about the DISPLAY CSM and MODIFY CSM commands.

The CSM HVCOMM storage limit value is specified by using the HVCOMM MAX statement in the CSM SYSTEM PARMLIB member IVTPRM00. See the Statements and parameters for IVTPRM00 in z/OS MVS Initialization and Tuning Reference for more information.

If the CSM HVCOMM storage limit value is correct, there might be a storage problem. Contact the IBM software support center for problem determination.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

Descriptor code: 6

Automation: Not applicable.

Example:

```
IVT5605I CSM HVCOMM STORAGE AT CRITICAL LEVEL
```

IVT5606I CSM HVCOMM STORAGE SHORTAGE RELIEVED

Explanation: This message is issued when CSM HVCOMM storage usage has returned to a normal threshold.

The CSM HVCOMM normal threshold is defined as 80% of the CSM HVCOMM storage limit value.

System action: Processing continues.

Operator response: None.

System programmer response: None.

User response: None.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

| **Descriptor code:** 5

Automation: Not applicable.

Example:

```
IVT5606I CSM HVCOMM STORAGE SHORTAGE RELIEVED
```

IVT5607I CSM HVCOMM STORAGE AT CONSTRAINED LEVEL

Explanation: This message is issued when CSM HVCOMM storage is above 80% of the CSM HVCOMM storage limit value and is approaching the CSM HVCOMM constrained threshold. CSM HVCOMM storage usage might reach the critical level.

System action: Processing continues. Subsequent requests for CSM HVCOMM storage might fail if the current storage growth rate continues.

Operator response: Issue the **DISPLAY CSM** command without the OWNERID operand to determine current storage limits and usage. Issue a **DISPLAY CSM** command with OWNERID=ALL to determine how much storage is in use by each application. See the DISPLAY CSM command information in z/OS Communications Server: SNA Operation for more information. Take a console dump of the TCP/IP address space and the VTAM address space.

Save the system log and dump for problem determination and contact the system programmer.

System programmer response: Verify that the CSM HVCOMM storage limit value is correct. Increase storage as required by using a MODIFY CSM command. See the MODIFY CSM command information in z/OS Communications Server: SNA Operation for more information. The CSM HVCOMM storage limit value is specified by using the HVCOMM MAX statement in the CSM SYSTEM PARMLIB member IVTPRM00. See the Statements and parameters for IVTPRM00 in z/OS MVS Initialization and Tuning Reference for more information.

If the CSM HVCOMM storage limit value is correct, there might be a storage problem. Contact the IBM software support center for problem determination.

User response: Not applicable.

Problem determination: Not applicable.

Source: z/OS Communications Server CSM

Module: Use the modifiable VTAM start option MSGMOD=yes (*f procname,vtamopts,msgmod=yes* or *f procname,msgmod=yes*) to display the issuing module when a message is issued. See z/OS Communications Server: SNA Operation and z/OS Communications Server: SNA Resource Definition Reference for more information about start options.

Routing code: 2

| **Descriptor code:** 5

Automation: Not applicable.

Example:

```
IVT5607I CSM HVCOMM STORAGE AT CONSTRAINED LEVEL
```

Chapter 15. USS messages

This chapter provides information on unformatted session services(USS) messages that are sent to the VTAM operator or a program operator, and USS messages that are sent to terminal users. For information on translating USS messages, see “User-selected message changes” on page 5.

See the z/OS Communications Server: SNA Resource Definition Reference for additional information.

USS messages sent to the VTAM operator or a program operator

The operation-level USS table contains definitions for USS messages that are sent to the VTAM operator or a program operator. These USS messages and their VTAM message equivalents are:

USS message number	VTAM operator message
0	IST457I
1	IST450I
2	IST451I
3	IST452I
4	IST453I
6	IST792I
8	IST454I
11	IST455I
12	IST456I
14	IST458I

See Chapter 5, “IST messages for VTAM network operators IST001I – IST399I,” on page 43 for a description of the VTAM operator messages listed in the preceding chart.

USS messages sent to terminal users

The session-level USS table contains definitions for USS messages that are sent to terminal users. These messages consist of USSMSG00 through USSMSG14. VTAM issues these messages in response to commands sent by logical units (for example, a character-coded logon or logoff command).

The USS messages are described in the following section as they are defined in the IBM-supplied session-level USS table, ISTINCDT.

You can also define two messages of your own.

USSMSG00

The text you define for this message is issued after VTAM has accepted a USS command from a terminal user.

USSMSG10

The text you define for this message is issued after a logical unit is activated.

USSMSG00 • USSMSG05

Note: For a BSC 3275 terminal, the following messages are not printed on the attached terminal. The message only appears on a 3275 display screen.

USSMSG00 (user-defined message)

Explanation: You can define this message (with the USSMSG macro) to be issued after VTAM has accepted a USS command from a terminal user. See the z/OS Communications Server: SNA Resource Definition Reference for more information on the USSMSG macro.

System action: Processing continues.

Operator response: None.

USSMSG01 INVALID *command* COMMAND SYNTAX

Explanation: The syntax of the entered command *command* is not valid. If the command cannot be determined, the *command* portion of the message is null.

System action: The command is not executed.

Operator response: Reenter the command with corrected syntax.

USSMSG02 *command* COMMAND UNRECOGNIZED

Explanation: Command *command* with parameter *parameter* is not supported.

System action: The command is not executed.

Operator response: Issue the desired command correctly.

USSMSG03 *parameter* PARAMETER EXTRANEOUS

Explanation: An extraneous parameter *parameter* has been specified for a USS command.

Notes:

1. Parameters on USS commands are not processed in the order they are provided in the command.
2. All positional parameters in a command that occur before the first positional keyword parameter will be labeled Px, starting with P1.

System action: The command is not executed.

Operator response: Correct and reenter the command.

USSMSG04 *parameter* PARAMETER VALUE *value* NOT VALID

Explanation: The parameter *parameter* has been specified with an invalid value. For example, if *parameter* is a logon mode entry name (LOGMODE), the name might be undefined in the logical unit's logon mode table.

System action: The command is not executed.

Operator response: Correct and reenter the command.

USSMSG05 UNSUPPORTED FUNCTION

Explanation: The logical unit sent a command to VTAM improperly. If SSCPFM=USS3270 is specified for a logical unit, the logical unit can enter input using the ENTER key, the CLEAR key, the System Request key, or a magnetic card reader. If SSCPFM=USSSCS is specified for a logical unit, the logical unit must not issue a Clear, Cancel, or Signal request, and it cannot send a zero-length command. All logical units must send the character-coded command as a single-request chain.

System action: The command is not executed.

Operator response: Reenter the command. Some of the invalid commands mentioned above are sent when program function (PF) keys are pressed. Terminal users should avoid pressing these keys.

USSMSG06 SEQUENCE ERROR

Explanation: A USS command was entered at the wrong time. Either a USS command was issued before the processing of a prior USS command completed, or a LOGOFF command was issued when a session did not exist.

System action: None.

Operator response: None.

USSMSG07 *luname* UNABLE TO ESTABLISH SESSION — *runame* FAILED WITH SENSE *sense*

Explanation: This message is issued for one of the following reasons:

- A valid logon request was entered and forwarded to an application program, but one of the following occurred:
 - The application program rejected the logon request (by issuing a CLSDST instead of an OPNDST macro).
 - The logical unit rejected the application program's OPNDST macro (by returning a negative response to the BIND request sent by OPNDST).
- The session initiation request was for a cross-domain session. The required SSCP-SSCP session is not active. This might be due to failure to define, activate, or define and activate the host CDRM statement or the CDRM statement for the external CDRM.
- The session initiation request was for a cross-domain session, and the required CDRSC definitions had not been activated.
- No route was available to support the requested session.
- The COS name requested for the session was not defined in the COS table associated with the PLU's domain. (A COS name is selected from the logon mode used for the session.)
- The SSCP of either the PLU or the SLU detected a logic error that prevented session setup (for example, a duplicate network address has been assigned).
- The interpret table recognized an error involving a logon command. The logon command, as entered, cannot be used to establish a session with the application program.

luname is the node (known to VTAM) from which the logon request was entered.

runame is the type of initiation RU being processed. *runame* will be **SETUP** when the RU cannot be determined at the time of the failure. If *runame* is **SETUP**, the session could have been terminated during session setup. See Chapter 16, "Command and RU types in VTAM messages," on page 1123, for more information on RUs and command types.

sense is the 8-digit hexadecimal sense code set at failure time. See z/OS Communications Server: IP and SNA Codes for more information on sense codes.

System action: The command is not executed. No session is established between the application program and the logical unit.

Operator response: It is possible that the application program cannot accept the session parameters specified by the logon mode name in the LOGON command. It is also possible that the logical unit cannot accept the application program's substituted session parameters. In this situation, a LOGON command specifying a different logon mode name might work. It is also possible that the LOGON command is unrecognized because a proper value was not defined in the interpret table.

This message is generally evidence of improper design of either the application program, the USS table, or the logical unit's application program. Provide the *luname*, *runame*, and *sense* values to the system help desk.

USSMSG08 INSUFFICIENT STORAGE

Explanation: Not enough storage is available for successful processing of a command.

System action: The command is not executed.

Operator response: Reenter the command.

USSMSG09 MAGNETIC CARD DATA ERROR

Explanation: A character-coded command from a logical unit for which SSCPFM=USS3270 is coded contains invalid magnetic card data. Either the card data was entered into a field that was too small, or a parity error occurred.

System action: The command is not executed.

Operator response: Reenter the command. If the magnetic card data has been entered into a field that was too small, press the CLEAR key and reenter the command, entering the magnetic card data into a larger field.

USSMSG10 (user-defined message)

Explanation: You can define this message (with the USSMSG macro) to be issued after a logical unit is activated. See the z/OS Communications Server: SNA Resource Definition Reference for more information on the USSMSG macro.

If this message is not defined, users must enter Alt+SysRq to enter USS LOGON commands, unless the terminal is defined with SSCPFM=USS3270 or SSCPFM=USS3275.

System action: The logical unit is activated.

USSMSG11 *parameters* SESSIONS ENDED

Explanation: VTAM has received a TERM SELF RU (with the NOTIFY option specified) from a logical unit. *parameters* are the network-qualified names specified in the TERM SELF RU for the PLU and SLU. See *SNA Format and Protocol Reference Manual: Architectural Logic* for more information.

For example, if an LU-LU session is terminated by an RU specifying APPL1 and APPL2, the following text is displayed:

```
LU1=NETA.APPC1 LU2=NETA.APPL2 SESSIONS ENDED
```

System action: The session is ended.

Operator response: None.

USSMSG12 REQUIRED PARAMETER OMITTED

Explanation: A USS command was missing a required parameter. See the z/OS Communications Server: SNA Resource Definition Reference for more information on USS commands for terminal users.

System action: The command is not executed.

Operator response: Reenter the command with the required parameters.

USSMSG13 IBMECHO *data*

Explanation: This message is issued the specified number of times in response to a IBMTEST USS command. If the number of times to issue the message is not specified, the default of 10 times is used. If no data was entered in the USS command, the value for *data* is A–Z and 0–9.

USSMSG14 USS MESSAGE *number* NOT DEFINED

Explanation: One of the preceding USS messages was to be issued, but VTAM could not find the definition for this message. The value of *number* indicates which USS message was not located; see the description of that USS message to determine what condition occurred.

For example, an unrecognized command condition occurred, but VTAM could not locate USSMSG02 in ISTINCDT, the IBM-supplied session-level USS table. Since the IBM-supplied table defines all USS messages (except for 00 and 10), this message has been deleted. USSMSG14 is evidence that the USS tables have been improperly defined or installed.

System action: The command is not executed.

Operator response: See the user response for USS message *number*.

Chapter 16. Command and RU types in VTAM messages

This chapter lists the command and request/response unit (RU) types that can appear in VTAM messages. See *z/OS Communications Server: SNA Operation* for additional information on commands. See *SNA Formats* for additional information on RUs.

There are two RU types that represent internal VTAM RU flows. These internal RU types are not documented in SNA publications and some are not included in *VTAM Data Areas*.

It is not required that users of the product know the meaning of these internal RUs. When required, the product support organization might use them to assist in internal flow diagnosis.

- **Access Method RU (AM type)**

These internal RUs are requests that might be seen in the PIU trace and are a function of physical unit services (PUNS), configuration services, or session services.

- **Interprocess Signals (IPS type)**

These internal signals are issued for APPN functions. They can be seen in APSEND trace entries.

Command and RU type descriptions

The following commands or RU types might appear in VTAM messages.

Command or RU type	Function
ABCONN	Abandon Connection
ABCONNOUT	Abandon Connect Out
ACTCDRM	Activate CDRM
ACTCONNIN	Activate Connect In
ACTIVATE	Activate
ACTLINK	Activate Link
ACTLU	Activate LU
ACTPU	Activate PU
ACTTRACE	Activate Trace
ACTVR	Activate Virtual Route
ADDNR	Add Network Resource
AM ADDLINK	Add Link
AM ADDLSTA	Add Link Station
AM ADRQCMP	Address Request Complete
AM ALLORSC	Allocate Resource
AM CLEANUP	Cleanup
AM CLSACB	Close ACB

Command or RU type	Function
AM CONNECT	Connect
AM CONDLOD	Request Conditional Load
AM CS	Configuration Services
AM DEACTXF	Deactivate Transforms
AM DELETNR	Delete Network Resource
AM DISCNCT	Disconnect
AM FLUSH	Flush Virtual Route
AM FREERSC	Free Resource
AM GAINGWN	Gained Gateway Node
AM GBIND	Generic BIND
AM GENTERM	Generic Terminate
AM GUNBIND	Generic UNBIND
AM INIT_PU	Initialize PU
AM LOSTGWN	Lost Gateway Node
AM NFY SLT	Notify (Schedule LOSTERM Exit)
AM NOTIFY	Notify
AM OPNACB	Open ACB
AM OSA	Override Session Address
AM PCE	Purge Chain Element
AM PWQ	Purge Wait Queue
AM RDTADD	Resource Definition Add
AM REALLOC	Reallocate
AM REQ ERA	Request Explicit Route Activate
AM REQ VRD	Request Virtual Route Deactivate
AM REQDUMP	Request Dump
AM REQLOAD	Resource Load
AM RESETRT	Reset Routable State
AM RESUME	Resume; used to redrive session setup processing.
AM RNAA	Request Network Address Assignment
AM SC AMRU	Switched Connection AMRU
AM SC EXIT	Switched Connection Exit
AM SETRT	Set Routable State
AM SSA	Set Session Address
AM SSADISC	Set Session Address and Disconnect
AM UNCDLOD	Request Unconditional Load
AM VR INOP	Virtual Route Inoperative
AM VR STAT	Virtual Route Status
ANA	Assign Network Address
ANS	Auto Network Shutdown Started

Command or RU type	Function
ANSC	Auto Network Shutdown Complete
API CHEF	API CHANGE(ENDAFFNF)
API CHGEAF	CHANGE(ENDAFFIN) macro
API CLSPAS	CLSDST(PASS) macro
API CLSRLS	CLSDST(RELEASE) macro
API INQAPS	INQUIRE(APPSTAT) macro
API INQCID	INQUIRE(CIDXLATE) macro
API INQCNT	INQUIRE(COUNTS) macro
API INQDPY	INQUIRE(DISPLAY) macro
API INQDVC	INQUIRE(DEVCHAR) macro
API INQLOG	INQUIRE(LOGONMSG) macro
API INQNQN	INQUIRE(NQN) macro
API INQPER	INQUIRE(PERSESS) macro
API INQSKY	INQUIRE(SESSKEY) macro
API INQSNM	INQUIRE(SESSNAME) macro
API INQSPM	INQUIRE(SESSPARMS) macro
API INQSTA	INQUIRE(STATUS)macro
API INQTOP	INQUIRE(TOPLOGON) macro
API INQTRM	INQUIRE(TERMS) macro
API INTERP	INTRPRET macro
API OPNACC	OPNDST(ACCEPT) macro
API OPNACQ	OPNDST(ACQUIRE) macro
API OPNRES	OPNDST(RESTORE) macro
API OPNSEC	OPNSEC macro
API RCVCMD	RCVCMD macro
API RECEIV	RECEIVE macro
API REQSES	REQSESS macro
API RSETSR	RESETSR macro
API SEND	SEND macro
API SESONC	SESSIONC macro
API SETGNA	SETLOGON(GNAMEADD) macro
API SETGND	SETLOGON(GNAMEDEL) macro
API SETLQS	SETLOGON(QUIESCE) macro
API SETLSP	SETLOGON(STOP) macro
API SETLST	SETLOGON(START) macro
API SETNPE	SETLOGON(NPERSIST) macro
API SETPER	SETLOGON(PERSIST) macro
API SIMLOG	SIMLOGON macro
API SNDCMD	SENDCMD macro

Command or RU type	Function
API TRMSES	TERMSESS macro
BFCINIT	Boundary Function Control Initiate
BFCLEANUP	Boundary Function Cleanup
BFINIT	Boundary Function Initiate
BFTERM	Boundary Function Terminate
BFSESEND	Boundary Function Session End
BFSESSINFO	Boundary Function Session Information
BFSESSST	Boundary Function Session Start
BID	Bid
BIND	Bind Session
BIND FAIL	Bind Failure
BIS	Bracket Initiation Stopped
CANCEL	Cancel
CD NOTIFY	Cross-Domain Notify
CDCINIT	Cross-Domain Control Initiate
CDINIT OTH	Cross-Domain Initiate (Other)
CDRM CLEAR	Clear CDRM-CDRM Session
CDRM ERP	CDRM ERP Internal Clear
CDESEND	Cross-Domain Session Ended
CDESSST	Cross-Domain Session Started
CDSSF	Cross-Domain Session Setup Failure
CDSTF	Cross-Domain Session Takedown Failure
CDTAKEDOWN	Cross-Domain Takedown
CDTD COMP	Cross-Domain Takedown Complete
CDTERM	Cross-Domain Terminate
CHAR CODED	Unformatted Request Unit
CHASE	Chase
CHG NRSPOL	Change Negative Response to Poll Limit
CHG POLLIM	Change Poll Limit
CHG SESSLM	Change Session Limit
CHG TLIMIT	Change Transmission Limit
CHKPT	Checkpoint Resource Status Function
CINIT	Control Initiate
CKPTN	Checkpoint Node Status Function
CLEANUP	Cleanup
CLEAR	Clear Session
CNM	Communications Network Management Request
CONNOUT	Connect Out
CONTACT	Contact

Command or RU type	Function
CONTACTED	Contacted
CPCRYPT	Cryptography Management Function
CPMSG	Internal WTOR Function
CRV	Cryptography Verify
CTERM	Control Terminate
D ADJCP	DISPLAY ADJACENT CONTROL POINT command
D ADJCLUST	DISPLAY ADJACENT CLUSTER TABLE command
D BNCOSMAP	DISPLAY BORDER NODE CLASS-OF-SERVICE MAPPING command
D CNOS	DISPLAY CHANGE NUMBER OF SESSIONS command
D CONVID	DISPLAY CONVERSATION ID command
D DLURS	DISPLAY DLURS command
D DIRECTRY	DISPLAY DIRECTORY command
D DISK	DISPLAY DISK command
D LMTBL	DISPLAY LU-MODE TABLE command
D NCPSTOR	DISPLAY NCP STORAGE command
D NETSRVR	DISPLAY NETWORK NODE SERVER LIST command
D PATHTAB	DISPLAY PATH TABLE command
D SAMAP	DISPLAY SAMAP command
D STORUSE	DISPLAY STORAGE USAGE command
D TGPS	DISPLAY TRANSMISSION GROUP PROFILES command
D TOPO	DISPLAY TOPOLOGY command
D TRACES	DISPLAY TRACES command
D VTAMOPTS	DISPLAY VTAM START OPTIONS command
DACTCDRM	Deactivate Cross-Domain Resource Manager
DACTCONNIN	Deactivate Connect In
DACTLINK	Deactivate Link
DACTLU	Deactivate LU
DACTPU	Deactivate PU
DACTTRACE	Deactivate Trace
DACTVR	Deactivate Virtual Route
DDDLU RU	Dynamic definition of dependent LUs
DELETE	Delete
DELETENR	Delete Network Resource
DELIVER	Deliver Request
DIAL START	Dial Start Request
DISCONTACT	Discontact RU
DISP STOR	Display Storage
DISPLAY	Display Command
DLR PURGE	Dump/Load/Restart Purge

Command or RU type	Function
DSRLST	Cross-Domain Direct Search List
DUMP FINAL	Dump Final
DUMP INIT	Dump Initial
DUMP TEXT	Dump Text
DWACT	Dial when active
ECHO TEST	ECHO Test
ENT SLOWDN	Enter Slowdown
ER ACT	Explicit Route Activate
ER ACT RPY	Explicit Route Activate Reply
ER INOP	Explicit Route Inoperative
ER OP	Explicit Route Operative
ER TEST	Explicit Route Test
ER TESTED	Explicit Route Tested
ER TST RPY	Explicit Route Test Reply
EXT SLOWDN	Exit Slowdown
F ACT GPT	MODIFY TRACE,TYPE=GPT command
F ACT NCTR	MODIFY TRACE,TYPE=NETCTLR command
F ACT SIT	MODIFY TRACE,TYPE=SIT command
F ACT TG	MODIFY TRACE,TYPE=TG
F ALSLIST	MODIFY ALSLIST command
F ALTRACE	MODIFY TRACE,TYPE=LINE
F CDRM	MODIFY CROSS DOMAIN RESOURCE MANAGER command
F CHKPT	MODIFY CHECKPOINT command
F CHANGE	MODIFY NEG POLL, or POLL, or SESSLIM
F CNOS	MODIFY CHANGE NUMBER OF SESSIONS command
F COMPRESS	MODIFY COMPRESS command
F DACT GPT	MODIFY NOTRACE,TYPE=GPT command
F DACT SIT	MODIFY NOTRACE,TYPE=SIT command
F DACT TG	MODIFY NOTRACE,TYPE=TG command
F DACTNCTR	MODIFY NOTRACE,TYPE=NETCTLR command
F DEFAULTS	MODIFY DEFAULTS command
F DEFINE	MODIFY DEFINE command
F DIR DEL	MODIFY DIRECTORY,FUNCTION=DELETE command
F DIR UPD	MODIFY DIRECTORY,FUNCTION=UPDATE command
F DIRECTORY	MODIFY DIRECTORY command
F DLTRACE	MODIFY NOTRACE,TYPE=LINE command
F DR DEL	MODIFY DR,TYPE=DELETE
F DR MOVE	MODIFY DR,TYPE=MOVE
F DUMP	MODIFY DUMP command

Command or RU type	Function
F DUMP CSP	MODIFY DUMP,TYPE=CSP command
F DUMP DYN	MODIFY DUMP,TYPE=NCP,OPTION=DYNA command
F DUMP MOS	MODIFY DUMP,TYPE=MOSS command
F DUMP PGC	MODIFY DUMP,ACTION=PURGE,TYPE=CSP
F DUMP PGM	MODIFY DUMP,ACTION=PURGE,TYPE=MOSS
F DUMP PGN	MODIFY DUMP,ACTION=PURGE,TYPE=NCP
F DUMP STO	MODIFY DUMP, ACTION=STORE
F DUMP TRC	MODIFY DUMP,ACTION=TRANSFER,TYPE=CSP
F DUMP TRH	MODIFY DUMP,ACTION=TRANSFER,TYPE=NCP (header)
F DUMP TRM	MODIFY DUMP,ACTION=TRANSFER,TYPE=NCP (main storage)
F DUMP TRN	MODIFY DUMP,ACTION=TRANSFER,TYPE=NCP
F ENCR	MODIFY ENCR command
F EXIT	MODIFY EXIT command
F IMR	MODIFY IMR command
F LINEDEF	MODIFY LINEDEF command
F LL2	MODIFY LL2 command
F LOAD ADD	MODIFY LOAD ADD command
F LOAD CAN	MODIFY LOAD CANCEL command
F LOAD PRG	MODIFY LOAD PURGE command
F LOAD REN	MODIFY LOAD RENAME command
F LOAD REP	MODIFY LOAD REPLACE command
F LOAD SET	MODIFY LOAD SET command
F NOTNSTAT	MODIFY NO TUNING STATISTICS command
F PROFILES	MODIFY PROFILES command
F QUERY	MODIFY QUERY command
F RESOURCE	MODIFY RESOURCE command
F RTP	MODIFY RTP command
F TABLE	MODIFY TABLE command
F TGP	MODIFY TRANSMISSION GROUP PROFILE command
F TNSTAT	MODIFY TUNING STATISTICS command
F TOPO	MODIFY TOPOLOGY command
F TOPO ID	MODIFY TOPO,ID= command
F USERVAR	MODIFY USERVAR command
F VTAMOPTS	MODIFY VTAM START OPTIONS command
FNA	Free Network Address
FORCE DEAC	Force Deactivate
FORCE REAC	Force Reactivate
FORWARD	Forward Request

Command or RU type	Function
GDS CDINIT	Cross domain initiate generalized data stream (GDS) variable
GDS CP_CAP	Control point capabilities generalized data stream (GDS) variable
GDS DELETE	Delete generalized data stream (GDS) variable
GDS FIND	Find generalized data stream (GDS) variable
GDS FOUND	Found generalized data stream (GDS) variable
GDS IOCD	Initiate other cross domain generalized data stream (GDS) variable
GDS LOCATE	Locate generalized data stream (GDS) variable
GDS NOTIFY	Notify generalized data stream (GDS) variable
GDS REGSTR	Register generalized data stream (GDS) variable
GDS TDU	Topology database update generalized data stream (GDS) variable
HALT CDLNK	Process Cross-Domain Links During HALT
HARD INOP	Hard INOP
INACT GVBK	VARY INACT,TYPE=GIVEBACK command
INACT SON	Deactivate (session outage notification)
INIT LOAD	Network Services Initialize Load
INIT OTHER	Initiate-Other RU
INIT SELF	Initiate-Self RU Format 0
INIT SELF	Initiate-Self RU Format 1
INOP	Inoperative
INT SYNCH	TPPOST macro
IP DLP	DLUR PATH SWITCH COMP in ISTCPKCB
IPL ABORT	Network Services IPL Abort
IPL FINAL	IPL Final Request
IPL FINAL	Network Control IPL Final
IPL FINAL	Network Services IPL Final
IPL INIT	IPL Initial Request
IPL INIT	Network Control IPL Initial
IPL INIT	Network Services IPL Initial
IPL TEXT	IPL Text Request
IPL TEXT	Network Control IPL Text
IPL TEXT	Network Services IPL Text
IPS ACC	Adjacent control point contacted interprocess signal (IPS)
IPS ACL	Process adjacent cluster interprocess signal (IPS)
IPS ACR	Cross-Domain Response AMRU
IPS ACU	Adjacent control point updated interprocess signal (IPS)
IPS BNP	Border node session reply interprocess signal (IPS)

Command or RU type	Function
IPS BNQ	Border node session request interprocess signal (IPS)
IPS BRI	Broadcast interprocess signal (IPS)
IPS CBN	Cache border node information interprocess signal (IPS)
IPS CDY	Cross-Domain Resource display
IPS CMA	Process COS mapping interprocess signal (IPS)
IPS COS	Define Class of Service interprocess signal (IPS)
IPS CPS	CP status interprocess signal (IPS)
IPS CRQ	CRR request
IPS CSH	Cache search interprocess signal (IPS)
IPS CSR	Cache search reply interprocess signal (IPS)
IPS DIA	Display Adjacent Cluster
IPS DLR	DLUR status
IPS DQE	Dequeue interprocess signal (IPS)
IPS DRV	Data recovered
IPS DSI	DISPLAY SRCHINFO interprocess signal (IPS)
IPS DSN	Directory server notify
IPS ERP	RTP_EXPREC_PURGE
IPS FST	Rapid transport protocol (RTP) free storage
IPS GCR	Generic cache search reply interprocess signal (IPS)
IPS GCS	Generic cache search request interprocess signal (IPS)
IPS GUS	Generic cache search update request interprocess signal (IPS)
IPS INO	Initiate other interprocess signal (IPS)
IPS IOC	Initiate other complete interprocess signal (IPS)
IPS MPI	Multinode persistent session HPR connection information
IPS MSI	Multinode persistent session information
IPS NVP	Nonverify Reply
IPS NVR	Nonverify Request
IPS OTC	Orderly sessions terminate complete interprocess signal (IPS)
IPS OTD	Output topology database update interprocess signal (IPS)
IPS OTR	Orderly sessions terminate request interprocess signal (IPS)
IPS PCQ	PCID query
IPS PCR	PCID query response
IPS PLT	Purge locate timer
IPS PND	Pending session characteristics interprocess signal (IPS)
IPS PNL	Process network node server list interprocess signal (IPS)
IPS PRC	Proceed interprocess signal (IPS)
IPS PRV	Provide session characteristics interprocess signal (IPS)
IPS QED	Queued interprocess signal (IPS)
IPS RAC	Resource available complete interprocess signal (IPS)

Command or RU type	Function
IPS RAL	Rapid transport protocol (RTP) allocation
IPS RAT	Rapid transport protocol (RTP) attach
IPS RAV	Resource available interprocess signal (IPS)
IPS RCS	Rapid transport protocol (RTP) connection setup
IPS RDL	Rapid transport protocol (RTP) deallocation
IPS RDT	Rapid transport protocol (RTP) deattach
IPS RIN	Rapid transport protocol (RTP) inactivation
IPS RIO	Rapid transport protocol (RTP) inoperative
IPS RMR	Request multiple routes interprocess signal (IPS)
IPS RQR	Request route interprocess signal (IPS)
IPS RRC	Release request complete interprocess signal (IPS)
IPS RRQ	Release request interprocess signal (IPS)
IPS RSR	Rapid transport protocol (RTP) route setup request
IPS RST	RTP route setup interprocess signal (IPS)
IPS RSU	Rapid transport protocol (RTP) route setup
IPS RTI	Rapid transport protocol (RTP) TG inoperative
IPS SAC	Subarea cleanup interprocess signal (IPS)
IPS SCR	Search request
IPS SDY	Display sessions
IPS SHR	Request single hop route
IPS SIR	Session initiate information request
IPS SRC	Session request complete interprocess signal (IPS)
IPS SRO	CPSVRMGR session outage
IPS SRP	Protocol violation detected
IPS SRQ	Session request interprocess signal (IPS)
IPS SRT	TDU error detected from the DLUR
IPS STP	Start TP
IPS STR	Start TP reply
IPS TGU	TG update
IPS TPE	TP ended
IPS UPD	Update directory
IPS UMR	Update modes interprocess signal (IPS)
LCL GAINFO	GetAddrInfo request for local IP address
LINKLVL2	Enter Test Mode (LL2)
LL2	MODIFY LL2 command
LOAD REQRD	Network Services Load Required
LOAD STAT	Network Services Load Status
LOST CTLPT	Lost Control Point
LOST PATH	Lost Path

Command or RU type	Function
LUSTAT	LU Status
MODIFY	MODIFY Command
MODIFY NOTNSTAT	MODIFY NO TUNING STATISTICS command
MODIFY TNSTAT	MODIFY TUNING STATISTICS command
MS SCV	Maintenance Services Set Control Vector
NTNMON RPY	NCPMON reply RU
NCLSA	Network Control Lost Subarea
NMVT	Network Management Vector Transport
NLSA	Network Services Lost Subarea
NSPE	Network Services Procedure Error
NTFY NS(C)	Notify Session End
NTFY NS(S)	Notify
QC	Quiesce Complete
QEC	Quiesce at End of Chain
RDELETENR	Request Delete Network Resource
REC TEST	Record Test Data
REC TRACE	Record Line Trace Data
RECFMS	Record Formatted Maintenance Statistics
RECMD	Record Measurement Data
RECMS	Record Maintenance Statistics
RECSTOR	Record Storage
RECTR	Record Test Results
REL IMMED	VARY REL, TYPE=IMMED command
REL GVBK	VARY REL, TYPE=GIVEBACK command
RELEASE	VARY REL command
RELQ	Release Quiesce
REQ ECHO	Request Echo Test
REQ RTTEST	Request Route Test
REQACTCDRM	Request ACTCDRM
REQACTPU	Request Activate PU
REQC	Request Contact
REQCONT	Request Contact
REQDACTPU	Request Deactivate PU
REQDISCONT	Request Discontact
REQDMP CSP	Request CSP Dump
REQDMP MOS	Request MOSS Dump
REQDUMP	Request Dump
REQDUMP DY	Request Dynamic Dump
REQLOAD	Request Load

Command or RU type	Function
REQMS	Request Maintenance Statistics
RESET LU	Reset LU
RMPO	Remote Power Off
RMT GAINFO	GetAddrInfo request for remote IP address
RNAA	Request Network Address Assignment
ROUTE_INOP	Network Services Route Inoperative
RQR	Request Recovery
RSHUTD	Request Shutdown
RTR	Ready to Receive
SBI	Stop Bracket Initiation
SCV	Set Control Vector
SDT	Start Data Traffic
SELECT VR	Virtual Route Select
SESS ENDED	Session Ended
SESS START	Session Started
SETCV	Set Control Vector
SETCV(NAU)	Set Control Vector Network Addressable Unit
SETCV(SAR)	Set Control Vector Subarea Routing
SETCV(SSS)	Set Control Vector SDLC Secondary Station ID
SETCV(STD)	Set Control Vector Set Time And Date
SETCV(DPU)	Set Control Vector Dynamic Path Update
SETCV(FRS)	Set Control Vector Frame Relay Switching
SETTIM CAN	Scheduled Cancel
SETUP	Generic Session Initiation
SHUTC	Shutdown Complete
SHUTDOWN	Shutdown
SIGNAL	Signal
SOFT INOP	Soft INOP
SSCP TKOVR	SSCP Takeover
STSN	Set and Test Sequence Number
SW TO EP	Switch Line to EP Mode
SW TO NCP	Switch Line to NCP Mode
SYNTAX CHK	VARY ACT,SCOPE=SYNTAX
TERM OTHER	Terminate-Other RU
TERM SELF	Terminate-Self Format 0
TIMER REQ	Set Timer Request
TR_INQUIRY	Translate Inquiry
TR_REPLY	Translate Reply
UBIND FAIL	Unbind Failure

Command or RU type	Function
UNBIND	Unbind RU
VARY	VARY command
VARY ACQ	VARY ACQ or VARY ACT, ACQ command
VARY ACT	VARY ACT command
VARY ANS	VARY ANS command
VARY AUTOLOG	VARY AUTOLOG command
VARY DIAL	VARY DIAL command
VARY DRDS	VARY DRDS command
VARY HGUP	VARY HANGUP command
VARY INACT	VARY INACT or VARY INACT,TYPE=IMMED command
VARY INOP	VARY INOP command
VARY LOGON	VARY LOGON command
VARY NOLOG	VARY NOLOGON command
VARY PATH	VARY PATH command
VARY REL	VARY REL command
V NOLOGON	VARY NOLOGON command
XID	Exchange ID
XID3	Exchange ID 3

Chapter 17. Node and ID types in VTAM messages

This table describes the node and ID types that can appear in VTAM operator messages.

Node/ID type	Description
ADJ CLUSTER TABLE	Adjacent cluster table
ADJCP	Adjacent control point major node
ADJACENT CP	Adjacent control point
ADJCP MAJOR NODE	Adjacent control point major node
ADJSSCP TABLE	Adjacent SSCP table
APPL	Application program
APPL SEGMENT	Application program major node
APPN COS TABLE	APPN Class of Service table
BN COS MAP TABLE	BN Class of Service map table
CA MAJOR NODE	Channel-attachment major node
CDRM	Cross-domain resource manager
CDRM SEGMENT	Cross-domain resource manager major node
CDRSC	Cross-domain resource
CDRSC SEGMENT	Cross-domain resource major node
CLONE CDRSC	Clone cross-domain resource
CMIP APPL	CMIP application program
CP	Control point
DIRECTORY ENTRY	Entry in directory services database
DYNAMIC APPL	Dynamic application program
DYNAMIC FRSESET	Dynamically defined NCP frame relay switching equipment set (FRSESET)
EXIT	Session management exit
GENERIC RESOURCE	Generic resource name
GENERIC USERVAR	Generic resource USERVAR
GR PREFERENCES	Generic resource preferences
HOST CP	Host control point
ILU/CDRSC	Independent LU represented as a CDRSC
LCL SNA MAJ NODE	Channel-attached (local) major node consisting of one or more SNA cluster controllers
LCL 3270 MAJ NODE	Local 3270 major node
LINE	Communication line
LINE GROUP	Line group
LINK STATION	PU type 4 or 5 representing an NCP or host processor

Node/ID type	Description
LOGICAL UNIT	Logical unit
LUGROUP MAJ NODE	LU group major node
MODEL APPL	Model application program
MODEL CDRSC	Model cross-domain resource
MODEL LU	Model LU
MODEL LU GROUP	Model LU group
MODEL MAJOR NODE	Model major node
MODEL SEGMENT	Model major node
NN SERVER LIST	Network node server list
N/A	Indicates that the displayed major node represents an ID type, such as a list or table. Some ID types do not get displayed.
PATH TABLE	PATH table
PU_T1	Physical unit type 1
PU_T2	Physical unit type 2
PU_T2.1	Physical unit type 2.1
PU T4/5	Communication controller or a host with an SSCP
RTP MAJOR NODE	Major node that contains all the RTPs
RESOURCE	Resource that may not yet be defined to VTAM
SSCP	System services control point
STATIC FRSESET	Statically defined NCP frame relay switching equipment set (FRSESET)
SW SNA MAJ NODE	Switched SNA major node
TCP/IP MAJOR NODE	TCP/IP major node
TG PROFILE TABLE	APPN Transmission Group Profile
TRL MAJOR NODE	Transport resource list major node
TRLE	Element in the active transport resource list
TSO USERID	TSO user ID that is being displayed.
XCA MAJOR NODE	External communication adapter (XCA) major node

Appendix A. Message additions and changes

This appendix contains the following sections:

- “Message additions”
- “Message text changes”
- “Retired messages” on page 1140

See z/OS Summary of Message and Interface Changes for a list of all new, changed or deleted z/OS Communications Server messages.

Message additions

This section includes the text and variable field lengths of the new messages.

Note: in the message text, a percent sign (%) represents a character that is reserved for variable information. The maximum length of the variable is indicated by a percent sign and a number (for example, %8). In some messages, if the variable information is shorter than the variable field, the extra blanks might be suppressed, causing the message text to shift to the left.

New IST VTAM network operator messages

```
| IST2412I FIXED HVCOMMON          %9 %9 %9
| IST2413I PRIVATE                 %9 %9 %9
| IST2414I FIXED PRIVATE           %9 %9 %9
| IST2415I TOTAL FIXED             %9 %9 %8
| IST2416I %10 %16 PROCESSED
| IST2418I SMC PFID = %4 VCHID = %4 PNETID = %16
| IST2419I VIRTUAL INTERRUPT DRIVEN FOR TRLE %8
| IST2420I ISM NOT SUPPORTED, REQUIRED HARDWARE NOT AVAILABLE
| IST2421I SMC-D LINK FAILURE ON TRLE %8 CODE = %8
| IST2422I NO ISM PFIDS DEFINED FOR PNETID %16
| IST2423I NO ISM PFIDS AVAILABLE FOR PNETID %16
| IST2424I 3270 DATA STREAM ERROR - %%%%%%%%%%17 %%%%%%%%%%17
| IST2425I %3 SUBAREA = X'%%4' INDEX = X'%%4' ELEMENT = X'%%4'
| IST2426I IPADDR = %%%%%%%%%%46
| IST2427I DATE = %%%%%%%%%10 TIME = %%%%%%%%%8 ID = %%%%%%%%%10
| IST2428I ROW = %3 COLUMN = %3
| IST2429I OUTBOUND - SEQ = X'%%4' OFF = %5 LEN = %5
| IST2430I INBOUND - SEQ = X'%%4' OFF = %5 LEN = %5
| IST2431I %8 %8 %8 %8 *%8 %8*
| IST2432I %5 MESSAGES SUPPRESSED FOR %5 SECONDS
| IST2433I DSMONITR = YES, DSCOUNT = %3, DSACTION = %17
| IST2434I DSTRUST = %%%%%%%%%%36
| IST2435I SESSIONS MONITORED = %10, ERRORS DETECTED = %10
| IST2436I DSMONITR = NO
| IST2437I DSMONITR = %3, ERRORS DETECTED = %10
| IST2438I SESSIONS = %5 ERRORS = %5
| IST2439I PLU                      SLU                      SID                      ERRORS
| IST2440I %%%%%%%%%% %%%%%%%%%% %%%%%%%%%% %%%%%%%%%%
| IST2441I JOBNAME = %8 SID = %16
```

Message text changes

This section includes the text and variable field lengths of messages with text changes.

| old: Isth005I VTAM Internal Trace (VIT) PSS and SMS options are active.
| IBM suggests that these options always be active
| for VIT tracing for optimal problem determination.
| new: Isth005I VTAM Internal Trace (VIT) *vit-opt* option is active.
| IBM prefers that this option is always active, but if CPU is
| constrained then you can elect to stop this trace option.
|
| old: Isth006E VTAM Internal Trace (VIT) options for PSS and SMS are not both active
| new: Isth006E VTAM Internal Trace (VIT) option *vit_opt* is not active

Retired messages

This section includes the text and variable field lengths of messages that are no longer in use. Thus the following messages are deleted from the book.

ISTM013I GATEWAY statement is not in use on this system

ISTM014E GATEWAY statements are in use on this system during this IPL

Appendix B. Message-flooding prevention

Certain messages in VTAM can be issued several times for an event without supplying new information to the operator (for example, IST264I is issued for each attempted logon from multiple terminals to an undefined application program). These repeating messages can overwhelm an operator console or program operator application, and critical messages could be concealed in this volume of information. To alleviate this occurrence, VTAM includes a message-flooding prevention mechanism.

VTAM uses a table containing a list of pre-designated messages that are candidates for flooding suppression. There is default IBM-supplied table, ISTMSFLD, or a user-defined message-flooding table can be defined. For more information on message-flooding prevention, defining your own message-flooding prevention table, and the IBM-supplied message-flooding prevention table, see the z/OS Communications Server: SNA Resource Definition Reference.

The message-flooding prevention table specifies, for each message, the criteria that must be met to prevent the message from being reissued. A message is a candidate for suppression if it is listed in the table and meets the following criteria:

1. Time-span: The message is issued a second time in the specified amount of time (the default is 30 seconds).
2. Suppressible variable-text fields: The specific variable fields listed in the table contain the same information for this issuance of the message as the previous issuance. Only fields listed in the table are checked. The message may have other variable fields which can have different values and still result in suppressing the message.

If the above criteria are met, the message is suppressed. When a message is suppressed it will not be routed to the program operator application or system console to which it was destined. However, the message may be sent to the system hardcopy log if it was destined for the system console, based on the HARDCOPY specification in the message-flooding prevention table (the default in ISTMSFLD is that the message be sent to the system hardcopy log).

Note: The message-flooding prevention table prevents specific messages from being issued by VTAM. This may affect network management application command lists and any automated operations facilities at your installation.

Appendix C. Message routing and suppression

This appendix contains the following sections:

- “Message formats”
- “Solicited messages” on page 1144
- “Unsolicited messages” on page 1145
- “Message rerouting and percolation” on page 1146
- “Message descriptor codes” on page 1147
- “Message routing codes” on page 1148
- “Message suppression levels” on page 1149
- “Codes and suppression levels” on page 1150
 - “ELM messages for Logon Manager” on page 1150
 - “IKT messages for TSO/VTAM” on page 1150
 - “IST VTAM operator messages” on page 1151

This information may help you diagnose problems in program operator applications, understand the way messages are issued, determine which start options to choose, or how to define VTAM.

Message formats

The message format of **all** messages is determined by the destination specified in the USS table.

In pre-Version 4 releases, messages sent to the primary program operator log (PPOLOG) or percolated to a primary program operator (PPO) are copies of messages formatted for the system console or secondary program operator (SPO). In the current version, copies of messages are no longer sent. Messages appear in the format defined in the USS table for the message destination.

The impact to automated operation procedures depends on which USS table is specified for your system console and each program operator application (POA), and whether those tables define messages with or without blank suppression.

