

z/OS



MVS System Messages Volume 2 (ARC - ASA)

Version 2 Release 2

Note

Before using this information and the product it supports, read the information in "Notices" on page 605.

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

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About this document

MVS™ System Messages primarily describe messages that are issued to the system operator at the system console and system messages that are logged. These