- For information about message percolation, see “Message rerouting and percolation” on page 1146.
- See the *z/OS Communications Server: SNA Resource Definition Reference* for information about USS message tables.
- See the *z/OS Communications Server: New Function Summary* for information about impacts to automated operations.

Format differences

Message format differences are summarized in the following table:

Table 1. Message format differences

	IBM-supplied default USS table (ISTINCNO)	Default USS table (ISTCFCMM)
Formats messages for:	System console	PPO

Table 1. Message format differences (continued)

	IBM-supplied default USS table (ISTINCNO)	Default USS table (ISTCFCMM)
Blank suppression available?	Yes	No
Number of blanks after message ID:	1	2
<p>Note: ISTINCNO can be used for the POA if a message is not found in ISTCFCMM. User-defined tables can also be associated with the system console or POAs. For more information about the order of search for a message, see the z/OS Communications Server: SNA Resource Definition Reference.</p>		

- Pre-Version 4 Example

- In releases prior to Version 4, if you are using the default USS tables for your system console and POAs, and issue a MODIFY USERVAR command from the system console, the PPO will receive a percolated copy of message IST825I in the following format:

```
IST825I USERVAR DEFINED - NAME = NAME1, VALUE = APPL1
```

This message is identical to the original message built for the system console according to the IBM-supplied default table, ISTINCNO. It has extra blanks suppressed and has one blank following the message ID (IST825I).

- If the MODIFY USERVAR command had been issued from an SPO, the original message IST825I for the SPO and the percolated copy of the message for the PPO would have been formatted according to the default USS table, ISTCFCMM. It would have two blanks following the message ID. Extra blanks would not be suppressed:

```
IST825I USERVAR DEFINED - NAME = NAME1 , VALUE = APPL1
```

If the PPO was not available, an exact copy would have been sent to the system console.

- Current Version Example

- In the current version, if you are using the default USS tables for your system console and POAs and issue a MODIFY USERVAR command from the system console, the system console will receive message IST825I formatted according to ISTINCNO. Extra blanks will be suppressed and one blank will follow the message ID:

```
IST825I USERVAR DEFINED - NAME = NAME1, VALUE = APPL1
```

- The PPO will receive the percolated message IST825I formatted according to ISTCFCMM. Two blanks will follow the message ID. Extra blanks will not be suppressed:

```
IST825I USERVAR DEFINED - NAME = NAME1 , VALUE = APPL1
```

Solicited messages

Solicited messages are those messages that are normally issued in response to an operator command from the system console or from a program operator application (POA).

- From the system console

If a message is solicited from the system console, it is routed to the system console. A message may be sent to the primary program operator (PPO) for one of the following reasons:

- The message is percolated.

- PPOLOG=YES was specified as a start option or by the MODIFY PPOLOG command.

If a message is percolated **and** PPOLOG=YES, the message is sent to the PPO twice.

For additional information on message percolation and a list of percolated messages, see “Message rerouting and percolation” on page 1146.

For a description of the PPOLOG start option, see the z/OS Communications Server: SNA Resource Definition Reference . For a description of the MODIFY PPOLOG command, see z/OS Communications Server: SNA Operation .

- From a program operator application (POA)

If a message is solicited from a POA, it is first routed to the POA. The POA can be a primary program operator (PPO) or a secondary program operator (SPO). If the POA is no longer available and the message requires a reply, the message is redirected to the system console. Messages that do not require a reply are converted to unsolicited messages. For additional information, see “Message rerouting and percolation” on page 1146.

If the original message was solicited from an SPO and is percolated, it is also sent to the PPO. If it cannot be sent to the PPO and has not already been redirected to the system console, it is sent to the system console.

In addition to the normal messages that are solicited as the immediate result of a VTAM operator command, other messages are also considered by VTAM to be solicited:

- When resources are activated at VTAM startup, subsequent messages associated with those resources (other than those directly resulting from another VTAM operator command) will be considered to be solicited and will be returned to the system console or started task where the VTAM START command was issued. This is because VTAM internally saves the console ID of the system console or started task in the control block representing each resource, to be used in later messages. This is also true of resources activated by a VTAM operator command from a POA or system console. These resources can be:
 - Exit routines started at VTAM initialization.
 - Resources started at VTAM initialization via the configuration list.
 - Resources activated by a VTAM operator command from a POA or system console.
- An example is the case of an exit routine activated as a result of VTAM initialization. The IST984I indicating that the user exit is active will return to the system console or started task where the VTAM START command is issued. If the user exit routine goes inactive for some reason, an IST985I message indicating that the user exit failed will also return to the same location, even if VTAM had been started hours or days before the inactivation. The message, from the VTAM perspective, is solicited, not unsolicited.
- Message IST020I VTAM INITIALIZATION COMPLETE is a special case. It is always sent to the master console as a solicited message.

Unsolicited messages

Unsolicited messages are usually those received as a result of an error condition such as an alert. If a message is not solicited, it is first routed to the PPO. If the PPO is not available, the message is redirected to the system console.

Percolated messages can also be received as unsolicited messages. For additional information, see “Message rerouting and percolation” on page 1146.

A solicited message (not a WTOR) that is destined for a program operator application (POA) that is not active will be converted to an unsolicited message and delivered as an unsolicited message. For additional information, see “Message rerouting and percolation.” There are also cases in which messages that may be expected to be solicited are changed to unsolicited due to an error condition. For example, INOPs override command processing, so the inactivation messages following an INOP are unsolicited. If a VARY INACT is done for an NCP and a hard INOP is received while it is inactivating, the messages about inactivation processing before the INOP will be solicited, but the messages after the INOP will be unsolicited.

Message rerouting and percolation

The following sections describe message rerouting and percolation.

Message rerouting

When a write-to-operator-with-reply (WTOR) is destined for a program operator application (POA) and cannot be delivered, it is rerouted to a system console using the routing codes defined in the appropriate USS message table.

When a message (not a WTOR) is destined for a program operator application (POA) and cannot be delivered, it is converted to an unsolicited message and rerouted to the primary program operator (PPO), if it is available. If the PPO is not available, the message is redirected to the system console using the routing codes defined in the appropriate USS message table.

Message percolation

Message percolation refers to the way that certain VTAM operator messages are routed. Percolation is determined internally by VTAM and cannot be modified by the user.

If the message is in response to a command issued by a secondary program operator (SPO) or a system console operator, it is routed (percolated) to both the originator of the command and the primary program operator (PPO). The PPO receives the message in the form of an unsolicited message.

- If the command was issued by an SPO and an active PPO is not available, the message is routed to the system console as well as to the SPO.
- If a network management application is the PPO, the percolated message may be broadcast to every network management application defined to the application receiving the message.

The following messages are percolated.

IST154I
IST813I
IST814I
IST825I
IST930I
IST959I
IST973I
IST1030I
IST1150I
IST1151I

IST1153I

IST1283I

Note: IST314I (END) is percolated only if it is part of a percolated message group such as IST1283I.

Message descriptor codes

Descriptor codes describe the kind of message being issued. These codes, with the routing codes, determine how the message is to be printed or displayed and how a message is to be deleted from a display device. Descriptor codes 1–7 are mutually exclusive; only one such code is assigned to a message. Descriptor codes 8–10 can appear with any other descriptor code.

See “Codes and suppression levels” on page 1150 for the list of messages and their codes and suppression levels.

Code Meaning

- 1 **System Failure:** This message indicates that an error occurred that could not be corrected. To continue, the operator must restart the system.
- 2 **Immediate Action Required:** This message requires an immediate action by the operator. The action may be required because the message issuer is in a wait state until the action is performed, or because system performance is degraded until the action is taken.
- 3 **Eventual Action Required:** This message requires an eventual action by the operator. The task does not await completion of the action.
- 4 **System Status:** This message indicates the status of a system task or the status of a hardware unit.
- 5 **Immediate Command Response:** This message is issued as an immediate response to a system command. The completion of the response is not dependent upon another system action or task.
- 6 **Job Status:** This message contains status information regarding the job or job step.
- 7 **Application Program/Processor:** This message is issued while a program is in problem mode.
- 8 **Out-of-Line Message:** This message is one of a group of one or more messages to be displayed out of line. If the device support cannot print a message out of line, the code is ignored, and the message is printed in line with other messages.
- 9 **Operator’s Request:** This message is written in response to an operator’s request for information by DEVSERV, MONITOR, and other operating system commands.
- 10 This message is issued in response to a TRACK command.
- 11 **Critical Eventual Action Required:** This message indicates that a critical event has occurred which must eventually be followed by an action. The message will remain on the screen until the action is taken.
- 12 **Important Information:** This message contains important information that must be displayed at the console, but does not require any action in response.
- 13–16 Reserved.

Message routing codes

Routing codes determine where the message appears. These codes route VTAM and TSO/VTAM messages to selected functional consoles. More than one routing code may be assigned to the message. With multiple-console support, each console operator receives only the messages related to the commands entered at that console or to the functions assigned to that console, regardless of the routing codes assigned to those messages. If a message that is routed to a particular console cannot be issued at that console, that message is issued at the master console.

See “Codes and suppression levels” on page 1150 for the list of messages and their codes and suppression levels.

Code Meaning

- 1 **Master Console Action:** This message indicates a change in the system status, and demands action by the master console operator.
- 2 **Master Console Information:** This message indicates a change in the system status. Such a message does not demand action, but alerts the master console operator to a condition that may require action. This routing code is used for any message that indicates job status, and also for processor and problem program messages to the master console operator.
- 3 **Tape Pool:** This message specifies the status of a tape unit or reel, the disposition of a tape reel, or other tape-oriented information. For example, a message which requests that tapes be mounted.
- 4 **Direct Access Pool:** This message specifies the status of a direct access unit or pack, the disposition of a disk pack, or other direct-access-oriented information. For example, a message which requests that disks be mounted.
- 5 **Tape Library:** This message specifies tape library information. For example, a message which requests, by volume serial numbers, that tapes be obtained for system or programmer use.
- 6 **Disk Library:** This message specifies disk library information. For example, a message which requests, by volume serial numbers, that disk packs be obtained for system or programmer use.
- 7 **Unit Record Pool:** This message specifies unit-record equipment information. For example, a message which requests that printer trains be mounted.
- 8 **Teleprocessing Control:** This message specifies the status or the disposition of data communication equipment. For example, a message which indicates line errors.
- 9 **System Security:** This message is associated with security checking. For example, a message which requires a reply specifying a password.
- 10 **System Error Maintenance:** This message indicates either a system error, or an input/output error that could not be corrected. It also indicates a message associated with system maintenance.
- 11 **Programmer Information:** This message is for the problem programmer. This routing code is used only when the program issuing the message has no way of routing the message to the programmer using the system-output data set facility. The message appears in the job’s system output message class.

Note: Messages assigned routing code 11 will default to the master console if a secondary console, specified during the VTAM definition process to receive these messages, is not active. The messages will not default to the master console, however, if no secondary console was specified to receive these messages.

- 12 **Emulators:** This message is issued by an emulator program.
- 13 Reserved for customer use.
- 14 Reserved for customer use.
- 15 Reserved for customer use.
- 16 Reserved for future expansion.

Message suppression levels

The level at which VTAM can suppress a message is designated by either the SUPP start option or the MODIFY SUPP command. If a message is at the designated level or at a lower level, it is not written to the console or to the program operator. Messages at higher levels, as well as messages that cannot be suppressed, continue to go to the console and the program operator.

The following suppression levels are defined by IBM. If you design your own message suppression criteria, it is your responsibility to document any changes to the published message suppression levels. Suppression levels are listed from lowest to highest order.

See “Codes and suppression levels” on page 1150 for the list of messages and their codes and suppression levels.

Informational (INFO)

If VTAM suppression level is set to INFO, only messages defined with SUPP=INFO in the USS table will be suppressed.

Informational-level messages do not indicate error conditions and usually indicate that some VTAM processing has been started. These messages probably have little or no effect if omitted.

Warning (WARN)

If VTAM suppression level is set to WARN, messages defined with SUPP=INFO or with SUPP=WARN will be suppressed.

Warning-level messages indicate error conditions that do not cause commands to fail or to be rejected. These messages tell you that a problem exists, such as use of a command that is not valid or a condition in which a minor node cannot be activated. VTAM can continue to process other parts of the command or procedure.

Normal (NORM)

If VTAM suppression level is set to NORM, messages defined with SUPP=INFO, SUPP=WARN, or SUPP=NORM will be suppressed.

Normal-level messages contain all VTAM completion messages. For example, these messages tell you that commands have completed processing successfully or that a configuration has been activated successfully.

Serious (SER)

If VTAM suppression level is set to SER, messages defined with SUPP=INFO, SUPP=WARN, SUPP=NORM, or SUPP=SER will be suppressed.

Serious-level messages indicate error conditions that cause commands or procedures to fail. These messages tell you that commands must be re-entered or procedures must be re-initiated.

Never (NOSUP or NEVER)

If VTAM suppression level is set to NOSUPP, no messages will be suppressed. If a message is defined with SUPP=NEVER, it will not be suppressed at any VTAM suppression level.

Unsuppressible-level messages can never be suppressed. This level includes messages in any of the following categories:

- Messages indicating failure of the VTAM start procedure
- Messages included in a display resulting from the DISPLAY command
- Messages requesting an operator’s reply
- Messages indicating situations that cause or result from abnormal termination of VTAM.

Note: For message groups, if the first message in a group is suppressed, all messages in the group will be suppressed.

Codes and suppression levels

The following tables list the descriptor codes, routing codes, and suppression levels for logon manager, TSO/VTAM, and VTAM operator messages.

ELM messages for Logon Manager

Message identifier	Descriptor code	Routing codes	Suppression level
ALL ELM messages	6	2,8	NEVER

IKT messages for TSO/VTAM

MVS identifier	Descriptor code	Routing codes	Suppression level
IKT001D	***	1,8	NEVER
IKT002I	***	1,8	NEVER
IKT003D	***	1,8	NEVER
IKT004D	***	1,8	NEVER
IKT005I	***	1,8	NEVER
IKT006I	***	1,8	NEVER
IKT007I	***	1,8	NEVER
IKT008I	***	1,8	NEVER
IKT009I	***	1,8	NEVER
IKT010D	***	1,8	NEVER
IKT011I	***	1,8	NEVER
IKT012D	***	1,8	NEVER
IKT013I	***	1,8	NEVER

MVS identifier	Descriptor code	Routing codes	Suppression level
IKT014I	***	1,8	NEVER
IKT015I	***	1,8	NEVER
IKT016D	***	1,8	NEVER
IKT017I	***	1,8	NEVER
IKT018I	***	1,8	NEVER
IKT020I	***	1,8	NEVER
IKT026D	***	1,8	NEVER
IKT028I	***	1,8	NEVER
IKT029I	***	1,8	NEVER
IKT030I	***	1,8	NEVER
IKT031I	***	2,8	NEVER
IKT032I	***	1,8	NEVER
IKT033I	***	1,8	NEVER
IKT100I	4	2,8	NEVER
IKT103I	4	2,8	NEVER
IKT104I	4	2,8	NEVER
IKT105I	4	1,8	NEVER
IKT106I	4	1,8	NEVER
IKT109I	4	2,8	NEVER
IKT111I	4	2,8	NEVER
IKT112I	4	2,8	NEVER.
IKT115I	4	2,8	NEVER
IKT116I	4	2,8	NEVER
IKT117I	4	2,8	NEVER
IKT118I	4	2,8	NEVER
IKT119I	4	2,8	NEVER
IKT120I	4	2,8	NEVER.
IKT121I	4	2,8	NEVER
IKT122I	4	1,8	NEVER
IKT123I	5	2	NEVER
IKT124I	5	2	NEVER
IKT125I	4	1,8	NEVER

IST VTAM operator messages

Message identifier	Descriptor code	Routing code	Suppression level
IST001I	5	2	NEVER
IST003I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST009I	5	2	NEVER
IST010I	5	2	SER
IST011I	5	2	NORM
IST013I	4	2,10	INFO
IST014I	5	1	WARN
IST015A	2	1	NEVER
IST017I	5	2	WARN
IST018I	5	2	WARN
IST020I	5	2	NORM
IST025I	5	2	WARN
IST033I	5	2	SER
IST037I	5	2	SER
IST038I	5	2	SER
IST039I	5	2	NORM
IST040I	5	2	NEVER
IST043I	5	2	SER
IST046I	5	2	WARN
IST049I	5	2	NEVER
IST050I	5	2	SER
IST051A	2	1	NEVER
IST052I	5	2	WARN
IST054I	5	2	WARN
IST056A	2	1	NEVER
IST057I	5	2	WARN
IST058I	5	2	WARN
IST059I	5	2	WARN
IST061I	5	2	SER
IST066I	5	2	SER
IST072I	5	2	SER
IST073I	5	2	SER
IST074I	5	2	SER
IST075I	5	2	NEVER
IST077I	5	2,8	NEVER
IST080I	5	2	NEVER
IST081I	5	2	NEVER
IST082I	5	2	NEVER
IST084I	5	2	NEVER
IST085I	5	2	SER
IST087I	5	8	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST089I	5	2	NEVER
IST092I	5	2	NEVER
IST093I	5	2	NORM
IST095A	2	1	NEVER
IST096I	5	2	SER
IST097I	5	8	NEVER
IST101I	5	2	SER
IST102I	4	2,8	NEVER
IST105I	5	2	NORM
IST107I	5	2	WARN
IST109I	5	2	INFO
IST112I	5	2	NEVER
IST113I	5	2	NEVER
IST115I	5	2	WARN
IST116I	6	2	WARN
IST117I	4	2,10	WARN
IST118I	5	2	WARN
IST120I	5	2	NORM
IST122I	6	2	WARN
IST124I	5	2	SER
IST126I	5	2	WARN
IST127I	6	2	SER
IST128I	6	2	SER
IST129I	5	2,8,10	WARN
IST130I	4	2	SER
IST132I	5	2	SER
IST133I	4	2	INFO
IST134I	5	2	NEVER
IST135I	5	2	NEVER
IST136I	5	2	NEVER
IST137I	5	2	WARN
IST142I	5	2	WARN
IST146I	5	2	NEVER
IST148I	5	2	NEVER
IST149I	5	2	NEVER
IST150I	5	2	NORM
IST153I	6	2	INFO
IST154I	5	2	SER
IST155I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST159I	5	2	NEVER
IST165I	5	2	NORM
IST167I	5	2	NEVER
IST168I	5	2	NEVER
IST169I	5	2	INFO
IST170I	5	2	NEVER
IST171I	5	2	NEVER
IST172I	5	2	NEVER
IST176I	5	2	SER
IST180I	5	2	WARN
IST181I	5	2	WARN
IST182I	5	2	WARN
IST183A	2	2	NEVER
IST184I	5	2	WARN
IST185I	5	2	WARN
IST186I	5	2	WARN
IST187I	5	2	SER
IST191I	5	2	SER
IST192I	5	2	WARN
IST193I	5	2	SER
IST194I	5	2	SER
IST195I	5	2	SER
IST198I	5	2	NEVER
IST199I	5	2	NORM
IST206I	5	2	NEVER
IST208I	5	2	WARN
IST211I	4	2	WARN
IST212I	5	8	NEVER
IST213I	5	8	NEVER
IST214I	4	2	WARN
IST219I	4	2	WARN
IST221I	5	2	NORM
IST223I	5	2	NEVER
IST225I	5	2	SER
IST226I	5	2	INFO
IST228I	5	2	NEVER
IST231I	5	2,8	NEVER
IST232I	5	2,8	NEVER
IST234I	4	2,8,10	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST238I	4	8	WARN
IST240A	2	2	NEVER
IST241I	5	8	NORM
IST242I	4	8	SER
IST243I	5	8	NORM
IST244I	5	8	NEVER
IST245I	5	8	NEVER
IST246I	4	8	NEVER
IST247I	5	2,8	NEVER
IST252I	5	2	NEVER
IST257I	4	2,8	SER
IST258I	5	2	WARN
IST259I	4	8	WARN
IST260I	5	2	WARN
IST262I	5	2,8	NEVER
IST264I	4	8	SER
IST265I	4	8	SER
IST266I	5	2	INFO
IST270I	5	2	NORM
IST271I	5	2	NEVER
IST272A	2	1	NEVER
IST278A	2	1	NEVER
IST282A	3	1	NEVER
IST284A	2	1	NEVER
IST285I	5	2	SER
IST301I	5	2	WARN
IST302I	5	2	WARN
IST303I	5	2	WARN
IST309I	5	2,4,8	WARN
IST310I	5	2	SER
IST311I	5	2,4,8	WARN
IST314I	5	2	NEVER
IST315I	5	2	NORM
IST316I	5	2	NORM
IST317I	5	2	SER
IST319I	5	2	NORM
IST320I	5	2	WARN
IST321I	5	2	WARN
IST322I	5	2	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST323I	5	2	WARN
IST324I	5	2	INFO
IST326I	5	2	NORM
IST327I	5	2	NORM
IST328I	5	2	NORM
IST330I	5	2	WARN
IST331I	5	2	WARN
IST333I	5	2	WARN
IST336I	5	2	NEVER
IST339I	5	2	WARN
IST348I	5	2	NORM
IST350I	5	2	NEVER
IST351I	5	2	NEVER
IST352I	5	2	NEVER
IST353I	5	2	NEVER
IST354I	5	2	NEVER
IST355I	5	2	NEVER
IST356I	5	2	NEVER
IST359I	5	2	NEVER
IST360I	5	2	NEVER
IST361A	2	2	NEVER
IST362I	5	2	WARN
IST363I	5	2	WARN
IST366I	5	2	WARN
IST367I	5	2	WARN
IST368I	5	2	WARN
IST380I	5	2	NORM
IST381I	5	2	SER
IST382I	5	2	SER
IST383I	5	2	NORM
IST384I	5	2	SER
IST388I	5	8	NEVER
IST389I	5	8	NEVER
IST391I	5	8	NEVER
IST393I	5	8	NEVER
IST394I	5	8	NEVER
IST395I	5	8	NEVER
IST396I	5	8	NEVER
IST397I	5	8	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST398I	5	8	WARN
IST399E	3	2	SER
IST400I	5	2	NORM
IST401I	5	2	NEVER
IST403I	5	2	SER
IST410I	5	1	NEVER
IST411I	5	2	SER
IST412I	5	2	INFO
IST413I	5	2	NEVER
IST414I	5	2	SER
IST416I	4	2,8	NEVER
IST422I	5	2	WARN
IST423I	5	2	WARN
IST424I	5	2	WARN
IST425I	5	2	WARN
IST430I	5	2	WARN
IST433I	5	2	SER
IST435I	5	2	WARN
IST436I	5	2	WARN
IST437I	5	2	WARN
IST440I	4	2	NEVER
IST441I	4	2	NEVER
IST442I	4	2	NEVER
IST443I	4	2	NEVER
IST447I	5	2	WARN
IST448I	5	2	NEVER
IST449I	5	8	NEVER
IST450I	5	2	SER
IST451I	5	8	NEVER
IST452I	5	8	SER
IST453I	5	8	NEVER
IST454I	5	8	SER
IST455I	5	2	NORM
IST456I	5	8	SER
IST457I	5	2	NORM
IST458I	5	2	NEVER
IST459I	5	2	SER
IST460I	5	2	SER
IST461I	4	2	NORM

Message identifier	Descriptor code	Routing code	Suppression level
IST462I	5	2	WARN
IST464I	4	2	NORM
IST465I	5	2	SER
IST466I	4	2	WARN
IST467I	5	8	SER
IST473I	4	2,8	WARN
IST474I	5	2	NEVER
IST475I	5	2	NEVER
IST476I	5	2	NEVER
IST477I	5	2	NEVER
IST478I	5	2	NEVER
IST479I	5	2	NEVER
IST482I	5	8	NEVER
IST483I	5	8	NEVER
IST484I	5	2	NEVER
IST486I	5	8	NEVER
IST487I	5	2	INFO
IST488I	5	2	SER
IST489I	5	2	WARN
IST490I	5	2	SER
IST493I	5	2	SER
IST494I	5	2	SER
IST495I	4	2	NEVER
IST496E	3	8	WARN
IST499I	5	2	NORM
IST500I	4	2,8	WARN
IST501I	4	2,8	NEVER
IST502A	2	2,8	NEVER
IST503I	4	2,8	NEVER
IST504I	4	2,8	INFO
IST505I	4	2,8	NORM
IST506I	4	2,8	WARN
IST507I	4	2,8	WARN
IST510I	5	8	NEVER
IST511I	5	2	NEVER
IST512I	5	2	NEVER
IST513I	5	2	NEVER
IST516I	5	2	NEVER
IST517I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST518I	5	2	NEVER
IST520I	4	8	NEVER
IST521I	4	8	SER
IST522I	4	8	SER
IST523I	4	8	INFO
IST524I	4	8	INFO
IST525I	4	8	INFO
IST526I	5	2	WARN
IST528I	4	8	INFO
IST529I	4	8	WARN
IST530I	4	8	INFO
IST531I	4	8	INFO
IST533I	5	8	NEVER
IST534I	5	8	NEVER
IST535I	5	8	NEVER
IST536I	5	8	NEVER
IST537I	5	8	NEVER
IST538I	5	8	NEVER
IST539I	5	8	NEVER
IST540I	5	8	NORM
IST541I	5	8	WARN
IST542I	5	8	WARN
IST543I	5	8	WARN
IST544I	5	8	WARN
IST546I	4	8	NEVER
IST547I	4	8	INFO
IST548I	4	2	SER
IST549I	5	8	NORM
IST561I	5	2	SER
IST562I	5	2	SER
IST563I	5	2	SER
IST564I	5	2	SER
IST565I	5	2	SER
IST566I	5	2	SER
IST567I	5	2	NORM
IST571I	5	2	SER
IST572I	5	8	NEVER
IST574E	3	2	SER
IST576I	5	2,8	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST577I	4	2	NEVER
IST578I	4	2	NEVER
IST579I	4	2	NEVER
IST580I	4	2	NEVER
IST581I	4	2	NEVER
IST582I	5	8	WARN
IST583I	5	2	SER
IST585E	3	2	SER
IST587I	4	8	WARN
IST588I	5	2,8	NEVER
IST589I	4	8	WARN
IST590I	4	8	INFO
IST591E	3	2	SER
IST592I	5	2	NEVER
IST593I	5	2	WARN
IST594I	5	2	WARN
IST595I	5	8	NEVER
IST596I	5	8	NEVER
IST597I	5	8	NEVER
IST599I	5	8	NEVER
IST602I	5	2	SER
IST605I	5	2	SER
IST607I	5	2	SER
IST608I	5	2	SER
IST610I	5	8	NEVER
IST611I	5	8	NEVER
IST617I	5	2	INFO
IST619I	4	2,8	WARN
IST621I	4	2,8	NORM
IST623I	5	8	NEVER
IST624I	5	8	NEVER
IST627I	5	2	SER
IST632I	5	2	NEVER
IST633I	5	2	NEVER
IST634I	5	8	NEVER
IST635I	5	8	NEVER
IST636I	5	8	NEVER
IST637I	5	8	NEVER
IST638I	5	8	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST639I	5	8	NEVER
IST640I	5	8	NEVER
IST641I	5	8	NEVER
IST642I	5	8	NEVER
IST643I	5	8	NEVER
IST644I	5	8	NEVER
IST645I	5	2	SER
IST650I	5	2	NEVER
IST652I	5	2	NEVER
IST654I	5	2	NEVER
IST655I	5	2	NEVER
IST656I	5	2	INFO
IST658I	5	8	NEVER
IST660I	5	2	WARN
IST663I	4	8	SER
IST664I	4	8	SER
IST670I	4	8	NORM
IST674I	5	2	NORM
IST675I	5	8	NEVER
IST678I	5	2	NEVER
IST679A	2	1	NEVER
IST680I	4	8	SER
IST683I	4	8	SER
IST684I	4	8	WARN
IST688I	5	2	SER
IST690I	4	8	SER
IST693I	4	8	SER
IST700I	5	2	WARN
IST701I	5	2	INFO
IST702I	5	2	WARN
IST703I	5	2	WARN
IST706I	5	2	WARN
IST707I	5	2	INFO
IST708I	5	2	WARN
IST709I	5	2	SER
IST710I	4	2	WARN
IST712I	5	2	WARN
IST713I	5	2	WARN
IST714I	5	2	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST715I	5	2	WARN
IST716I	4	8	WARN
IST717I	4	8	WARN
IST718I	5	8	WARN
IST719I	5	8	WARN
IST720I	5	8	INFO
IST721I	4	8	WARN
IST723I	4	8	INFO
IST725I	4	8	INFO
IST726I	4	8	INFO
IST727I	4	8	NORM
IST728I	4	8	INFO
IST732I	4	8	SER
IST734I	4	8	SER
IST735I	4	8	INFO
IST737I	4	8	INFO
IST740I	4	8	WARN
IST742I	4	8	INFO
IST744I	4	8	INFO
IST745I	4	8	INFO
IST746I	4	8	INFO
IST751I	5	2,8	NEVER
IST752I	5	8	NEVER
IST755I	4	8	NORM
IST756E	3	8	SER
IST757E	3	8	SER
IST758E	3	8	SER
IST759E	3	8	SER
IST760E	3	8	SER
IST761E	3	8	SER
IST762I	4	8	NORM
IST763I	4	8	NORM
IST764I	4	8	NORM
IST765E	3	8	SER
IST766I	5	2	NORM
IST767E	3	8	SER
IST768E	3	8	SER
IST769E	3	8	SER
IST770E	3	8	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST771E	3	8	SER
IST772I	5	8	SER
IST773I	5	8	SER
IST778I	4	8	INFO
IST784I	5	8	NEVER
IST786I	5	8	NEVER
IST787I	5	8	SER
IST788I	5	8	NEVER
IST789I	5	8	NEVER
IST790I	5	8	NEVER
IST792I	5	2	NEVER
IST793E	3	8	SER
IST794I	5	2	NEVER
IST796I	5	2	WARN
IST797I	5	2	NEVER
IST798I	5	2	NEVER
IST799I	5	8	NEVER
IST803I	5	2	NEVER
IST804I	5	2	INFO
IST805I	5	2	NORM
IST806I	5	2	NORM
IST807I	5	2	SER
IST808I	5	8	NEVER
IST809I	5	8	NEVER
IST812I	5	8	NEVER
IST813I	5	8	NEVER
IST814I	5	8	NEVER
IST815I	5	4,5,9	NEVER
IST816I	5	2	NEVER
IST819I	4	8	NORM
IST820I	4	8	SER
IST822I	4	8	SER
IST824I	4	2	WARN
IST825I	5	8	NEVER
IST826I	5	2	NEVER
IST830I	4	8	SER
IST831I	4	2	WARN
IST832I	4	2	WARN
IST833I	4	2	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST834I	5	8	NEVER
IST836I	4	2	WARN
IST837I	4	2	WARN
IST838I	7	2	NEVER
IST839I	7	2	NEVER
IST840I	7	2	NEVER
IST841I	5	2	NEVER
IST842I	5	2	NORM
IST844I	5	2	NEVER
IST845I	4	2	WARN
IST846I	5	2	INFO
IST849I	5	2	WARN
IST860I	5	2	WARN
IST861I	5	2	NEVER
IST862I	5	2	NEVER
IST863I	5	2	NEVER
IST864I	5	2	NEVER
IST865I	5	2	NEVER
IST866I	5	2	NEVER
IST867I	5	2	INFO
IST869I	5	2	NEVER
IST870I	5	2	NORM
IST871I	5	2	NORM
IST872I	5	2	NORM
IST873I	5	2	NEVER
IST874I	5	2	NEVER
IST875I	5	2	NEVER
IST876I	5	2	NEVER
IST877I	5	2	NEVER
IST878I	5	2	NEVER
IST879I	5	2	NEVER
IST880I	5	2	NEVER
IST881I	5	2	NORM
IST882I	5	2	NORM
IST883I	5	2	NEVER
IST886I	5	2	NORM
IST887I	5	2	NEVER
IST888I	5	2	NEVER
IST889I	4	8	INFO

Message identifier	Descriptor code	Routing code	Suppression level
IST890I	5	2	SER
IST891I	4	8	INFO
IST892I	4	8	INFO
IST893I	4	8	INFO
IST894I	4	8	INFO
IST895I	4	8	INFO
IST896I	5	2	INFO
IST897I	5	2	INFO
IST898I	5	8	NEVER
IST899I	5	2	INFO
IST900I	5	2	INFO
IST901A	5	2	NEVER
IST902A	5	2	NEVER
IST903A	5	2	NEVER
IST904A	5	2	NEVER
IST905A	5	2	NEVER
IST906A	5	2	NEVER
IST907A	5	2	NEVER
IST908A	5	2	NEVER
IST909A	5	2	NEVER
IST910I	5	2	INFO
IST911I	5	2	INFO
IST912I	5	2	INFO
IST913I	5	2	INFO
IST914I	5	2	INFO
IST915I	5	2	INFO
IST916I	5	2	INFO
IST917I	5	2	INFO
IST918A	5	2	NEVER
IST919I	5	2	NORM
IST920I	5	2	NEVER
IST921I	5	2	NEVER
IST922I	5	2	NEVER
IST923I	5	2	NEVER
IST924I	5	2	NEVER
IST925I	5	2	NEVER
IST926I	5	2	NORM
IST927I	5	2	NORM
IST928I	5	2	NORM

Message identifier	Descriptor code	Routing code	Suppression level
IST929I	5	2	NORM
IST930I	5	2	NEVER
IST931I	4	8	NEVER
IST932E	3	2	SER
IST933I	5	2	NEVER
IST934I	5	2	NEVER
IST935I	5	2	NEVER
IST936I	5	2	NEVER
IST937A	2	2	NEVER
IST938I	5	2	NEVER
IST939I	5	2	SER
IST940I	4	8	SER
IST946I	5	2	NEVER
IST947I	5	2	NEVER
IST948I	5	2	NEVER
IST949I	5	2	WARN
IST950I	5	2,8	NEVER
IST951I	5	2	NEVER
IST952I	5	2	NEVER
IST953I	5	2	NEVER
IST954I	5	2	NEVER
IST955I	5	2	NEVER
IST956I	5	2	NEVER
IST957I	5	2	NEVER
IST958I	5	2	NEVER
IST959I	5	2	WARN
IST960I	5	2	SER
IST961I	3	2	NEVER
IST962I	4	8	INFO
IST963I	3	2	NEVER
IST965I	3	2	NEVER
IST966I	5	2,8	NEVER
IST967I	4	2	WARN
IST968I	4	2	WARN
IST970I	4	2	WARN
IST971I	5	8	NEVER
IST972I	5	2	SER
IST973I	5	2	INFO
IST974I	5	2	INFO

Message identifier	Descriptor code	Routing code	Suppression level
IST976I	5	2	WARN
IST977I	5	2	NEVER
IST979I	5	2	WARN
IST981I	5	2	NEVER
IST982I	4	8	INFO
IST983E	11	2	NEVER
IST984I	4	8	NEVER
IST985I	4	8	NEVER
IST986I	5	2	NEVER
IST987I	5	2	NEVER
IST988I	5	2	NEVER
IST989I	5	2	NEVER
IST990E	3	2	WARN
IST991I	5	2	WARN
IST996I	5	8	NEVER
IST997I	5	8	NEVER
IST998E	3	2	NEVER
IST999E	3	2	NEVER
IST1000I	5	2	NEVER
IST1001I	5	8	NEVER
IST1002I	5	8	NEVER
IST1003I	5	8	NEVER
IST1004I	5	8	NEVER
IST1005I	5	8	NEVER
IST1006I	5	8	NEVER
IST1007I	5	8	NEVER
IST1008I	5	8	NEVER
IST1009I	5	8	NEVER
IST1010I	5	8	NEVER
IST1011I	5	2	WARN
IST1012I	5	8	NEVER
IST1013I	5	8	NEVER
IST1014I	5	2	SER
IST1015I	4	8	SER
IST1016I	5	2	INFO
IST1017I	5	2	NEVER
IST1018I	5	2	NEVER
IST1019I	5	8	NEVER
IST1020I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST1021I	8	5	NEVER
IST1022I	4	2	NEVER
IST1023E	3	2	SER
IST1024I	2	4	WARN
IST1025I	5	2	NEVER
IST1026I	5	2	NEVER
IST1027I	5	2	NEVER
IST1028I	4	8	SER
IST1029I	5	8	NEVER
IST1030I	5	8	NEVER
IST1031I	5	8	NEVER
IST1032I	5	8	SER
IST1033I	5	2	NEVER
IST1034I	5	2	NEVER
IST1035I	4	8	WARN
IST1036I	2	2	SER
IST1037I	2	2	SER
IST1038I	5	2	NEVER
IST1039I	5	2	NEVER
IST1040I	5	8	NEVER
IST1041I	5	2	NEVER
IST1042I	5	2	NEVER
IST1043I	5	2	NEVER
IST1044I	5	2	NEVER
IST1045I	5	2	NORM
IST1046I	5	2	NEVER
IST1048I	5	2	NEVER
IST1049I	5	2	NEVER
IST1050I	5	2	NEVER
IST1051I	4	8	INFO
IST1052I	5	2	NEVER
IST1053I	5	2	NEVER
IST1054I	5	2	NEVER
IST1055I	5	2	NEVER
IST1056I	5	2	NEVER
IST1057I	5	2	NEVER
IST1058I	5	2	INFO
IST1059I	5	2	INFO
IST1060I	5	2	INFO

Message identifier	Descriptor code	Routing code	Suppression level
IST1061I	5	2	INFO
IST1062I	4	8	INFO
IST1063I	5	2	WARN
IST1064I	5	2	WARN
IST1065I	5	2	INFO
IST1066I	5	2	INFO
IST1067I	5	2	NEVER
IST1068I	5	2	NEVER
IST1069I	5	2	NEVER
IST1070I	5	2	NEVER
IST1071I	5	2	NEVER
IST1072I	5	2	NEVER
IST1073I	5	2	NEVER
IST1074I	5	2	NEVER
IST1075I	5	2	NEVER
IST1076I	5	2	NEVER
IST1077I	5	2	NEVER
IST1078I	5	2	NEVER
IST1079I	5	2	NEVER
IST1080I	5	2	NEVER
IST1081I	5	2	NEVER
IST1082I	5	2	NORM
IST1083I	5	2	SER
IST1084I	5	2	NEVER
IST1085I	5	2	SER
IST1086I	5	2	NORM
IST1088I	5	2	NORM
IST1089I	5	2	NEVER
IST1090I	5	2	NORM
IST1091I	5	2	NEVER
IST1092I	5	2	NEVER
IST1093I	5	2	NEVER
IST1094I	5	2	NEVER
IST1095I	5	2	SER
IST1096I	5	2	NORM
IST1097I	5	2	NORM
IST1098I	5	2	NEVER
IST1099I	5	2	NEVER
IST1100I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1101I	5	2	NEVER
IST1102I	5	2	NEVER
IST1103I	5	2	NEVER
IST1104I	5	2	NEVER
IST1105I	5	2	NEVER
IST1106I	5	2	NEVER
IST1107I	5	2	NEVER
IST1108I	5	2	NEVER
IST1110I	5	2	SER
IST1111I	5	2	SER
IST1112I	5	2	SER
IST1113I	5	2	SER
IST1114I	5	2	NEVER
IST1115I	6	2	NEVER
IST1116I	6	2	WARN
IST1117I	5	2	WARN
IST1118I	3	2	NEVER
IST1119I	3	2	NEVER
IST1120I	5	2	SER
IST1121I	5	2	WARN
IST1122I	5	2	WARN
IST1123I	5	2	NEVER
IST1124I	3	2	WARN
IST1125I	3	2	WARN
IST1126I	3	2	WARN
IST1127I	3	2	WARN
IST1128I	5	2	WARN
IST1129I	5	2	SER
IST1130I	5	2	SER
IST1131I	5	2	NEVER
IST1132I	5	2	NORM
IST1133I	5	2	NORM
IST1134I	5	2	NORM
IST1135I	5	2,8,10	WARN
IST1136I	5	2,8,10	WARN
IST1137I	5	2	SER
IST1138I	4	8	SER
IST1139I	5	2	NORM
IST1140I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST1141I	5	2	SER
IST1142I	5	2	SER
IST1143I	5	2	NORM
IST1144I	5	2	NORM
IST1145I	5	2	SER
IST1146I	5	2	WARN
IST1147I	5	2	WARN
IST1148I	5	2	WARN
IST1149I	4	8	NORM
IST1150I	5	8	NEVER
IST1151I	5	8	NEVER
IST1152I	5	2	NORM
IST1153I	5	2	NEVER
IST1154I	5	2	NEVER
IST1155I	5	2	SER
IST1156I	5	2	NEVER
IST1157I	3	2	WARN
IST1158I	5	2	NEVER
IST1159I	5	2	NEVER
IST1160I	5	2	NEVER
IST1161I	5	2	NEVER
IST1162I	5	2	NEVER
IST1163I	5	2	NEVER
IST1164I	5	2	NEVER
IST1166I	5	2	WARN
IST1167I	5	2	WARN
IST1168I	5	2	NEVER
IST1169E	11	2	NEVER
IST1174I	4	2	NORM
IST1175I	5	2	WARN
IST1176I	5	2	NEVER
IST1177I	5	2	NEVER
IST1183I	5	2	SER
IST1184I	5	2	NEVER
IST1185I	5	2	NEVER
IST1186I	5	2	NEVER
IST1187I	5	2	SER
IST1188I	5	2	NEVER
IST1189I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1190I	3	2	NORM
IST1191I	3	2	NORM
IST1192I	3	2	NORM
IST1193I	3	2	SER
IST1194I	3	2	WARN
IST1196I	5	2	NORM
IST1197I	5	2	NORM
IST1198I	5	2	NORM
IST1199I	5	2	WARN
IST1200I	5	2	NEVER
IST1201I	5	2	SER
IST1202I	5	2	NEVER
IST1203I	5	2	NEVER
IST1204I	5	2	NEVER
IST1205I	5	2	WARN
IST1206I	5	2	WARN
IST1207I	5	2	WARN
IST1208I	5	2	WARN
IST1209I	5	2	WARN
IST1211I	4	2,8,10	WARN
IST1212I	5	2,8	NEVER
IST1213I	5	2	WARN
IST1214I	5	2	WARN
IST1215I	5	2	NEVER
IST1216A	2	1	NEVER
IST1217A	2	1	NEVER
IST1218I	5	2	NEVER
IST1219I	5	2	NEVER
IST1220I	5	8	NEVER
IST1221I	5	2	NEVER
IST1222I	4	2	WARN
IST1223I	5	2	NEVER
IST1224I	5	2	NEVER
IST1225I	5	2	NEVER
IST1226I	5	2	WARN
IST1227I	5	2	NEVER
IST1228I	5	2	WARN
IST1229I	5	2	WARN
IST1230I	4	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1231I	4	2	NEVER
IST1232I	4	2	NEVER
IST1233I	4	2	NEVER
IST1234I	4	2	NEVER
IST1235I	4	2	NEVER
IST1236I	5	2	NEVER
IST1237I	5	2	NEVER
IST1238I	5	2	NEVER
IST1239I	5	2	NEVER
IST1240I	5	2	NEVER
IST1241I	5	2	NEVER
IST1242I	5	2	NEVER
IST1243I	5	2	NEVER
IST1244I	5	2	NEVER
IST1245I	5	2	SER
IST1246I	5	2	SER
IST1247I	5	2	SER
IST1248I	5	2	NEVER
IST1249I	5	2	WARN
IST1250I	5	2	NEVER
IST1251I	5	2	NEVER
IST1252I	5	2	NEVER
IST1253I	5	2	NEVER
IST1254I	5	2	NEVER
IST1255I	5	2	NEVER
IST1256I	5	2	NEVER
IST1257I	5	2	WARN
IST1258I	5	2	WARN
IST1259I	5	2	WARN
IST1260I	5	2	WARN
IST1261I	3	2	NEVER
IST1262I	5	2	NEVER
IST1263I	5	2	WARN
IST1264I	5	2	SER
IST1265I	5	2	SER
IST1266I	5	2	INFO
IST1267I	5	2	SER
IST1268I	5	2	NORM
IST1269I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST1270I	5	2	SER
IST1271I	5	2	INFO
IST1272I	5	2	WARN
IST1273I	5	2	SER
IST1274I	5	2	SER
IST1275I	5	2	NORM
IST1276I	5	8	NEVER
IST1277I	5	2	NORM
IST1278I	4	8	INFO
IST1279I	5	2	WARN
IST1280I	5	2	SER
IST1281I	5	8	SER
IST1282I	4	2	INFO
IST1283I	5	2	NEVER
IST1284I	5	2	NEVER
IST1285I	5	2	NORM
IST1286I	5	2	INFO
IST1287I	5	2	INFO
IST1288I	5	2	WARN
IST1289I	5	2	INFO
IST1290I	5	2	INFO
IST1291I	5	2	NEVER
IST1292I	5	2	NEVER
IST1293I	5	2	NEVER
IST1294I	5	2	INFO
IST1295I	5	2	NEVER
IST1296I	5	2	NEVER
IST1297I	5	2	NEVER
IST1298I	5	2	NEVER
IST1299I	5	2	NEVER
IST1300I	5	2	NEVER
IST1301I	5	2	NEVER
IST1302I	5	2	NEVER
IST1303I	5	2	NEVER
IST1304I	5	2	NEVER
IST1305I	5	2	NEVER
IST1306I	5	2	NEVER
IST1307I	5	2	NEVER
IST1308I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1309I	5	2	NEVER
IST1310I	5	2	NEVER
IST1311A	1	2	NEVER
IST1312I	5	2	NEVER
IST1313I	5	2	NEVER
IST1314I	5	2	NEVER
IST1315I	5	2	NEVER
IST1316I	5	2	NEVER
IST1317I	5	2	NEVER
IST1318I	5	2	NEVER
IST1319I	5	2	NEVER
IST1320I	5	2	SER
IST1321I	5	2	NEVER
IST1322I	5	2	NEVER
IST1323I	5	2	NEVER
IST1324I	5	2	NEVER
IST1326I	5	2	NEVER
IST1327I	5	2	NEVER
IST1328I	5	2	NEVER
IST1329I	5	2	NEVER
IST1330I	5	2	INFO
IST1331I	5	2	SER
IST1332I	5	2	WARN
IST1333I	5	2	NEVER
IST1334I	5	2	WARN
IST1335I	5	2	WARN
IST1336I	5	2	INFO
IST1337I	5	2	INFO
IST1338I	5	2	INFO
IST1342I	5	8	NEVER
IST1343I	5	8	NEVER
IST1345I	5	2	NEVER
IST1346I	5	2	WARN
IST1347I	5	2	NORM
IST1348I	5	2	NEVER
IST1349I	5	2	NEVER
IST1350I	5	2	WARN
IST1351I	5	2	NEVER
IST1352I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1353I	5	2	NEVER
IST1354I	5	2	NEVER
IST1355I	5	2	NEVER
IST1356I	5	2	SER
IST1357I	5	2	NEVER
IST1358I	5	2	NEVER
IST1359I	5	2	NEVER
IST1360I	5	2	NEVER
IST1361I	5	2	SER
IST1363I	5	2	NEVER
IST1364I	5	2	NEVER
IST1365I	5	2	WARN
IST1366I	5	2	WARN
IST1367I	5	2	NEVER
IST1368I	5	2	NEVER
IST1369I	5	2	NEVER
IST1370I	5	2	NEVER
IST1372I	5	2	NEVER
IST1373I	5	2	NEVER
IST1374I	5	2	NEVER
IST1375I	5	2	NEVER
IST1376I	5	2	NEVER
IST1377I	5	2	NEVER
IST1378I	5	8	NEVER
IST1380I	5	2	WARN
IST1381I	5	2	WARN
IST1382I	5	2	NEVER
IST1383I	5	2	NEVER
IST1385I	5	2	INFO
IST1386I	5	2	INFO
IST1391I	5	2	NORM
IST1392I	5	2	NORM
IST1393I	5	2	NEVER
IST1394I	4	8	SER
IST1395I	5	2	NEVER
IST1396I	5	2	SER
IST1397I	5	2	SER
IST1398I	5	2	SER
IST1399I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST1400I	5	8	NEVER
IST1401I	5	2	NEVER
IST1402I	5	2	NEVER
IST1403I	5	2	NEVER
IST1404I	5	2	NEVER
IST1405I	5	2	NEVER
IST1406I	5	8	NEVER
IST1408I	5	2	NEVER
IST1409I	5	2	NEVER
IST1410I	5	2	NEVER
IST1411I	4	8	WARN
IST1412I	4	8	INFO
IST1413I	5	2	NORM
IST1414I	5	2	NORM
IST1415I	5	2	NEVER
IST1416I	4	2,8	WARN
IST1417I	3	2	NEVER
IST1418I	5	2	NEVER
IST1419I	5	2	INFO
IST1420I	5	2	INFO
IST1421I	5	8	WARN
IST1422I	5	2	NEVER
IST1423I	2	5	SER
IST1424I	5	2	NEVER
IST1425I	5	2	NEVER
IST1426I	5	2	NEVER
IST1427I	5	2	NEVER
IST1430I	8	4	INFO
IST1431I	5	2	NEVER
IST1432I	5	8	NEVER
IST1433I	2	5	SER
IST1434I	5	2	NEVER
IST1435I	5	2	NEVER
IST1436I	4	8	INFO
IST1437I	5	2	INFO
IST1438I	5	2	NEVER
IST1439I	11	2	NEVER
IST1440I	5	2	INFO
IST1441I	5	2	INFO

Message identifier	Descriptor code	Routing code	Suppression level
IST1442I	5	2	INFO
IST1443I	5	2	WARN
IST1444I	5	2	WARN
IST1445I	5	8	NEVER
IST1446I	5	2	WARN
IST1447I	5	2	NEVER
IST1449I	3	2	INFO
IST1450I	5	2	NEVER
IST1451I	5	2	NEVER
IST1452I	3	2	INFO
IST1453I	5	2	NEVER
IST1454I	5	2	NEVER
IST1455I	4	2	INFO
IST1456I	4	2	INFO
IST1457I	5	2	NEVER
IST1458I	5	2	NEVER
IST1459I	5	2	NEVER
IST1460I	5	2	NEVER
IST1461I	5	2	NEVER
IST1462I	5	2	NEVER
IST1463I	5	2	NEVER
IST1464I	5	2	NEVER
IST1465I	5	2	NEVER
IST1466I	5	2	NEVER
IST1467I	5	2	NEVER
IST1468I	5	2	NEVER
IST1469I	5	2	NEVER
IST1470I	5	2	NEVER
IST1471I	5	2	NEVER
IST1472I	5	2	NEVER
IST1473I	5	2	NEVER
IST1474I	5	2	NEVER
IST1475I	3	2	NEVER
IST1476I	5	2	NEVER
IST1477I	5	2	NEVER
IST1478I	5	2	NEVER
IST1479I	5	2	NEVER
IST1480I	5	2	NEVER
IST1481I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1482I	5	2	NEVER
IST1483I	5	2	NEVER
IST1484I	5	2	NEVER
IST1485I	5	2	NEVER
IST1486I	5	2	NEVER
IST1487I	5	2	NEVER
IST1488I	5	2	NEVER
IST1489I	5	2	NEVER
IST1490I	5	2	NEVER
IST1493I	5	2	NEVER
IST1494I	5	2	NEVER
IST1495I	5	2	NEVER
IST1496I	5	2	SER
IST1497I	5	2	NEVER
IST1498I	5	2,8	NEVER
IST1499I	4	2	NEVER
IST1500I	5	8	NEVER
IST1509I	5	2	NEVER
IST1510I	5	2	NEVER
IST1511I	5	2	NEVER
IST1514I	5	2	NEVER
IST1515I	5	2	NORM
IST1516I	5	2	NEVER
IST1517I	5	2	NEVER
IST1518I	5	2	NEVER
IST1519I	5	2	NEVER
IST1520I	5	2	NEVER
IST1521I	5	2	NEVER
IST1522I	5	2	NEVER
IST1523I	5	2	NEVER
IST1524I	5	2	NEVER
IST1525I	5	2	NEVER
IST1526I	5	2	NEVER
IST1527I	5	2	NEVER
IST1528I	5	2	NEVER
IST1529I	5	2	NEVER
IST1530I	5	2	NEVER
IST1531I	5	2	NEVER
IST1532I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1533I	5	2	NEVER
IST1534I	5	2	NEVER
IST1535I	5	2	NEVER
IST1536I	5	2	NEVER
IST1537I	5	2	NEVER
IST1538I	5	2	NEVER
IST1539I	5	2	NEVER
IST1540I	5	2	NEVER
IST1541I	5	2	NEVER
IST1542I	5	2	NEVER
IST1543I	5	2	NEVER
IST1544I	4	8	SER
IST1545I	5	2	NEVER
IST1546I	5	2	NEVER
IST1547I	5	2	NEVER
IST1548I	5	2	NEVER
IST1549I	5	2	NEVER
IST1550I	5	2	NEVER
IST1551I	5	2	NEVER
IST1552I	5	2	NEVER
IST1553I	5	2	NEVER
IST1554I	5	2	NEVER
IST1555I	5	2	NEVER
IST1556I	5	2	SER
IST1557I	5	2	NEVER
IST1558I	5	2	SER
IST1559I	5	2	NEVER
IST1560I	5	2	NEVER
IST1561I	5	2	NEVER
IST1562I	5	2	SER
IST1563I	5	2	NEVER
IST1564I	5	2	NEVER
IST1565I	5	2	NEVER
IST1566I	5	2	NEVER
IST1567I	5	2	NEVER
IST1568I	4	2	NEVER
IST1569I	4	2	NEVER
IST1570I	4	2	NEVER
IST1571I	5	8	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1572I	5	8	NEVER
IST1573I	5	8	NEVER
IST1574I	5	8	NEVER
IST1575I	5	2	NEVER
IST1576I	5	2	NEVER
IST1577I	5	2	NEVER
IST1578I	5	2	NEVER
IST1579I	5	2	NEVER
IST1580I	5	8	SER
IST1582I	5	8	SER
IST1583I	5	8	SER
IST1584I	5	8	SER
IST1585I	5	8	SER
IST1586I	5	8	SER
IST1587I	5	2	NEVER
IST1588I	5	2	NEVER
IST1589I	9	8	NEVER
IST1590I	5	2	SER
IST1591I	5	2	SER
IST1592I	5	2	SER
IST1593I	5	2	SER
IST1594I	5	2	SER
IST1595I	5	2	SER
IST1596I	5	2	SER
IST1597I	5	2	SER
IST1598I	5	2	SER
IST1599I	5	2	SER
IST1600I	5	2	SER
IST1601I	3	2	SER
IST1602I	5	2	SER
IST1603I	5	2	SER
IST1604I	5	2	SER
IST1605I	5	2	SER
IST1606I	5	2	SER
IST1607I	5	2	SER
IST1608I	5	2	SER
IST1609I	5	2	SER
IST1610I	5	2	SER
IST1611I	5	2	SER

Message identifier	Descriptor code	Routing code	Suppression level
IST1612I	5	2	SER
IST1613I	4	2	NEVER
IST1614I	4	2	NEVER
IST1615I	4	2	NEVER
IST1616I	4	2	NEVER
IST1617I	4	2	NEVER
IST1618I	4	2	NEVER
IST1619I	4	2	NEVER
IST1621I	5	2	SER
IST1622I	5	2	NEVER
IST1623I	5	2	NEVER
IST1624I	5	2	NEVER
IST1625I	5	8	NEVER
IST1626I	5	2	INFO
IST1627I	5	2	INFO
IST1628I	5	2	INFO
IST1629I	5	2	NEVER
IST1630I	5	2	SER
IST1631I	5	2	SER
IST1632I	5	2	NEVER
IST1633I	5	2	NEVER
IST1634I	5	2	NEVER
IST1635I	5	2	NEVER
IST1636I	5	2	NEVER
IST1637I	5	2	NEVER
IST1638I	5	2	NEVER
IST1639I	5	2	NEVER
IST1640I	5	2	NEVER
IST1641I	5	2	NEVER
IST1642I	5	2	NEVER
IST1643I	5	2	NEVER
IST1644I	5	2	NEVER
IST1645I	5	2	NEVER
IST1649I	5	2	NEVER
IST1650I	5	8	SER
IST1651I	5	8	SER
IST1652I	5	8	SER
IST1653I	4	2	NEVER
IST1654I	4	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1655I	4	2	NEVER
IST1656I	5	8	INFO
IST1657I	5	8	INFO
IST1658I	5	8	SER
IST1660I	3	2,9	NEVER
IST1661I	5	2	NEVER
IST1662I	5	2	NEVER
IST1663I	5	2	NEVER
IST1664I	5	2	NEVER
IST1668I	5	2	NEVER
IST1669I	5	2	NEVER
IST1670I	5	2	NEVER
IST1671I	5	2	NEVER
IST1672I	4	2	NEVER
IST1674I	4	2	NEVER
IST1675I	4	2	NEVER
IST1676I	4	2	NEVER
IST1679I	5	2	INFO
IST1680I	5	2	INFO
IST1681I	5	2	INFO
IST1682I	5	2	SER
IST1683I	5	2	SER
IST1684I	5	2	SER
IST1685I	5	2	INFO
IST1686I	5	2	SER
IST1687I	5	2	SER
IST1688I	5	2	WARN
IST1689I	5	2	NEVER
IST1690I	5	2	NEVER
IST1691I	5	2	NEVER
IST1692I	5	8	NEVER
IST1693I	5	8	WARN
IST1694I	4	8	INFO
IST1695I	5	2	NEVER
IST1696I	5	2	NEVER
IST1697I	5	2	NEVER
IST1698I	5	2	WARN
IST1700I	5	2	WARN
IST1701I	5	2	INFO

Message identifier	Descriptor code	Routing code	Suppression level
IST1702I	5	2	INFO
IST1703I	5	2	INFO
IST1704I	5	2	NEVER
IST1705I	5	2	NEVER
IST1706I	5	2	NEVER
IST1707I	5	2	NEVER
IST1708I	5	2	NEVER
IST1709I	5	2	NEVER
IST1710I	5	2	NEVER
IST1711I	5	2	NEVER
IST1713I	5	2	NEVER
IST1714I	5	2	NEVER
IST1715I	5	8	NEVER
IST1716I	5	8	NEVER
IST1717I	5	2	NEVER
IST1718I	5	2	NEVER
IST1719I	5	2	NEVER
IST1720I	5	2	NEVER
IST1721I	5	2	NEVER
IST1722I	5	2	NEVER
IST1723I	5	2	NEVER
IST1724I	5	8	NEVER
IST1725E	5	2	NEVER
IST1726I	5	2	NEVER
IST1727I	5	2	NEVER
IST1728I	5	2	NEVER
IST1729I	5	2	NORM
IST1730I	5	2	NORM
IST1731I	5	2	SER
IST1732I	4	2	NEVER
IST1733I	5	2	NORM
IST1734I	4	2	NEVER
IST1736I	5	2	NEVER
IST1737I	5	2	NEVER
IST1738I	5	2	NEVER
IST1739I	5	2	NEVER
IST1740I	5	2	NEVER
IST1743I	5	2	WARN
IST1744I	5	2	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST1745I	2	5	SER
IST1746I	5	2	NEVER
IST1747I	5	2	NEVER
IST1748I	5	2	NEVER
IST1749I	2	5	SER
IST1750I	5	2	NEVER
IST1751I	5	2	NEVER
IST1752I	5	2	NEVER
IST1753I	5	2	NEVER
IST1754I	5	2	NEVER
IST1755I	5	2	NEVER
IST1756I	5	2	NEVER
IST1757I	5	2	NEVER
IST1758I	5	2	NEVER
IST1759I	5	2	NEVER
IST1760I	5	2	NEVER
IST1761I	5	8	SER
IST1762I	5	2	NEVER
IST1763I	5	2	INFO
IST1764I	5	2	INFO
IST1765I	5	2	INFO
IST1766I	5	2	INFO
IST1767I	5	2	INFO
IST1768I	5	2	INFO
IST1769I	5	2	INFO
IST1773I	5	2	NEVER
IST1774I	4	8	WARN
IST1775I	4	8	WARN
IST1776I	5	2	INFO
IST1777I	5	2	INFO
IST1778I	5	2	INFO
IST1779I	5	2	INFO
IST1780I	5	2	INFO
IST1781I	5	2	INFO
IST1782I	5	2	INFO
IST1783I	5	2	INFO
IST1784I	5	2	INFO
IST1785I	5	2	INFO
IST1786I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1787I	5	2	NEVER
IST1788I	5	2	NEVER
IST1789I	5	2	NEVER
IST1790I	5	2	NEVER
IST1791I	5	2	NEVER
IST1792I	5	2	NEVER
IST1793I	5	2	NEVER
IST1794I	5	2	NEVER
IST1795I	5	2	NEVER
IST1796I	5	2	NEVER
IST1797I	5	2	NEVER
IST1798I	5	2	INFO
IST1799I	5	2	SER
IST1800I	5	2	NEVER
IST1801I	5	2	NEVER
IST1802I	5	2	NEVER
IST1803I	5	2	INFO
IST1804I	5	2	INFO
IST1805I	5	2	INFO
IST1806I	5	2	NEVER
IST1807I	5	2	NEVER
IST1809I	5	2	INFO
IST1810I	5	2	NEVER
IST1811I	5	2	NEVER
IST1816I	5	2	NEVER
IST1817I	5	2	NEVER
IST1818I	5	2	NEVER
IST1819I	5	2	NEVER
IST1820I	5	2	NEVER
IST1821I	5	2	NEVER
IST1822I	5	2	NEVER
IST1823I	5	2	NEVER
IST1824I	5	2	NEVER
IST1825I	5	2	NEVER
IST1826I	5	2	NEVER
IST1827I	5	2	NEVER
IST1828I	5	2	NEVER
IST1829I	5	2	NEVER
IST1830I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1831I	5	2	NEVER
IST1832I	3	2	WARNING
IST1833I	3	2	WARNING
IST1834I	5	2	NEVER
IST1835I	5	2	NEVER
IST1836I	5	2	NEVER
IST1837I	5	2	NEVER
IST1838I	5	2	NEVER
IST1839I	5	2	NEVER
IST1841I	5	2	NEVER
IST1842I	5	2	NEVER
IST1843I	5	2	NEVER
IST1844I	5	2	NEVER
IST1845I	5	2	NEVER
IST1846I	5	2	NEVER
IST1847I	5	2	NEVER
IST1848I	5	2	NEVER
IST1849I	5	2	NEVER
IST1850I	5	2	NEVER
IST1851I	5	2	NEVER
IST1852I	5	2	NEVER
IST1853I	5	2	NEVER
IST1854I	5	2	NEVER
IST1855I	5	2	NEVER
IST1856I	5	2	NEVER
IST1857I	5	2	NEVER
IST1858I	5	2	NEVER
IST1859I	5	2	NEVER
IST1860I	5	2	NEVER
IST1861I	5	2	NEVER
IST1862I	5	2	NEVER
IST1863I	5	2	NEVER
IST1864I	5	2	NEVER
IST1865I	5	2	NEVER
IST1866I	5	2	NEVER
IST1867I	5	2	NEVER
IST1868I	5	2	NEVER
IST1869I	5	2	NEVER
IST1870I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1871I	5	2	NORM
IST1872I	5	2	NORM
IST1873I	5	2	NORM
IST1874I	5	2	NORM
IST1875I	5	2	NORM
IST1876I	5	2	NORM
IST1877I	5	2	NORM
IST1878I	5	2	NORM
IST1879I	5	2	NORM
IST1880I	5	2	NORM
IST1881I	5	2	NORM
IST1882I	5	2	NORM
IST1883I	4	8	INFO
IST1884I	4	8	INFO
IST1885I	5	2,8	NEVER
IST1886I	5	2	NEVER
IST1887I	5	2	NEVER
IST1888I	5	2	NEVER
IST1889I	3	2	SER
IST1890I	5	2	NEVER
IST1891I	5	2	NEVER
IST1892I	5	2	SER
IST1893I	5	2	WARN
IST1894I	5	2	WARN
IST1895I	5	2	WARN
IST1896I	5	2	NEVER
IST1897I	5	2	NEVER
IST1898I	5	2	NEVER
IST1899I	5	2	NEVER
IST1900I	5	2	NEVER
IST1901I	5	2	NEVER
IST1902I	5	2	NEVER
IST1903I	5	2	NEVER
IST1904I	5	2	NEVER
IST1905I	5	2	NEVER
IST1906I	5	2	NEVER
IST1907I	5	2	NEVER
IST1908I	5	2	NEVER
IST1909I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1910I	5	2	NEVER
IST1911I	5	2	NEVER
IST1912I	5	2	NEVER
IST1913I	5	2	NEVER
IST1914I	5	2	NEVER
IST1915I	5	2	NEVER
IST1916I	5	2	NEVER
IST1917I	5	2	NEVER
IST1919I	5	2	NEVER
IST1920I	5	2	NEVER
IST1921I	5	2	NEVER
IST1922I	5	2	NEVER
IST1923I	5	2	NEVER
IST1924I	5	2	NEVER
IST1925I	5	2	INFO
IST1926I	5	2	WARN
IST1927I	5	2	WARN
IST1928I	5	2	INFO
IST1929I	5	2	INFO
IST1930I	5	2	INFO
IST1931I	5	2	WARN
IST1932I	5	2	WARN
IST1933I	5	2	WARN
IST1940I	5	2	NEVER
IST1941I	5	2	NEVER
IST1942I	4	8	INFO
IST1943I	4	8	INFO
IST1944I	4	8	INFO
IST1945I	4	8	INFO
IST1946I	4	8	INFO
IST1947I	4	8	INFO
IST1948I	4	8	INFO
IST1949I	4	8	INFO
IST1950I	4	8	INFO
IST1951I	4	8	INFO
IST1952I	4	8	INFO
IST1953I	4	8	INFO
IST1954I	5	2	NEVER
IST1955I	4	2	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST1956I	4	2	WARN
IST1957I	4	2	WARN
IST1958I	5	2	NEVER
IST1959I	5	2	NEVER
IST1960I	5	2	NEVER
IST1961I	5	2	NEVER
IST1962I	5	2	NEVER
IST1963I	5	2	NEVER
IST1964I	5	2	NEVER
IST1965I	5	2	NEVER
IST1966I	5	2	NEVER
IST1967I	5	2	NEVER
IST1968I	5	2	NEVER
IST1969I	5	2	NEVER
IST1970I	5	2	NEVER
IST1971I	5	2	NEVER
IST1972I	5	2	NEVER
IST1973I	5	2	NEVER
IST1974I	5	2	NEVER
IST1975I	5	2	NEVER
IST1976I	5	2	NEVER
IST1977I	5	2	NEVER
IST1978I	5	2	NEVER
IST1979I	5	2	NEVER
IST1980I	5	2	NEVER
IST1981I	5	2	NEVER
IST1982I	5	2	NEVER
IST1983I	5	2	NEVER
IST1984I	5	2	NEVER
IST1985I	5	2	NEVER
IST1986I	5	2	NEVER
IST1987I	5	2	NEVER
IST1988I	5	2	NEVER
IST1989I	5	2	NEVER
IST1990I	5	2	NEVER
IST1991I	5	2	NEVER
IST1992I	5	2	NEVER
IST1993I	5	2	NEVER
IST1994I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST1995I	5	2	NEVER
IST1996I	5	2	NEVER
IST1997I	5	2	NEVER
IST1998I	5	2	NEVER
IST1999I	5	2	NEVER
IST2000I	5	2	NEVER
IST2001I	5	2	NEVER
IST2002I	5	2	NEVER
IST2003I	5	2	NEVER
IST2004I	5	2	NEVER
IST2005I	5	2	NEVER
IST2006I	5	2	NEVER
IST2007I	5	2	NEVER
IST2008I	5	2	NEVER
IST2009I	5	2	NEVER
IST2010I	5	2	NEVER
IST2011I	5	2	NEVER
IST2012I	5	2	NEVER
IST2013I	5	2	NEVER
IST2014I	5	2	NEVER
IST2015I	5	2	NEVER
IST2016I	5	2	NEVER
IST2017I	5	2	NEVER
IST2018I	5	2	NEVER
IST2019I	5	2	NEVER
IST2020I	5	2	NEVER
IST2021I	5	2	NEVER
IST2022I	5	2	NEVER
IST2023I	5	2	NEVER
IST2024I	5	2	NEVER
IST2025I	5	2	NEVER
IST2026I	5	2	NEVER
IST2027I	5	2	NEVER
IST2028I	5	2	NEVER
IST2029I	5	2	NEVER
IST2030I	5	2	NEVER
IST2031I	5	2	NEVER
IST2032I	5	2	NEVER
IST2033I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2034I	5	2	NEVER
IST2035I	5	2	NEVER
IST2036I	5	2	NEVER
IST2037I	5	2	NEVER
IST2038I	5	2	NEVER
IST2039I	5	2	NEVER
IST2040I	5	2	NEVER
IST2041I	5	2	NEVER
IST2042I	5	2	NEVER
IST2043I	5	2	NEVER
IST2044I	5	2	NEVER
IST2045I	5	2	NEVER
IST2046I	4	2	NEVER
IST2047I	5	2	NEVER
IST2048I	5	2	NEVER
IST2049I	5	2	NEVER
IST2050I	5	2	NEVER
IST2052I	5	2	NEVER
IST2054I	5	2	NEVER
IST2055I	5	2	NEVER
IST2056I	5	2	NEVER
IST2057I	5	2	NEVER
IST2058I	3	2	NEVER
IST2059I	5	2	NEVER
IST2061I	4	2	NEVER
IST2062I	4	2	NEVER
IST2063I	4	2	NEVER
IST2064I	5	2	NEVER
IST2065I	5	2	NEVER
IST2066I	5	2	NEVER
IST2067I	5	2	NEVER
IST2068I	5	2	NEVER
IST2069I	5	2	NEVER
IST2070I	5	2	NEVER
IST2071I	5	2	NEVER
IST2072I	5	2	NEVER
IST2073I	5	2	NEVER
IST2074I	5	2	NEVER
IST2075I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2076I	5	2	NEVER
IST2077I	5	2	NEVER
IST2078I	5	2	NEVER
IST2079I	5	2	NEVER
IST2080I	5	2	NEVER
IST2081I	5	2	NEVER
IST2082I	5	2	NEVER
IST2083I	5	2	NEVER
IST2084I	5	2	NEVER
IST2085I	5	2	NEVER
IST2086I	5	2	NEVER
IST2087I	5	2	NEVER
IST2088I	5	2	NEVER
IST2089I	5	2	NEVER
IST2090I	5	2	NEVER
IST2091I	5	2	NEVER
IST2092I	5	2	NEVER
IST2093I	5	2	INFO
IST2094I	5	2	NEVER
IST2095I	5	2	NEVER
IST2096I	5	2	INFO
IST2097I	5	2	INFO
IST2098I	5	2	INFO
IST2099I	5	2	INFO
IST2100I	5	2	INFO
IST2101I	5	2	INFO
IST2102I	4	8	INFO
IST2103I	4	8	INFO
IST2104I	4	8	INFO
IST2105I	5	2	SER
IST2106I	5	8	SER
IST2107I	5	8	SER
IST2108I	5	8	SER
IST2109I	5	8	SER
IST2110I	5	8	SER
IST2111I	5	8	SER
IST2113I	5	2	NEVER
IST2114I	5	2	NEVER
IST2116I	4	2	WARN

Message identifier	Descriptor code	Routing code	Suppression level
IST2117I	4	2	WARN
IST2118I	4	2	WARN
IST2119I	5	2	NEVER
IST2120I	5	2	NEVER
IST2121I	5	2	NEVER
IST2122I	5	2	NEVER
IST2123I	5	2	NEVER
IST2124I	5	2	NEVER
IST2125I	5	2	NEVER
IST2126I	5	2	NEVER
IST2127I	5	2	NEVER
IST2128I	5	2	NEVER
IST2129I	5	2	NEVER
IST2130I	5	2	NEVER
IST2131I	5	2	NEVER
IST2132I	5	2	NEVER
IST2133I	5	2	NEVER
IST2134I	5	2	NEVER
IST2135I	5	2	NEVER
IST2136I	5	2	NEVER
IST2137I	5	2	NEVER
IST2138I	5	2	NEVER
IST2139I	5	2	NEVER
IST2140I	5	2	NEVER
IST2141I	5	2	NEVER
IST2142I	5	2	NEVER
IST2143I	5	2	NEVER
IST2144I	5	2	NEVER
IST2145I	5	2	NEVER
IST2146I	5	2	NEVER
IST2147I	5	2	NEVER
IST2148I	5	2	NEVER
IST2149I	5	2	NEVER
IST2150I	5	2	NEVER
IST2151I	5	2	NEVER
IST2152I	5	2	NEVER
IST2153I	5	2	NEVER
IST2154I	5	2	NEVER
IST2155I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2156I	5	2	NEVER
IST2157I	5	2	NEVER
IST2158I	4	2	INFO
IST2159I	5	2	INFO
IST2160I	5	2	SER
IST2161I	5	8	NEVER
IST2162I	5	2	WARN
IST2163I	5	2	WARN
IST2164I	5	2	WARN
IST2165I	5	2	WARN
IST2166I	5	2	WARN
IST2167I	5	2	WARN
IST2168I	5	2	WARN
IST2169I	5	2	WARN
IST2170I	5	2	WARN
IST2171I	5	2	WARN
IST2172I	5	2	WARN
IST2173I	5	2	WARN
IST2174I	5	2	WARN
IST2175I	5	2	WARN
IST2176I	5	2	WARN
IST2177I	5	2	WARN
IST2178I	5	2	NEVER
IST2179I	4	8	SER
IST2180I	6	2	NORM
IST2181I	5	2	INFO
IST2182I	5	2	NEVER
IST2183I	5	2	NEVER
IST2184I	5	2	NEVER
IST2185I	5	2	NEVER
IST2186I	5	2	NEVER
IST2187I	5	2	NEVER
IST2188I	5	2	NEVER
IST2189I	5	2	NEVER
IST2190I	5	2	NEVER
IST2191I	5	2	NEVER
IST2192I	5	2	NEVER
IST2193I	5	2	NEVER
IST2194I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2195I	5	2	NEVER
IST2196I	5	2	NEVER
IST2197I	5	2	NEVER
IST2198I	5	2	NEVER
IST2199I	5	2	NEVER
IST2200I	5	2	NEVER
IST2201I	5	2	NEVER
IST2202I	5	2	NEVER
IST2203I	5	2	NEVER
IST2204I	5	2	NEVER
IST2205I	5	2	NEVER
IST2206I	5	2	NEVER
IST2207I	5	2	NEVER
IST2208I	5	2	NEVER
IST2209I	5	2	NEVER
IST2210I	5	2	NEVER
IST2211I	5	2	NEVER
IST2212I	5	2	NEVER
IST2213I	5	2	NEVER
IST2214I	5	2	NEVER
IST2215I	5	2	NEVER
IST2216I	5	2	NEVER
IST2217I	5	2	NEVER
IST2218I	5	2	NEVER
IST2219I	5	2	NEVER
IST2220I	5	2	NEVER
IST2221I	5	2	NEVER
IST2222I	5	2	WARN
IST2223I	5	2	WARN
IST2224I	5	2	NEVER
IST2225I	5	2	NEVER
IST2226I	5	2	NEVER
IST2227I	5	2	NEVER
IST2229I	5	2	NEVER
IST2230I	5	2	NEVER
IST2231I	5	2	NEVER
IST2232I	5	2	NEVER
IST2233I	5	2	NEVER
IST2234I	5	2	NORM

Message identifier	Descriptor code	Routing code	Suppression level
IST2235I	5	2	NORM
IST2236I	5	2	NEVER
IST2237I	5	2	NEVER
IST2238I	5	2	NEVER
IST2239I	5	2	NEVER
IST2240I	5	2	NORM
IST2241I	5	2	NEVER
IST2242I	5	2	NEVER
IST2243I	4	2	SER
IST2244I	5	2	NEVER
IST2245I	4	2	WARN
IST2246I	4	2	NEVER
IST2247I	4	2	NEVER
IST2248I	5	2	NEVER
IST2249I	5	2	NEVER
IST2250I	5	2	NEVER
IST2251I	5	2	NEVER
IST2252I	5	2	NEVER
IST2253I	4	2	WARN
IST2254I	4	2,10	WARN
IST2255I	4	2,10	WARN
IST2256I	4	2,10	WARN
IST2257I	5	2	NEVER
IST2258I	5	2	NEVER
IST2259I	5	2	NEVER
IST2260I	5	2	NEVER
IST2261I	5	2	NEVER
IST2262I	5	2	NEVER
IST2263I	5	2	NEVER
IST2264I	5	2	NEVER
IST2265I	5	2	INFO
IST2266I	6	2	NEVER
IST2267I	5	2	NEVER
IST2268I	5	2	NEVER
IST2269I	5	2	NEVER
IST2270I	5	2	NEVER
IST2271I	5	2	NEVER
IST2272I	5	2	NEVER
IST2273E	11	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2274I	5	2	NEVER
IST2275I	5	2	NEVER
IST2276I	5	2	NEVER
IST2277I	5	2	NEVER
IST2278I	5	2	NEVER
IST2279I	5	2	NEVER
IST2280I	5	2	NEVER
IST2281I	5	2	NEVER
IST2282I	5	2	NEVER
IST2283I	5	2	NEVER
IST2284I	5	2	NEVER
IST2285I	5	2	NEVER
IST2286I	5	2	NEVER
IST2287I	5	2	NEVER
IST2288I	5	2	NEVER
IST2289I	5	2	NEVER
IST2290I	5	2	NEVER
IST2291I	5	2	NEVER
IST2292I	5	2	NEVER
IST2293I	5	2	NEVER
IST2294I	5	2	NEVER
IST2295I	5	2	NEVER
IST2296I	5	2	NEVER
IST2298I	4	2,8	NEVER
IST2299I	4	2,8	NEVER
IST2302I	5	2	NEVER
IST2303I	5	2	NEVER
IST2304I	5	2	NEVER
IST2305I	5	2	NEVER
IST2309I	5	2	NEVER
IST2310I	5	2	NEVER
IST2316I	5	2	NEVER
IST2317I	5	2	NEVER
IST2319I	5	2	NEVER
IST2320I	7,12	2	NEVER
IST2321I	5	2	NEVER
IST2322I	7,12	2	NEVER
IST2323E	11	2	NEVER
IST2324I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2325I	5	2	NEVER
IST2326I	5	2	NEVER
IST2327I	5	2	NEVER
IST2328I	5	2	NEVER
IST2329I	5	2	NEVER
IST2330I	5	2	NEVER
IST2331I	5	2	NEVER
IST2332I	5	2	NEVER
IST2333I	5	2	NEVER
IST2334I	5	2	NEVER
IST2335I	5	2	NEVER
IST2336I	5	2	NEVER
IST2337I	5	2	NEVER
IST2338I	5	2	NEVER
IST2339I	5	2	NEVER
IST2340I	5	2	NEVER
IST2341I	5	2	NEVER
IST2342I	5	2	INFO
IST2343I	5	2	NEVER
IST2344I	12	2,8	NEVER
IST2345I	12	2,8	NEVER
IST2346I	12	2,8	NEVER
IST2347I	12	2,8	NEVER
IST2348I	5	2	NEVER
IST2349I	5	2	NEVER
IST2350I	5	2	NEVER
IST2351I	5	2	NEVER
IST2352I	5	2	NEVER
IST2353I	5	2	NEVER
IST2354I	5	2	NEVER
IST2355I	5	2	NEVER
IST2356I	5	2	NEVER
IST2357I	5	2	NEVER
IST2358I	5	2	NEVER
IST2359I	5	2	NEVER
IST2360I	5	2	NEVER
IST2361I	5	2	NEVER
IST2362I	5	2	NEVER
IST2364I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2365I	5	2	NEVER
IST2366I	5	2	NEVER
IST2367I	5	2	NEVER
IST2368I	5	2	NEVER
IST2369I	5	2	NEVER
IST2370I	5	2	NEVER
IST2371I	5	2	NEVER
IST2372I	5	2	NEVER
IST2373I	5	2	NEVER
IST2374I	5	2	NEVER
IST2375I	5	2	NEVER
IST2376I	5	2	NEVER
IST2377I	5	2	NEVER
IST2378I	5	2	NEVER
IST2379I	5	2	NEVER
IST2380I	5	2	NEVER
IST2381I	5	2	NEVER
IST2382I	5	2	NEVER
IST2383I	5	2	NEVER
IST2384E	11	2	NEVER
IST2386I	5	2	NEVER
IST2387I	5	2	NEVER
IST2388I	5	2	NEVER
IST2389I	5	2	NEVER
IST2390I	5	2	NEVER
IST2391I	5	2	NEVER
IST2392I	5	2	NEVER
IST2393I	5	2	NEVER
IST2395I	5	2	NEVER
IST2396I	5	2	NEVER
IST2397I	5	2	NEVER
IST2398I	5	2	NEVER
IST2399I	5	2	NEVER
IST2400I	5	2	NEVER
IST2401I	5	2	NEVER
IST2402I	5	2	NEVER
IST2403I	5	2	NEVER
IST2404I	5	2	NEVER
IST2405I	5	2	NEVER

Message identifier	Descriptor code	Routing code	Suppression level
IST2406I	5	2	NEVER
IST2407I	5	2	NEVER
IST2408I	5	2	NEVER
IST2409I	5	2	NEVER
IST2410I	5	2	NEVER
IST2411I	5	2	NEVER
IST2412I	5	2	NEVER
IST2413I	5	2	NEVER
IST2414I	5	2	NEVER
IST2415I	5	2	NEVER
IST2416I	5	2	NEVER
IST2417I	5	2	NEVER
IST2418I	5	2	NEVER
IST2419I	5	2	NEVER
IST2420I	5	2	NEVER
IST2421I	5	2	NEVER
IST2422I	5	2	NEVER
IST2423I	5	2	NEVER
IST2424I	4	8,9	NEVER
IST2425I	4	8,9	NEVER
IST2426I	4	8,9	NEVER
IST2427I	4	8,9	NEVER
IST2428I	4	8,9	NEVER
IST2429I	4	8,9	NEVER
IST2430I	4	8,9	NEVER
IST2431I	4	8,9	NEVER
IST2432I	4	8,9	NEVER
IST2433I	5	2	NEVER
IST2434I	5	2	NEVER
IST2435I	5	2	NEVER
IST2436I	5	2	NEVER
IST2437I	5	2	NEVER
IST2438I	4	8,9	NEVER
IST2439I	4	8,9	NEVER
IST2440I	4	8,9	NEVER
IST2441I	4	8,9	NEVER
IST2445I	5	2	NEVER
IST2446I	5	2	NEVER

IUT VTAM operator messages

MVS identifier	Descriptor code	Routing code	Suppression level
IUT5000I	4	2	NEVER
IUT5001I	6	2	NEVER
IUT5002I	4	2	NEVER

IVT VTAM operator messages

MVS identifier	Descriptor code	Routing code	Suppression level
IVT5501I	5	2	NEVER
IVT5502I	5	2	NEVER
IVT5503I	5	2	NEVER
IVT5504I	5	2	NEVER
IVT5505I	5	2	NEVER
IVT5506I	5	2	NEVER
IVT5507I	5	2	NEVER
IVT5508I	5	2	NEVER
IVT5510I	5	2	NEVER
IVT5511I	5	2	NEVER
IVT5512I	5	2	NEVER
IVT5513I	5	2	NEVER
IVT5516I	5	2	NEVER
IVT5517I	5	2	NEVER
IVT5518I	5	2	NEVER
IVT5519I	5	2	NEVER
IVT5520I	5	2	NEVER
IVT5521I	5	2	NEVER
IVT5529I	5	2	NEVER
IVT5530I	5	2	NEVER
IVT5531I	5	2	NEVER
IVT5532I	5	2	NEVER
IVT5533I	5	2	NEVER
IVT5534I	5	2	NEVER
IVT5535I	5	2	NEVER
IVT5536I	5	2	NEVER
IVT5538I	5	2	NEVER
IVT5539I	5	2	NEVER
IVT5541I	5	2	NEVER
IVT5549I	5	2	NEVER

MVS identifier	Descriptor code	Routing code	Suppression level
IVT5551I	5	2	NEVER
IVT5553I	5	2	NEVER
IVT5554I	5	2	NEVER
IVT5556I	5	2	NEVER
IVT5557I	5	2	NEVER
IVT5558I	5	2	NEVER
IVT5559I	5	2	NEVER
IVT5560I	5	2	NEVER
IVT5561I	5	2	NEVER
IVT5562I	5	2	NEVER
IVT5563I	5	2	NEVER
IVT5564I	5	2	NEVER
IVT5565I	5	2	NEVER
IVT5566I	5	2	NEVER
IVT5567I	5	2	NEVER
IVT5568I	5	2	NEVER
IVT5569I	5	2	NEVER
IVT5570I	5	2	NEVER
IVT5571I	5	2	NEVER
IVT5572I	5	2	NEVER
IVT5573I	5	2	NEVER
IVT5574I	5	2	NEVER
IVT5575I	5	2	NEVER
IVT5576I	5	2	NEVER
IVT5577I	5	2	NEVER
IVT5578I	5	2	NEVER
IVT5579I	5	2	NEVER
IVT5580I	5	2	NEVER
IVT5581I	5	2	NEVER
IVT5582I	5	2	NEVER
IVT5583I	5	2	NEVER
IVT5584I	5	2	NEVER
IVT5585I	5	2	NEVER
IVT5586I	5	2	NEVER
IVT5587I	5	2	NEVER
IVT5588I	5	2	NEVER
IVT5589I	5	2	NEVER
IVT5590I	6	2	WARN
IVT5591I	6	2	WARN

MVS identifier	Descriptor code	Routing code	Suppression level
IVT5592I	6	2	WARN
IVT5593I	6	2	WARN
IVT5594I	5	2	NEVER
IVT5595I	5	2	NEVER
IVT5596I	5	2	NEVER
IVT5598I	5	2	NEVER
IVT5599I	5	2	NEVER
IVT5600I	5	2	NEVER
IVT5603I	5	2	WARN
IVT5604I	5	2	NEVER
IVT5605I	5	2	NEVER
IVT5606I	5	2	NEVER
IVT5607I	5	2	NEVER

Appendix D. Messages affected by the MSGLVL option

This appendix contains all messages affected by the MSGLVL Option.

General description

The MSGLEVEL start option or the MSGLVL operand on the USSMSG macro allows you to select the version of the message that VTAM issues.

- MSGLVL=BASE is the default and represents the pre-Version 4 message.
- MSGLVL=V4R1, MSGLVL=V4R2, or MSGLVL=V4R3 represents the new message or message group.

This option is valid only for those messages listed in this appendix.

See the z/OS Communications Server: SNA Resource Definition Reference for a description of the MSGLEVEL start option or the MSGLVL operand on the USSMSG macro.

Notes:

1. If you want the version 4 messages to be displayed, you must indicate MSGLVL=V4R1, V4R2, or V4R3.
2. If you use program operators that depend on the original BASE messages, you might want VTAM to issue the pre-Version 4 message to the program operators.

Differences between BASE and Version 4 messages

There are several differences between BASE and Version 4 messages:

Version 4 messages can display network-qualified resource names.

Resource variable fields were increased from 8 to 17 characters in the Version 4 messages to accommodate the display of network-qualified names. VTAM displays network-qualified names in the form *netid.name*.

BASE message might be replaced by more than one Version 4 message.

To provide more specific error information and to simplify automated operations, BASE messages might be replaced by more than one Version 4 message.

BASE messages IST059I, IST129I, and IST660I were replaced by more than one Version 4 message. See “Message text for BASE and Version 4 messages” on page 1206 for more information.

Node type was added in Version 4.

To provide more detailed information about the type of resource, a *nodetype* variable field was added to several Version 4 messages and message groups.

Text and variable field wording might not be identical in BASE and Version 4 messages.

In most cases, increasing the resource variable field to 17 characters caused the Version 4 message to exceed the desired length. Therefore, to prevent truncation of message text on some systems, the text and variable field wording of the new Version 4 message might not be identical to the BASE message it replaces.

In some cases, the BASE message wording has been changed so that the meaning of the text or variable field information is more specific or descriptive.

Note: The wording of most of the reasons in message IST225I (BASE) and message IST1137I (Version 4) are not identical. The following table maps *reason* in message IST225I to its Version 4 equivalent in message IST1137I.

Table 2. Reasons in IST225I (BASE) and IST1137I (V4R1)

IST225I BASE (default)	IST1137I version 4
ALSNAME PARAMETER OMITTED	ALSNAME NOT GIVEN
ALSNAME NOT VALID	ALSNAME NOT VALID
CALL SECURITY ERROR	SECURITY DATA ERROR
CURRENT LEVEL HIGHER	MUST BE MORE SECURE
DYNAMIC CDRSC NOT VALID	CDRSC IS DYNAMIC
INSUFFICIENT STORAGE	STORAGE SHORTAGE
INVALID MODEL LU	MODEL LU NOT VALID
INVALID STATE FOR CDRSC	CDRSC NOT ACTIVE
NODE HAS NO KEY	NODE KEY UNDEFINED
NO SUITABLE RESOURCES FOUND	RESOURCES NOT FOUND
NOT AN APPLICATION PROGRAM	MUST BE APPLICATION
REJECTED BY INSTALLATION EXIT	INSTALL EXIT REJECT
SECURITY MANAGER ERROR	SECURITY ERROR
SECURITY MANAGER NOT AVAILABLE	SUPPORT UNAVAILABLE
SUBORDINATE NODE PENDING INACT	DEACTIVATE PENDING
UNABLE TO ALLOCATE CDRSC	CDRSC NOT ALLOCATED
VTAM ERROR	VTAM ABEND
EXIT IS NOT FOUND	EXIT IS NOT FOUND
FUNCTION NOT SUPPORTED	INSTALL PROGRAM
FUNCTION NOT OPERATIONAL	PROGRAM NOT ACTIVE

Message text for BASE and Version 4 messages

The message explanation provides a description of the variable information in the message text. See Chapter 5, “IST messages for VTAM network operators IST001I – IST399I,” on page 43 for descriptions of the following messages.

Notes:

1. If you want the V4R1 messages to be displayed, you must indicate MSGLVL=V4R1 as a start option, even though you are running on a VTAM which is post-V4R1.
2. If MSGLVL=V4R2 is specified as a start option, the base messages that have no replacements will be displayed with the V4R1-level messages and the V4R2-level messages.

Message text for BASE and V4R2 or higher

BASE:

IST619I ID = %8 FAILED - RECOVERY IN PROGRESS

V4R2:

IST1416I ID = %17 FAILED - RECOVERY IN PROGRESS

Message text for BASE and Version 4

BASE:

IST059I %28 IGNORED - INSUFFICIENT STORAGE

Version 4:

IST1064I TRACE IGNORED, %17 - STORAGE SHORTAGE

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST059I %28 IGNORED - INSUFFICIENT STORAGE

Version 4:

IST1128I PATH %8 IGNORED, %17 - STORAGE SHORTAGE

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST072I %10 FOR ID = %8 FAILED DURING NETWORK DEFINITION

Version 4:

IST1264I %10 FOR %17 FAILED DURING DEFINITION

BASE:

IST073I %10 FOR ID = %8 FAILED - MORE POWERFUL REQUEST IN PROGRESS

Version 4:

IST1129I %10 FAILED, %17 - DEACTIVATE PENDING

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST074I %10 FOR ID = %8 FAILED - INSUFFICIENT STORAGE

Version 4:

IST1130I %10 FOR %17 FAILED - STORAGE SHORTAGE

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST082I DEVTYPE = %24 %27

Version 4:

IST1131I DEVICE = %12 %35

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST093I %8 ACTIVE

Version 4:

IST1132I %17 IS ACTIVE, TYPE = %17

BASE:

IST105I %8 NODE NOW INACTIVE

Version 4:

IST1133I %17 IS NOW INACTIVE, TYPE= %8 %9

BASE:

IST113I %8 IS A USERVAR WITH VALUE %8 IN NETWORK %8

Version 4:

IST1156I USERVAR %8 IN %8 HAS VALUE %17

BASE:

IST120I NODE %8 NOW HAS CONTROLLING LU %8

Version 4:

IST1134I %17 NOW HAS CONTROLLING LU %9 %8

BASE:

IST129I UNRECOVERABLE OR FORCED ERROR ON NODE %8 - VARY INACT SCHED

Version 4:

IST1135I FORCED VARY INACT SCHEDULED FOR %17

BASE:

IST129I UNRECOVERABLE OR FORCED ERROR ON NODE %8 -VARY INACT SCHED

Version 4:

IST1136I VARY INACT %17 SCHEDULED - UNRECOVERABLE ERROR

BASE:

IST186I %10 FOR ID = %8 CONTINUES COLD - CHECKPOINT DATA SET %15

Version 4:

IST1263I %10 FOR %17 FORCED COLD, %15

BASE:

IST187I %10 FOR ID = %8 FAILED - CHECKPOINT DATA SET %15

Version 4:

IST1265I %10 FOR %17 FAILED - %15

BASE:

IST225I %12 FOR ID = %8 FAILED - %30

Version 4:

IST1137I %11 FAILED, %17 - %19

BASE:

IST226I %10 FOR ID = %8 NOT EFFECTIVE DURING CURRENT OR QUEUED SESSIONS

Version 4:

IST1266I %10 FOR %17 AFFECTS NEW SESSIONS ONLY

BASE:

IST234I I/O ERROR %23

Version 4:

IST1211I I/O ERROR %17 %4 %4 %4

BASE:

IST262I %8 = %8, STATUS = %10

Version 4:

IST1212I %8 = %17 STATUS = %10

BASE:

IST264I REQUIRED %13 %8 %15

Version 4:

IST1138I REQUIRED %13 %32

BASE:

IST380I ERROR FOR ID = %8 - REQUEST: %10, SENSE: %8

Version 4:

IST1139I %10 FOR %17 FAILED - SENSE: %8

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST381I %10 FOR ID = %8 FAILED - CANNOT DEFINE NODE

Version 4:

IST1267I %10 FAILED - CANNOT DEFINE %17

BASE:

IST382I %10 FOR ID = %8 FAILED - STATE: %5 NOT VALID FOR REQUEST

Version 4:

IST1140I %10 FAILED %17 - STATE %5 NOT VALID

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST383I DEACTIVATION OF ID = %8 FAILED - REQUEST: %10 SENSE: %8

Version 4:

IST1268I %17 DEACTIVATION %10 FAILED: %8

BASE:

IST384I %10 FOR ID = %8 FAILED

Version 4:

IST1269I %10 FOR %17 FAILED

BASE:

IST414I %10 FOR ID = %8 FAILED - PROCESS UNAVAILABLE

Version 4:

IST1270I %10 FAILED - %17 NOT ACTIVE

BASE:

IST483I %8 %10, CDRM = %8, NETID = %8

Version 4:

IST1276I %17 %10 CDRM = %8

BASE:

IST487I %10 FOR ID = %8 SCHEDULED BY %10

Version 4:

IST1271I %10 FOR %17 SCHEDULED BY %10

BASE:

IST489I %10 FOR ID = %8 CONTINUES - CANNOT DEFINE NODE: %8

Version 4:

IST1272I %8 %8 CONTINUES - %17 UNDEFINED

BASE:

IST490I %10 FOR ID = %8 FAILED - %10 IN PROGRESS

Version 4:

IST1273I %10 %17 FAILED: %10 PENDING

BASE:

IST493I %10 FOR ID = %8 OVERRIDDEN BY %10

Version 4:

IST1141I %10 FOR %17 OVERRIDDEN BY %10

BASE:

IST511I TRACE REQUEST FAILED - %8 INVALID

Version 4:

IST1142I TRACE REQUEST FAILED - %17 NOT VALID

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST512I TRACE TERMINATED FOR NODE = %8 %18

Version 4:

IST1143I TRACE TERMINATED FOR %17 %18

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST513I TRACE INITIATED FOR NODE %8 %18

Version 4:

IST1144I TRACE INITIATED FOR %17 %18

IST1045I NODE TYPE = %17

IST314I END

BASE:

IST530I %10 PENDING %38

Version 4:

IST1436I RU PENDING:
IST1278I %10 PENDING %21 %26

BASE:

IST608I %10 FOR ID = %8 FAILED - HIGHER NODE: %8 NOT ACTIVE

Version 4:

IST1274I %10 %17 FAILED: %8 NOT ACTIVE

BASE:

IST627I %8 - INSUFFICIENT STORAGE

Version 4:

IST1145I TRACE REQUEST FAILED, %17 - STORAGE SHORTAGE
IST1045I NODE TYPE = %17
IST314I END

BASE:

IST660I %10 FOR ID = %8 FAILED - PARM: %15 NOT VALID

Version 4:

IST1146I %17 %10 U = %4 FAILED

BASE:

IST660I %10 FOR ID = %8 FAILED - PARM: %15 NOT VALID

Version 4:

IST1147I %17 %8 LOGON= %17 FAILED

BASE:

IST660I %10 FOR ID = %8 FAILED - PARM: %15 NOT VALID

Version 4:

IST1148I %17 %8 RNAME = %8 FAILED

BASE:

IST670I VARY %4 PROCESSING FOR ID = %8 COMPLETE

Version 4:

IST1149I VARY %4 PROCESSING FOR NODE %17 COMPLETE

BASE:

IST674I %10 FOR ID = %8 CONTINUES - PARM: %15 IGNORED

Version 4:

IST1275I %15 IGNORED ON %10 %17

BASE:

IST813I USERVAR %8 CHANGED FROM %8 TO %8

Version 4:

IST1150I %8 CHANGED: %17 TO %17

BASE:

IST825I USERVAR DEFINED - NAME = %8, VALUE = %8

Version 4:

IST1151I USERVAR %8 DEFINED: VALUE = %17

BASE:

IST886I %11 %8 %8 %8 %11 %13 FAILED

Version 4:

IST1277I %11 %8 %8 %17 %11 %13 FAILED

BASE:

IST919I NODE %8 NO LONGER HAS CONTROLLING LU %8

Version 4:

IST1152I %17 CONTROLLING LU %17 REMOVED

BASE:

IST930I %16 - %16 SESSION USING %4 OF %2BUF

Version 4:

IST1153I %17 %17 SESSION %2BUF USE %4

BASE:

IST939I VARY NOLOGON HAD NO EFFECT - %8 NOT FOUND FOR %8

Version 4:

IST1155I %17 VARY NOLOGON = %17 FAILED

BASE:

IST970I LU-LU VERIFICATION ERROR %2 FOR %26

Version 4:

IST1213I %35 LU-LU VERIFY ERROR %2

BASE:

IST988I %8 %8 %8 %8 %8 %8

Version 4:

IST1154I %17 %17 %17

BASE:

IST1082I GENERATED ADDRESS FOR %8 %11 FROM %8

Version 4:

IST1285I ADDRESS FOR %17 %11 FROM %8

Appendix E. Message text for VTAM operator messages

This appendix lists the text of VTAM operator messages for MVS.

For a description of variable information in the messages, see the individual message explanation.

Note: in the message text, a percent sign (%) represents a character that is reserved for variable information. The maximum length of the variable is indicated by a percent sign and a number (for example, %8). In some messages, if the variable information is shorter than the variable field, the extra blanks might be suppressed, causing the message text to shift to the left.

Message text for ELM logon manager network operator messages

The following table lists the message text for all ELM Logon Manager Network operator messages issued for MVS.

Message number	Text
ELM001I	REDEFINITION COMPLETE
ELM002I	LOGON MANAGER INITIALIZATION COMPLETED
ELM003I	NO SUBAREAS DETECTED IN CONFIGURATION DEFINITION
ELM004I	REDEFINITION IN PROGRESS —; COMMAND QUEUED
ELM005I	MEMBER REQUEST ACCEPTED
ELM006I	REDEFINITION IN PROGRESS
ELM007I	REDEFINITION UNSUCCESSFUL
ELM008I	REPLY TRUNCATED
ELM009I	STOP REQUEST ACCEPTED
ELM010I	INFO REQUEST ACCEPTED
ELM011I	MINLINK REQUEST ACCEPTED
ELM012I	SELECTED RESOURCE NOT FOUND
ELM013I	MINLINK REQUEST COMPLETED
ELM014I	NAME: TYP: STATUS: CURRENT: CONTROL: REASON: INITS:
ELM015I	NO PENDING RESOURCES FOUND
ELM016I	LOGON MANAGER CLOSEDOWN COMPLETED
ELM017I	REQUIRED STORAGE UNAVAILABLE
ELM018I	SA RECORD CAUSES MAXSUBA PARAMETER TO BE EXCEEDED
ELM019I	LMAPPL RECORD CAUSES MAXAPLC VALUE TO BE EXCEEDED
ELM020I	UNABLE TO ACCESS CONFIGURATION DEFINITION DATA SET MEMBER
ELM021I	ERROR ENCOUNTERED IN READING CONFIGURATION DEFINITION DATA SET MEMBER
ELM022I	HELP REQUEST ACCEPTED
ELM023I	VALID COMMAND PARAMETERS ARE:
ELM024I	HELP ...GET VALID COMMAND FORMATS
ELM025I	INFO,ID=NNNNNNNN ...GET STATUS FOR RESOURCE NAMED NNNNNNNN
ELM026I	INFO,ID=CLU ...GET STATUS FOR EACH CONTROL LOGICAL UNIT
ELM027I	INFO,ID=CLU,PEND ...GET STATUS FOR EACH PENDING CLU
ELM028I	INFO,ID=APPL ...GET STATUS FOR EACH SUPPORTED APPLICATION
ELM029I	INFO,ID=APPL,PEND ...GET STATUS FOR EACH PENDING APPL
ELM030I	INFO,ID=ALL ...GET STATUS FOR EACH CLU AND APPL
ELM031I	INFO,ID=ALL,PEND ...GET STATUS FOR EACH PENDING CLU AND APPL

Message number	Text
ELM032I	MEMBER=MMMMMMMM ...PROCESS DEFINITION MEMBER MMMMMMMMM
ELM033I	MINLINK=VVV,ID=ALL...SET MINLINK VALUE TO VVV (1-255)
ELM034I	FOR EACH SUPPORTED APPLICATION
ELM035I	MINLINK=VVV,ID=NNNNNNNNN ...SET MINLINK VALUE FOR APPL NNNNNNNNN
ELM036I	STOP ...REQUESTS CLOSEDOWN
ELM037I	LMAPPL RECORD IGNORED — WOULD CAUSE MAXAPLC LIMIT TO BE EXCEEDED
ELM040I	<i>name type status curop=curcnt conop=concnt reason inits</i>
ELM050I	SYNTAX ERROR [AFTER <i>keyword</i>] [AT <i>token</i>] IN <i>type</i>
ELM051I	INCORRECT VALUE SPECIFIED FOR <i>operand</i> IN <i>type</i>
ELM060I	NO VALID VALUE FOR PARAMETER <i>parameter</i> PROVIDED
ELM061I	CURRENT VALUE OF MEMBER PARAMETER IS <i>membername</i>
ELM062I	CURRENT VALUE OF MAXSUBA PARAMETER IS <i>value</i>
ELM063A	ENTER LOGON MANAGER START PARAMETERS (OR 'END')
ELM070I	<i>macro</i> FAILURE [FOR APPLICATION <i>applname</i>][,RETURN CODE <i>value</i>]
ELM075I	SESSION SETUP FOR <i>olu</i> TO <i>dlu</i> FAILED, SENSE = <i>code</i>
ELM080I	ATTACH FAILED FOR SUBTASK <i>taskname</i>
ELM081I	BUFFER STORAGE NOT AVAILABLE FOR RECEIVE FROM CLU <i>cluname</i>
ELM090I	SEND TO CLU <i>cluname</i> FAILED[, RC/FB= <i>value</i>]
ELM091I	RECEIVE FROM CLU <i>cluname</i> FAILED[, RC/FB= <i>value</i>]
ELM100I	ACB RELEASE-LEVEL VECTOR INDICATES INCORRECT VTAM LEVEL
ELM101A	ENTER 'CONTINUE' WHEN VTAM IS ACTIVE (OR 'END')
ELM110I	INITIALIZATION UNSUCCESSFUL

Message text for IKT TSO/VTAM network operator and terminal user messages

The following table lists the message text for all IKT TSO/VTAM Network Operator and Terminal User messages issued for MVS.

Message number	Text
IKT001D	<i>nnnn</i> USER(S) ACTIVE REPLY 'U', 'SIC', OR 'FSTOP'
IKT002I	TCAS IS TERMINATING, REASON CODE= <i>code</i>
IKT003D	TCAS UNABLE TO ACCEPT LOGONS, REASON CODE= <i>code</i> REPLY 'RETRY' OR 'TERM'
IKT004D	INVALID PARAMETERS SPECIFIED, RESPECIFY OR REPLY 'U'
IKT005I	TCAS IS INITIALIZED
IKT006I	TCAS ENDED
IKT007I	TCAS ACCEPTING LOGONS
IKT008I	TCAS NOT ACCEPTING LOGONS
IKT009I	TPEND HAS OCCURRED, TCAS TERMINATION IN PROGRESS
IKT010D	<i>nnnn</i> USER(S) ACTIVE, REPLY 'SIC' OR 'FSTOP'
IKT011I	TCAS UNABLE TO {ACCEPT QUIESCE} LOGONS, REASON CODE= <i>code</i>
IKT012D	TCAS TERMINATION IN PROGRESS — SPECIFY 'U' OR 'DUMP'
IKT013I	PARAMETER FILE CANNOT BE OPENED - DEFAULT PARAMETERS USED
IKT014I	I/O ERROR READING MEMBER <i>member_name</i> - DEFAULT PARAMETERS USED
IKT015I	MODIFY COMMAND REJECTED, INVALID PARAMETERS SPECIFIED
IKT016D	INVALID REPLY — RESPECIFY
IKT017I	FILE FOR PRINTING TSO/VTAM TIME SHARING PARAMETERS CANNOT BE OPENED
IKT018I	I/O ERROR PRINTING TSO/VTAM TIME SHARING PARAMETERS, PRINTING STOPPED
IKT020I	TCAS CONSOLE COMMUNICATION TASK ABENDED, RECOVERY IN PROGRESS

Message number	Text
IKT026D	TCAS ABEND IN PROGRESS — SPECIFY 'U' OR 'DUMP'
IKT028I	RC= <i>aabcc</i> SENSE= <i>code</i> TERMINAL <i>termid</i> CANNOT BE CONNECTED OR RELEASED BY VTAM
IKT029I	RC= <i>aabcc</i> SENSE= <i>code</i> TERMINAL <i>termid</i> ABOUT TO BE RELEASED BY VTAM
IKT030I	TCAS LOGON PROCESS FAILURE PLU= <i>pluname</i> SLU= <i>sluname</i> [SENSE= <i>code</i>]
IKT031I	PARAMETER(S) SPECIFIED IN MEMBER <i>member_name</i> NOT VALID
IKT032I	<i>macro</i> FAILED FOR <i>gname</i> RPLRTNCD <i>aa</i> RPLFDB2 <i>bb</i>
IKT033I	TCAS USERMAX VALUE SET TO <i>count</i>
IKT100I	USERID <i>userid</i> CANCELED DUE TO UNCONDITIONAL LOGOFF
IKT103I	UNKNOWN ENTRY CODE <i>code</i> TO VTAM LOSTERM EXIT
IKT105I	LOGON REJECTED DUE TO INVALID APPLICATION ID
IKT106I	LOGON REJECTED, CANNOT OPEN ACB, ACBERFLG=X' <i>nn</i>
IKT109I	TSO/VTAM LOSTERM FAILED DUE TO VTAM SHORTAGE OF UECEB/VRPL
IKT111I	APPLNAME= <i>applname</i> FAILED DUE TO: <i>reason</i>
IKT112I	{SEND RECEIVE} ERROR DURING QUERY PROCESSING FOR <i>applname</i> ,RPLRTNCD= <i>aa</i> ,RPLFDB2= <i>bb</i> ,SENSE= <i>code</i>
IKT115I	TSO UNABLE TO DISCONNECT TERMINAL <i>luname</i>
IKT116I	<i>userid</i> {SEND RECEIVE} ERROR,RPLRTNCD= <i>aa</i> , RPLFDB2= <i>bb</i> , SENSE= <i>code</i> , WAITING FOR RECONNECTION <i>termid</i>
IKT117I	TSO/VTAM INITIALIZATION FAILED FOR APPLNAME= <i>applname</i> , LUNAME= <i>luname</i>
IKT118I	INVALID QUERY REPLY, TERMINAL ID: <i>termid</i>
IKT119I	<i>langcode</i> MESSAGES NOT AVAILABLE FOR LU <i>luname</i> , USING DEFAULT
IKT120I	CLOSE ACB FOR <i>applname</i> FAILED, CODE= <i>returncode</i> ERROR= <i>acberflag</i>
IKT121I	TCAS SEND/RECEIVE NOT POSTED FOR TERMINAL <i>termid</i>
IKT122I	IPADDR..PORT <i>ipaddr..portno</i>
IKT123I	DNS NAME: <i>dns_name</i>
IKT124I	<i>dns_name_continued</i>
IKT125I	TSO LOGON REJECTED: QUERY REPLY TOO LARGE - TERMINAL ID: <i>termid</i>
IKT00201I	MAXIMUM USERS LOGGED ON, TRY LATER
IKT00202I	INSUFFICIENT STORAGE AVAILABLE FOR REQUIRED CONTROL BLOCKS
IKT00203I	ADDRESS SPACE CREATION FAILED
IKT00204I	LOGON FAILED, NO USER APPLID AVAILABLE
IKT00300I	LOGON RECONNECT SUCCESSFUL, SESSION ESTABLISHED
IKT00301I	LOGON RECONNECT UNSUCCESSFUL DUE TO SYSTEM ERROR
IKT00400I	INPUT DATA LOST
IKT00401I	OUTPUT DATA LOST
IKT00402I	REENTER DATA BEGINNING WITH <i>text</i>
IKT00403I	ERROR ON OUTPUT, RETRY IN PROGRESS
IKT00405I	SCREEN ERASURE CAUSED BY ERROR RECOVERY PROCEDURE

Message text for IST VTAM operator messages

The following table lists the message text for all IST VTAM operator messages issued for MVS.

Message number	Text
IST001I	VTAM START REJECTED - %38
IST003I	ABEND OCCURRED DURING NETWORK DEFINITION OF CONFIG %8, CODE = %3
IST009I	VTAM ALREADY ACTIVE - START REJECTED
IST010I	%8 COMMAND INVALID

Message number	Text
IST011I	%10 FOR %8 %24
IST013I	I/O ERROR FOR %8 IN %8
IST015A	ERROR PROCESSING LIST IDENTIFIER - ENTER LIST ID OR BLANK
IST018I	CONFIG COULD NOT BE INITIALIZED - VTAM START CONTINUES
IST020I	VTAM INITIALIZATION COMPLETE FOR %6
IST025I	BLDL FAILED FOR %8 IN %8
IST033I	%8 COMMAND CANCELLED
IST037I	%8 FAILED - SYNTAX ERROR
IST038I	VARY FAILED FOR ID = %8 - HOST CDRM IS NOT ACTIVE
IST039I	%8 FAILED - CANNOT IDENTIFY COMMAND TYPE
IST040I	START OPTION %8 REQUIRED - REENTER WHEN PROMPTED
IST043I	%8 INVALID VALUE FOR KEYWORD %8
IST049I	VTAM START REJECTED - %8 FOR %2 ACB FAILED
IST050I	%8 COMMAND REJECTED - OPEN FOR VTAM DATA SET %12 FAILED
IST051A	ENTER VTAM START PARAMETERS
IST052I	%8 IS AN INVALID START OPTION KEYWORD - IGNORED
IST054I	%8 IN %8 IS EMPTY - START PROCESSING CONTINUES
IST056A	LIST = %3 IS INVALID - ENTER LIST ID OR BLANK
IST057I	KEYWORD MISSING AFTER TRACE/NOTRACE OPTION ON START PARMS
IST058I	%8 AND %8 OPTIONS HAVE DUPLICATE VALUES
IST059I	%28 IGNORED - INSUFFICIENT STORAGE
IST061I	%10 FOR %17 FAILED - NODE UNKNOWN TO VTAM
IST066I	%10 FAILED - CONFLICTING OR INVALID OPTIONS
IST072I	%10 FOR ID = %8 FAILED DURING NETWORK DEFINITION
IST073I	%10 FOR ID = %8 FAILED - MORE POWERFUL REQUEST IN PROGRESS
IST074I	%10 FOR ID = %8 FAILED - INSUFFICIENT STORAGE
IST075I	NAME = %17, TYPE = %17
IST077I	SIO = %5 CUA = %4 %14
IST080I	%8 %10 %8 %10 %8 %10
IST081I	LINE NAME = %8, LINE GROUP = %8, MAJNOD = %8
IST082I	DEVTYPE = %24 %27
IST084I	NETWORK NODES:
IST085I	DISPLAY FAILED - INFORMATION NOT AVAILABLE
IST087I	TYPE = %19, CONTROL = %4
IST089I	%8 TYPE = %17, %10 %14
IST092I	REQUESTED %11 LESS THAN CURRENT ALLOCATION - REQUEST %8
IST093I	%8 ACTIVE
IST095A	OPTION TO DUMP %8 AVAILABLE - REPLY 'YES' OR 'NO' OR 'YES,DUMPSTA=LINKSTANAME'
IST096I	%8 FAILED - DUPLICATE %8 PARAMETERS SPECIFIED
IST097I	%8 ACCEPTED
IST101I	%8 FAILED - %8 NOT SPECIFIED
IST102I	VTAM IS NOW INACTIVE
IST105I	%8 NODE NOW INACTIVE
IST107I	TIME AND DATE NOT SET IN %8 DUE TO INVALID TIMER IN HOST
IST112I	VTAM INTERNAL TRACE MODIFY FAILED - CONFLICTING MODES
IST113I	%8 IS A USVAR WITH VALUE %8 IN NETWORK %8
IST115I	INSUFFICIENT STORAGE TO READ %8 MEMBER OF VTAM DEFINITION LIBRARY
IST116I	MEMBER %8 NOT FOUND ON VTAM DEFINITION LIBRARY
IST117I	I/O ERROR READING %8 MEMBER OF VTAM DEFINITION LIBRARY
IST118I	ANOMALY FOUND NEAR RECORD %8 IN MEMBER %8 - CODE = %2
IST120I	NODE %8 NOW HAS CONTROLLING LU %8
IST122I	ATTACH OF VTAM SUBTASK %8 FAILED

Message number	Text
IST124I	STOP COMMAND REJECTED - NOT SUPPORTED FOR VTAM
IST126I	%8 MODE NOT SUPPORTED DUE TO LOADING FAILURE
IST127I	%8 STILL ACTIVE - VTAM TERMINATION WAITING FOR %28
IST128I	HALT OF VTAM ALREADY IN PROGRESS
IST129I	UNRECOVERABLE OR FORCED ERROR ON NODE %8 - VARY INACT SCHED
IST130I	VTAM SUBTASK %8 INACTIVE - ABEND THRESHOLD EXCEEDED
IST132I	VTAM SUBTASK %8 NOT REATTACHED - CANNOT BE FOUND
IST133I	VTAM TERMINATION IN PROGRESS
IST134I	GROUP = %8, MAJOR NODE = %8
IST135I	PHYSICAL UNIT = %8 %10
IST136I	%8 SNA MAJOR NODE = %8
IST137I	CONFIG %8 BYPASSED - LOCAL ADDRESS OF LU %8 IS INVALID
IST142I	CONFIG %8 BYPASSED - PATH MACRO %8 ERROR, REASON CODE %
IST146I	LINE NAME = %8, STATUS = %5
IST148I	DIAL OUT PATH INFORMATION FOR PHYSICAL UNIT %8
IST149I	LINE GRP TELEPHONE NUMBER OR LINE NAME PID GID CNT
IST150I	RRT LOAD MODULE %8 DOES NOT CONTAIN RESOURCE SEGMENT %9
IST153I	PENDING DEACTIVATION OF %8 OVERRIDDEN
IST154I	EXPANSION FAILED FOR %4 BUFFER POOL - CODE %2, USERID=%8
IST155I	SUBTASK %8 HAS ABENDED, CODE %3
IST159I	THE FOLLOWING NODES ARE IN A PENDING STATE
IST165I	CDRM %8 HAS AN INVALID ELEMENT VALUE - 1 IS ASSUMED
IST167I	NO DIAL OUT PATH FOR %8
IST168I	%8 %32 %11 %3 %3
IST169I	DISCONNECTION CAUSED VARY %5 FOR PU = %8
IST170I	LINES:
IST171I	ACTIVE SESSIONS = %10, SESSION REQUESTS = %10
IST172I	NO %21 %9
IST176I	%8 FAILED - %8 AND %8 ARE CONFLICTING OPTIONS
IST180I	OPEN FAILED ON CKPT DS %8 MAJ NODE %8 RTNCD = %2 %2
IST181I	CLOSE FAILED ON CKPT DS %8 MAJ NODE %8 RTNCD = %2 %2
IST182I	UNABLE TO GET STORAGE FOR CKPT %8 MAJOR NODE %8
IST183A	%8 FOUND LOADED WITH %8 - REPLY 'YES' TO REIPL OR 'NO' TO CONTINUE
IST184I	I/O ERROR ON CKPT DS %8 MAJOR NODE %8 RTNCD = %2 %2
IST185I	LOGICAL ERROR ON CHECKPOINT DS %8 MAJOR NODE %8
IST186I	%10 FOR ID = %8 CONTINUES COLD - CHECKPOINT DATA SET %15
IST187I	%10 FOR ID = %8 FAILED - CHECKPOINT DATA SET %15
IST191I	%8 SYNTAX ERROR
IST192I	POA MSG TRANSFER FAILED - INSUFFICIENT STORAGE
IST193I	REPLY %2 IGNORED - REPLY TOO LONG FOR REQUESTOR
IST194I	REPLY %2 NOT OUTSTANDING
IST195I	REPLY %2 IGNORED - NON-DECIMAL ID
IST198I	VTAM INTERNAL TRACE ACTIVATION FAILED - GTF NOT ACTIVE
IST199I	OPTIONS = %51
IST206I	SESSIONS:
IST208I	UNABLE TO TERMINATE SESSIONS FOR ID = %8 - INSUFFICIENT STORAGE
IST211I	NCP SLOWDOWN INITIATED FOR %8
IST212I	ACBNAME = %8
IST213I	ACBNAME FOR ID = %8
IST214I	NCP SLOWDOWN TERMINATED FOR %8
IST219I	I/O ERROR ON READ FOR %8 - BYTECNT MISMATCH
IST223I	MODIFY %8 COMMAND COMPLETED

Message number	Text
IST225I	%12 FOR ID = %8 FAILED - %30
IST226I	%10 FOR ID = %8 NOT EFFECTIVE DURING CURRENT OR QUEUED SESSIONS
IST228I	ENCRYPTION = %11 , TYPE = %6
IST231I	%8 MAJOR NODE = %8
IST232I	%8 %10 %13
IST234I	I/O ERROR %23
IST238I	%10 %3 FOR ID = %8 RCVD %60
IST240A	WAIT STATE IN VTAM DUE TO INSUFFICIENT NUMBER OF I/O BUFFERS SPECIFIED BY USER
IST241I	%10 COMMAND COMPLETE FOR %17
IST242I	%10 COMMAND FAILED FOR ID = %8 SENSE = %8
IST243I	FRAMES SENT = %5, RCVD = %5, RCVD WITHOUT ERRORS = %5
IST244I	NCP %11 STORAGE FOR ID = %8
IST245I	%6 %8 %8 %8 %8
IST247I	LOAD/DUMP PROCEDURE STATUS = %5 %19
IST257I	VTAM SDUMP FAILED WITH RETURN CODE %2 REASON X'%2'
IST258I	STMT IN ERROR = %80
IST259I	INOP RECEIVED FOR %8 CODE = %2 %50
IST260I	%8 - %8 SESSION LOST, SA %10 CODE %2
IST262I	%8 = %8, STATUS = %10
IST264I	REQUIRED %13 %8 %15
IST265I	%10 FOR ID = %8 FAILED - DUP %8 HL %8
IST266I	%8 STARTED
IST270I	LOAD OF %8 COMPLETE - LOAD MODULE = %7
IST271I	JOBNAME = %8, STEPNAME = %8, DSPNAME = %8
IST272A	NO INITIAL TEST FOR %8 - REPLY 'U' TO BYPASS - OR CANCEL
IST278A	INVALID REPLY FOR ID = %8 LOAD - ENTER 'U' - OR CANCEL
IST282A	INVALID REPLY FOR ID = %8 %10 %40
IST284A	OPTION TO RELOAD %8 AVAILABLE - REPLY 'YES' OR 'NO' OR 'YES,LOADSTA=LINKSTANAME'
IST285I	%8 DUMP OF %8 %34
IST302I	INVALID DEFINITION TYPE IN MEMBER %8 IN VTAM DEFINITION LIBRARY
IST303I	INSUFFICIENT STORAGE TO BUILD CONFIGURATION %8
IST309I	UNABLE TO LOAD MODULE %8 FROM LIBRARY %8
IST310I	INVALID SPACE REQUEST FOR CONFIGURATION %8
IST311I	NCP LOAD MODULE LIBRARY %8 - FAILED TO OPEN
IST314I	END
IST315I	VTAM INTERNAL TRACE ACTIVE - MODE = %3, SIZE = %4 %7
IST316I	%13 TRACE USER OPTIONS ARE NOT ACTIVE
IST317I	VTAM INTERNAL TRACE ACTIVATION FAILED - INSUFFICIENT STORAGE
IST319I	CONFIGURATION %8 FIRST SPECIFICATION USED %22
IST320I	CONFIGURATION %8 DEFINITION FAILED - %20
IST321I	CONFIGURATION %8 DEFAULT TAKEN - %22
IST322I	CONFIGURATION %8 ERROR IGNORED - %22
IST323I	LABEL = %8 - MACRO TYPE = %8 - KEYWORD = %8
IST324I	%8 IN PROGRESS WITH ID = %8 DUE TO %10 REQUEST
IST326I	REQUEST = %10 FAILED FOR %8 ID = %8, SENSE = %8
IST327I	%8 ID = %8 INCOMPLETE, REQUEST = %10, SENSE = %8
IST328I	COMMUNICATION WITH CDRM ID = %8 LOST
IST330I	TABLE TYPE = %8 NAME = %8
IST331I	CONFIG %8 BYPASSED - 'MAXSUBA' VALUES CONFLICT
IST333I	CONFIG %8 USING DUPLICATE RESOURCE NAME %8 - CODE %
IST336I	THIS NCP MAJOR NODE WAS %28
IST339I	CONFIG %8 BYPASSED - %8 UNKNOWN TO THE NCP

**Message
number**

Text

IST348I UNABLE TO PROCESS DISCONNECTION FOR PU = %8 DUE TO LACK OF STORAGE
IST350I DISPLAY TYPE = %24
IST351I LOCAL 3270 MAJOR NODE = %8
IST352I LOCAL SNA MAJOR NODE = %8
IST353I SWITCHED SNA MAJOR NODE = %8
IST354I PU T4/5 MAJOR NODE = %8
IST355I LOGICAL UNITS:
IST356I %11 %6 %6 %12 %5 %5/%5 %5
IST359I ATTACHMENT = %8
IST360I APPLICATIONS:
IST361A %19 FOUND LOADED WITH %19 REPLY 'YES' TO RELOAD OR 'NO' TO CANCEL ACTIVATION
IST362I GROUP %8 DEVICES UNAVAILABLE - MISSING SYSCNTRL OPTION
IST363I CONFIG %8 NODES AND SUBNODES SET UNAVAILABLE - %22
IST366I CONFIG %8 UNABLE TO DEFINE %8 - MAXIMUM NUMBER OF NETWORK ADDRESSES FOR HOST SUBAREA
EXCEEDED

IST367I NO STORAGE TO DEFINE NODE %8 CONFIG %8
IST368I FUNCTION GROUP %8 FAILED
IST380I ERROR FOR ID = %8 - REQUEST: %10, SENSE: %8
IST381I %10 FOR ID = %8 FAILED - CANNOT DEFINE NODE
IST382I %10 FOR ID = %8 FAILED - STATE: %5 NOT VALID FOR REQUEST
IST383I DEACTIVATION OF ID = %8 FAILED - REQUEST: %10 SENSE: %8
IST384I %10 FOR ID = %8 FAILED
IST388I DYNAMIC CDRSC DEFINITION SUPPORT = %3
IST389I PREDEFINITION OF CDRSC = %3
IST391I ADJ LINK STATION = %8, LINE = %8, NODE = %8
IST393I PU T4/5 MAJOR NODE %8, SUBAREA = %10
IST394I ADJACENT LINK STATIONS NOT OWNED BUT AWAITING ACTIVATION
IST395I %8 %8 %8 %8 %8 %8
IST396I LNKSTA STATUS CTG GTG ADJNODE ADJSA NETID ADJLS
IST397I %8 %10 %3 %3 %8 %5 %8 %7%
IST398I LOAD OF %8 FAILED - %8 HAS ZERO ENTRY POINT
IST399E ISTSDCOS IS NOT A CLASS OF SERVICE TABLE - ISTSDCOS DELETED
IST400I TERMINATION IN PROGRESS FOR APPLID %8
IST401I %10 INITIATED FOR ID = %8
IST403I %8 COMMAND FAILED - MULTIPLE OPTIONS FOR %8 NOT ALLOWED
IST410I %4 BUFFER POOL COULD NOT BE BUILT - CODE %
IST411I %8 COMMAND REJECTED DUE TO TERMINATION IN PROGRESS
IST412I VTAM COMMAND PROCESSING TERMINATED
IST413I VTAM DUMPING FOR %26
IST414I %10 FOR ID = %8 FAILED - PROCESS UNAVAILABLE
IST416I SDUMP ISSUED DUE TO ADDRESS SPACE TERMINATION
IST422I I/O ERROR ON DS %8 RTN CD = %2, %2
IST423I UNABLE TO GET STORAGE FOR DS %8
IST424I CLOSE FAILED ON DS %8 RTN CD = %2, %2
IST425I OPEN FAILED ON DS %8 RTN CD = %2, %2
IST430I %10 FOR ID = %8 DISCARDED
IST433I COMMAND REJECTED - TUNING STATISTICS TASK NOT ATTACHED
IST435I UNABLE TO RECORD ON TUNSTATS FILE, CODE = %10
IST436I STORAGE NOT AVAILABLE FOR TUNING STATISTICS DATA
IST440I TIME = %8 DATE = %5 ID = %8
IST441I DLRLMAX = %10 CHWR = %10 CHRDL = %10
IST442I ATTN = %10 RDATA = %10 IPIU = %10
IST443I OPIU = %10 RDBUF = %10 SLODN = %10

Message**number****Text**

IST447I BUFFER SIZE WAS IGNORED FOR ONE OR MORE POOLS
IST448I %8 OPTION IGNORED - %29
IST449I %11 = %8, CURRENT = %8, MAXIMUM = %8
IST450I INVALID %8 COMMAND SYNTAX
IST451I %8 COMMAND UNRECOGNIZED, PARAMETER=%8
IST452I %8 PARAMETER EXTRANEIOUS
IST453I %8 PARAMETER VALUE %17 NOT VALID
IST454I %8 COMMAND FAILED, INSUFFICIENT STORAGE
IST455I %43 SESSIONS ENDED
IST456I %8 REQUIRED PARAMETER OMITTED
IST457I POSITIVE %8 COMMAND RESPONSE
IST458I USS MESSAGE %3 NOT DEFINED
IST459I %10 FAILED - ID = %8 - ADJ NODE %55
IST460I %10 FOR U/RNAME ENTRY ID = %8 FAILED: %40
IST461I %10 FOR U/RNAME ENTRY ID = %8 STARTED
IST462I ACTIVATION OF LINK STATION %8 IS DEFERRED PENDING HIGHER LEVEL NODE ACTIVATION
IST464I LINK STATION %8 HAS CONTACTED %8 SA %10
IST465I %10 FOR ID = %8 FAILED - NO %4 STATION AVAILABLE
IST466I %10 FOR ID = %8 CONTINUES - UNABLE TO DO %40
IST467I CONTACTED ERROR TYPE %3 FOR ID = %8
IST473I CONNECTIVITY TEST TO %8 TERMINATED AFTER %3 ECHOES DUE TO I/O ERROR, SENSE = %8
IST475I %8 FAILED FOR %8 REQUEST %10 SENSE %8
IST476I CDRM TYPE = %8 %20
IST477I CDRMS:
IST478I CDRSCS:
IST479I CDRM NAME = %8, VERIFY OWNER = %3
IST482I %8 %5, SA %10, EL %5, NETID = %8
IST483I %8 %10, CDRM = %8, NETID = %8
IST484I SUBAREA = %10 %26
IST486I CURRENT STATE = %10, DESIRED STATE = %5
IST487I %10 FOR ID = %8 SCHEDULED BY %10
IST488I %10 FOR ID = %8 FAILED - DUPLICATE NODE: %8
IST489I %10 FOR ID = %8 CONTINUES - CANNOT DEFINE NODE: %8
IST490I %10 FOR ID = %8 FAILED - %10 IN PROGRESS
IST493I %10 FOR ID = %8 OVERRIDDEN BY %10
IST494I %10 FOR ID = %8 FAILED - ALREADY IN DESIRED STATE
IST495I %11 HAS BEEN SET TO %8
IST496E %22 FUNCTION INOPERATIVE DUE TO ABEND
IST499I DISK FUNCTIONS FOR %8 NOT PERFORMED
IST507I %8 NOT ACTIVE, TSO TRACE REQUEST IGNORED
IST510I ROUTE TEST %3 FAILED - %35
IST511I TRACE REQUEST FAILED - %8 INVALID
IST512I TRACE TERMINATED FOR NODE = %8 %18
IST513I TRACE INITIATED FOR NODE %8 %18
IST516I DESTSUB ADJSUB TGN ER ER STATUS VR(S)
IST517I %7 %7 %3 %2 %6 %24
IST520I UNABLE TO PROCESS %44
IST521I GBIND %6 FOR COS %8 %25
IST522I %2 %2 %5 %8 SA %10 TO SA %10 %7
IST523I REASON = %53
IST524I REVERSE ER MASK = %4
IST525I REJECTING SA %10 USING TG %3 ADJACENT SA %10

Message number	Text
IST526I	ROUTE FAILED FROM %10 TO %10 - DSA %10 - NETID %8
IST528I	VIRTUAL ROUTE NUMBER %32
IST529I	VR SELECTION EXIT %24 %19
IST530I	%10 PENDING %38
IST531I	%62
IST533I	ER %2 %9 IN ROUTE TEST %3
IST534I	%10 %3 %10 %10 %3
IST535I	ROUTE DISPLAY %3 FROM SA %10 TO SA %10
IST536I	VR TP STATUS ER ADJSUB TGN STATUS CUR MIN MAX
IST537I	%2 %2 %6 %2 %10 %3 %6 %3 %3 %3
IST538I	ROUTE TEST %3 IN PROGRESS
IST539I	DISPLAY ROUTE COMMAND FAILED, COS CANNOT BE RESOLVED
IST540I	DISPLAY ROUTE COMMAND FAILED, SENSE = %8
IST541I	FOLLOWING PATH DEFINITION IS IGNORED
IST542I	INVALID DESTSA %10 FOR PATH DEFINITION - IGNORED
IST543I	PATH %36 IS REDEFINED AS FOLLOWS
IST544I	PATH %36
IST546I	UNABLE TO PROCESS %41
IST547I	EXPLICIT ROUTE MASK %4
IST548I	%10 FAILED %48
IST549I	LL2 TEST FOR ID = %8 ENDED %24
IST561I	STORAGE UNAVAILABLE: %4 BUFFER POOL
IST562I	STORAGE UNAVAILABLE: %11 REACHED
IST563I	STORAGE UNAVAILABLE: MAXPVT REACHED FOR %8 %8
IST564I	STORAGE UNAVAILABLE: COMMON AREA SUBPOOL %3
IST565I	STORAGE UNAVAILABLE: VTAM PRIVATE AREA SUBPOOL %3
IST566I	STORAGE UNAVAILABLE: %8 %8 SUBPOOL %3
IST567I	%10 OF %8 FOR %8 %13
IST571I	LOAD FAILED FOR ID = %8 REQ: %10, SENSE: %8
IST572I	REJECTING TG ADJACENT ER MASK
IST574E	START I/O TIMEOUT OCCURRED FOR %8
IST576I	TSO TRACE = %3
IST577I	TIME = %8 DATE = %5 ID = %8
IST578I	CHNRM = %10 CHMAX = %10 RDBUF = %10
IST579I	ATTN = %10 TIMERS = %10 QDPH = %10
IST580I	BUFCAP = %10 PRI = %10 SLODN = %10
IST581I	IPIU = %10 OPIU = %10 DLRMAX = %10
IST582I	'EVERY' INVALID FOR TRACE OF ID = %8 - OPERAND IGNORED
IST583I	CONFIG %8 NOT PROCESSED - SYSDEF TASK NOT ATTACHED
IST585E	VTAM UNABLE TO CLOSE %8 - RESOURCES MAY BE LOST TO VTAM
IST587I	IRN STORAGE %8 CAUSED BY SLOWDOWN OF NODE %8
IST588I	SIT TRACE STATUS = %5
IST589I	ERROR FOR ID = %8, CODE = %, NET = %8
IST590I	CONNECT%3 %11 FOR PU %8 ON LINE %8
IST591E	VTAM COMMAND CANCELED DUE TO VTAM TASK ABEND - %3 - RETRY COMMAND
IST592I	VTAM MAIN TASK ABEND - CODE %3 - VTAM IS BEING TERMINATED
IST593I	ISTPDCLU %17 SESSION ENDED
IST594I	ISTPDCLU %9 FAILED %3 %3
IST595I	IRNLIMIT = %8, CURRENT = %8, MAXIMUM = %8
IST596I	IRN TRACE = %3
IST597I	CAPABILITY-PLU %9,SLU %9,SESSION LIMIT %8
IST599I	REAL NAME = %17

**Message
number**

Text

IST602I %8 FAILED ID = %8 - HIGHER NODE HAS BECOME INACTIVE
IST605I ERROR FOR ID = %8 - %8 : %10, DATA INVALID FOR THIS NODE
IST607I %10 FOR %17 FAILED - INVALID NODE TYPE OR STATE
IST608I %10 FOR ID = %8 FAILED - HIGHER NODE: %8 NOT ACTIVE
IST610I LINE %8 - STATUS %10
IST611I ADJACENT SSCP TABLE FOR %8 %11
IST617I DEACTIVATION IN PROGRESS FOR %8
IST619I ID = %8 FAILED - RECOVERY IN PROGRESS
IST621I %22 FOR NETWORK NODE %8
IST623I %7 ADJACENT SSCP TABLE %12
IST624I %8 %8 %5 %7
IST627I %8 - INSUFFICIENT STORAGE
IST632I BUFF BUFF CURR CURR MAX MAX TIMES EXP/CONT EXP
IST633I ID SIZE TOTAL AVAIL TOTAL USED EXP THRESHOLD INCR
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST635I %8 %10 %16 %8 %2 %2 %7%
IST636I CDRSCS OWNED BY %8 -
IST637I SUBAREA=%10 ELEMENT=%5
IST638I ADJNETSA = %10, ADJNETEL = %5
IST639I GWN = %8, ADJNET = %8
IST640I %8 ADDR IN ADJNET - SA = %10, EL = %5
IST641I GATEWAY PATH SELECTION LIST - %15
IST642I ADJNET GWN SUBAREA ELEM ADJNETSA ADJNETEL
IST643I %8 %8 %10 %5 %10 %5
IST644I %8 TG %8 %8
IST645I %8 DEFINITION FAILED - NO VALID %8 MACRO
IST650I POLL = %3, NEGPOLL = %3, SESSION(S) = %3
IST652I %8 IS A DUPLICATE KEYWORD IN THE TRACE/NOTRACE OPTION
IST654I I/O TRACE = %3, BUFFER TRACE = %3 %18
IST655I %8 TRACE STATUS = %5
IST656I ACTIVATE REJECTED FROM UNDEFINED CDRM, SA %10 EL %5
IST658I %8 COMMAND FAILED - %8 NOT FOUND
IST660I %10 FOR ID = %8 FAILED - PARM: %15 NOT VALID
IST663I %10 REQUEST %22, SENSE=%8
IST664I %5 %3=%17 %5 %3=%17
IST670I VARY %4 PROCESSING FOR ID = %8 COMPLETE
IST674I %10 FOR ID = %8 CONTINUES - PARM: %15 IGNORED
IST675I VR = %2, TP = %2
IST678I INSUFFICIENT STORAGE TO SCHEDULE TPEND EXIT FOR %8
IST679A PLEASE DIAL LINE = %8, NUMBER = %32
IST680I CONNECTION REQUEST DENIED - ID = %8 %20
IST683I CONNECTION REQUEST DENIED, ID = %8
IST684I I/O ERR, CSW = %16, SENSE = %4
IST688I VARY FAILED FOR ID = %8 - INSUFFICIENT STORAGE
IST690I CONNECTION REQUEST DENIED - INVALID STATION ID = %12
IST693I UNABLE TO DISCONNECT ID = %8
IST700I INVALID %5 - SKIPPING TO NEXT NETWORK STMT OR EOF
IST701I CONFIG %8 LABEL = %8 STMT TYPE = %8
IST702I CONFIG %8 - UNEXPECTED %22
IST703I CONFIG %8 ADJSSCP DEFINITIONS IGNORED - NO ADJCDRM STMT
IST706I ADJSSCP TABLE FOR %8 IGNORED - INSUFFICIENT STORAGE
IST707I ADJSSCP TABLE BEING MODIFIED BY ACTIVATION OF %8

**Message
number**

Text

IST708I %16 %18 %15
IST709I CONFIG %8 FAILED-%38
IST710I CONFIG = %8 NETWORK = %8 %22
IST712I CONFIG %8 GWPATH %8 IGNORED - MISSING OPERANDS
IST713I CONFIG %8 GWPATH %8 - %8 OPERAND IGNORED
IST714I CONFIG %8 GWPATH %8 IGNORED - INVALID STMT
IST715I CONFIG %8 CDRM %8 IGNORED - GWPATH STMT MISSING
IST716I %10 FOR %8 FAILED
IST717I NETID %8 ID %8 SA %10 %27
IST718I ADDRESS INVALID FOR NETID=%8 CDRM=%8 CODE=X'%2'
IST719I %63
IST720I %8 HAS CONTACTED %8 IN %8, SA %10
IST721I SESSION SETUP FOR CDRM %8 USING GWN %8 FAILED
IST723I SSCPID %12 ALREADY IN USE BY CDRM %8
IST725I GWN %8, SUBAREA %10, CDRM ALIAS ELEMENT %5
IST726I ADJNET %8, ADJNETSA %10, ADJNETEL %5
IST727I COMMUNICATION WITH CDRM %8 LOST - REASON = X'%2'
IST728I GWPATHS FOR GWN %8 ARE NOW %8 FOR THESE CDRMS
IST732I %10 REJECTED DUE TO %20
IST734I ACTIVATION OF CDRM %8 USING GWN %8 FAILED
IST735I NO ADDRESS TRANSFORMS - REQACTCDRM SENT
IST737I DEFAULT VR LIST USED FOR CDRM %8 USING GWN %8
IST740I UNABLE TO FREE ALIAS ADDRESSES FOR CDRM %8 GWN %8
IST742I ACTIVATION OF CDRM %8 %6 - GWN PATH NOT AVAILABLE
IST744I CROSS-NETWORK SESSION SETUP FAILED, NETWORK = %8
IST745I ACTCDRM TO CDRM = %8 FAILED, SENSE = %8
IST746I BIND FAILED FROM %8 TO %8, SENSE = %8
IST751I SIO = %8, ERROR CT = %8, CUA = %4
IST752I GPT TRACE STATUS = %11 %18
IST755I ALERT FROM PU %8 FOLLOWS
IST756E ALERT FROM PU %8 FOLLOWS
IST757E MOSS UNAVAILABLE - HARDWARE ERROR
IST758E MOSS RELOADED - HARDWARE ERROR
IST759E MOSS DISKETTE UNUSABLE
IST760E MOSS DISKETTE HARDWARE ERROR
IST761E MOSS CONSOLE UNAVAILABLE
IST762I MOSS IN MAINTENANCE MODE
IST763I PHYSICAL UNIT RELOADED - HARDWARE ERROR
IST764I PHYSICAL UNIT RELOADED - PRIOR ABEND CODE WAS %8
IST765E CHANNEL ADAPTER %8 UNAVAILABLE - HARDWARE ERROR
IST766I DUMP FAILED - NO %4 DUMP ON %8 DISK(ETTE)
IST767E SCANNER %8 (%8-%8) UNAVAILABLE - HARDWARE ERROR
IST768E SCANNER %8 (%8-%8) UNAVAILABLE - HARDWARE ERROR
IST769E SCANNER %8 (%8-%8) UNAVAILABLE - SOFTWARE ERROR
IST770E SCANNER %8 (%8-%8) UNAVAILABLE - SOFTWARE ERROR
IST771E SCANNER %8 LINE %8 UNAVAILABLE - HARDWARE ERROR
IST772I UAC = %2 %42
IST773I SESSION WITH %8 IN PROCESS OF BEING TERMINATED
IST778I %8 %8 %8 %8 %8 %8
IST784I SESSION(S) EXIST(S) WITH UNKNOWN PARTNER(S)
IST786I %8 COMMAND REJECTED - %28
IST787I SSCP TAKEOVER FOR NODE %8 IN PROGRESS

**Message
number**

Text

IST789I %10 FAILED FOR ID = %8, CA / NCP CONFLICT
IST790I MAXIMUM %5 USED = %7K
IST792I NO SUCH SESSION EXISTS
IST793E SESSION MANAGEMENT ERROR, CODE %29
IST796I HOSTSA VALUE EXCEEDS %8
IST797I FROM VIA ADJACENT DEST ER LENGTH
IST798I %8
IST799I %15 %4 IN PROGRESS
IST803I VTAM TERMINATION TASK TERMINATED-OPEN FAILED
IST804I CLOSE IN PROGRESS FOR %8 OPENED BY %8 %8
IST805I VTAM CLOSE COMPLETE FOR %8
IST807I %10 FOR ID = %8 FAILED - NODE IS IN TEST MODE
IST808I ORIGIN PU = %8 DEST PU = %8 %16
IST809I XRF SESSIONS - PRIMARY = %5 BACKUP = %5
IST812I %8 COMMAND NOT ACCEPTED
IST813I USERVAR %8 CHANGED FROM %8 TO %8
IST814I USERVAR %8 DELETED
IST815I AUTOMATIC RECOVERY IS SUPPORTED
IST816I %10 %3 %10 %4
IST819I CDRM %8 COMMUNICATION LOST - RECOVERY IN PROGRESS
IST820I %5 RSP DATA DISCARDED FOR ID = %8 - INSUFF STORAGE
IST822I CDRM %8 RECOVERY FAILED - INSUFFICIENT STORAGE
IST825I USERVAR DEFINED - NAME = %8, VALUE = %8
IST826I VTAM START REJECTED--START COMMAND NOT USED FOR VTAM INITIALIZATION
IST830I ORIGINATING SSCP NAME = %8, NETID = %8
IST831I DUPLICATE ADJCDRM NAME %8 IN %8
IST832I UNLABELED %8 STMT IN %8
IST833I SKIPPING TO NEXT %37
IST834I %4 BACKUP SESSION(S) EXIST(S) WITH UNKNOWN PARTNERS
IST838I TRACE STATUS DISPLAY FOR ID = %8
IST839I PU NAME LINE NAME
IST840I %8 %8
IST841I NO RESOURCES ARE BEING TRACED FOR %8
IST842I UNABLE TO FIND BUFFERS IN %2 POOL - DUMP IN PROGRESS
IST844I VTAM START REJECTED - %8 IS DUPLICATE NAME
IST846I REAL I/O NOT SUPPORTED BECAUSE %32
IST849I %8 INCONSISTENT WITH USE OF %8 IN %8
IST860I DEACTIVATION OF %8 INCOMPLETE - INSUFFICIENT STORAGE
IST861I MODETAB=%8 USSTAB=%8 LOGTAB=%8
IST862I NETID = %8 COSTABLE = %19
IST863I MODIFY TABLE COMMAND FAILED-%33
IST864I NEWTAB=%8, OLDTAB=%8, OPT=%9, TYPE=%7
IST865I %12 COMMAND COMPLETE-%29
IST866I %10 HAD NO EFFECT - %40
IST867I SIT TRACE FOR %8 FAILED TO ACTIVATE
IST869I USERID = %8
IST870I NETWORK ADDRESS RECEIVED FOR %8 IN USE BY %8
IST871I RESOURCE %8 %11
IST872I DR MOVE MISMATCH DETECTED FOR %8
IST873I PLU SLU SID STATUS
IST874I %17 %17 %16 %8
IST875I %7 TOWARDS %3 = %8 %28

**Message
number**

Text

IST876I SIGNALS NEEDED TO COMPLETE SESSION %8
IST877I %14 %14 %14 %14
IST878I NUMBER OF %7 SESSIONS = %10
IST879I %7 REAL = %17 ALIAS = %17
IST880I SETUP STATUS = %8 %26
IST881I %17 LINK STATION %8
IST882I WAITING FOR DEVICE END FROM DEVICE
IST883I %9 OF SAW BUFFERS USED %27
IST886I %11 %8 %8 %8 %11 %13 FAILED
IST887I NO COS TABLE FOR %8 - %17 MAY BE USED
IST888I ADDR + LENGTH VALUES EXCEED STORAGE - LENGTH SET TO %3
IST889I SID = %16
IST890I AUTOLOGON SESSION SETUP FAILED
IST891I %26 GENERATED FAILURE NOTIFICATION
IST892I %17 ORIGINATED FAILURE NOTIFICATION
IST893I ORIGINAL FAILING REQUEST IS %10
IST894I ADJSSCPS TRIED FAILURE SENSE ADJSSCPS TRIED FAILURE SENSE
IST895I %8 %8 %8 %8
IST896I AUTOLOGON WILL BE RETRIED WHEN CONTROLLING PLU IS AVAILABLE
IST897I LOAD OF %8 STARTED
IST898I GWSELECT = %3
IST899I RETRY OF AUTOLOGON(S) TO %17 %14
IST919I NODE %8 NO LONGER HAS CONTROLLING LU %8
IST920I %4 % % BUFF SIZE %5 EXP INCREMENT %5
IST921I TIMES EXP %10 EXP/CONT THRESH %5 / %5
IST922I CURR TOTAL %11 CURR AVAILABLE %11
IST923I MAX TOTAL %11 MAX USED %11
IST924I -----
IST925I DYNAMIC PATH DEFINITION %8 STATUS = %5
IST926I PATH FOR %8 IGNORED - NODE %8 NOT FOUND/INVALID
IST927I ERROR FOR %17 DSA %10 %15 CODE %2
IST928I DELETER KEYWORD FOR %8 IGNORED
IST929I LOAD OF DYNAMIC PATH DEFINITION %17 COMPLETE
IST930I %16 - %16 SESSION USING %4 OF %2BUF
IST931I SYMPTOM STRING = %44
IST932E FAILURE OCCURRED DURING TAKEOVER OF %8, SENSE=%8
IST933I LOGMODE=%8, COS=%8 %10
IST934I DLOGMOD=%8 USS LANGTAB=%8
IST935I ORIGIN=%8, NETID=%8, ID=%17
IST936I ANSWER MODE = %28
IST937A %8 CORRELATOR MISMATCH %17 %17 REPLY 'RELOAD'
IST938I OPEN ACB REJECTED, CANNOT LOAD %8
IST939I VARY NOLOGON COMMAND HAD NO EFFECT - %8 NOT FOUND FOR %8
IST940I %64
IST946I BASENO %5 GREATER OR EQUAL TO XPANLIM %10 BUFFERS
IST947I STATIC BUFFERING ASSUMED FOR %2BUF
IST948I XPANLIM TOO SMALL FOR %2BUF - CHANGED TO %10 BUFFERS
IST949I ISTMGC10 IN VTAMLIB %10 - VTAM PROCESSING CONTINUES
IST950I VCNS = %10
IST951I DISPLAY DISK INFORMATION FOR %8
IST952I DUMP NAME DATE TIME
IST953I %8 %8 %8

Message**number****Text**

Message number	Text
IST954I	LOAD MODULE DATE TIME STORE STATUS [ACTIVE]
IST955I	%8 %8 %8 %9 %3
IST956I	%4 SAP=%3 MAC=%12 %13 %12
IST957I	NO NCP LOAD MODULE OR DUMP ON DISK
IST958I	INBND=%5 OUTBND=%5 PENDING=%3 ATTN=%5 CUA=%4
IST959I	INVALID PIU RECEIVED FROM %8 - VARY INACT SCHEDULED
IST960I	DISPLAY TABLE FAILED - %8 NOT FOUND
IST961I	LOAD OF %8 %12 FAILED
IST962I	INOP X'%2' RECEIVED FOR PU UNDER SWITCHED LINE %8
IST963I	LOAD MODULE = %7
IST965I	AUTO DUMP/LOAD: %3
IST966I	USER=VCNS
IST967I	%20 FAILED FOR %8; RC %2 RS%8
IST968I	INTERFACE INITIALIZATION FAILED - REASON %2
IST970I	LU-LU VERIFICATION ERROR %2 FOR %26
IST971I	ADJ LINK STATION %8 USING %8 IN %8
IST972I	SIT TRACE FOR %8 TERMINATED - %8
IST973I	USERVAR %8 %47
IST976I	ENTRY %8 DEFINED BUT NO %6 DEFINED FOR %8
IST977I	MDLTAB=%8 ASLTAB=%8
IST979I	BUILD FAILED FOR TABLE %8
IST981I	PRIVATE: CURRENT = %8, MAXIMUM USED = %8
IST982I	%10 %10 REQUEST(S) PENDING TO SUBAREA %10
IST983E	%8 MESSAGE QUEUE LIMIT EXCEEDED - FURTHER MESSAGES WILL BE DISCARDED
IST984I	USER EXIT %17 IS %8
IST985I	USER EXIT %17 %14 FAILED-CODE %2
IST986I	TABLE=%8 TYPE=%8 USE COUNT=%8
IST987I	THE RESOURCES THAT USE THE TABLE ARE:
IST988I	%8 %8 %8 %8 %8 %8
IST989I	EXP LIMIT %8 BUFFS REQUESTED %8
IST990E	CORRELATOR MISMATCH FOR %8 IGNORED - ACTIVATION CONTINUES
IST991I	CORRELATOR MISMATCH FOR %8 FOUND-RELOAD SCHEDULED
IST998E	VTAM MESSAGE %5 ISSUED BUT DOES NOT EXIST
IST999E	VTAM MESSAGE LOST - INSUFFICIENT STORAGE
IST1001I	ID= %8 %15 %16
IST1002I	RCPRI=%4 RCSEC=%4
IST1003I	%7 CNOS=%8 DEFINE=%8
IST1004I	%10 FOR %8 FAILED - %28
IST1005I	%17 %17 %17
IST1006I	%8 NAMES DEFINED %23 FOR %8
IST1007I	PARTNER = %17, LOGMODE = %8
IST1008I	CONVID = %8, STATUS = %9, ETIME = %5
IST1009I	SID = %16
IST1010I	NO CONVERSATION(S) FOUND FOR %8
IST1011I	ENTRY %8 NOT FOUND IN %6 %8 FOR %8
IST1012I	NO PARTNER LU(S) DEFINED FOR %8
IST1013I	NO LOGMODE(S) DEFINED IN LU %8 FOR %8
IST1015I	APPLICATION SUPPLIED %21=%16
IST1016I	DYANMIC DEFINITION OF %8 FAILED
IST1017I	MODELS:
IST1018I	MODEL MAJOR NODE = %8
IST1019I	USERVAR VALUE CLASS TYPE EXIT APPC

Message number	Text
IST1020I	INSUFFICIENT STORAGE-DATA SPACE %8 FULL
IST1021I	MEDIUM=%8,ADAPNO=%4,CUA=%4,SNASAP=%4
IST1022I	WRBUF = %10
IST1023E	START I/O TIMEOUT OCCURRED FOR CUA=%4
IST1024I	I/O ERROR ON READ FOR CUA=%4-BYTE COUNT MISMATCH
IST1028I	%59
IST1029I	%8 %17 %5 %8 %4 %4
IST1030I	USERVAR EXIT IS %8
IST1031I	MODIFY COMMAND FAILED - %8: EXIT FAILURE, CODE %4
IST1032I	%2 BUFFER SIZE TOO SMALL-SIZE MUST BE AT LEAST %8
IST1033I	%8 ALREADY DEFINED FOR APPC SESSIONS OF %8
IST1034I	%8 ALREADY USING %8 FOR APPC SESSIONS
IST1035I	ERROR WHILE %8 NETWORK %8 %4 GWN %8
IST1036I	NODE ABEND-UNUSABLE RESOURCE IS %8
IST1037I	NODE ABEND-INOP REPORTED FOR %8
IST1038I	MODIFY NOTRACE REJECTED-VIT IS NOT WAITING TO TERMINATE
IST1039I	SSCP TKOVR FOR ID = %8 FAILED-INACT GVBK SCHEDULED
IST1040I	CONVERSATION(S) FOUND FOR %8
IST1041I	%17 %17
IST1042I	%8 = %5 %18 %13
IST1043I	CP NAME = %8 - CP NETID = %8 - DYNAMIC LU = %3
IST1044I	ALLSLIST = %8 %8 %8 %8
IST1045I	NODE TYPE = %17
IST1046I	%8 %17 ALSO EXISTS
IST1048I	COMPRESSION LEVEL - INPUT = %4, OUTPUT= %4
IST1049I	PERCENT REDUCTION - INPUT = %4, OUTPUT= %4
IST1050I	MAXIMUM COMPRESSION LEVEL - INPUT = %4, OUTPUT = %4
IST1051I	EVENT CODE = %4
IST1052I	SYNTAX ERROR AFTER %8-ALL FURTHER OPTIONS IGNORED
IST1053I	VALUE FOR %8 MUST BE 'YES' OR 'NO'
IST1054I	VALUE FOR %8 MUST BE BETWEEN %8 AND %10
IST1055I	VALUE FOR %8 MUST BE %7
IST1056I	%8 PARAMETER %2 MUST BE BETWEEN %4 AND %10
IST1057I	%17 IS ALSO A REAL RESOURCE
IST1058I	MODEL LU GROUP = %8, LUSEED = %8
IST1059I	MODEL NAME = %8
IST1060I	LUGROUP MAJOR NODE = %8
IST1061I	FAILURE OCCURRED ON %8 AT %4
IST1062I	EVENT ID = %40
IST1063I	MODELS AFTER THE 255TH MODEL IN LUGROUP %8 IGNORED
IST1064I	TRACE IGNORED, %17 - STORAGE SHORTAGE
IST1065I	LOAD MODULE REQUESTED IPL ESTIMATED IPL
IST1066I	%8 %14 %14
IST1067I	LOGICAL LINES:
IST1068I	PHYSICAL RESOURCE (PHYSRSC) = %8
IST1069I	PARAMETER %2 FOR %8 MUST BE %7
IST1070I	%8 FOR %8 IS NOT VALID-START CONTINUES
IST1071I	SONLIM OPTION PARAMETER 1 MUST BE GREATER THAN PARAMETER 2
IST1072I	%8 HAS TOO MANY PARAMETERS-START OPTION IGNORED
IST1073I	%8 CAN ONLY BE SPECIFIED AFTER OPTION %8
IST1074I	PARAMETERS FOR %8 ARE NOT in THRESHOLD LIMITS
IST1075I	PARAMETER %2 FOR %8 IS NOT VALID

Message number	Text
IST1076I	VALUE DEFINED FOR HOSTPU, %8, IS A RESERVED KEYWORD
IST1077I	OPTION %8 AFTER %8 %8 IS NOT VALID
IST1078I	LIST START OPTION CANNOT BE IN START FILE-OPTION IGNORED
IST1079I	%8 ACTIVATION CONTINUES - CANNOT ASSOCIATE %8
IST1080I	%4 STATION NAME = %8
IST1081I	ADJACENT LINK STATION = %8
IST1082I	GENERATED ADDRESS FOR %8 %11 FROM %8
IST1083I	ERROR ACTIVATING ADJCP %17 SENSE = %8
IST1084I	START LIST IGNORED - %13 WILL BE USED
IST1085I	%5 ACTIVATION ERROR %20 SENSE = %8
IST1086I	APPN CONNECTION FOR %17 IS ACTIVE - TGN = %3
IST1088I	ADJCP %17 HAS BEEN DEACTIVATED
IST1089I	MODIFY FAILED-TGP %8 DOES NOT EXIST
IST1090I	TGP FOR %6 %22 IS SET TO %8
IST1091I	MODIFY TGP FAILED - %6 %22 IS UNKNOWN
IST1092I	MODIFY TGP FAILED, INSUFFICIENT STORAGE
IST1093I	%8 IS IGNORED-ONLY VALID WHEN %11 IS SPECIFIED
IST1094I	GWSSCP VALUE FORCED TO NO-NODETYPE IS EN
IST1095I	INITIATION FAILED FOR %17 - NO LINK TO ADJCP
IST1096I	CP-CP SESSIONS WITH %17 ACTIVATED
IST1097I	CP-CP SESSION WITH %17 TERMINATED
IST1098I	%8 DEACTIVATED, DEPLETING IO BUFFER POOL
IST1099I	SESSION TERMINATED, DEPLETING %4 BUFFER POOL
IST1100I	ADJACENT CONTROL POINTS FROM MAJOR NODE %8
IST1101I	ADJCP DISPLAY SUMMARY FOR %17
IST1102I	NODENAME NODETYPE CONNECTIONS CP CONNECTIONS NATIVE
IST1103I	%17 %4 %3 %3 %4
IST1104I	CONNECTION SUMMARY FOR %17
IST1105I	RESOURCE STATUS TGN CP-CP TG CHARACTERISTICS
IST1106I	%8 %6 %3 %5 %32
IST1107I	TGP NAME TG CHARACTERISTICS
IST1108I	%8 %32
IST1110I	ACTIVATION OF CP-CP SESSION WITH %17 FAILED
IST1111I	ADJACENT NODE DOES NOT SUPPORT UNSOLICITED BINDS
IST1112I	CP ALREADY HAS A CP-CP SESSION WITH A NETWORK NODE
IST1113I	EN-EN SESSION IS NOT VALID
IST1114I	%8 START OPTION IGNORED - NOT VALID FOR %12
IST1115I	CDRM NAME %8 IS DIFFERENT THAN SSCPNAME START OPTION
IST1116I	SSCP NAME %8 IS USED
IST1117I	PHYSICAL RESOURCE (PHYSRSC) %8 %12 INTERFACE = %16
IST1118I	LINK DEFINITION FAILURE, CP = %17 TGN = %3
IST1119I	FAILURE REASON - INSUFFICIENT STORAGE
IST1120I	%8 %8 DEFINITION FAILED-INSUFFICIENT STORAGE
IST1121I	COSAPPN IN %11 %9 - PROCESSING CONTINUES
IST1122I	CHKPT TO DATASET %8 WAS NOT SUCCESSFUL, CODE= %2
IST1123I	MODIFY CHKPT TO DATASET %8 WAS SUCCESSFUL
IST1124I	UNABLE TO REGISTER RESOURCES WITH %17
IST1125I	END NODE IS NOT AUTHORIZED
IST1126I	END NODE NETID REJECTED
IST1127I	UNRECOGNIZED REGISTRATION REQUEST
IST1128I	PATH %8 IGNORED, %17 - STORAGE SHORTAGE
IST1129I	%10 FAILED, %17 - DEACTIVATE PENDING

Message number	Text
IST1130I	%10 FOR %17 FAILED - STORAGE SHORTAGE
IST1131I	DEVICE = %12 %35
IST1132I	%17 IS ACTIVE, TYPE = %17
IST1133I	%17 IS NOW INACTIVE, TYPE = %17
IST1134I	%17 NOW HAS CONTROLLING LU %17
IST1135I	FORCED VARY INACT SCHEDULED FOR %17
IST1136I	VARY INACT %17 SCHEDULED - UNRECOVERABLE ERROR
IST1137I	%11 FAILED, %17 - %19
IST1138I	REQUIRED %13 %32
IST1139I	%10 FOR %17 FAILED - SENSE: %8
IST1140I	%10 FAILED %17 - STATE %5 NOT VALID
IST1141I	%10 FOR %17 OVERRIDDEN BY %10
IST1142I	TRACE REQUEST FAILED - %17 NOT VALID
IST1143I	TRACE TERMINATED FOR %17 %18
IST1144I	TRACE INITIATED FOR %17 %18
IST1145I	TRACE REQUEST FAILED, %17 - STORAGE SHORTAGE
IST1146I	%17 %10 U = %4 FAILED
IST1147I	%17 %8 LOGON= %17 FAILED
IST1148I	%17 %8 RNAME = %8 FAILED
IST1149I	VARY %4 PROCESSING FOR NODE %17 COMPLETE
IST1150I	%8 CHANGED: %17 TO %17
IST1151I	USERVAR %8 DEFINED: VALUE = %17
IST1152I	%17 CONTROLLING LU %17 REMOVED
IST1153I	%17 %17 SESSION %2BUF USE %4
IST1154I	%17 %17 %17
IST1155I	%17 VARY NOLOGON = %17 FAILED
IST1156I	USERVAR %8 IN %8 HAS VALUE %17
IST1157I	DUPLICATE REGISTRATION %17 %17
IST1158I	MODIFY TOPO COMMAND FAILED, ID = %17 %9
IST1159I	HOST NODE DATABASE ENTRY CANNOT BE DELETED
IST1160I	TYPE=FORCE MUST BE SPECIFIED FOR LOCAL TG OR ADJACENT NODE
IST1161I	SSCP SESSIONS
IST1162I	%15 = %10
IST1163I	RSN HPR
IST1164I	%10 %3
IST1166I	VIRTUAL NODE %17 CONNECTION ACTIVATION FAILED
IST1167I	VN %17 CONNECTION DEACTIVATION FAILED
IST1168I	VIRTUAL NODE %17 CONNECTION ACTIVE
IST1169E	%8 REPLY ID FOR MESSAGE %8 NOT AVAILABLE
IST1176I	BASIC FROZEN
IST1177I	% %7 %7 %7
IST1183I	%8 EXIT RETURNED A CODE OF %2 %21 %2
IST1184I	CPNAME = %17 - NETSRVR = %17
IST1185I	NAME = %17 - DIRECTORY ENTRY = %10 %2
IST1186I	DIRECTORY ENTRY = %10 %2
IST1187I	%10 NOT VALID-APPN NOT SUPPORTED BY %17
IST1188I	VTAM %6 STARTED AT %8 ON %8
IST1189I	%28 %26
IST1190I	OPEN FAILED FOR %8 ABEND = %3 RC = %2
IST1191I	I/O ERROR ON %8 %23
IST1192I	CLOSE FAILED FOR %8 ABEND = %3 RC= %2
IST1193I	%6 SESSION DEACTIVATION FAILURE FOR %17

Message number	Text
IST1194I	DUPLICATE RESOURCE IS %17
IST1196I	APPN CONNECTION FOR %17 INACTIVE - TGN = %3
IST1197I	ADJCP MAJOR NODE = %17
IST1198I	%17 DELETED FROM DIRECTORY
IST1199I	%10 FOR %17 FAILED, UNKNOWN RESOURCE
IST1200I	%8 TSO USERID TRACE = %3
IST1201I	COMMAND REJECTED BY ISTCMMD EXIT
IST1202I	VALUE %17 FOR %8 IS NOT A VALID NAME
IST1203I	VALUE %17 FOR %8 IS UNKNOWN RESOURCE
IST1204I	VALUE %17 FOR %8 NOT VALID FOR REQUEST
IST1205I	MANAGEMENT SERVICES TRANSPORT UNAVAILABLE
IST1206I	LOAD FAILED FOR THE PROGRAM-TO-PROGRAM INTERFACE
IST1207I	NETWORK MANAGEMENT IS INACTIVE
IST1208I	PROGRAM-TO-PROGRAM INTERFACE MODULE IS INACTIVE
IST1209I	PROGRAM-TO-PROGRAM INTERFACE MODULE STORAGE SHORTAGE
IST1211I	I/O ERROR %17 %4 %4 %4
IST1212I	%8 = %17 STATUS = %10
IST1213I	%35 LU-LU VERIFY ERROR %2
IST1214I	FFST %38
IST1215I	ERROR IN START LIST %8 - %22
IST1216A	ENTER 1 TO CONTINUE-2 TO REENTER LIST-3 TO TERMINATE VTAM
IST1217A	RESPONSE NOT VALID: REENTER 1, 2, OR 3
IST1218I	ACB ERROR FIELD = %2
IST1219I	RTNCD = %2, FDB2 = %2
IST1220I	SSCPNAME NETID CURRENT STATE ROUTING STATUS
IST1221I	%5 DEV = %4 STATUS = %10 STATE = %12
IST1222I	%5 DEVICE %4 IS INOPERATIVE, NAME IS %8
IST1223I	BN NATIVE TIME LEFT LOCATE SIZE
IST1224I	%3 %4 %2 %4
IST1225I	VIRTUAL NODE %17 CONNECTION INACTIVE
IST1226I	TOPOLOGY UPDATE FAILED, INSUFFICIENT STORAGE
IST1227I	%5 %10 = %41
IST1228I	%10 FOR %17 FAILED, CODE = %
IST1229I	%10 FAILED, %17 IS NOT A %2
IST1230I	TIME = %8 DATE = %5 ID = %8
IST1231I	IPDU = %10 OPDU = %10
IST1232I	TSWEEP = %7 QSWEEP = %8
IST1233I	DEV = %7 DIR = %8
IST1234I	BSIZE = %7 MAXBYTES = %8
IST1235I	SIO = %7 SLOWDOWN = %8
IST1236I	BYTECNT0 = %10 BYTECNT = %10
IST1237I	%8 = %10 %21
IST1238I	DSPNAME CURRENT MAXIMUM QUEUED
IST1239I	%8 %7 %7 %7
IST1240I	DSPNAME CURRENT MAXIMUM JOBNAME APPL COUNT
IST1241I	%8 %7 %7 %8 %8 %10
IST1242I	POOL CURRENT MAXIMUM %4 %7 %7
IST1243I	%8 %7 %7 %8 %7 %7
IST1244I	TOTAL %8 POOL STORAGE USAGE: %7 %7
IST1245I	NO NETWORK NODE SERVER IS AVAILABLE FOR CP-CP SESSIONS
IST1246I	NO ADJACENT NETWORK NODES ALLOWED BY SERVER LIST
IST1247I	ALL ATTEMPTS TO ESTABLISH A SESSION WERE UNSUCCESSFUL

Message number	Text
IST1248I	DEACTIVATE LOCAL LINK BEFORE DELETING
IST1249I	IST1249I SYNTAX ERROR AT RECORD %8 IN MEMBER %8
IST1250I	NAME LEVEL MODULE STATUS
IST1251I	%8 %8 %8 %24
IST1252I	DEFINED NETWORK NODE SERVER LIST, NAME = %8
IST1253I	%17 %13
IST1254I	SERVER LIST PROCESSED ORDER = %5
IST1255I	OTHER NETWORK NODES ALLOWED AS SERVERS
IST1256I	CURRENT NETWORK NODE SERVER
IST1257I	SEQUENCE NOT VALID, STATEMENT IGNORED, SKIPPING TO EOF
IST1258I	%15 IS NOT VALID FOR %2
IST1259I	VBUILD TYPE = %8 IS ONLY VALID FOR%4
IST1260I	%24 TRUNCATED - INSUFFICIENT STORAGE
IST1261I	ABEND OCCURRED DURING LINK DEFINITION
IST1262I	MODULE %8 LOAD FAILED - %26
IST1263I	%10 FOR %17 FORCED COLD, %12 %2
IST1264I	%10 FOR %17 FAILED DURING DEFINITION
IST1265I	%10 FOR %17 FAILED - %15
IST1266I	%10 FOR %17 AFFECTS NEW SESSIONS ONLY
IST1267I	%10 FAILED - CANNOT DEFINE %17
IST1268I	%17 DEACTIVATION %10 FAILED: %8
IST1269I	%10 FOR %17 FAILED
IST1270I	%10 FAILED - %17 NOT ACTIVE
IST1271I	%10 FOR %17 SCHEDULED BY %10
IST1272I	%8 %8 CONTINUES - %17 UNDEFINED
IST1273I	%10 %17 FAILED: %10 PENDING
IST1274I	%10 %17 FAILED: %8 NOT ACTIVE
IST1275I	%15 IGNORED ON %10 %17
IST1276I	%17 %10 CDRM = %8
IST1277I	%11 %8 %8 %17 %11 %13 FAILED
IST1278I	%10 %47
IST1279I	%17 NOT UPDATED, %8 AND CDRSC CONFLICT
IST1280I	SESSION TYPE = %9 - SENSE = %8
IST1281I	%8 ON %8 MUST BE NETWORK QUALIFIED
IST1283I	MODIFY USERVAR COMMAND COMPLETE
IST1284I	LUALIAS %8 IS %17 FOR APPLICATIONS
IST1285I	ADDRESS FOR %17 %11 FROM %8
IST1286I	SHADOW PROCESSING FAILED, %8 - %17 RESET
IST1287I	FAILURE REASON IS LUALIAS %8 ALREADY IN USE
IST1288I	TOPOLOGY DATASET RETRIEVAL WAS NOT SUCCESSFUL, CODE = %2
IST1289I	FRSESET %8 PHYSICAL UNITS:
IST1290I	FRSESET HAS BEEN SUCCESSFULLY SENT TO NCP %8
IST1291I	FRSESET WILL BE SENT TO THE NCP DURING PU ACTIVATION
IST1292I	FRSESET WILL NOT BE SENT TO THE NCP DUE TO DEFINITION ERROR
IST1293I	CMIP SERVICES IS ACTIVE
IST1294I	FRSESET HAS BEEN SENT TO NCP %8 BUT FAILURE OCCURRED
IST1295I	CP NAME NODETYPE ROUTERES CONGESTED CP-CP WEIGHT
IST1296I	%17 %7 %4 %8 %5
IST1297I	ICN/MDH CDSERVR RSN HPR
IST1298I	%3 %3 %10 %4
IST1299I	TRANSMISSION GROUPS ORIGINATING AT CP %17
IST1300I	DESTINATION CP TGN STATUS TGTYPE VALUE WEIGHT

Message number	Text
IST1301I	%17 %3 %5 %10 %3 %5
IST1302I	CAPACITY PDELAY COSTTIME COSTBYTE
IST1303I	%7 %8 %3 %3
IST1304I	SECURITY UPARM1 UPARM2 UPARM3
IST1305I	%8 %3 %3 %3
IST1306I	LAST CHECKPOINT ADJ NN EN SERVED EN CDSERVR ICN BN
IST1307I	%8 %8 %4 %4 %4 %4 %4 %4
IST1308I	RESOURCE WAS NOT FOUND IN THE TOPOLOGY DATABASE
IST1309I	START OPTION CURRENT VALUE ORIGINALVALUE ORIGIN
IST1310I	%8 %17 %17 %8
IST1311A	ENTER START OPTION OVERRIDES OR ENTER HALT TO EXIT VTAM
IST1312I	NO START OPTIONS HAVE BEEN MODIFIED
IST1313I	NO TRACES ACTIVE FOR %17
IST1314I	TRLE = %8 STATUS = %10 CONTROL = %4
IST1315I	DISPLAY TRUNCATED AT %3 = %10
IST1316I	PU NAME = %8 STATUS = %10 TRLE = %8
IST1317I	DLCADDR SUBFIELDS FOR PID: %3 %5
IST1318I	%60
IST1319I	%57
IST1320I	%21 IS ONLY VALID AT %12
IST1321I	TABLE FOR %8 %13
IST1322I	NON-NATIVE NATIVE
IST1323I	%8 %8 %7
IST1324I	VNNAME = %17 VNGROUP = %8
IST1326I	CP NAME TYPE STATE STATUS SNVC
IST1327I	%17 %7 %10 %12 %3
IST1328I	TRLE %8 NOT FOUND
IST1329I	%10 %8 FAILED - VIRTUAL NODE NOT DEFINED
IST1330I	%7 CANNOT BE ACTIVATED FROM %12
IST1331I	%13 IS INACTIVE
IST1332I	CMIP SERVICES LOAD FAILED FOR %8 IN %8
IST1333I	ADJLIST = %8
IST1334I	TGN NOT AVAILABLE
IST1335I	%8 HAS NO ADJCDRM STATEMENT FOR ADJLIST %8
IST1336I	%8 ACTIVATION FAILED = CONFLICTING%8 VALUES
IST1337I	%6 ON %8 IGNORED - ONLY VALID FOR BN
IST1338I	%8 VALUE ON %17 IGNORED-VALUES CONFLICT
IST1342I	DNSUFFIX = %50
IST1343I	%50
IST1345I	ID VALUE DESCRIPTION
IST1346I	NCP DOES NOT SUPPORT CONNECTION NETWORK FUNCTION
IST1347I	INSUFFICIENT STORAGE TO DELAY DISCONNECTOF %8
IST1348I	VTAM STARTED AS %19
IST1349I	COMPONENT ID IS %14
IST1350I	DEFINITION ERROR: %42
IST1351I	DLURNAME DIALNUMBER PID GID CNT
IST1352I	DLUR NAME DLUS CONWINNER STATE DLUS CONLOSER STATE
IST1353I	%17 %16 %16
IST1354I	DLUR NAME = %17 MAJNODE =%17
IST1355I	PHYSICAL UNITS SUPPORTED BY DLUR %17
IST1356I	NETWORK NODE DOES NOT PROVIDE REQUIRED SERVER FUNCTION
IST1357I	CPCP

Message number	Text
IST1358I	NO QUALIFYING MATCHES %3 %17
IST1359I	MEMBER NAME OWNING CP SELECTABLE APPC
IST1360I	%17 %8 %3 %3
IST1361I	%8 FROM %16 IGNORED -NOT A VALID NAME
IST1363I	GENERIC RESOURCE NAME %8 REPRESENTS %17
IST1364I	%8 IS A GENERIC RESOURCE NAME FOR:
IST1365I	CONNECTION ATTEMPT TO STRUCTURE %16 FAILED
IST1366I	MVS MACRO %8 FAILED - RTN CODE= %2- REASON CODE= %4
IST1367I	COUPLING FACILITY STRUCTURE %16 NOT AVAILABLE
IST1368I	CONNECTION IS PENDING
IST1369I	REBUILD IS IN PROGRESS
IST1370I	%17 IS CONNECTED TO STRUCTURE %16
IST1372I	STRUCTURE %16 IS BEING DUMPED
IST1373I	STORAGE ELEMENT SIZE = %10
IST1374I	CURRENT MAXIMUM PERCENT
IST1375I	STRUCTURE SIZE %10 %10 %4
IST1376I	STORAGE ELEMENTS %10 %10 %4
IST1377I	LIST ENTRIES %10 %10 %4
IST1378I	%9 FAILED FOR %8 - GENERIC RESOURCE NAME EXISTS
IST1380I	DISCONNECTING FROM STRUCTURE %16
IST1381I	REBUILD STARTED FOR STRUCTURE %16
IST1382I	REBUILD HAS BEEN STOPPED FOR STRUCTURE %16
IST1383I	REBUILD COMPLETE FOR STRUCTURE %16
IST1385I	ADJCLUST INFORMATION WAS IGNORED DUE TO INSUFFICIENT STORAGE
IST1386I	DYNAMIC ALLOCATION FAILED FOR %4 CODE= %2 REASON = %4
IST1391I	DELAYED DISCONNECT OF %8 FAILED DUE TO ABEND
IST1392I	DISCNTIM = %5 DEFINED AT %4 FOR DISCONNECT
IST1393I	GENERIC RESOURCE NAME RESOLUTION EXIT IS%8
IST1394I	CPNAME = %17 STATION ID =%12
IST1395I	FLDTAB = %8 FILTER = %8
IST1396I	DISK I/O INITIALIZATION FAILED FOR CMIP SERVICES
IST1397I	INITIALIZATION FAILED FOR CMIP SERVICES
IST1398I	ALL ATTEMPTS TO RESTART CMIP SERVICES WERE UNSUCCESSFUL
IST1399I	ATTEMPTING TO RESTART CMIP SERVICES
IST1400I	DGTIMER = %5 EXTIMER = %5
IST1401I	RESOURCE NOT FOUND-RETRY IN %5 SEC(S)OR %5 REQUEST(S)
IST1402I	SRTIMER = %5 SRCOUNT = %5
IST1403I	MODIFY QUERY REPLY FROM %8
IST1404I	%2 %56
IST1405I	%56
IST1406I	CONTIMER = %5 IATIMER = %5
IST1408I	MODIFY TGP NOT APPLICABLE FOR %6 %22
IST1409I	%17 ASSOC = %17 ETYPE = %8
IST1410I	QUERY %10 %8
IST1411I	INOP GENERATED FOR %8
IST1412I	%30 %8 - RETURN CODE %4
IST1413I	%19 - REDIAL ATTEMPTED FOR %8
IST1414I	%19 - REDIAL NOT ATTEMPTED FOR %8
IST1415I	%8 CONFLICTS WITH A GENERIC RESOURCE NAME
IST1416I	ID = %17 FAILED - RECOVERYIN PROGRESS
IST1417I	NETID NAME STATUS TYPE MAJNODE
IST1418I	%8 %8 %10 %17 %8

**Message
number**

Text

IST1419I DUPLICATE SESSION INFORMATION REPORTED FOR %17
IST1420I UNABLE TO ASSOCIATE THE FOLLOWING SESSION(S) WITH %8
IST1421I %17 %17 HAS DUPLICATE ADDRESS
IST1422I SAVED TRACE REQUESTS FOR %17
IST1423I %17 REJECTED BECAUSE DSPLYWLD = %8
IST1424I APPLICATIONS DEFINED USING THIS MODEL:
IST1425I DEFINED USING MODEL %17
IST1426I NO APPLICATIONS DEFINED USING THIS MODEL
IST1427I NAME = %17 FOUND TYPE = %9
IST1430I REASON FOR INOP IS %41
IST1432I DYNLU AND CDRSC VALUES FOR %17 CONFLICT
IST1433I %17 REJECTED - DSPLYWLD = NO FOR APPL %8
IST1434I DLUR ANS SUPPORT CONFLICT FOR PU %8 - SET TO ANS=STOP
IST1435I LEVEL INPUT OUTPUT
IST1436I RU PENDING:
IST1438I LOGMODE %8 UNKNOWN IN THIS DOMAIN,DEFAULT IS ISTDOSDF
IST1439I IST1439I %3 PERCENT OF %8 USED FOR STRUCTURE %16
IST1440I USE = %42
IST1441I VARY ACT FOR %8 FAILED, USE=SPARE
IST1442I MODIFY LINEDEF FAILED, %8 CANNOT BE REDEFINED
IST1443I ACYDDF LOADED = NO ACCESS AUTHORITY CHECKING
IST1444I %8 NOT LOADED = %35
IST1445I RESOURCE %17 FOR USERVAR %8 NOT FOUND
IST1446I SYMBOLIC SUBSTITUTION NOT AVAILABLE IN THIS RELEASE OF MVS
IST1447I REGISTRATION TYPE = %7
IST1449I DEFAULT(S) WILL BE USED IF NO OVERRIDE IS SPECIFIED
IST1450I GLOBAL TNSTAT = %8 CNSL = %3 TIME = %4
IST1451I TRLE = %8 TNSTAT = %8
IST1452I %10 MISMATCH IGNORED FOR %8
IST1453I VARY INACT FOR %17 FAILED - FRSESET PU ACTIVE
IST1454I %10 %12 DISPLAYED [FOR ID = %24 | FOR LU = %24]
IST1455I ERROR DETECTED BY EXIT SERVICES FOR %8 IN %8
IST1456I FUNCTION %8 - REASON: %32
IST1457I VTAM APING VERSION %5 (PARTNER TP VERSION %5)
IST1458I ORIGIN ADJSUB VR TP ER REVERSE ER
IST1459I %5 %5 %3 %3 %3 %3
IST1460I TGN CPNAME TG TYPE HPR
IST1461I %3 %17 %11 %4
IST1462I ECHO IS %6
IST1463I ALLOCATION DURATION: %8 MILLISECONDS
IST1464I PROGRAM STARTUP AND VERSION EXCHANGE: %8 MILLISECONDS
IST1465I DURATION DATA SENT DATA RATE DATA RATE
IST1466I (MILLISECONDS) (BYTES) (KBYTE/SEC) (MBIT/SEC)
IST1467I %8 %8 %8 %8
IST1468I TOTALS: %8 %8 %8 %8
IST1469I DURATION STATISTICS:
IST1470I MINIMUM = %8 AVERAGE = %8 MAXIMUM = %8
IST1471I SESSION UNAVAILABLE FOR APING
IST1472I APING %11 ERROR
IST1473I SENSE = %8
IST1474I APINGD TP CONCURRENT INSTANCE LIMIT = %9
IST1475I EXIT %17 IN USE: REENTER COMMAND TO FORCE

**Message
number**

Text

IST1476I TCID X'%16' - REMOTE TCID X'%15'
IST1477I ALLOWED DATA FLOW RATE = %6 %9
IST1478I NUMBER OF UNACKNOWLEDGED BUFFERS = %5
IST1479I RTP CONNECTION STATE = %15
IST1480I RTP END TO END ROUTE - RSCV PATH
IST1481I DESTINATION CP %17 - NCE X
IST1482I HPR = %3 - OVERRIDE = %3 - CONNECTION = %3
IST1483I DTEAD = %15 VNREVCHG = %6
IST1484I %17 %8
IST1485I DLCADDR SUBFIELDS FOR %8
IST1486I RTP NAME STATE DESTINATION CP
IST1487I %8 %15 %17
IST1488I %12 FOR RTP %8 AS %7 TO %17
IST1489I APING SESSION INFORMATION
IST1490I DLU=%17 SID=%16
IST1493I RTP SUMMARY FOR %17 COUNT = %5 RTPONLY = %3
IST1494I PATH SWITCH %9 FOR RTP %8 TO %17
IST1495I NO ALTERNATE ROUTE AVAILABLE
IST1496I DISPLAY APING FAILED - PRIOR DISPLAY APING IS EXECUTING
IST1498I LOADING NCP FROM %13
IST1499I AHHC SUBCHANNEL %4 %15
IST1500I STATE TRACE = %19
IST1501I XCF TOKEN = %16
IST1502I ADJACENT CP = %17
IST1503I XCF TOKEN = %16 STATUS = %10
IST1504I XCF CONNECTION WITH %17 IS INOPERATIVE
IST1505I TYPE = %4 TOKEN = %16
IST1506I %8 FAILED FOR %17 - MEMBER LEAVING GROUP
IST1507I VR-BASED TG NOT SUPPORTED
IST1508I CP-CP SESSIONS ON VR-BASED TG NOT SUPPORTED
IST1509I %8 UNKNOWN BUT ACCEPTED -- PREVIOUS VALUE WAS %8
IST1510I LLERP = %8 - RECEIVED = %8
IST1511I MAXIMUM NETWORK LAYER PACKET SIZE = %6 BYTES
IST1512I %27 FAILED - CODE X'%4' - CUA %4
IST1513I %14 FAILED - %36
IST1514I SUBAREA COS APPNCOS
IST1515I %8 TRACE ACTIVE
IST1516I INITIAL DATA FLOW RATE = %6 %9
IST1517I LIST HEADERS = %10 - LOCK HEADERS= %10
IST1518I BASE STRUCTURE IS %16
IST1519I ALTERNATE STRUCTURES ARE:
IST1520I SUBAREA SEARCH INFORMATION:
IST1521I %8 NAME CDINIT DSRLST IOCD INTOTH TOTAL
IST1522I %8 %5 %5 %5 %5 %6
IST1523I OLU DLU SID RU
IST1524I %17 %17 %16 %6
IST1525I TOTAL NUMBER OF OUTSTANDING SEARCHES =%10
IST1526I APPN SEARCH INFORMATION:
IST1527I %6 NAME TYPE STATUS BROADCAST DIRECTED TOTAL
IST1528I %17 %2 %4 %5 %5 %6
IST1529I OLU DLU SID LOCATE
IST1530I %17 %17 %16 %5

Message

number	Text
IST1531I	SID = %16 CP(OLU)= %17
IST1532I	OLU = %17 DLU = %17
IST1533I	SEARCH CONCENTRATED = %3 RDS = %3
IST1534I	SSCP/CP IN OLU DIRECTION = %17
IST1535I	REPLY RETURNED TO ORIGINATING CP = %3
IST1536I	CONCENTRATED BEHIND %16 %20
IST1537I	AWAITING REPLY FROM THE FOLLOWING NODE(S):
IST1538I	%17 %34
IST1539I	PCID MODIFIER = %20
IST1540I	SEARCH STATUS = %10 SSCP(OLU) = %8
IST1541I	LOCATES PENDING = %10 CURRENTTASK = %5
IST1542I	NO ADJSSCP ROUTING INFORMATION AVAILABLE
IST1543I	REQUESTS CONCENTRATED BEHIND THIS SEARCH = %5
IST1544I	DIAL OUT PURGE IN PROGRESS - ID = %8
IST1545I	NODE ROLE VECTOR = %7
IST1546I	CDRM STATUS SUBAREA ELEMENT NETIDSSCPID
IST1547I	%8 %5 %10 %5 %8 %5
IST1548I	BROADCAST = %3 DIRECTED = %3
IST1549I	OWNER = %17 MNPS STATE = %21
IST1550I	MNPS STATE = %21
IST1551I	%51
IST1552I	MAC = %11 MACTYPE = %4
IST1553I	%47 %4
IST1554I	PVCNAME = %8
IST1555I	VPCI/VCI = %6
IST1556I	ATM %7 FAILURE: ID = %8 STATUS = %8
IST1557I	MEDIUM = %3, PORT NAME = %8
IST1558I	DIAG = %8 %8 %8 %8 %8 %8
IST1559I	ATM ADDRESS TYPE FORMAT
IST1560I	VARY ACT %8 CHANGE FAILED
IST1561I	PORTNAME ON TRLE NOT VALID
IST1562I	CAUSE = %3
IST1563I	CKEYNAME = %8 CKEY = %9
IST1564I	TSO NOT ACTIVE
IST1565I	%7 MODULES = %7K
IST1566I	MODULE %8 IS NOT LOADED INTO CSA/ECSA
IST1567I	%16 %16 %16
IST1568I	INLP = %10 ONLP = %10 BFNLP = %10
IST1569I	INLP = %10 ONLP = %10
IST1570I	NBYTECTO = %10 NBYTECT = %10
IST1571I	%8 ENTRY POINT IS %8 LEVEL IS %7
IST1572I	MODULE %8 CANNOT BE LOCATED
IST1573I	%12 STORAGE DISPLAY BEGINS AT LOCATION %8
IST1574I	%4 %8 %8 %8 %8 %17
IST1575I	DIALNO FOR PID: %3 %5
IST1576I	DYNAMIC SWITCHED MAJOR NODE %8 CREATED
IST1577I	HEADER SIZE = %5 DATA SIZE = %7 STORAGE = %9
IST1578I	%6 INOP DETECTED FOR %8 BY %8 CODE = %3
IST1579I	-----
IST1580I	XID RECEIVED BY VTAM:
IST1582I	CONTROL VECTOR X'22'' ANALYSIS:
IST1583I	BYTE OFFSET OF FIRST BYTE IN ERROR =%7

Message number	Text
IST1584I	BIT OFFSET OF FIRST BIT IN ERROR = %5
IST1585I	SENSE CODE = %11
IST1586I	XID SENT BY VTAM:
IST1587I	ORIGIN NCE X'%16'
IST1588I	RTP END TO END ROUTE - COMPUTED SESSION PATH
IST1590I	PU NETID DIFFERENT THAN HOST AND CONTACTED REQUEST
IST1591I	NCP NOT LOADED
IST1592I	NETID IN XID DID NOT MATCH NETID OF PU
IST1593I	RESOURCE TYPE NOT VALID
IST1594I	CPNAME IN CONTACTED REQUEST SAME AS SSCPNAME
IST1595I	LINK STATION NOT ASSOCIATED WITH AN NCP
IST1596I	SWITCHED LINK STATION STATE PCTD2 NOT VALID FOR LOAD
IST1597I	SWITCHED CALL=IN NCP NOT VALID
IST1598I	LEASED LINK STATION STATE PCTD2 NOT VALID FOR LOAD
IST1599I	NCP INDICATES LOAD REQUIRED BUT LOAD=NO
IST1600I	LOAD MODULE MISMATCH - LOAD=NO
IST1602I	RU ERROR: EXTRA CV X'%2'
IST1603I	RU ERROR: INVALID POSITIVE RESPONSE
IST1604I	RU ERROR: LENGTH, FORMAT, OR TYPE NOT VALID
IST1605I	RU ERROR: MISSING CV X'0B'
IST1606I	DIAL RETRY FAILED
IST1607I	RU ERROR: RESPONSE TOO LONG
IST1608I	RU ERROR: RESPONSE TOO SHORT
IST1609I	CV X'0B'' INDICATES ADJACENT LINK STATION NOT SUPPORTED
IST1610I	CORRELATOR MISMATCH - LOAD=NO
IST1611I	CORRELATOR MISMATCH - NCP ACQUIRED BEFORE ACTIVATION
IST1612I	LOAD MODULE MISMATCH - EXPECTED %8FOUND %8
IST1613I	TYPE = %4 ATTN = %8
IST1614I	RSIO = %8 INPACKET = %8 INBYTE = %8
IST1615I	ARPACKET = %8 ARBYTE = %8 MAXRCVD = %8
IST1616I	WSIO = %8 OTPACKET = %8 OUTBYTE = %8
IST1617I	AWPACKET = %8 AWBYTE = %8 MAXSENT = %8
IST1618I	READCCW = %8 PCICNT = %8
IST1619I	WRITECCW = %8 APPEND = %8
IST1621I	DUPLICATE CP NAME: %17 FORID = %8
IST1622I	DLCADDR SUBFIELD %2 NOT VALID - %28
IST1623I	DUPLICATE DLCADDR SUBFIELD %2 - %28
IST1624I	DLCADDR SUBFIELD %2 NOT SPECIFIED - %23
IST1625I	STORAGE ADDRESS %8 IS UNAVAILABLE
IST1626I	ALL DATA IN %16 FOR %17 REMOVED
IST1627I	MULTI-NODE PERSISTENT SESSION TIMER EXPIRED
IST1628I	DATA WAS IN AN UNRECOVERABLE STATE - %21
IST1649I	ORIGIN = %8 TARGET = %8 STATUS = %10
IST1650I	IDX INITIALIZATION FAILED FOR %8 DEVICE %4 CODE %2
IST1651I	IDX RECEIVED BY VTAM:
IST1652I	IDX SENT BY VTAM:
IST1653I	RWSIO = %8 CHWR = %8 CHRD = %8
IST1654I	INPACKET = %8 INBYTE = %8 MAXRCVD = %8
IST1655I	OTPACKET = %8 OTBYTE = %8 MAXSENT = %8
IST1656I	VTAMTOPO = %8, NODE REPORTED - %3
IST1657I	MAJOR NODE VTAMTOPO = %8
IST1658I	XID3 NEGOTIATION ERROR - DEVICE %8 - SENSE = %8

Message number	Text
IST1660A	ENTER PASSWORD FOR %8 %8
IST1661I	%8 PARAMETER NOT VALID FROM PROGRAM OPERATOR
IST1662I	%8 PARAMETER VALUE NOT ALLOWED
IST1663I	%8 %8 COMMAND FAILED - %20
IST1664I	PASSWORD MUST BE 1-8 CHARACTERS
IST1668I	LUNAME: IPADDR..PORT
IST1669I	IPADDR..PORT %46
IST1670I	%17 %21
IST1671I	Entry Subarea Exit Subarea
IST1672I	CURRENT NETWORK NODE SERVER NOT FOUND IN ACTIVE NETSRVR LIST
IST1673I	SWITCH TO PREFERRED NETWORK NODE SERVER IS COMPLETE
IST1674I	PREFERRED NETWORK NODE SERVER = %18
IST1675I	ACTIVE NETSRVR LIST AND PREFERRED NN SERVER ARE MERGED
IST1676I	SWITCH TO PREFERRED NETWORK NODE SERVER FAILED - CODE = %2
IST1677I	PREFERRED NETWORK NODE SERVER
IST1679I	MEDIUM = %5
IST1680I	%6 IP ADDRESS %39
IST1681I	LOCAL SAP = %3 REMOTE SAP = %3
IST1682I	HPR/IP %8 FAILURE: ID = %8
IST1683I	HPR/IP %7 FAILURE: ID = %8 STATUS = %8
IST1684I	RETURN CODE = %8 REASON CODE = %8
IST1685I	TCP/IP JOB NAME = %8
IST1686I	NO USABLE TCP/IP JOB AVAILABLE FOR HPR/IP
IST1687I	HPR/IP PORT NOT AVAILABLE
IST1688I	EXCESSIVE TIME %5 DETECTED FOR STRUCTURE %16
IST1689I	%10 FAILED - NOT CONNECTED TO %16
IST1690I	VARY CFS FAILED - ALREADY CONNECTED TO %16
IST1691I	VARY CFS FAILED - %16 IS NOT AVAILABLE
IST1692I	TCB = %2 TCP PORT = %3
IST1693I	NETWORK ADDRESS RECEIVED FOR %17 IN USE
IST1694I	REASON = SEQUENCE NUMBER ERROR
IST1695I	PU NAME CP NAME COSNAME SWITCH CONGEST STALL SESS
IST1696I	%8 %17 %8 %3 %3 %10
IST1697I	RTP PACING ALGORITHM = ARB RESPONSIVE MODE
IST1698I	PROBE %8 ATTEMPTED - FFST NOT AVAILABLE
IST1700I	%9 CONFLICTS WITH %17 %17
IST1701I	CP NAME LOCATE SIZE
IST1702I	%17 %4
IST1703I	DESIRED LOCATE SIZE = %4 LAST LOCATE SIZE = %4
IST1704I	%8 = %8 FROM ADJACENT SSCP TABLE
IST1705I	%8 = %8 FROM START OPTION
IST1706I	PARTNER NAME GENERIC RESOURCE MEMBER ATTRIBUTES
IST1707I	%17 %17 %8 %8
IST1708I	%10 FAILED - GENERIC RESOURCES NOT AVAILABLE
IST1709I	%10 FAILED - NOT CONNECTED TO %16
IST1710I	RSCV FROM PLU SAVED AT SESSION ACTIVATION
IST1711I	RSCV TOWARDS SLU SAVED AT SESSION ACTIVATION
IST1713I	RTP RSCV IN THE DIRECTION OF THE %3
IST1714I	NO PATH INFORMATION EXISTS
IST1715I	MPCLEVEL = %6 MPCUSAGE = %9
IST1716I	PORTNAME = %8 LINKNUM = %3 OSA CODE LEVEL = 4%
IST1717I	ULPID = %8 ULP INTERFACE = %16

**Message
number**

Text

IST1718I DATAPATH DEVICE %4 NOT FOUND FOR TRLE %8
IST1719I PCIREALO = %8 PCIREAL = %8
IST1720I PCIVIRTO = %8 PCIVIRT = %8
IST1721I SBALCNT = %8 SBALCNT = %8
IST1722I PACKCNT = %8 PACKCNT = %8
IST1723I SIGACNT = %8 SIGACNT = %8
IST1724I I/O TRACE = %3 TRACE LENGTH = %4
IST1725E STORAGE SHORTAGE IN %16 - UNABLE
IST1726I ADDRESS FOR %17 DELETED FROM %8
IST1727I DNS NAME: %50
IST1728I %60
IST1729I OPTION %4 MUST BE CODED WHEN SUBTRACE %4 IS SPECIFIED
IST1730I SUBTRACE %4 ACTIVE UNDER TRACE OPTION %4
IST1731I %8 ACTIVATION FAILED - HPR=RTP REQUIRED WITH HPR/IP
IST1732I VTAM INITIATED SLOWDOWN TERMINATION FOR DEVICE %8
IST1733I %8 DEVICE HAS BEEN IN SLOWDOWN MORE THAN %3 SECONDS
IST1734I DEVICE %8 INITIATED SLOWDOWN TERMINATION
IST1736I PU NAME
IST1737I %8
IST1738I ANR LABEL TP ER NUMBER
IST1739I %16 %8 %
IST1740I IBMTGPS IN %11 IS EMPTY - PROCESSING CONTINUES
IST1743I IBMTGPS IN %11 NOT FOUND - PROCESSING CONTINUES
IST1744I IBMTGPS IN %11 IN ERROR - PROCESSING CONTINUES
IST1745I %17 REJECTED BECAUSE VARYWLD = %8
IST1746I %7 COMMAND PROCESSING COMPLETE
IST1747I SUMMARY OF STATE INFORMATION:
IST1748I %5 = %10 %5 = %10 %5 = %10
IST1749I %17 REJECTED - VARYWLD = NO FOR APPL %8
IST1750I PCITHRSO = %10 PCITHRSH = %10
IST1751I PCIUNPRO = %10 PCIUNPRD = %10
IST1752I RPROCDEO = %10 RPROCDEF = %10
IST1753I RREPLDEO = %10 RREPLDEF = %10
IST1754I NOREADSO = %10 NOREADS = %10
IST1755I SBALMAX = %10 SBALAVG = %10
IST1756I QDPTHMAX = %10 QDPTHAVG = %10
IST1757I PRIORITY%: %11 PRIORITY%: %11
IST1758I RSCV TOWARDS DLUR SAVED AT SESSION ACTIVATION
IST1759I RTP RSCV FROM THE DIRECTION OF THE DLUR
IST1760I %8 SUBCHANNEL %4 VARY OFFLINE NOT ALLOWED
IST1761I %8 PARAMETER EXTRANEIOUS FOR DISPLAY ID COMMAND
IST1762I %8 ACT FAILED - TCPNAME/IPADDR START OPTION REQUIRED
IST1763I NO ACTIVE CP-CP SESSION-CAPABLE TGS EXIST
IST1764I NO ACTIVE CP-CP SESSION-CAPABLE TG TO %17
IST1765I ADJACENT CP WINNER LOSER STATE NODE ANDCB
IST1766I %17 %6 %6 %9 %2 %8
IST1767I TRACE INITIATED FOR %8 DYNAMIC APPLICATIONS
IST1768I TRACE TERMINATED FOR %8 DYNAMIC APPLICATIONS
IST1769I LAST TDU RECEIVED - %8 %8 FROM %17
IST1773I TNSTAT RECORDS CANNOT BE SENT TO SMF - SMF NOT IN SYSTEM
IST1774I OPTIMAL CNN ROUTE NOT CHOSEN - ENTRY/EXIT SUBAREA MISMATCH
IST1775I CNN ENTRY SUBAREA = %5 CNN EXIT SUBAREA = %5

**Message
number**

Text

IST1776I TDUS RECEIVED MOST RECENTLY
IST1777I CP NAME RSN DESTINATION CP TGN ACC REJ
IST1778I %17 %8 %17 %3 %5 %5
IST1779I TDUS RECEIVED BETWEEN %8 %8 - %8 %8
IST1780I TOPOLOGY RESOURCE RECORDS REFERENCED MOST FREQUENTLY
IST1781I INITDB CHECKPOINT DATASET LAST GARBAGE COLLECTION
IST1782I ENTRY NAME TABLE NAME ACTIVATION TIME
IST1783I %8 %8 %8 %8
IST1784I LAST TDU RECEIVED - NONE
IST1785I %8 %8 %8 %8
IST1786I HPR ROUTE TEST INITIATED FOR RTP PU
IST1787I HPR ROUTE TEST RESULTS FOR RTP PU %8
IST1788I NODE CP NAME TG NUMBER PARTNER CP NAME INTERNODAL TIME
IST1789I (MILLISECONDS)
IST1790I %17 %8 %17 %15
IST1791I HPR ROUTE TEST PACKET NOT RETURNED BY NODE %17
IST1792I TOTAL RTP TRAVERSAL TIME %15 MILLISECONDS
IST1793I HPR ROUTE TEST NOT INITIATED - RTP PU NOT IN PROPER STATE
IST1794I HPR ROUTE TEST NOT INITIATED - TEST ALREADY IN PROGRESS
IST1795I HPR ROUTE TEST NOT INITIATED - INSUFFICIENT STORAGE
IST1796I SYSTEM-MANAGED DUPLEXING REBUILD IS IN PROGRESS
IST1797I STRUCTURE TYPE = %5
IST1798I TOPOLOGY DATASET RETRIEVED WAS CREATED ON %8 %8
IST1799I NO ROUTE AVAILABLE TO DESTINATION IP ADDRESS %15
IST1800I TRLE = %8 ** CONGESTED **
IST1801I UNITS OF WORK FOR NCB AT ADDRESS X'%8'
IST1802I %2 CURRENT = %4 AVERAGE = %4 MAXIMUM = %4
IST1803I %8 PARAMETER VALUE NOT VALID - DEFAULT %8 USED
IST1804I %8 PARAMETER NOT VALID - IGNORED
IST1805I ONLY LOCAL TOPOLOGY INFORMATION IS AVAILABLE
IST1806I NO DIAL-IN LINE FOUND FOR HPR/IP SWITCHED CONNECTION
IST1807I NO DIAL-IN LINE FOR HPR/IP VIRTUAL NODE %17
IST1809I HPR ROUTE TEST NOT INITIATED - INSUFFICIENT PATH INFORMATION
IST1810I PKTIQDO = %10 PKTIQD = %10
IST1811I BYTIQDO = %10 BYTIQD = %10
IST1816I PARAMETER 1 FOR DISCNTIM MUST BE NUMERIC OR IMMED
IST1817I PATH SWITCH REASON: RTP CONNECTION UNAVAILABLE
IST1818I PATH SWITCH REASON: SHORT REQUEST RETRY LIMIT EXHAUSTED
IST1819I PATH SWITCH REASON: TG INOP
IST1820I PATH SWITCH REASON: MODIFY RTP COMMAND ISSUED
IST1821I PATH SWITCH REASON: AUTO PATH SWITCH FOR PSRETRY
IST1822I PATH SWITCH REASON: UNKNOWN
IST1823I LIST DVIPA SYSNAME TCPNAME # ASSIGNED PORTS
IST1824I %4 %39 %5
IST1825I %8 %8 %5
IST1826I PORTS: %5 %5 %5 %5 %5 %5
IST1827I %5 %5 %5 %5 %5 %5
IST1828I LIST %4 IS UNCLAIMED
IST1829I NO CLAIMED LISTS FOUND FOR THE SPECIFIED DVIPA
IST1830I NO CLAIMED LISTS FOUND
IST1831I %3 OF SYSTEM CSA STORAGE REMAINING = %9
IST1832I CSALIMIT VALUE %9 MIGHT BE TOO SMALL

Message number	Text
IST1833I	CSA STORAGE ALLOCATION EXCEEDS SPECIFIED CSALIMIT VALUE
IST1834I	LIST DVIPA SYSNAME TCPNAME #ENTRIES TGCOUNT SEQNUMBER
IST1835I	%4 %15
IST1836I	%8 %8 %10 %10
IST1837I	%8 %8 %10 %10
IST1838I	LIST ENTRY KEYS:
IST1839I	%32
IST1840I	DLUR = %17
IST1841I	ACTUAL DATA FLOW RATE = %6 %9
IST1842I	NUMBER OF NLPS RETRANSMITTED = %10
IST1843I	NUMBER OF NLPS ON WAITING-TO-SEND QUEUE = %5
IST1844I	ARB MODE = %6
IST1845I	BOUNDARY DIVIDING REGIONS % AND % = %10 MILLISECONDS
IST1846I	%7 RECEIVER THRESHOLD = %9 MICROSECONDS
IST1847I	NUMBER OF NLPS ON WAITING-FOR-ACKNOWLEDGEMENT QUEUE = %5
IST1848I	SEND BYTE COUNT = %10 RECEIVE BYTE COUNT = %10
IST1849I	LARGEST NLP SENT = %10 BYTES
IST1850I	LARGEST NLP RECEIVED = %10 BYTES
IST1851I	SMOOTHED ROUND TRIP TIME = %10 MILLISECONDS
IST1852I	LIVENESS TIMER = %10 SECONDS
IST1853I	NUMBER OF NLPS ON OUT-OF-SEQUENCE QUEUE = %5
IST1854I	NUMBER OF NLPS ON INBOUND SEGMENTS QUEUE = %5
IST1855I	NUMBER OF SESSIONS USING RTP = %10
IST1856I	LAST PATH SWITCH OCCURRENCE WAS ON %8 AT %8
IST1857I	BACKPRESSURE REASON COUNTS:
IST1858I	PATHSWITCH SEND QUEUE MAX STORAGE FAILURE STALLED PIPE
IST1859I	%3 %3 %3 %3
IST1860I	NUMBER OF NLPS SENT = %10 - OVERFLOW = %10
IST1861I	NUMBER OF NLPS RECEIVED = %10 - OVERFLOW = %10
IST1862I	ARB MAXIMUM SEND RATE = %6 %9
IST1863I	SUBAREA INDEX ELEMENT
IST1864I	X'%4' (%5) X'%4' (%5) X'%4' (%5)
IST1865I	GLOBAL INOPDUMP = %3
IST1866I	TRLE = %8 INOPDUMP = %3
IST1867I	INOPDUMP = %3 FOR ALL TRLE-BASED RESOURCES
IST1868I	DISPLAY APING FAILED - TP INSTANCE LIMIT EXCEEDED
IST1869I	NO %8 SESSIONS EXIST
IST1870I	%8 HAS %9 ACTIVE SESSIONS
IST1871I	MESSAGE TRIGGER: MESSAGE = %8 MATCHLIM = %4
IST1872I	VALUE %1 = %28 %20
IST1873I	SENSE TRIGGER: SENSE = %8 RU = %3 %3 MATCHLIM = %4
IST1874I	MESSAGE TRIGGER: NONE
IST1875I	SENSE TRIGGER: NONE
IST1876I	MESSAGE TRIGGER DELETED
IST1877I	SENSE TRIGGER DELETED
IST1878I	NO MESSAGE TRIGGER EXISTS
IST1879I	VTAM DUMPING FOR CSDUMP TRIGGER MESSAGE %8
IST1880I	VTAM DUMPING FOR CSDUMP TRIGGER SENSE %2 %6 RU %6
IST1881I	VTAM DUMPING FOR CSDUMP - IMMEDIATE DUMP
IST1882I	NO SENSE TRIGGER EXISTS
IST1883I	SESSION ESTABLISHED WITH %8 - DLUR %17
IST1884I	SESSION ENDED WITH %8 - DLUR %5 %12

**Message
number**

Text

IST1885I SIO = %5 SLOWDOWN = %3
IST1886I SLOWDOWN TIME EXCEEDS MAXSLOW = %3 SECONDS FOR DEVICE %4
IST1887I DEVICE %4 EXITED SLOWDOWN MODE
IST1888I %3 = %17 SID = %10 %6
IST1889I SSCP-SSCP SESSION TO %17 HELD FOR PACING
IST1890I %8 ACTIVATION FAILED - NO SOURCE IP ADDRESS AVAILABLE
IST1891I %8 DIAL FAILED - MISMATCH OF IP ADDRESS FAMILIES
IST1892I NO ROUTE AVAILABLE TO DESTINATION
IST1893I NAME-TO-ADDRESS RESOLUTION FAILED
IST1894I %8 IGNORED - INCOMPATIBLE WITH %3 %5
IST1895I %8 RESET - INCOMPATIBLE WITH %5 %3
IST1896I VNNAME %17
IST1897I %8 ACTIVATION FAILED - TCPNAME START OPTION REQUIRED
IST1898I %8 ACTIVATION FAILED - IPADDR OR HOSTNAME REQUIRED
IST1899I %8 ACTIVATION FAILED - VRN INFORMATION MUST BE UNIQUE
IST1900I ASSIGNED IP ADDRESS %15
IST1901I LINES UNDER GROUP: %8
IST1902I GROUP = %8
IST1903I FAILURE OVER VRN %17 TO CP %17
IST1904I %8 = %29 %20
IST1905I START OPTION = %8
IST1906I CURRENT VALUE = %23 %20
IST1907I ORIGINAL VALUE = %23 %20
IST1908I ORIGIN = %8
IST1909I REMOTE HOSTNAME %24 %20
IST1910I LOCAL HOSTNAME %25 %20
IST1911I %40 %20
IST1912I IP ADDRESS %29 %10
IST1913I LUNAME PORT
IST1914I %17 %5
IST1915I %8 ACTIVATION FAILED - VNNAME ALREADY ACTIVE AS GLOBAL
IST1916I %8 ACTIVATION FAILED - VNNAME ALREADY ACTIVE AS LOCAL
IST1917I %8 IN CONFLICT WITH %8 - BOTH OPTIONS IGNORED
IST1919I INOPCODES FOR MODULE %8:
IST1920I DUMP ENABLED:
IST1921I %36 %19
IST1922I DUMP DISABLED:
IST1923I MODULE %8 INOPCODE %3 DOES NOT EXIST
IST1924I %8 DOES NOT EXIST OR DOES NOT CONTAIN INOPCODES
IST1925I SOCKET OPENED BY SNAMGMT SERVER SUBTASK
IST1926I SNAMGMT SERVER IS UNABLE TO ACCEPT CONNECTION REQUESTS
IST1927I SOCKET %10 CALL FAILED - RC = %8 RSN = %8
IST1928I SNAMGMT CONNECTION TO %8 IS ACTIVE
IST1929I SNAMGMT CONNECTION TO %8 HAS ENDED
IST1930I SOCKET CLOSED BY SNAMGMT SERVER SUBTASK
IST1931I SNAMGMT CONNECTION REFUSED FOR %8
IST1932I SNAMGMT SECURITY CHECK FAILED FOR %8
IST1933I SNAMGMT SERVER CLOSING CONNECTION TO %8
IST1934I IDBLK = %3 IDNUM = %5
IST1935I RIF = %36
IST1936I LOCADDR = %3
IST1937I PATH SWITCH REASON: INITIATED BY REMOTE PARTNER

Message number	Text
IST1938I	APPC = %3
IST1939I	INACT FINAL = %3
IST1940I	MODIFY COMMAND REJECTED - SNAMGMT ALREADY ACTIVE
IST1941I	MODIFY COMMAND REJECTED - SNAMGMT ALREADY SET TO NO
IST1942I	APPN LOCATE SEARCH STEPS ATTEMPTED
IST1943I	DIRECTED SEARCH TO A SERVED END NODE
IST1944I	DIRECTED SEARCH TO A NETWORK NODE
IST1945I	DIRECTED SEARCH TO A BORDER NODE
IST1946I	LOCAL SUBAREA SEARCH
IST1947I	BROADCAST SEARCH TO SERVED END NODES
IST1948I	DIRECTED SEARCHES TO BORDER NODES
IST1949I	DIRECTED SEARCH TO A CENTRAL DIRECTORY SERVER
IST1950I	DIRECTED SEARCHES TO ALTERNATE CENTRAL DIRECTORY SERVERS
IST1951I	BROADCAST SEARCH TO NETWORK NODES
IST1952I	DIRECTED SEARCHES TO INTERCHANGE NODES
IST1953I	%18 - SENSE %8 FROM %17
IST1954I	TRL MAJOR NODE = %8
IST1955I	STALL DETECTED FOR RTP %8 TO %17
IST1956I	STALL CONTINUES FOR RTP %8 TO %17
IST1957I	STALL ALLEVIATED FOR RTP %8 TO %17
IST1958I	NUMBER OF ORPHANED BUFFERS = %10
IST1959I	DATA FLOW STATE = NORMAL
IST1960I	%8 %17 %8 %3 %3 %3 %4
IST1961I	DATA FLOW STATE = STALLED
IST1962I	APPNCOS = %8 - PRIORITY = NETWORK
IST1963I	APPNCOS = %8 - PRIORITY = HIGH
IST1964I	APPNCOS = %8 - PRIORITY = MEDIUM
IST1965I	APPNCOS = %8 - PRIORITY = LOW
IST1966I	ACTIVATED AS ACTIVE ON %8 AT %8
IST1967I	ACTIVATED AS PASSIVE ON %8 AT %8
IST1968I	ARB INFORMATION:
IST1969I	MAXIMUM ACTUAL DATA FLOW RATE = %6 %9
IST1970I	RATE REDUCTIONS DUE TO RETRANSMISSIONS =%10
IST1971I	TIMER INFORMATION:
IST1972I	SHORT REQUEST TIMER = %10 MILLISECONDS
IST1973I	OUTBOUND TRANSMISSION INFORMATION:
IST1974I	NUMBER OF NLPS SENT = %20 (%4)
IST1975I	TOTAL BYTES SENT = %20 (%4)
IST1976I	BYTES RETRANSMITTED = %20 (%4)
IST1977I	MAXIMUM NUMBER OF NLPS ON WAITING-FOR-ACK QUEUE = %10
IST1978I	WAITING-FOR-ACK QUEUE MAX REACHED ON %8 AT %8
IST1979I	INBOUND TRANSMISSION INFORMATION:
IST1980I	SEQUENCE NUMBER = %10 (X''%8'')
IST1981I	TOTAL BYTES RECEIVED = %20 (%4)
IST1982I	NUMBER OF NLPS ON INBOUND WORK QUEUE = %9
IST1983I	MAXIMUM NUMBER OF NLPS ON INBOUND WORK QUEUE = %10
IST1984I	PATH SWITCH INFORMATION:
IST1985I	PATH SWITCHES INITIATED FROM REMOTE RTP = %10
IST1986I	PATH SWITCHES INITIATED FROM LOCAL RTP =%10
IST1987I	PATH SWITCHES DUE TO LOCAL FAILURE = %10
IST1988I	PATH SWITCHES DUE TO LOCAL PSRETRY = %10
IST1989I	NO MATCHING AUTOLOGON REQUESTS

**Message
number**

Text

IST1990I PENDING AUTOLOGON REQUESTS FOR:
IST1991I %17 - WAITING FOR PLU NOTIFICATION
IST1992I %17 - WAITING FOR AUTOTI TIMER
IST1993I %17 - WAITING FOR CDRM ACTIVATION
IST1994I %17 - WAITING FOR CDRM OR CPCP ACTIVATION
IST1995I %17 - WAITING FOR AUTOCAP NODE ACTIVATION
IST1996I OR AUTOTI TIMER
IST1997I %17 %17 %17
IST1998I %17 - WAITING FOR AUTOTI/AUTORTRY START OPTION
IST1999I MODIFICATION OR SLU REACTIVATION
IST2000I ENTERPRISE EXTENDER GENERAL INFORMATION
IST2001I ENTERPRISE EXTENDER CONNECTION INFORMATION
IST2002I ENTERPRISE EXTENDER AGGREGATE CONNECTION INFORMATION
IST2003I ENTERPRISE EXTENDER XCA MAJOR NODE NAME = %8
IST2004I LIVTIME = %5 SRQTIME = %5 SRQRETRY = %5
IST2005I IPRESOLV = %3
IST2006I PORT PRIORITY = SIGNAL NETWORK HIGH MEDIUM LOW
IST2007I IPPORT NUMBER = %5 %5 %5 %5 %5
IST2008I IPTOS VALUE = %2 %2 %2 %2 %2
IST2009I RTP PIPES = %10 LU-LU SESSIONS = %10
IST2010I INOPS DUE TO SRQRETRY EXPIRATION = %10
IST2011I AVAILABLE LINES FOR THIS EE VRN= %10
IST2012I ACTIVE CONNECTIONS USING THIS EE VRN = %10
IST2013I AVAILABLE LINES FOR PREDEFINED EE CONNECTIONS = %10
IST2014I ACTIVE PREDEFINED EE CONNECTIONS = %10
IST2015I ACTIVE LOCAL VRN EE CONNECTIONS = %10
IST2016I ACTIVE GLOBAL VRN EE CONNECTIONS = %10
IST2017I TOTAL RTP PIPES = %10 LU-LU SESSIONS = %10
IST2018I TOTAL ACTIVE PREDEFINED EE CONNECTIONS = %10
IST2019I TOTAL ACTIVE LOCAL VRN EE CONNECTIONS = %10
IST2020I TOTAL ACTIVE GLOBAL VRN EE CONNECTIONS = %10
IST2021I TOTAL ACTIVE EE CONNECTIONS = %10
IST2022I EE CONNECTION ACTIVATED ON %8 AT TIME %8
IST2023I CONNECTED TO LINE %8
IST2024I CONNECTED TO SWITCHED PU %8
IST2025I LDLC SIGNALS RETRANSMITTED AT LEAST ONE TIME = %5
IST2026I LDLC SIGNALS RETRANSMITTED SRQRETRY TIMES = %5
IST2027I DWINOP = %3 REDIAL = %7 REDDELAY = %4
IST2028I KEEPACT = %3
IST2029I MTU SIZE = %5
IST2030I PORT PRIORITY = SIGNAL
IST2031I PORT PRIORITY = NETWORK
IST2032I PORT PRIORITY = HIGH
IST2033I PORT PRIORITY = MEDIUM
IST2034I PORT PRIORITY = LOW
IST2035I TOTALS FOR ALL PORT PRIORITIES
IST2036I NLPS SENT = %20 (%4)
IST2037I BYTES SENT = %20 (%4)
IST2038I NLPS RETRANSMITTED = %20 (%4)
IST2039I BYTES RETRANSMITTED = %20 (%4)
IST2040I NLPS RECEIVED = %20 (%4)
IST2041I BYTES RECEIVED = %20 (%4)

**Message
number**

Text

IST2042I %6 OF %6 EE CONNECTIONS DISPLAYED
IST2043I TOTAL ACTIVE EE CONNECTIONS FOR LOCAL HOSTNAME = %10
IST2044I TOTAL ACTIVE EE CONNECTIONS FOR LOCAL IPADDR = %10
IST2045I ENTERPRISE EXTENDER XCA MAJOR NODE NOT ACTIVE
IST2046I MNPS FORCED TAKEOVER TIMER EXPIRED FOR %8
IST2047I %8 DOES NOT HAVE AN ACTIVE EE CONNECTION
IST2048I LOCAL IPADDR IS NOT VALID WITH LOCAL HOSTNAME
IST2049I REMOTE IPADDR IS NOT VALID WITH REMOTE HOSTNAME
IST2050I THIS PATH WILL NOT BE SELECTED FOR UNRCHTIM = %5 SECONDS
IST2052I ORIGIN NODE PARTNER NODE UNRCHTIM EXPIRES
IST2054I VIRTUAL NODE PARTNER NODE UNRCHTIM EXPIRES
IST2055I %17 %17 %6 %8
IST2056I NO MATCHING UNREACHABLE PARTNER INFORMATION EXISTS
IST2057I UNREACHABLE PARTNER INFORMATION:
IST2058I UNREACHABLE PARTNERS FOR %3 %17 EXCEED %5
IST2059I NUMBER OF NLPS RECEIVED = %20 (%4)
IST2061I NO FORCED TAKEOVER REQUESTS ARE ACCEPTABLE
IST2062I %%% FORCED TAKEOVER REQUESTS ARE ACCEPTABLE
IST2063I ALL FORCED TAKEOVER REQUESTS ARE ACCEPTABLE
IST2064I PLU TO SLU RU SIZE = %5 SLU TO PLU RU SIZE = %5
IST2065I ENTERPRISE EXTENDER CONNECTION REXMIT INFORMATION
IST2066I ENTERPRISE EXTENDER CONNECTION SRQRETRY INFORMATION
IST2067I EEDIAG DISPLAY ISSUED ON %8 AT %8
IST2068I NLP RETRANSMIT RATE = %7
IST2069I REXMIT COUNTERS LAST CLEARED ON %8 AT %8
IST2070I SRQRETRY COUNTERS LAST CLEARED ON %8 AT %8
IST2071I ALL DIAGNOSTIC COUNTERS CLEARED FOR %6 EE CONNECTIONS
IST2072I REXMIT COUNTERS CLEARED FOR %6 EE CONNECTIONS
IST2073I SRQRETRY COUNTERS CLEARED FOR %6 EE CONNECTIONS
IST2074I SUCCESSFUL SRQRETRY ATTEMPT = %2 OCCURRENCES = %9
IST2075I DISPLAY RTPS SUMMARY INFORMATION
IST2076I TOTAL MATCHING PIPES = %7
IST2077I CPSVCMG PIPES = %7
IST2078I RSETUP PIPES = %7
IST2079I LU-LU PIPES = %7
IST2080I PATH SWITCHING PIPES = %7
IST2081I CONGESTED PIPES = %7
IST2082I STALLED PIPES = %7
IST2083I SESSIONS = %7
IST2084I %7 OF %7 MATCHING RTP PIPES DISPLAYED
IST2085I NUMBER OF NLPS ON OUTBOUND WORK QUEUE = %7
IST2086I MAXIMUM NUMBER OF NLPS ON OUTBOUND WORK QUEUE = %7
IST2087I OUTBOUND WORK QUEUE MAX REACHED ON %8 AT %8
IST2088I CDRSCS DEFINED USING THIS MODEL:
IST2089I NO CDRSCS DEFINED USING THIS MODEL
IST2090I TRACE INITIATED FOR %5 CLONE CDRSCS
IST2091I TRACE ENDED FOR %5 CLONE CDRSCS
IST2092I NO CLONE CDRSCS EXIST FOR SCOPE %9
IST2093I AUTOLOGON SEARCH INITIATED FOR %4 APPLICATIONS
IST2094I MODEL CDRSC WAS NOT DELETED - CLONE CDRSCS EXIST
IST2095I MODEL CDRSC DELETE = %3
IST2096I AUTOLOGON SEARCH COMPLETED FOR APPLICATION %17

**Message
number**

Text

IST2097I STATUS = CANNOT BE LOCATED
IST2098I STATUS = UNABLE TO ACCEPT LOGONS
IST2099I STATUS = AUTOLOGON SESSIONS INITIATED FOR %4 LUS
IST2100I %17 - NORMALLY LOGGED OFF LUS
IST2101I NO LUS EXIST IN A STATE TO INITIATE AN AUTOLOGON SESSION
IST2102I RSCV FROM PLU
IST2103I RSCV TOWARDS SLU
IST2104I RSCV TOWARDS DLUR
IST2105I %8 ACTIVATION FAILED - HPR/IP XCA NODE ALREADY ACTIVE
IST2106I MODIFY GR DELETE FAILED FOR %17
IST2107I LOCAL GR ACB IS OPEN
IST2108I LOCAL APPLICATION OWNED GR AFFINITY EXISTS
IST2109I NON-LOCAL GR INSTANCE SELECTABLE
IST2110I NON-LOCAL APPLICATION OWNED GR AFFINITY EXISTS
IST2111I NON-LOCAL GR SESSION ACTIVE
IST2113I %8 SESSION DEACTIVATED - EXPFLTRM THRESHOLD EXCEEDED
IST2114I LIVTIME: INITIAL = %4 MAXIMUM = %4 CURRENT = %4
IST2116I STALL DETECTED FOR XCF TRLE %8 TO %17
IST2117I STALL CONTINUES FOR XCF TRLE %8 TO %17
IST2118I STALL ALLEVIATED FOR XCF TRLE %8 TO %17
IST2119I ENTERPRISE EXTENDER DISPLAY CORRELATOR: %8
IST2120I HOSTNAME RESOLUTION IN PROGRESS
IST2121I HOSTNAME RESOLUTION COMPLETE
IST2122I EE DISPLAY REJECTED - MAXHNRES LIMIT EXCEEDED
IST2123I DIAL FAILED FOR EE PU %8 - EXISTING CONNECTION FOUND
IST2124I REMOTE IPADDR OR HOSTNAME IS ALSO REQUIRED
IST2125I LOCAL IPADDR OR HOSTNAME IS ALSO REQUIRED
IST2126I CONNECTIVITY TEST IN PROGRESS
IST2127I CONNECTIVITY TEST FAILED - NO DIAL OUT LINE AVAILABLE FOR EE
IST2128I CONNECTIVITY TEST FAILED - EE NOT AVAILABLE FOR LOCAL IPADDR
IST2129I CONNECTIVITY TEST FAILED - MISMATCH OF IP ADDRESS FAMILY
IST2130I ENTERPRISE EXTENDER CONNECTIVITY TEST INFORMATION
IST2131I EEDIAG DISPLAY COMPLETED ON %8 AT %8
IST2132I LDLC PROBE VERSIONS: VTAM = %5 PARTNER = %7
IST2133I INTFNAME: %16 INTFTYPE: %16
IST2134I CONNECTIVITY SUCCESSFUL PORT: %5
IST2135I CONNECTIVITY UNSUCCESSFUL SENSE: %8 PORT: %5
IST2136I CONNECTIVITY TEST ENDED - MAXIMUM TIME LIMIT EXCEEDED
IST2137I %3 %15 %5 RTT: %5
IST2138I %3 %39 %5 RTT: %5
IST2139I CONNECTIVITY TEST RESULTS DISPLAYED FOR %2 INTERFACES
IST2140I CONNECTIVITY TEST FAILED - LINE %8 IS INACTIVATING
IST2141I CONNECTIVITY TEST FAILED - SWITCHED PU IS NOT ENABLED FOR EE
IST2142I CONNECTIVITY TEST REJECTED - SAME TEST ALREADY IN PROGRESS
IST2143I IN PROGRESS ENTERPRISE EXTENDER DISPLAY CORRELATOR: %8
IST2144I CONNECTIVITY TEST REJECTED - MAXEETST LIMIT EXCEEDED
IST2145I PENDING ENTERPRISE EXTENDER DISPLAY COMMANDS
IST2146I EE DISPLAY ISSUED ON %8 AT %8
IST2147I CORRELATOR: %8 LINE: %8 STATUS: %16
IST2148I EE CONNECTIVITY TEST REACHES MAXTIME ON %8 AT %8
IST2149I %5 OF %5 CORRELATORS DISPLAYED
IST2150I VIRTUAL NODE %17 - %5 UNREACHABLE PARTNERS

Message number	Text
IST2151I	PARTNER LIMIT EXCEEDED - UNUSABLE UNTIL COUNT IS BELOW %5
IST2152I	MODIFY TOPO COMMAND FAILED
IST2153I	ORIG, VRN, OR DEST OPERAND REQUIRED
IST2154I	ROUTE SELECTION TRACE IS ACTIVE - BFRNUM = %3
IST2155I	ROUTE SELECTION TRACE IS INACTIVE
IST2156I	STORAGE ALLOCATED TO ROUTE SELECTION TRACE = %5
IST2157I	ALIASRCH = %3
IST2158I	VTAM HAS JOINED THE SYSPLEX GROUP %8
IST2159I	XCF GROUP: %8 CFS GROUP: %8
IST2160I	%10 FAILED : ULP IS USING TRLE %17
IST2161I	BLOCKED TIME = %5
IST2162I	INCONSISTENT UNRCHTIM VALUES DEFINED FOR %17
IST2163I	REBUILD FOR STRUCTURE %16 STOPPED
IST2164I	FAILURE REASON - LOST CONNECTION TO NEW STRUCTURE
IST2165I	FAILURE REASON - LOST CONNECTION TO ORIGINAL STRUCTURE
IST2166I	FAILURE REASON - STRUCTURE FAILURE
IST2167I	DISCONNECT REASON - OPERATOR COMMAND
IST2168I	DISCONNECT REASON - NORMAL DISCONNECT
IST2169I	FAILURE REASON - SUBTASK ABEND
IST2170I	FAILURE REASON - VTAM HALTING
IST2171I	FAILURE REASON - LOST CONNECTIVITY
IST2172I	FAILURE REASON - STRUCTURE TYPE NOT VALID
IST2173I	FAILURE REASON - INTERNAL COUPLING FACILITY STRUCTURE ERROR
IST2174I	FAILURE REASON - CONNECTION NAME NOT VALID
IST2175I	FAILURE REASON - PROCESS TIMED OUT
IST2176I	FAILURE REASON - MVS EVENT
IST2177I	FAILURE REASON - UNSUPPORTED COUPLING FACILITY LEVEL
IST2178I	RPNCB ADDRESS %8
IST2179I	NO DIAL-OUT LINE FOUND FOR SWITCHED PU %8
IST2180I	DYNLU = %3 FOR %17 SET FROM %8
IST2181I	%4 STRUCTURE NAME IS %16
IST2182I	UNRCHTIM = %5
IST2183I	QDIOSYNC = %8 - SYNCID = %8 - SAVED = %3
IST2184I	QDIOSYNC = %8 - SYNCID = %8 - SAVED = %3
IST2186I	THIS PATH WILL NOT BE SELECTED FOR UNRCHTIM SECONDS
IST2187I	XCF SEND FAILURE ON TRLE %8 MESSAGE TYPE: %9
IST2188I	LDLC TIMER OPERANDS ON GROUP %8 IGNORED
IST2190I	DEVICEID PARAMETER FOR OSAENTA TRACE COMMAND = %11
IST2191I	HPR PATH SWITCH SUMMARY FROM %8 AT %8
IST2192I	STARTED = %5
IST2193I	TGINOP = %5 SRQTIMER = %5 PSRETRY = %5
IST2194I	PARTNER = %5 MNPS = %5 UNAVAILABLE = %5
IST2195I	NETWORK = %5 HIGH = %5 MEDIUM = %5 LOW = %5
IST2196I	COMPLETED = %5
IST2197I	FAILED = %5
IST2198I	NETID STARTED COMPLETED FAILED
IST2199I	CPNAME NET HI MED LOW NET HI MED LOW NET HI MED LOW
IST2200I	%8 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3
IST2201I	%8 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3 %3
IST2202I	GREXIT = %3 WLM = %3 LOCLU = %3
IST2203I	CHARACTER SET %4 - CODE PAGE %4
IST2204I	LOCAPPL = %3 PASSOLU = %3

Message number	Text
IST2205I	%60
IST2206I	%7 PATH SWITCH EVENTS FOR %6 CPS in %4 NETIDS
IST2207I	%7 TABLE FOR %13
IST2208I	%8 = %8 FROM START OPTION
IST2209I	%8 = %8 FROM ADJCLUST TABLE
IST2210I	GR PREFERENCE TABLE ENTRY = %12
IST2211I	ACK QUEUE MAX
IST2212I	%5
IST2213I	LAST BACKPRESSURE APPLIED ON %8 AT %8
IST2214I	BACKPRESSURE REASON: PATHSWITCH
IST2215I	BACKPRESSURE REASON: SEND QUEUE MAXIMUM REACHED
IST2216I	BACKPRESSURE REASON: STORAGE FAILURE
IST2217I	BACKPRESSURE REASON: STALLED PIPE
IST2218I	BACKPRESSURE REASON: WAITING-FOR-ACK QUEUE MAXIMUM REACHED
IST2219I	%8 ACTIVATION WAITING FOR MINIMUM NUMBER OF DEVICES
IST2220I	%8 ACTIVATION RESUMING - ONLINE DEVICES DETECTED
IST2221I	EXPLICITBINDPORTRANGE - START: %5 END: %5
IST2222I	QDIOSYNC CAPTURE INITIATED FOR TRLE %8
IST2223I	QDIOSYNC STATE ARMED FOR TRLE %8 AT TIME OF INOP
IST2224I	ENTERPRISE EXTENDER ROUTING POLICY INFORMATION
IST2225I	PORT ROUTE TABLE ROUTING RULE
IST2226I	%5 %8 %32
IST2227I	CONNECTIVITY NOT TESTED - ROUTE NOT APPLICABLE PORT: %5
IST2229I	REFIFO TIMER = %10 MILLISECONDS
IST2230I	MAXIMUM NUMBER OF NLPs ON OUT-OF-SEQUENCE QUEUE = %10
IST2231I	CURRENT HPR CLOCK RATE = %8
IST2232I	HPR CLOCK RATE LAST SET TO HIGH ON %8 AT %8
IST2233I	HPR CLOCK RATE LAST EXITED HIGH ON %8 AT %8
IST2234I	MESSAGE TRIGGER: TCPNAME = %8
IST2235I	REMOTE DUMP FOR XCF LINK INOP: %3
IST2236I	LAST NLP RETRANSMITTED ON %8 AT %8
IST2237I	%8 CURRENTLY REPRESENTS A LIMITED RESOURCE
IST2238I	DISCNT = %5 - FINAL USE = %9
IST2239I	PATH SWITCH REASON: MNPS ENDPOINT RECOVERY
IST2240I	SENSE TRIGGER: TCPNAME = %8
IST2241I	TIME ISL
IST2185I	FRINVCTO = %10 FRINVCT = %10
IST2242I	SIGMCNTO = %10 SIGMCNT = %10
IST2243I	CP-CP SESSION WITH %17 ENDING DUE TO MAXLOCAT
IST2244I	HPRDIAG DISPLAY ISSUED ON %8 AT %8
IST2245I	XMIT STALL DETECTED FOR RTP %8 TO %17
IST2246I	XMIT STALL CONTINUES FOR RTP %8 TO %17
IST2247I	XMIT STALL ALLEVIATED FOR RTP %8 TO %17
IST2248I	ALL DIAGNOSTIC COUNTERS CLEARED FOR %7 RTP PIPES
IST2249I	NLP RETRANSMIT RATE = %9
IST2250I	ALL DIAGNOSTIC COUNTERS CLEARED ON %8 AT %8
IST2251I	AUTHORIZED NETID LIST FOR BORDER NODE SEARCHING:
IST2252I	%8 %8 %8 %8 %8 %8
IST2253I	HPRSTALL TIME EXCEEDED FOR RTP %8 TO %17
IST2254I	TOPOLOGY RESOURCE ERROR FOR NODE: ID = %17
IST2255I	TOPOLOGY RESOURCE ERROR FOR TG: TGN = %3
IST2256I	ORIG = %17 - DEST = %17

Message number	Text
IST2257I	CSDUMP MUST BE FOLLOWED BY MESSAGE OR SENSE OPERAND
IST2258I	%8 CAN ONLY BE SPECIFIED AFTER CSDUMP OPTION
IST2259I	%8 OPERAND MUST BE SPECIFIED AFTER %13
IST2260I	CSDUMP %8 OPERAND VALUE %17 IS NOT VALID
IST2261I	CSDUMP MESSAGE OPERAND HAS TOO MANY VALUES
IST2262I	REMOTE OPERAND NOT VALID WITH CSDUMP MESSAGE %8
IST2263I	PORTNAME = %8 PORTNUM = %3 OSA CODE LEVEL = %4
IST2264I	CSDUMP OPTION SPECIFIED MULTIPLE TRIGGERS
IST2265I	%8 %8 FAILED FOR %4 CODE = %2 REASON = %4
IST2266I	STORAGE POOL %8 AT PAGE ALLOCATION LIMIT
IST2267I	RTP PACING ALGORITHM = ARB PROGRESSIVE MODE
IST2268I	NUMBER OF BYTES ON WAITING-FOR-ACK QUEUE = %10
IST2269I	MAXIMUM NUMBER OF BYTES ON WAITING-FOR-ACK QUEUE = %9
IST2270I	%60
IST2271I	PATH SWITCH DELAY = %3
IST2272I	PATH SWITCH DELAYED UNTIL %8 AT %8
IST2273E	PACKETS DISCARDED FOR %8 - READ QUEUE CONGESTION
IST2274I	TDU DIAGNOSTIC SUMMARY:
IST2275I	TDU INFORMATION SINCE LAST RESET ON %8 AT %8
IST2276I	NO CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED
IST2277I	POSSIBLE CORRUPTION OF TOPOLOGY CONTROL VECTORS DETECTED
IST2278I	SINCE VTAM START ON %8 AT %8
IST2279I	CP NAME DESTINATION CP TGN TIME DETECTED
IST2280I	%17 %17 %3 %8 %8
IST2281I	LAST TDU SENT - %8 %8
IST2282I	TDU COUNTS:
IST2283I	NO TDUDIAG RSN UPDATES EX
IST2284I	FOR THE FOLLOWING NODES AND TGS
IST2285I	TDUS SENT BETWEEN %8 %8 - %8 %8
IST2286I	TDUS RECEIVED:
IST2287I	TDUS SENT:
IST2288I	CP NAME RSN DESTINATION CP TGN SENT REC
IST2289I	RESOURCE SEQUENCE NUMBERS UPDATED BY THIS NODE:
IST2290I	TDUDIAG START OPTION = %6
IST2291I	UPDATED = %10
IST2292I	CP NAME RSN DESTINATION CP TGN UPDATED
IST2293I	%17 %8 %17 %3 %10
IST2294I	TDUDIAG RSN UPDATES:
IST2295I	TIME HEX RSN HEX RSN
IST2296I	CP NAME UPDATED BEFORE AFTER REASON
IST2297I	%17 %8 %8 %8 %11
IST2298I	TDUDIAG THRESHOLD REACHED FOR NODE: ID = %17
IST2299I	TDUDIAG THRESHOLD REACHED FOR TG: TGN = %3
IST2300I	RECEIVED FROM: %17
IST2301I	%3 OF %3 TOPOLOGY RESOURCES DISPLAYED
IST2302I	MODEL %8 IS THE BEST ACTIVE MATCH FOR %8
IST2303I	THERE IS NO ACTIVE MODEL MATCH FOR %8
IST2304I	%8 ALREADY EXISTS, TYPE = %17
IST2305I	NUMBER OF DISCARDED INBOUND READ BUFFERS = %10
IST2306I	TDU DIAGNOSTIC INFORMATION FOR NODE: ID = %17
IST2307I	THIS NODE DOES NOT SUPPORT UNKNOWN TOPOLOGY VECTORS
IST2308I	THAT HAVE SAVED TDUDIAG RSN UPDATES

**Message
number**

Text

IST2309I ACCELERATED ROUTING ENABLED
IST2310I ACCELERATED ROUTING DISABLED
IST2311I TDU DIAGNOSTIC INFORMATION FOR TG: TGN = %3
IST2312I CURRENT RSN = %10 - HEX RSN = %8
IST2313I TOTAL RSN UPDATES BY LOCAL HOST NODE = %10
IST2314I %3 OF %3 RSN UPDATES DISPLAYED
IST2315I LAST TDU SENT - NONE
IST2316I EARLYINO = %10 EARLYINT = %10
IST2317I ULPRETUO = %10 ULPRETU = %10
IST2318I UNABLE TO OPEN %8 - NETWORK ADDRESS LIMIT REACHED
IST2319I IQD NETWORK ID = %4
IST2320I WTOR %8 FROM CONSOLE %8 DELETED DUE TO VTAM HALT
IST2321I TDUDIAG VALUE MUST BE NUMERIC, 'ALWAYS', OR 'NEVER'
IST2322I WTOR %8 FROM POA %8 DELETED DUE TO VTAM HALT
IST2323E EE HEALTH VERIFICATION FAILED FOR ONE OR MORE CONNECTIONS
IST2324I EE HEALTH VERIFICATION: FAILED CONNECTION INFORMATION
IST2325I LINE %8 PU %8 ON %8 AT %8
IST2326I EE HEALTH VERIFICATION TOTAL CONNECTION FAILURES = %4
IST2327I EE HEALTH VERIFICATION OPTION - EEVERIFY = %4 MINUTES
IST2328I EE HEALTH VERIFICATION FAILED ON %8 AT %8
IST2329I EE HEALTH VERIFICATION SUCCESSFUL ON %8 AT %8
IST2330I EE HEALTH VERIFICATION FAILED FOR %8 AT %8
IST2331I QUEUE QUEUE READ QUEUE
IST2332I ID TYPE STORAGE STATUS
IST2333I %6 %8 %15 %22
IST2334I EEVERIFY MUST BE 'ACTIVATE', 'NEVER', OR A NUMERIC VALUE
IST2335I PATH SWITCH REASON: XMIT STALL RECOVERY
IST2336I STALLED = %5
IST2337I CHPID TYPE = chpid_type CHPID = chpid_num PNETID = net_id
IST2338I NACPROBE MUST BE 'DUMP', 'NODUMP', OR A NUMERIC VALUE
IST2339I EE HEALTH VERIFICATION LAST SUCCESS ON %8 AT %8
IST2340I EE HEALTH VERIFICATION LAST FAILED ON %8 AT %8
IST2341I EE HEALTH VERIFICATION HAS NEVER FAILED FOR THIS CONNECTION
IST2342I EE HEALTH VERIFICATION NOT SUPPORTED BY %8
IST2343I EE HEALTH VERIFICATION NOT SUPPORTED BY REMOTE EE PARTNER
IST2344I NODE ROLE CHANGE FROM %4 TO %4 FAILED - SENSE: %8
IST2345I NODE ROLE CHANGE FROM %4 TO %4 SUCCEEDED
IST2346I CP NAME = %17
IST2347I TDU RECEIVED FROM ADJACENT NODE %17
IST2348I ACTIVATED BY SHARED ACB %8
IST2349I SUBORDINATE APPLICATIONS SHARING THIS ACB:
IST2350I %4 SUBORDINATE APPLICATIONS SHARE THIS ACB
IST2351I MULTIPLE SUBORDINATE APPLICATIONS SHARE THIS ACB
IST2352I SENT = %10 RECEIVED = %10
IST2353I ACCEPTED = %10 REJECTED = %10
IST2354I IGNORED = %10
IST2355I TDUDIAG THRESHOLD REACHED ON %8 AT %8
IST2356I PLATFORM = %10
IST2357I CP NAME RSN DESTINATION CP TGN
IST2358I %17 %10 %17 %3
IST2359I NO TDU INFORMATION EX
IST2360I ROUTING TREES LAST CLEARED AT %8 %8 BY %6

Message number	Text
IST2361I	SMCR PFID = %4 PCHID = %4 PNETID = %16
IST2362I	PORTNUM = %1 RNIC CODE LEVEL = %17
IST2364I	CLOSE ACB OF %8 DID NOT COMPLETE IN A TIMELY MANNER
IST2365I	MODIFY TRACE COMMAND REJECTED - DSPSIZE NO LONGER SUPPORTED
IST2366I	POLLEQO = %10 POLLEQ = %10
IST2367I	POLLEQEO = %10 POLLEQE = %10
IST2368I	ULP_ID = %8
IST2369I	POLLCQO = %10 POLLCQ = %10
IST2370I	POLLCQUO = %10 POLLCQU = %10
IST2371I	POLLCQEO = %10 POLLCQE = %10
IST2372I	SRBSCHDO = %10 SRBSCHD = %10
IST2373I	SRBRSCO = %10 SRBRSCHD = %10
IST2374I	INBBYTLO = %10 INBBYTEL = %10
IST2375I	INBBYTMO = %10 INBBYTEM = %10
IST2376I	INBBYTNO = %10 INBBYTEN = %10
IST2377I	DATAREQO = %10 DATAREQ = %10
IST2378I	POSTO = %10 POST = %10
IST2379I	POSTEO = %10 POSTELEM = %10
IST2380I	POSTQEO = %10 POSTQED = %10
IST2381I	OUTBYTLO = %10 OUTBYTEL = %10
IST2382I	OUTBYTMO = %10 OUTBYTEM = %10
IST2383I	OUTBYTNO = %10 OUTBYTEN = %10
IST2384E	PACKETS DISCARDED FOR %8 - %8 IS CONGESTED
IST2386I	NUMBER OF DISCARDED OUTBOUND WRITE BUFFERS = %10
IST2387I	DIAL FAILED - DUPLICATE IP ADDRESSES ON EXISTING CONNECTION
IST2388I	EE VRN = %17
IST2390I	XXXXREG PCIE SERVICE FAILURE
IST2391I	%8 PCIE SERVICE FAILURE ON TRLE %8
IST2392I	PFID %4 ALLOCATION FAILURE - PFID IS NOT DEFINED
IST2393I	PFID %4 ALLOCATION FAILURE - PFID IS NOT ONLINE
IST2395I	RTP PACING ALGORITHM = ARB BASE MODE
IST2396I	RNIC STATISTICS FOR %8
IST2397I	DESCRIPTION OVERFLOW COUNT
IST2398I	%30 %10 %10
IST2399I	MESSAGE TRIGGER: RNICTRLE = %8
IST2400I	NO ADAPTER DIAGNOSTICS PRODUCED FOR %8: %23
IST2401I	DEVSTATS REJECTED FOR TRLE %8 - DEVICE NOT ACTIVE
IST2402I	DEVSTATS FAILED FOR TRLE %8 - DEVICE NOT OPERATIONAL
IST2403I	64-BIT STORAGE TYPE CURRENT MAXIMUM LIMIT
IST2404I	HVCOMMON %9 %9 %9
IST2405I	TRACE HVCOMMON %9 %9 %9
IST2406I	SMC-R LINK FAILURE ON TRLE %8 CODE = %8
IST2407I	LOCAL LINK ID = %8 REMOTE LINK ID = %8
IST2408I	LOCAL MAC = %12 REMOTE MAC = %12
IST2409I	%6 GID = %39
IST2410I	LOCAL QP = %4 REMOTE QP = %4
IST2411I	VLAN = %4
IST2412I	FIXED HVCOMMON %9 %9 %9
IST2413I	PRIVATE %9 %9 %9
IST2414I	FIXED PRIVATE %9 %9 %9
IST2415I	TOTAL FIXED %9 %9 %8
IST2416I	%10 %16 PROCESSED

Message number	Text
ISTH013E	T1BUF/T2BUF buffer pool allocation might not be optimal for use with Enterprise Extender
ISTH014I	T1BUF and T2BUF buffer pool allocations are sufficient for use without Enterprise Extender
ISTH015I	<i>buf_pool</i> buffer pool allocation of <i>buf_num</i> might be too high if Enterprise Extender is not being used
ISTH016E	T1BUF/T2BUF buffer pool allocation might not be optimal if Enterprise Extender is not being used
ISTH017E	Communications storage manager (CSM) storage allocation definitions might not be optimal.
ISTH018I	This check is not applicable in the current VTAM environment. Enterprise Extender (EE) lines have not been activated on this system and no VTAM Start Options associated with EE have been specified.
ISTH019I	This check is not applicable in the current VTAM environment. Enterprise Extender (EE) lines have been activated on this system or VTAM Start Options associated with EE have been specified.
ISTH020I	All active FTP servers correctly prevent anonymous users from submitting jobs.
ISTH021E	One or more FTP servers allow anonymous users to submit jobs.
ISTH029I	No MVRSHD servers are active
ISTH030E	One or more MVRSHD servers are active
ISTH031I	No active SMTP servers are configured as mail relays
ISTH032E	One or more active SMTP servers are configured as mail relays
ISTH033I	No active SNMP agents are configured with a community name of public
ISTH034E	One or more active SNMP agents are configured with a community name of public
ISTM013I (deleted in z/OS V2R2)	GATEWAY statement is not in use on this system.
ISTM014E (deleted in z/OS V2R2)	GATEWAY statements are in use on this system during this IPL.
ISTM017I	The sendmail client is not in use on this system
ISTM018E	The sendmail client is in use on this system
ISTM019I	The sendmail mail transfer agent is not in use on this system
ISTM020E	The sendmail mail transfer agent is in use on this system
ISTM021I	The sendmail MSA function is not in use on this system
ISTM022E	The sendmail MSA function is in use on this system
ISTM023I	The SMTPD daemon is not in use on this system
ISTM024E	The SMTPD daemon is in use on this system
ISTM025I	The SMTPD mail transfer agent is not in use on this system
ISTM026E	The SMTPD mail transfer agent is in use on this system
ISTM027I	The sendmail daemon is not in use on this system
ISTM028E	The sendmail daemon is in use on this system
ISTM029I	Legacy device statements are not in use on this system
ISTM030E	Legacy device statements are in use on this system during this IPL
ISTM031I	The TFTP daemon is not in use on this system
ISTM032E	The TFTP daemon is in use on this system
ISTM900I	Function: mhc_function last mhc_usage on mhc_date at mhc_time.

Message text for IUT VTAM operator messages

The following table lists the message text for all IUT VTAM operator messages issued for MVS.

Message number	Text
IUT5000I	%8 STILL ACTIVE: VTAM TERMINATION WAITING FOR %8
IUT5001I	VTAM REGISTRATION MANAGER PROCESSING TERMINATED

Message text for IVT VTAM operator messages

The following table lists the message text for all IVT VTAM operator messages issued for MVS.

Message number	Text
IVT5501I	CSM PARMLIB MEMBER %8 NOT FOUND - DEFAULT VALUES USED
IVT5502I	READ ERROR ON PARMLIB MEMBER %8 - DEFAULT VALUES USED
IVT5503I	CSM PARMLIB PARAMETER NOT VALID - %26
IVT5504I	ABEND %3 OCCURRED IN %8 - SDUMP HAS BEEN ISSUED
IVT5505I	CSM SDUMP FAILED WITH RETURN CODE %2 REASON X'%2'
IVT5506I	%8 STORAGE ALLOCATION FAILED IN CSM
IVT5507I	CSM PARMLIB INFORMATION FOUND IN MEMBER %8
IVT5508I	DISPLAY ACCEPTED
IVT5510I	MODIFY ACCEPTED
IVT5511I	%7 CSM COMMAND SYNTAX NOT VALID
IVT5512I	FIXED PARAMETER VALUE NOT VALID
IVT5513I	ECSA PARAMETER VALUE NOT VALID
IVT5516I	ERROR OBTAINING CSM PARMLIB INFORMATION - LIMITS UNCHANGED
IVT5517I	CSM LIMITS PRIOR TO MODIFY CSM PROCESSING:
IVT5518I	CSM LIMITS AFTER MODIFY CSM PROCESSING:
IVT5519I	ECSA MAXIMUM = %5 - FIXED MAXIMUM = %5
IVT5520I	OWNERID VALUE NOT VALID
IVT5521I	NO CSM STORAGE IS CURRENTLY ALLOCATED TO OWNERID %4
IVT5529I	PROCESSING DISPLAY CSM COMMAND - OWNERID NOT SPECIFIED
IVT5530I	BUFFER BUFFER
IVT5531I	SIZE SOURCE INUSE FREE TOTAL
IVT5532I	-----
IVT5533I	%5 %13 %9 %9 %9
IVT5534I	%5 %13 POOL DOES NOT EXIST
IVT5535I	TOTAL %13 %9 %9 %9
IVT5536I	TOTAL ALL SOURCES %9 %9 %9
IVT5538I	FIXED MAXIMUM = %9 FIXED CURRENT = %9
IVT5539I	ECSA MAXIMUM = %9 ECSA CURRENT = %9
IVT5541I	%5 MAXIMUM USED = %9 SINCE LAST DISPLAY CSM
IVT5549I	PROCESSING DISPLAY CSM COMMAND - OWNERID SPECIFIED
IVT5551I	SIZE SOURCE STORAGE ALLOCATED TO OWNER
IVT5553I	%5 %13 %9
IVT5554I	TOTAL %13 %9
IVT5556I	TOTAL FOR OWNERID %9
IVT5557I	OWNERID: ASID = %4 JOBNAME = %8
IVT5558I	%5 %13 UNABLE TO DETERMINE BUFFER VALUES

Message number	Text
IVT5559I	CSM DATA SPACE % NAME: %8
IVT5560I	CSM ECSA STORAGE LIMIT EXCEEDED
IVT5561I	CSM FIXED STORAGE LIMIT EXCEEDED
IVT5562I	CSM ECSA STORAGE AT CRITICAL LEVEL
IVT5563I	CSM FIXED STORAGE AT CRITICAL LEVEL
IVT5564I	CSM ECSA STORAGE SHORTAGE RELIEVED
IVT5565I	CSM FIXED STORAGE SHORTAGE RELIEVED
IVT5566I	CSM MONITOR IS ACTIVE
IVT5567I	CSM MONITOR IS NOT ACTIVE
IVT5568I	MONITOR PARAMETER VALUE IS NOT VALID
IVT5569I	CSM MONITOR IS DYNAMIC AND CURRENTLY ACTIVE
IVT5570I	CSM MONITOR IS DYNAMIC AND CURRENTLY NOT ACTIVE
IVT5571I	MONITOR PARAMETER IS NOT VALID WITH %4 %4
IVT5572I	PROCESSING DISPLAY CSMUSE COMMAND - OWNERID NOT SPECIFIED
IVT5573I	PROCESSING DISPLAY CSMUSE COMMAND - OWNERID SPECIFIED
IVT5574I	PROCESSING DISPLAY CSMUSE COMMAND - POOLSPECIFIED
IVT5575I	USAGE SUMMARY - %8 POOL TOTAL (ALLUSERS) = %9
IVT5576I	AMOUNT MONITOR ID OWNERID JOBNAME
IVT5577I	%9 %2 %4 %8
IVT5578I	DISPLAY TOTAL FOR %8 POOL (% USERS) = %9
IVT5579I	BUFFER USE FOR %2 : USECNT USERDATA MONITOR HISTORY
IVT5580I	%8 %8 %8
IVT5581I	POOL NAME NOT VALID
IVT5582I	DISPLAY CSMUSE COMMAND SYNTAX NOT VALID
IVT5583I	NO CSM STORAGE IS CURRENTLY IN USE FOR POOL %8
IVT5584I	USAGE DETAILS - %8 POOL - POOL TOTAL = %9
IVT5585I	DETAIL TOTAL FOR %8 POOL = %9
IVT5586I	DISPLAY CSMUSE SYNTAX NOT VALID - DUPLICATE OPERAND
IVT5587I	%8 NOT VALID ON DISPLAY CSMUSE COMMAND
IVT5588I	NO CSM STORAGE IS CURRENTLY IN USE FOR ANY USERS
IVT5589I	DISPLAY TOTAL FOR %8 POOL FOR THIS OWNERID = %9
IVT5590I	MAX ECSA VALUE ADJUSTED TO 90 PERCENT OF SYSTEM ECSA
IVT5591I	CSM ECSA STORAGE AT CONSTRAINED LEVEL
IVT5592I	CSM FIXED STORAGE AT CONSTRAINED LEVEL
IVT5593I	CSM CREATED AN ADDITIONAL DATA SPACE dspname
IVT5594I	%5 MAXIMUM USED = %9 SINCE IPL
IVT5599I	END
IVT5600I	PROBE %8 ATTEMPTED - FFST NOT AVAILABLE

Appendix F. Related protocol specifications

This appendix lists the related protocol specifications (RFCs) for TCP/IP. The Internet Protocol suite is still evolving through requests for comments (RFC). New protocols are being designed and implemented by researchers and are brought to the attention of the Internet community in the form of RFCs. Some of these protocols are so useful that they become recommended protocols. That is, all future implementations for TCP/IP are recommended to implement these particular functions or protocols. These become the *de facto* standards, on which the TCP/IP protocol suite is built.

You can request RFCs through electronic mail, from the automated Network Information Center (NIC) mail server, by sending a message to `service@nic.ddn.mil` with a subject line of RFC *nnnn* for text versions or a subject line of RFC *nnnn*.PS for PostScript versions. To request a copy of the RFC index, send a message with a subject line of RFC INDEX.

For more information, contact `nic@nic.ddn.mil` or at:

Government Systems, Inc.
Attn: Network Information Center
14200 Park Meadow Drive
Suite 200
Chantilly, VA 22021

Hard copies of all RFCs are available from the NIC, either individually or by subscription. Online copies are available at the following Web address:
<http://www.rfc-editor.org/rfc.html>.

Draft RFCs that have been implemented in this and previous Communications Server releases are listed at the end of this topic.

Many features of TCP/IP Services are based on the following RFCs:

RFC Title and Author

RFC 652

Telnet output carriage-return disposition option D. Crocker

RFC 653

Telnet output horizontal tabstops option D. Crocker

RFC 654

Telnet output horizontal tab disposition option D. Crocker

RFC 655

Telnet output formfeed disposition option D. Crocker

RFC 657

Telnet output vertical tab disposition option D. Crocker

RFC 658

Telnet output linefeed disposition D. Crocker

RFC 698

Telnet extended ASCII option T. Mock

- RFC 726**
Remote Controlled Transmission and Echoing Telnet option J. Postel, D. Crocker
- RFC 727**
Telnet logout option M.R. Crispin
- RFC 732**
Telnet Data Entry Terminal option J.D. Day
- RFC 733**
Standard for the format of ARPA network text messages D. Crocker, J. Vittal, K.T. Pogran, D.A. Henderson
- RFC 734**
SUPDUP Protocol M.R. Crispin
- RFC 735**
Revised Telnet byte macro option D. Crocker, R.H. Gumpertz
- RFC 736**
Telnet SUPDUP option M.R. Crispin
- RFC 749**
Telnet SUPDUP—Output option B. Greenberg
- RFC 765**
File Transfer Protocol specification J. Postel
- RFC 768**
User Datagram Protocol J. Postel
- RFC 779**
Telnet send-location option E. Killian
- RFC 783**
TFTP Protocol (revision 2) K.R. Sollins
- RFC 791**
Internet Protocol J. Postel
- RFC 792**
Internet Control Message Protocol J. Postel
- RFC 793**
Transmission Control Protocol J. Postel
- RFC 820**
Assigned numbers J. Postel
- RFC 821**
Simple Mail Transfer Protocol J. Postel
- RFC 822**
Standard for the format of ARPA Internet text messages D. Crocker
- RFC 823**
DARPA Internet gateway R. Hinden, A. Sheltzer
- RFC 826**
Ethernet Address Resolution Protocol: Or converting network protocol addresses to 48.bit Ethernet address for transmission on Ethernet hardware D. Plummer
- RFC 854**
Telnet Protocol Specification J. Postel, J. Reynolds

- RFC 855**
Telnet Option Specification J. Postel, J. Reynolds
- RFC 856**
Telnet Binary Transmission J. Postel, J. Reynolds
- RFC 857**
Telnet Echo Option J. Postel, J. Reynolds
- RFC 858**
Telnet Suppress Go Ahead Option J. Postel, J. Reynolds
- RFC 859**
Telnet Status Option J. Postel, J. Reynolds
- RFC 860**
Telnet Timing Mark Option J. Postel, J. Reynolds
- RFC 861**
Telnet Extended Options: List Option J. Postel, J. Reynolds
- RFC 862**
Echo Protocol J. Postel
- RFC 863**
Discard Protocol J. Postel
- RFC 864**
Character Generator Protocol J. Postel
- RFC 865**
Quote of the Day Protocol J. Postel
- RFC 868**
Time Protocol J. Postel, K. Harrenstien
- RFC 877**
Standard for the transmission of IP datagrams over public data networks J.T. Korb
- RFC 883**
Domain names: Implementation specification P.V. Mockapetris
- RFC 884**
Telnet terminal type option M. Solomon, E. Wimmers
- RFC 885**
Telnet end of record option J. Postel
- RFC 894**
Standard for the transmission of IP datagrams over Ethernet networks C. Hornig
- RFC 896**
Congestion control in IP/TCP internetworks J. Nagle
- RFC 903**
Reverse Address Resolution Protocol R. Finlayson, T. Mann, J. Mogul, M. Theimer
- RFC 904**
Exterior Gateway Protocol formal specification D. Mills
- RFC 919**
Broadcasting Internet Datagrams J. Mogul

- RFC 922**
Broadcasting Internet datagrams in the presence of subnets J. Mogul
- RFC 927**
TACACS user identification Telnet option B.A. Anderson
- RFC 933**
Output marking Telnet option S. Silverman
- RFC 946**
Telnet terminal location number option R. Nedved
- RFC 950**
Internet Standard Subnetting Procedure J. Mogul, J. Postel
- RFC 952**
DoD Internet host table specification K. Harrenstien, M. Stahl, E. Feinler
- RFC 959**
File Transfer Protocol J. Postel, J.K. Reynolds
- RFC 961**
Official ARPA-Internet protocols J.K. Reynolds, J. Postel
- RFC 974**
Mail routing and the domain system C. Partridge
- RFC 1001**
Protocol standard for a NetBIOS service on a TCP/UDP transport: Concepts and methods NetBios Working Group in the Defense Advanced Research Projects Agency, Internet Activities Board, End-to-End Services Task Force
- RFC 1002**
Protocol Standard for a NetBIOS service on a TCP/UDP transport: Detailed specifications NetBios Working Group in the Defense Advanced Research Projects Agency, Internet Activities Board, End-to-End Services Task Force
- RFC 1006**
ISO transport services on top of the TCP: Version 3 M.T. Rose, D.E. Cass
- RFC 1009**
Requirements for Internet gateways R. Braden, J. Postel
- RFC 1011**
Official Internet protocols J. Reynolds, J. Postel
- RFC 1013**
X Window System Protocol, version 11: Alpha update April 1987 R. Scheifler
- RFC 1014**
XDR: External Data Representation standard Sun Microsystems
- RFC 1027**
Using ARP to implement transparent subnet gateways S. Carl-Mitchell, J. Quarterman
- RFC 1032**
Domain administrators guide M. Stahl
- RFC 1033**
Domain administrators operations guide M. Lottor
- RFC 1034**
Domain names—concepts and facilities P.V. Mockapetris

- RFC 1035**
Domain names—implementation and specification P.V. Mockapetris
- RFC 1038**
Draft revised IP security option M. St. Johns
- RFC 1041**
Telnet 3270 regime option Y. Rekhter
- RFC 1042**
Standard for the transmission of IP datagrams over IEEE 802 networks J. Postel,
J. Reynolds
- RFC 1043**
Telnet Data Entry Terminal option: DODIIS implementation A. Yasuda, T.
Thompson
- RFC 1044**
Internet Protocol on Network System's HYPERchannel: Protocol specification K.
Hardwick, J. Lekashman
- RFC 1053**
Telnet X.3 PAD option S. Levy, T. Jacobson
- RFC 1055**
Nonstandard for transmission of IP datagrams over serial lines: SLIP J. Romkey
- RFC 1057**
RPC: Remote Procedure Call Protocol Specification: Version 2 Sun Microsystems
- RFC 1058**
Routing Information Protocol C. Hedrick
- RFC 1060**
Assigned numbers J. Reynolds, J. Postel
- RFC 1067**
Simple Network Management Protocol J.D. Case, M. Fedor, M.L. Schoffstall, J.
Davin
- RFC 1071**
Computing the Internet checksum R.T. Braden, D.A. Borman, C. Partridge
- RFC 1072**
TCP extensions for long-delay paths V. Jacobson, R.T. Braden
- RFC 1073**
Telnet window size option D. Waitzman
- RFC 1079**
Telnet terminal speed option C. Hedrick
- RFC 1085**
ISO presentation services on top of TCP/IP based internets M.T. Rose
- RFC 1091**
Telnet terminal-type option J. VanBokkelen
- RFC 1094**
NFS: Network File System Protocol specification Sun Microsystems
- RFC 1096**
Telnet X display location option G. Marcy
- RFC 1101**
DNS encoding of network names and other types P. Mockapetris

- RFC 1112**
Host extensions for IP multicasting S.E. Deering
- RFC 1113**
Privacy enhancement for Internet electronic mail: Part I — message encipherment and authentication procedures J. Linn
- RFC 1118**
Hitchhikers Guide to the Internet E. Krol
- RFC 1122**
Requirements for Internet Hosts—Communication Layers R. Braden, Ed.
- RFC 1123**
Requirements for Internet Hosts—Application and Support R. Braden, Ed.
- RFC 1146**
TCP alternate checksum options J. Zweig, C. Partridge
- RFC 1155**
Structure and identification of management information for TCP/IP-based internets M. Rose, K. McCloghrie
- RFC 1156**
Management Information Base for network management of TCP/IP-based internets K. McCloghrie, M. Rose
- RFC 1157**
Simple Network Management Protocol (SNMP) J. Case, M. Fedor, M. Schoffstall, J. Davin
- RFC 1158**
Management Information Base for network management of TCP/IP-based internets: MIB-II M. Rose
- RFC 1166**
Internet numbers S. Kirkpatrick, M.K. Stahl, M. Recker
- RFC 1179**
Line printer daemon protocol L. McLaughlin
- RFC 1180**
TCP/IP tutorial T. Socolofsky, C. Kale
- RFC 1183**
New DNS RR Definitions C.F. Everhart, L.A. Mamakos, R. Ullmann, P.V. Mockapetris
- RFC 1184**
Telnet Linemode Option D. Borman
- RFC 1186**
MD4 Message Digest Algorithm R.L. Rivest
- RFC 1187**
Bulk Table Retrieval with the SNMP M. Rose, K. McCloghrie, J. Davin
- RFC 1188**
Proposed Standard for the Transmission of IP Datagrams over FDDI Networks D. Katz
- RFC 1190**
Experimental Internet Stream Protocol: Version 2 (ST-II) C. Topolcic

- RFC 1191**
Path MTU discovery J. Mogul, S. Deering
- RFC 1198**
FYI on the X window system R. Scheifler
- RFC 1207**
FYI on Questions and Answers: Answers to commonly asked "experienced Internet user" questions G. Malkin, A. Marine, J. Reynolds
- RFC 1208**
Glossary of networking terms O. Jacobsen, D. Lynch
- RFC 1213**
Management Information Base for Network Management of TCP/IP-based internets: MIB-II K. McCloghrie, M.T. Rose
- RFC 1215**
Convention for defining traps for use with the SNMP M. Rose
- RFC 1227**
SNMP MUX protocol and MIB M.T. Rose
- RFC 1228**
SNMP-DPI: Simple Network Management Protocol Distributed Program Interface
G. Carpenter, B. Wijnen
- RFC 1229**
Extensions to the generic-interface MIB K. McCloghrie
- RFC 1230**
IEEE 802.4 Token Bus MIB K. McCloghrie, R. Fox
- RFC 1231**
IEEE 802.5 Token Ring MIB K. McCloghrie, R. Fox, E. Decker
- RFC 1236**
IP to X.121 address mapping for DDN L. Morales, P. Hasse
- RFC 1256**
ICMP Router Discovery Messages S. Deering, Ed.
- RFC 1267**
Border Gateway Protocol 3 (BGP-3) K. Lougheed, Y. Rekhter
- RFC 1268**
Application of the Border Gateway Protocol in the Internet Y. Rekhter, P. Gross
- RFC 1269**
Definitions of Managed Objects for the Border Gateway Protocol: Version 3 S. Willis, J. Burruss
- RFC 1270**
SNMP Communications Services F. Kastenholz, ed.
- RFC 1285**
FDDI Management Information Base J. Case
- RFC 1315**
Management Information Base for Frame Relay DTEs C. Brown, F. Baker, C. Carvalho
- RFC 1321**
The MD5 Message-Digest Algorithm R. Rivest

- RFC 1323**
TCP Extensions for High Performance V. Jacobson, R. Braden, D. Borman
- RFC 1325**
FYI on Questions and Answers: Answers to Commonly Asked "New Internet User" Questions G. Malkin, A. Marine
- RFC 1327**
Mapping between X.400 (1988)/ISO 10021 and RFC 822 S. Hardcastle-Kille
- RFC 1340**
Assigned Numbers J. Reynolds, J. Postel
- RFC 1344**
Implications of MIME for Internet Mail Gateways N. Bornstein
- RFC 1349**
Type of Service in the Internet Protocol Suite P. Almquist
- RFC 1350**
The TFTP Protocol (Revision 2) K.R. Sollins
- RFC 1351**
SNMP Administrative Model J. Davin, J. Galvin, K. McCloghrie
- RFC 1352**
SNMP Security Protocols J. Galvin, K. McCloghrie, J. Davin
- RFC 1353**
Definitions of Managed Objects for Administration of SNMP Parties K. McCloghrie, J. Davin, J. Galvin
- RFC 1354**
IP Forwarding Table MIB F. Baker
- RFC 1356**
Multiprotocol Interconnect on X.25 and ISDN in the Packet Mode A. Malis, D. Robinson, R. Ullmann
- RFC 1358**
Charter of the Internet Architecture Board (IAB) L. Chapin
- RFC 1363**
A Proposed Flow Specification C. Partridge
- RFC 1368**
Definition of Managed Objects for IEEE 802.3 Repeater Devices D. McMaster, K. McCloghrie
- RFC 1372**
Telnet Remote Flow Control Option C. L. Hedrick, D. Borman
- RFC 1374**
IP and ARP on HIPPI J. Renwick, A. Nicholson
- RFC 1381**
SNMP MIB Extension for X.25 LAPB D. Throop, F. Baker
- RFC 1382**
SNMP MIB Extension for the X.25 Packet Layer D. Throop
- RFC 1387**
RIP Version 2 Protocol Analysis G. Malkin
- RFC 1388**
RIP Version 2 Carrying Additional Information G. Malkin

- RFC 1389**
RIP Version 2 MIB Extensions G. Malkin, F. Baker
- RFC 1390**
Transmission of IP and ARP over FDDI Networks D. Katz
- RFC 1393**
Traceroute Using an IP Option G. Malkin
- RFC 1398**
Definitions of Managed Objects for the Ethernet-Like Interface Types F. Kastenholz
- RFC 1408**
Telnet Environment Option D. Borman, Ed.
- RFC 1413**
Identification Protocol M. St. Johns
- RFC 1416**
Telnet Authentication Option D. Borman, ed.
- RFC 1420**
SNMP over IPX S. Bostock
- RFC 1428**
Transition of Internet Mail from Just-Send-8 to 8bit-SMTP/MIME G. Vaudreuil
- RFC 1442**
Structure of Management Information for version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloghrie, M. Rose, S. Waldbusser
- RFC 1443**
Textual Conventions for version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloghrie, M. Rose, S. Waldbusser
- RFC 1445**
Administrative Model for version 2 of the Simple Network Management Protocol (SNMPv2) J. Galvin, K. McCloghrie
- RFC 1447**
Party MIB for version 2 of the Simple Network Management Protocol (SNMPv2) K. McCloghrie, J. Galvin
- RFC 1448**
Protocol Operations for version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloghrie, M. Rose, S. Waldbusser
- RFC 1464**
Using the Domain Name System to Store Arbitrary String Attributes R. Rosenbaum
- RFC 1469**
IP Multicast over Token-Ring Local Area Networks T. Pusateri
- RFC 1483**
Multiprotocol Encapsulation over ATM Adaptation Layer 5 Juha Heinanen
- RFC 1514**
Host Resources MIB P. Grillo, S. Waldbusser
- RFC 1516**
Definitions of Managed Objects for IEEE 802.3 Repeater Devices D. McMaster, K. McCloghrie

- RFC 1521**
MIME (Multipurpose Internet Mail Extensions) Part One: Mechanisms for Specifying and Describing the Format of Internet Message Bodies N. Borenstein, N. Freed
- RFC 1535**
A Security Problem and Proposed Correction With Widely Deployed DNS Software E. Gavron
- RFC 1536**
Common DNS Implementation Errors and Suggested Fixes A. Kumar, J. Postel, C. Neuman, P. Danzig, S. Miller
- RFC 1537**
Common DNS Data File Configuration Errors P. Beertema
- RFC 1540**
Internet Official Protocol Standards J. Postel
- RFC 1571**
Telnet Environment Option Interoperability Issues D. Borman
- RFC 1572**
Telnet Environment Option S. Alexander
- RFC 1573**
Evolution of the Interfaces Group of MIB-II K. McCloghrie, F. Kastenholz
- RFC 1577**
Classical IP and ARP over ATM M. Laubach
- RFC 1583**
OSPF Version 2 J. Moy
- RFC 1591**
Domain Name System Structure and Delegation J. Postel
- RFC 1592**
Simple Network Management Protocol Distributed Protocol Interface Version 2.0 B. Wijnen, G. Carpenter, K. Curran, A. Sehgal, G. Waters
- RFC 1594**
FYI on Questions and Answers—Answers to Commonly Asked "New Internet User" Questions A. Marine, J. Reynolds, G. Malkin
- RFC 1644**
T/TCP — TCP Extensions for Transactions Functional Specification R. Braden
- RFC 1646**
TN3270 Extensions for LUname and Printer Selection C. Graves, T. Butts, M. Angel
- RFC 1647**
TN3270 Enhancements B. Kelly
- RFC 1652**
SMTP Service Extension for 8bit-MIMEtransport J. Klensin, N. Freed, M. Rose, E. Stefferud, D. Crocker
- RFC 1664**
Using the Internet DNS to Distribute RFC1327 Mail Address Mapping Tables C. Allochio, A. Bonito, B. Cole, S. Giordano, R. Hagens
- RFC 1693**
An Extension to TCP: Partial Order Service T. Connolly, P. Amer, P. Conrad

- RFC 1695**
Definitions of Managed Objects for ATM Management Version 8.0 using SMIPv2
M. Ahmed, K. Tesink
- RFC 1701**
Generic Routing Encapsulation (GRE) S. Hanks, T. Li, D. Farinacci, P. Traina
- RFC 1702**
Generic Routing Encapsulation over IPv4 networks S. Hanks, T. Li, D. Farinacci, P. Traina
- RFC 1706**
DNS NSAP Resource Records B. Manning, R. Colella
- RFC 1712**
DNS Encoding of Geographical Location C. Farrell, M. Schulze, S. Pleitner D. Baldoni
- RFC 1713**
Tools for DNS debugging A. Romao
- RFC 1723**
RIP Version 2—Carrying Additional Information G. Malkin
- RFC 1752**
The Recommendation for the IP Next Generation Protocol S. Bradner, A. Mankin
- RFC 1766**
Tags for the Identification of Languages H. Alvestrand
- RFC 1771**
A Border Gateway Protocol 4 (BGP-4) Y. Rekhter, T. Li
- RFC 1794**
DNS Support for Load Balancing T. Brisco
- RFC 1819**
Internet Stream Protocol Version 2 (ST2) Protocol Specification—Version ST2+ L. Delgrossi, L. Berger Eds.
- RFC 1826**
IP Authentication Header R. Atkinson
- RFC 1828**
IP Authentication using Keyed MD5 P. Metzger, W. Simpson
- RFC 1829**
The ESP DES-CBC Transform P. Karn, P. Metzger, W. Simpson
- RFC 1830**
SMTP Service Extensions for Transmission of Large and Binary MIME Messages
G. Vaudreuil
- RFC 1831**
RPC: Remote Procedure Call Protocol Specification Version 2 R. Srinivasan
- RFC 1832**
XDR: External Data Representation Standard R. Srinivasan
- RFC 1833**
Binding Protocols for ONC RPC Version 2 R. Srinivasan
- RFC 1850**
OSPF Version 2 Management Information Base F. Baker, R. Coltun

- RFC 1854**
SMTP Service Extension for Command Pipelining N. Freed
- RFC 1869**
SMTP Service Extensions J. Klensin, N. Freed, M. Rose, E. Stefferud, D. Crocker
- RFC 1870**
SMTP Service Extension for Message Size Declaration J. Klensin, N. Freed, K. Moore
- RFC 1876**
A Means for Expressing Location Information in the Domain Name System C. Davis, P. Vixie, T. Goodwin, I. Dickinson
- RFC 1883**
Internet Protocol, Version 6 (IPv6) Specification S. Deering, R. Hinden
- RFC 1884**
IP Version 6 Addressing Architecture R. Hinden, S. Deering, Eds.
- RFC 1886**
DNS Extensions to support IP version 6 S. Thomson, C. Huitema
- RFC 1888**
OSI NSAPs and IPv6 J. Bound, B. Carpenter, D. Harrington, J. Houldsworth, A. Lloyd
- RFC 1891**
SMTP Service Extension for Delivery Status Notifications K. Moore
- RFC 1892**
The Multipart/Report Content Type for the Reporting of Mail System Administrative Messages G. Vaudreuil
- RFC 1894**
An Extensible Message Format for Delivery Status Notifications K. Moore, G. Vaudreuil
- RFC 1901**
Introduction to Community-based SNMPv2 J. Case, K. McCloaghrie, M. Rose, S. Waldbusser
- RFC 1902**
Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloaghrie, M. Rose, S. Waldbusser
- RFC 1903**
Textual Conventions for Version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloaghrie, M. Rose, S. Waldbusser
- RFC 1904**
Conformance Statements for Version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloaghrie, M. Rose, S. Waldbusser
- RFC 1905**
Protocol Operations for Version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloaghrie, M. Rose, S. Waldbusser
- RFC 1906**
Transport Mappings for Version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloaghrie, M. Rose, S. Waldbusser

- RFC 1907**
Management Information Base for Version 2 of the Simple Network Management Protocol (SNMPv2) J. Case, K. McCloghrie, M. Rose, S. Waldbusser
- RFC 1908**
Coexistence between Version 1 and Version 2 of the Internet-standard Network Management Framework J. Case, K. McCloghrie, M. Rose, S. Waldbusser
- RFC 1912**
Common DNS Operational and Configuration Errors D. Barr
- RFC 1918**
Address Allocation for Private Internets Y. Rekhter, B. Moskowitz, D. Karrenberg, G.J. de Groot, E. Lear
- RFC 1928**
SOCKS Protocol Version 5 M. Leech, M. Ganis, Y. Lee, R. Kuris, D. Koblas, L. Jones
- RFC 1930**
Guidelines for creation, selection, and registration of an Autonomous System (AS) J. Hawkinson, T. Bates
- RFC 1939**
Post Office Protocol-Version 3 J. Myers, M. Rose
- RFC 1981**
Path MTU Discovery for IP version 6 J. McCann, S. Deering, J. Mogul
- RFC 1982**
Serial Number Arithmetic R. Elz, R. Bush
- RFC 1985**
SMTP Service Extension for Remote Message Queue Starting J. De Winter
- RFC 1995**
Incremental Zone Transfer in DNS M. Ohta
- RFC 1996**
A Mechanism for Prompt Notification of Zone Changes (DNS NOTIFY) P. Vixie
- RFC 2010**
Operational Criteria for Root Name Servers B. Manning, P. Vixie
- RFC 2011**
SNMPv2 Management Information Base for the Internet Protocol using SMIPv2 K. McCloghrie, Ed.
- RFC 2012**
SNMPv2 Management Information Base for the Transmission Control Protocol using SMIPv2 K. McCloghrie, Ed.
- RFC 2013**
SNMPv2 Management Information Base for the User Datagram Protocol using SMIPv2 K. McCloghrie, Ed.
- RFC 2018**
TCP Selective Acknowledgement Options M. Mathis, J. Mahdavi, S. Floyd, A. Romanow
- RFC 2026**
The Internet Standards Process — Revision 3 S. Bradner

- RFC 2030**
Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6 and OSI D.
Mills
- RFC 2033**
Local Mail Transfer Protocol J. Myers
- RFC 2034**
SMTP Service Extension for Returning Enhanced Error Codes N. Freed
- RFC 2040**
The RC5, RC5-CBC, RC5-CBC-Pad, and RC5-CTS Algorithms R. Baldwin, R. Rivest
- RFC 2045**
Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies N. Freed, N. Borenstein
- RFC 2052**
A DNS RR for specifying the location of services (DNS SRV) A. Gulbrandsen, P. Vixie
- RFC 2065**
Domain Name System Security Extensions D. Eastlake 3rd, C. Kaufman
- RFC 2066**
TELNET CHARSET Option R. Gellens
- RFC 2080**
RIPng for IPv6 G. Malkin, R. Minnear
- RFC 2096**
IP Forwarding Table MIB F. Baker
- RFC 2104**
HMAC: Keyed-Hashing for Message Authentication H. Krawczyk, M. Bellare, R. Canetti
- RFC 2119**
Keywords for use in RFCs to Indicate Requirement Levels S. Bradner
- RFC 2133**
Basic Socket Interface Extensions for IPv6 R. Gilligan, S. Thomson, J. Bound, W. Stevens
- RFC 2136**
Dynamic Updates in the Domain Name System (DNS UPDATE) P. Vixie, Ed., S. Thomson, Y. Rekhter, J. Bound
- RFC 2137**
Secure Domain Name System Dynamic Update D. Eastlake 3rd
- RFC 2163**
Using the Internet DNS to Distribute MIXER Conformant Global Address Mapping (MCGAM) C. Allocchio
- RFC 2168**
Resolution of Uniform Resource Identifiers using the Domain Name System R. Daniel, M. Mealling
- RFC 2178**
OSPF Version 2 J. Moy
- RFC 2181**
Clarifications to the DNS Specification R. Elz, R. Bush

- RFC 2205**
Resource ReSerVation Protocol (RSVP)—Version 1 Functional Specification R. Braden, Ed., L. Zhang, S. Berson, S. Herzog, S. Jamin
- RFC 2210**
The Use of RSVP with IETF Integrated Services J. Wroclawski
- RFC 2211**
Specification of the Controlled-Load Network Element Service J. Wroclawski
- RFC 2212**
Specification of Guaranteed Quality of Service S. Shenker, C. Partridge, R. Guerin
- RFC 2215**
General Characterization Parameters for Integrated Service Network Elements S. Shenker, J. Wroclawski
- RFC 2217**
Telnet Com Port Control Option G. Clarke
- RFC 2219**
Use of DNS Aliases for Network Services M. Hamilton, R. Wright
- RFC 2228**
FTP Security Extensions M. Horowitz, S. Lunt
- RFC 2230**
Key Exchange Delegation Record for the DNS R. Atkinson
- RFC 2233**
The Interfaces Group MIB using SMIPv2 K. McCloghrie, F. Kastenholtz
- RFC 2240**
A Legal Basis for Domain Name Allocation O. Vaughn
- RFC 2246**
The TLS Protocol Version 1.0 T. Dierks, C. Allen
- RFC 2251**
Lightweight Directory Access Protocol (v3) M. Wahl, T. Howes, S. Kille
- RFC 2253**
Lightweight Directory Access Protocol (v3): UTF-8 String Representation of Distinguished Names M. Wahl, S. Kille, T. Howes
- RFC 2254**
The String Representation of LDAP Search Filters T. Howes
- RFC 2261**
An Architecture for Describing SNMP Management Frameworks D. Harrington, R. Presuhn, B. Wijnen
- RFC 2262**
Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) J. Case, D. Harrington, R. Presuhn, B. Wijnen
- RFC 2271**
An Architecture for Describing SNMP Management Frameworks D. Harrington, R. Presuhn, B. Wijnen
- RFC 2273**
SNMPv3 Applications D. Levi, P. Meyer, B. Stewart

- RFC 2274**
User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3) U. Blumenthal, B. Wijnen
- RFC 2275**
View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP) B. Wijnen, R. Presuhn, K. McCloghrie
- RFC 2279**
UTF-8, a transformation format of ISO 10646 F. Yergeau
- RFC 2292**
Advanced Sockets API for IPv6 W. Stevens, M. Thomas
- RFC 2308**
Negative Caching of DNS Queries (DNS NCACHE) M. Andrews
- RFC 2317**
Classless IN-ADDR.ARPA delegation H. Eidnes, G. de Groot, P. Vixie
- RFC 2320**
Definitions of Managed Objects for Classical IP and ARP Over ATM Using SMIv2 (IPOA-MIB) M. Greene, J. Luciani, K. White, T. Kuo
- RFC 2328**
OSPF Version 2 J. Moy
- RFC 2345**
Domain Names and Company Name Retrieval J. Klensin, T. Wolf, G. Oglesby
- RFC 2352**
A Convention for Using Legal Names as Domain Names O. Vaughn
- RFC 2355**
TN3270 Enhancements B. Kelly
- RFC 2358**
Definitions of Managed Objects for the Ethernet-like Interface Types J. Flick, J. Johnson
- RFC 2373**
IP Version 6 Addressing Architecture R. Hinden, S. Deering
- RFC 2374**
An IPv6 Aggregatable Global Unicast Address Format R. Hinden, M. O'Dell, S. Deering
- RFC 2375**
IPv6 Multicast Address Assignments R. Hinden, S. Deering
- RFC 2385**
Protection of BGP Sessions via the TCP MD5 Signature Option A. Hefferman
- RFC 2389**
Feature negotiation mechanism for the File Transfer Protocol P. Hethmon, R. Elz
- RFC 2401**
Security Architecture for Internet Protocol S. Kent, R. Atkinson
- RFC 2402**
IP Authentication Header S. Kent, R. Atkinson
- RFC 2403**
The Use of HMAC-MD5-96 within ESP and AH C. Madson, R. Glenn

- RFC 2404**
The Use of HMAC-SHA-1-96 within ESP and AH C. Madson, R. Glenn
- RFC 2405**
The ESP DES-CBC Cipher Algorithm With Explicit IV C. Madson, N. Doraswamy
- RFC 2406**
IP Encapsulating Security Payload (ESP) S. Kent, R. Atkinson
- RFC 2407**
The Internet IP Security Domain of Interpretation for ISAKMPD. Piper
- RFC 2408**
Internet Security Association and Key Management Protocol (ISAKMP) D. Maughan, M. Schertler, M. Schneider, J. Turner
- RFC 2409**
The Internet Key Exchange (IKE) D. Harkins, D. Carrel
- RFC 2410**
The NULL Encryption Algorithm and Its Use With IPsec R. Glenn, S. Kent,
- RFC 2428**
FTP Extensions for IPv6 and NATs M. Allman, S. Ostermann, C. Metz
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Internet Calendaring and Scheduling Core Object Specification (iCalendar) F. Dawson, D. Stenerson
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Internet X.509 Public Key Infrastructure Certificate and CRL Profile R. Housley, W. Ford, W. Polk, D. Solo
- RFC 2460**
Internet Protocol, Version 6 (IPv6) Specification S. Deering, R. Hinden
- RFC 2461**
Neighbor Discovery for IP Version 6 (IPv6) T. Narten, E. Nordmark, W. Simpson
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IPv6 Stateless Address Autoconfiguration S. Thomson, T. Narten
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Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification A. Conta, S. Deering
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Transmission of IPv6 Packets over Ethernet Networks M. Crawford
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Management Information Base for IP Version 6: ICMPv6 Group D. Haskin, S. Onishi
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Anti-Spam Recommendations for SMTP MTAs G. Lindberg

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Photuris: Extended Schemes and Attributes P. Karn, W. Simpson
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Domain Name System Security Extensions D. Eastlake 3rd
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Storing Certificates in the Domain Name System (DNS) D. Eastlake 3rd, O. Gudmundsson
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Storage of Diffie-Hellman Keys in the Domain Name System (DNS) D. Eastlake 3rd
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Detached Domain Name System (DNS) Information D. Eastlake 3rd
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SMTP Service Extension for Authentication J. Myers
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Introduction to Version 3 of the Internet-standard Network Management Framework J. Case, R. Mundy, D. Partain, B. Stewart
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An Architecture for Describing SNMP Management Frameworks B. Wijnen, D. Harrington, R. Presuhn
- RFC 2572**
Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) J. Case, D. Harrington, R. Presuhn, B. Wijnen
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SNMP Applications D. Levi, P. Meyer, B. Stewart
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User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3) U. Blumenthal, B. Wijnen
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View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP) B. Wijnen, R. Presuhn, K. McCloghrie
- RFC 2576**
Co-Existence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework R. Frye, D. Levi, S. Routhier, B. Wijnen
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Structure of Management Information Version 2 (SMIPv2) K. McCloghrie, D. Perkins, J. Schoenwaelder
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Textual Conventions for SMIPv2 K. McCloghrie, D. Perkins, J. Schoenwaelder
- RFC 2580**
Conformance Statements for SMIPv2 K. McCloghrie, D. Perkins, J. Schoenwaelder
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TCP Congestion Control M. Allman, V. Paxson, W. Stevens
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Guidelines for Next Hop Client (NHC) Developers R. Carlson, L. Winkler

- RFC 2591**
Definitions of Managed Objects for Scheduling Management Operations D. Levi,
J. Schoenwaelder
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IP and ARP over Fibre Channel M. Rajagopal, R. Bhagwat, W. Rickard
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*Don't SPEW A Set of Guidelines for Mass Unsolicited Mailings and Postings
(spam*)* S. Hambridge, A. Lunde
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Point-to-Point Tunneling Protocol K. Hamzeh, G. Pall, W. Verthein, J. Taarud,
W. Little, G. Zorn
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Internationalization of the File Transfer Protocol B. Curtin
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Definitions of Managed Objects for the Ethernet-like Interface Types J. Flick, J.
Johnson
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Extension Mechanisms for DNS (EDNS0) P. Vixie
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IPv6 Jumbograms D. Borman, S. Deering, R. Hinden
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Multicast Listener Discovery (MLD) for IPv6 S. Deering, W. Fenner, B.
Haberman
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IPv6 Router Alert Option C. Partridge, A. Jackson
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OSPF for IPv6 R. Coltun, D. Ferguson, J. Moy
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A Framework for Policy-based Admission Control R. Yavatkar, D. Pendarakis,
R. Guerin
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A DNS RR for specifying the location of services (DNS SRV) A. Gubrandsen, P.
Vixix, L. Esibov
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Simple Mail Transfer Protocol J. Klensin, Ed.
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Internet Message Format P. Resnick, Ed.
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TELNET KERMIT OPTION J. Altman, F. da Cruz
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Secret Key Transaction Authentication for DNS (TSIG) P. Vixie, O.
Gudmundsson, D. Eastlake 3rd, B. Wellington
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Textual Conventions for Internet Network Addresses M. Daniele, B. Haberman,
S. Routhier, J. Schoenwaelder

- RFC 2852**
Deliver By SMTP Service Extension D. Newman
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DNS Extensions to Support IPv6 Address Aggregation and Renumbering M. Crawford, C. Huitema
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The Naming Authority Pointer (NAPTR) DNS Resource Record M. Mealling, R. Daniel
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SMTP Service Extension for Command Pipelining N. Freed
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Secret Key Establishment for DNS (TKEY RR) D. Eastlake, 3rd
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Telnet Authentication Option T. Ts'o, ed., J. Altman
- RFC 2942**
Telnet Authentication: Kerberos Version 5 T. Ts'o
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Telnet Data Encryption Option T. Ts'o
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Telnet Encryption: DES 64 bit Cipher Feedback T. Ts'o
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Telnet Encryption: DES 64 bit Output Feedback T. Ts'o
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Analysis of an Equal-Cost Multi-Path Algorithm C. Hopps
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IP Version 6 Management Information Base for The Multicast Listener Discovery Protocol B. Haberman, R. Worzella
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Policy Core Information Model—Version 1 Specification B. Moore, E. Ellesson, J. Strassner, A. Westerinen
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Delegation of IP6.ARPA R. Bush
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The BSD Syslog Protocol C. Lonvick
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SMTP Service Extension for Secure SMTP over Transport Layer Security P. Hoffman
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DNSSEC and IPv6 A6 aware server/resolver message size requirements O. Gudmundsson
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Textual Conventions for Internet Network Addresses M. Daniele, B. Haberman, S. Routhier, J. Schoenwaelder
- RFC 3363**
Representing Internet Protocol version 6 (IPv6) Addresses in the Domain Name System R. Bush, A. Durand, B. Fink, O. Gudmundsson, T. Hain

- RFC 3376**
Internet Group Management Protocol, Version 3 B. Cain, S. Deering, I. Kouvelas, B. Fenner, A. Thyagarajan
- RFC 3390**
Increasing TCP's Initial Window M. Allman, S. Floyd, C. Partridge
- RFC 3410**
Introduction and Applicability Statements for Internet-Standard Management Framework J. Case, R. Mundy, D. Partain, B. Stewart
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An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks D. Harrington, R. Presuhn, B. Wijnen
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Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) J. Case, D. Harrington, R. Presuhn, B. Wijnen
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Simple Network Management Protocol (SNMP) Applications D. Levi, P. Meyer, B. Stewart
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User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3) U. Blumenthal, B. Wijnen
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View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP) B. Wijnen, R. Presuhn, K. McCloghrie
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Version 2 of the Protocol Operations for the Simple Network Management Protocol (SNMP) R. Presuhn, J. Case, K. McCloghrie, M. Rose, S. Waldbusser
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Transport Mappings for the Simple Network Management Protocol (SNMP) R. Presuhn, J. Case, K. McCloghrie, M. Rose, S. Waldbusser
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Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) R. Presuhn, J. Case, K. McCloghrie, M. Rose, S. Waldbusser
- RFC 3419**
Textual Conventions for Transport Addresses M. Daniele, J. Schoenwaelder
- RFC 3484**
Default Address Selection for Internet Protocol version 6 (IPv6) R. Draves
- RFC 3493**
Basic Socket Interface Extensions for IPv6 R. Gilligan, S. Thomson, J. Bound, J. McCann, W. Stevens
- RFC 3513**
Internet Protocol Version 6 (IPv6) Addressing Architecture R. Hinden, S. Deering
- RFC 3526**
More Modular Exponential (MODP) Diffie-Hellman groups for Internet Key Exchange (IKE) T. Kivinen, M. Kojo

- RFC 3542**
Advanced Sockets Application Programming Interface (API) for IPv6 W. Richard Stevens, M. Thomas, E. Nordmark, T. Jinmei
- RFC 3566**
The AES-XCBC-MAC-96 Algorithm and Its Use With IPsec S. Frankel, H. Herbert
- RFC 3569**
An Overview of Source-Specific Multicast (SSM) S. Bhattacharyya, Ed.
- RFC 3584**
Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework R. Frye, D. Levi, S. Routhier, B. Wijnen
- RFC 3602**
The AES-CBC Cipher Algorithm and Its Use with IPsec S. Frankel, R. Glenn, S. Kelly
- RFC 3629**
UTF-8, a transformation format of ISO 10646 R. Kermode, C. Vicisano
- RFC 3658**
Delegation Signer (DS) Resource Record (RR) O. Gudmundsson
- RFC 3678**
Socket Interface Extensions for Multicast Source Filters D. Thaler, B. Fenner, B. Quinn
- RFC 3715**
IPsec-Network Address Translation (NAT) Compatibility Requirements B. Aboba, W. Dixon
- RFC 3810**
Multicast Listener Discovery Version 2 (MLDv2) for IPv6 R. Vida, Ed., L. Costa, Ed.
- RFC 3826**
The Advanced Encryption Standard (AES) Cipher Algorithm in the SNMP User-based Security Model U. Blumenthal, F. Maino, K McCloghrie.
- RFC 3947**
Negotiation of NAT-Traversal in the IKE T. Kivinen, B. Swander, A. Huttunen, V. Volpe
- RFC 3948**
UDP Encapsulation of IPsec ESP Packets A. Huttunen, B. Swander, V. Volpe, L. DiBurro, M. Stenberg
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Textual Conventions for Internet Network Addresses M. Daniele, B. Haberman, S. Routhier, J. Schoenwaelder
- RFC 4007**
IPv6 Scoped Address Architecture S. Deering, B. Haberman, T. Jinmei, E. Nordmark, B. Zill
- RFC 4022**
Management Information Base for the Transmission Control Protocol (TCP) R. Raghunarayan
- RFC 4106**
The Use of Galois/Counter Mode (GCM) in IPsec Encapsulating Security Payload (ESP) J. Viega, D. McGrew

- RFC 4109**
Algorithms for Internet Key Exchange version 1 (IKEv1) P. Hoffman
- RFC 4113**
Management Information Base for the User Datagram Protocol (UDP) B. Fenner,
J. Flick
- RFC 4191**
Default Router Preferences and More-Specific Routes R. Draves, D. Thaler
- RFC 4217**
Securing FTP with TLS P. Ford-Hutchinson
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IP Forwarding Table MIB B. Haberman
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Management Information Base for the Internet Protocol (IP) S. Routhier
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Security Architecture for the Internet Protocol S. Kent, K. Seo
- RFC 4302**
IP Authentication Header S. Kent
- RFC 4303**
IP Encapsulating Security Payload (ESP) S. Kent
- RFC 4304**
Extended Sequence Number (ESN) Addendum to IPsec Domain of Interpretation (DOI) for Internet Security Association and Key Management Protocol (ISAKMP) S. Kent
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Cryptographic Algorithms for Use in the Internet Key Exchange Version 2 (IKEv2) J. Schiller
- RFC 4308**
Cryptographic Suites for IPsec P. Hoffman
- RFC 4434**
The AES-XCBC-PRF-128 Algorithm for the Internet Key Exchange Protocol P. Hoffman
- RFC 4443**
Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification A. Conta, S. Deering
- RFC 4552**
Authentication/Confidentiality for OSPFv3 M. Gupta, N. Melam
- RFC 4678**
Server/Application State Protocol v1 A. Bivens
- RFC 4753**
ECP Groups for IKE and IKEv2 D. Fu, J. Solinas
- RFC 4754**
IKE and IKEv2 Authentication Using the Elliptic Curve Digital Signature Algorithm (ECDSA) D. Fu, J. Solinas
- RFC 4809**
Requirements for an IPsec Certificate Management Profile C. Bonatti, Ed., S. Turner, Ed., G. Lebovitz, Ed.

- RFC 4835**
Cryptographic Algorithm Implementation Requirements for Encapsulating Security Payload (ESP) and Authentication Header (AH) V. Manral
- RFC 4862**
IPv6 Stateless Address Autoconfiguration S. Thomson, T. Narten, T. Jinmei
- RFC 4868**
Using HMAC-SHA-256, HMAC-SHA-384, and HMAC-SHA-512 with IPsec S. Kelly, S. Frankel
- RFC 4869**
Suite B Cryptographic Suites for IPsec L. Law, J. Solinas
- RFC 4941**
Privacy Extensions for Stateless Address Autoconfiguration in IPv6 T. Narten, R. Draves, S. Krishnan
- RFC 4945**
The Internet IP Security PKI Profile of IKEv1/ISAKMP, IKEv2, and PKIX B. Korver
- RFC 5014**
IPv6 Socket API for Source Address Selection E. Nordmark, S. Chakrabarti, J. Laganier
- RFC 5095**
Deprecation of Type 0 Routing Headers in IPv6 J. Abley, P. Savola, G. Neville-Neil
- RFC 5175**
IPv6 Router Advertisement Flags Option B. Haberman, Ed., R. Hinden
- RFC 5282**
Using Authenticated Encryption Algorithms with the Encrypted Payload of the Internet Key Exchange version 2 (IKEv2) Protocol D. Black, D. McGrew
- RFC 5996**
Internet Key Exchange Protocol Version 2 (IKEv2) C. Kaufman, P. Hoffman, Y. Nir, P. Eronen

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Appendix G. Architectural specifications

This appendix lists documents that provide architectural specifications for the SNA Protocol.

The APPN Implementers' Workshop (AIW) architecture documentation includes the following architectural specifications for SNA APPN and HPR:

- APPN Architecture Reference (SG30-3422-04)
- APPN Branch Extender Architecture Reference Version 1.1
- APPN Dependent LU Requester Architecture Reference Version 1.5
- APPN Extended Border Node Architecture Reference Version 1.0
- APPN High Performance Routing Architecture Reference Version 4.0
- SNA Formats (GA27-3136-20)
- SNA Technical Overview (GC30-3073-04)

For more information, see the AIW documentation page at <http://www.ibm.com/support/docview.wss?rs=852&uid=swg27017843>.

The following RFC also contains SNA architectural specifications:

- RFC 2353 *APPN/HPR in IP Networks APPN Implementers' Workshop Closed Pages Document*

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- Use assistive technologies such as screen readers and screen magnifier software
- Operate specific or equivalent features using only the keyboard
- Customize display attributes such as color, contrast, and font size

Using assistive technologies

Assistive technology products, such as screen readers, function with the user interfaces found in z/OS. Consult the assistive technology documentation for specific information when using such products to access z/OS interfaces.

Keyboard navigation of the user interface

Users can access z/OS user interfaces using TSO/E or ISPF. See *z/OS TSO/E Primer*, *z/OS TSO/E User's Guide*, and *z/OS ISPF User's Guide Vol I* for information about accessing TSO/E and ISPF interfaces. These guides describe how to use TSO/E and ISPF, including the use of keyboard shortcuts or function keys (PF keys). Each guide includes the default settings for the PF keys and explains how to modify their functions.

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Bibliography

This bibliography contains descriptions of the documents in the z/OS Communications Server library.

z/OS Communications Server documentation is available in the following forms:

- Online at the z/OS Internet Library web page at www.ibm.com/systems/z/os/zos/bkserv/
- In softcopy on CD-ROM collections. See “Softcopy information” on page xiv.

z/OS Communications Server library updates

An index to z/OS Communications Server book updates is at <http://www.ibm.com/support/docview.wss?uid=swg21178966>. Updates to documents are also available on RETAIN and in information APARs (info APARs). Go to <http://www.ibm.com/software/network/commserver/zos/support> to view information APARs.

z/OS Communications Server information

z/OS Communications Server product information is grouped by task in the following tables.

Planning

Title	Number	Description
z/OS Communications Server: New Function Summary	GC27-3664	This document is intended to help you plan for new IP or SNA function, whether you are migrating from a previous version or installing z/OS for the first time. It summarizes what is new in the release and identifies the suggested and required modifications needed to use the enhanced functions.
z/OS Communications Server: IPv6 Network and Application Design Guide	SC27-3663	This document is a high-level introduction to IPv6. It describes concepts of z/OS Communications Server's support of IPv6, coexistence with IPv4, and migration issues.

Resource definition, configuration, and tuning

Title	Number	Description
z/OS Communications Server: IP Configuration Guide	SC27-3650	This document describes the major concepts involved in understanding and configuring an IP network. Familiarity with the z/OS operating system, IP protocols, z/OS UNIX System Services, and IBM Time Sharing Option (TSO) is recommended. Use this document with the z/OS Communications Server: IP Configuration Reference.

Title	Number	Description
z/OS Communications Server: IP Configuration Reference	SC27-3651	This document presents information for people who want to administer and maintain IP. Use this document with the z/OS Communications Server: IP Configuration Guide. The information in this document includes: <ul style="list-style-type: none"> • TCP/IP configuration data sets • Configuration statements • Translation tables • Protocol number and port assignments
z/OS Communications Server: SNA Network Implementation Guide	SC27-3672	This document presents the major concepts involved in implementing an SNA network. Use this document with the z/OS Communications Server: SNA Resource Definition Reference.
z/OS Communications Server: SNA Resource Definition Reference	SC27-3675	This document describes each SNA definition statement, start option, and macroinstruction for user tables. It also describes NCP definition statements that affect SNA. Use this document with the z/OS Communications Server: SNA Network Implementation Guide.
z/OS Communications Server: SNA Resource Definition Samples	SC27-3676	This document contains sample definitions to help you implement SNA functions in your networks, and includes sample major node definitions.
z/OS Communications Server: IP Network Print Facility	SC27-3658	This document is for systems programmers and network administrators who need to prepare their network to route SNA, JES2, or JES3 printer output to remote printers using TCP/IP Services.

Operation

Title	Number	Description
z/OS Communications Server: IP User's Guide and Commands	SC27-3662	This document describes how to use TCP/IP applications. It contains requests with which a user can log on to a remote host using Telnet, transfer data sets using FTP, send and receive electronic mail, print on remote printers, and authenticate network users.
z/OS Communications Server: IP System Administrator's Commands	SC27-3661	This document describes the functions and commands helpful in configuring or monitoring your system. It contains system administrator's commands, such as TSO NETSTAT, PING, TRACERTE and their UNIX counterparts. It also includes TSO and MVS commands commonly used during the IP configuration process.
z/OS Communications Server: SNA Operation	SC27-3673	This document serves as a reference for programmers and operators requiring detailed information about specific operator commands.
z/OS Communications Server: Quick Reference	SC27-3665	This document contains essential information about SNA and IP commands.

Customization

Title	Number	Description
z/OS Communications Server: SNA Customization	SC27-3666	This document enables you to customize SNA, and includes the following information: <ul style="list-style-type: none"> • Communication network management (CNM) routing table • Logon-interpret routine requirements • Logon manager installation-wide exit routine for the CLU search exit • TSO/SNA installation-wide exit routines • SNA installation-wide exit routines

Writing application programs

Title	Number	Description
z/OS Communications Server: IP Sockets Application Programming Interface Guide and Reference	SC27-3660	This document describes the syntax and semantics of program source code necessary to write your own application programming interface (API) into TCP/IP. You can use this interface as the communication base for writing your own client or server application. You can also use this document to adapt your existing applications to communicate with each other using sockets over TCP/IP.
z/OS Communications Server: IP CICS Sockets Guide	SC27-3649	This document is for programmers who want to set up, write application programs for, and diagnose problems with the socket interface for CICS using z/OS TCP/IP.
z/OS Communications Server: IP IMS Sockets Guide	SC27-3653	This document is for programmers who want application programs that use the IMS™ TCP/IP application development services provided by the TCP/IP Services of IBM.
z/OS Communications Server: IP Programmer's Guide and Reference	SC27-3659	This document describes the syntax and semantics of a set of high-level application functions that you can use to program your own applications in a TCP/IP environment. These functions provide support for application facilities, such as user authentication, distributed databases, distributed processing, network management, and device sharing. Familiarity with the z/OS operating system, TCP/IP protocols, and IBM Time Sharing Option (TSO) is recommended.
z/OS Communications Server: SNA Programming	SC27-3674	This document describes how to use SNA macroinstructions to send data to and receive data from (1) a terminal in either the same or a different domain, or (2) another application program in either the same or a different domain.
z/OS Communications Server: SNA Programmer's LU 6.2 Guide	SC27-3669	This document describes how to use the SNA LU 6.2 application programming interface for host application programs. This document applies to programs that use only LU 6.2 sessions or that use LU 6.2 sessions along with other session types. (Only LU 6.2 sessions are covered in this document.)
z/OS Communications Server: SNA Programmer's LU 6.2 Reference	SC27-3670	This document provides reference material for the SNA LU 6.2 programming interface for host application programs.
z/OS Communications Server: CSM Guide	SC27-3647	This document describes how applications use the communications storage manager.

Title	Number	Description
z/OS Communications Server: CMIP Services and Topology Agent Guide	SC27-3646	This document describes the Common Management Information Protocol (CMIP) programming interface for application programmers to use in coding CMIP application programs. The document provides guide and reference information about CMIP services and the SNA topology agent.

Diagnosis

Title	Number	Description
z/OS Communications Server: IP Diagnosis Guide	GC27-3652	This document explains how to diagnose TCP/IP problems and how to determine whether a specific problem is in the TCP/IP product code. It explains how to gather information for and describe problems to the IBM Software Support Center.
z/OS Communications Server: ACF/TAP Trace Analysis Handbook	GC27-3645	This document explains how to gather the trace data that is collected and stored in the host processor. It also explains how to use the Advanced Communications Function/Trace Analysis Program (ACF/TAP) service aid to produce reports for analyzing the trace data information.
z/OS Communications Server: SNA Diagnosis Vol 1, Techniques and Procedures and z/OS Communications Server: SNA Diagnosis Vol 2, FFST Dumps and the VIT	GC27-3667 GC27-3668	These documents help you identify an SNA problem, classify it, and collect information about it before you call the IBM Support Center. The information collected includes traces, dumps, and other problem documentation.
z/OS Communications Server: SNA Data Areas Volume 1 and z/OS Communications Server: SNA Data Areas Volume 2	GC31-6852 GC31-6853	These documents describe SNA data areas and can be used to read an SNA dump. They are intended for IBM programming service representatives and customer personnel who are diagnosing problems with SNA.

Messages and codes

Title	Number	Description
z/OS Communications Server: SNA Messages	SC27-3671	This document describes the ELM, IKT, IST, IUT, IVT, and USS messages. Other information in this document includes: <ul style="list-style-type: none"> • Command and RU types in SNA messages • Node and ID types in SNA messages • Supplemental message-related information
z/OS Communications Server: IP Messages Volume 1 (EZA)	SC27-3654	This volume contains TCP/IP messages beginning with EZA.
z/OS Communications Server: IP Messages Volume 2 (EZB, EZD)	SC27-3655	This volume contains TCP/IP messages beginning with EZB or EZD.
z/OS Communications Server: IP Messages Volume 3 (EZY)	SC27-3656	This volume contains TCP/IP messages beginning with EZY.
z/OS Communications Server: IP Messages Volume 4 (EZZ, SNM)	SC27-3657	This volume contains TCP/IP messages beginning with EZZ and SNM.
z/OS Communications Server: IP and SNA Codes	SC27-3648	This document describes codes and other information that appear in z/OS Communications Server messages.

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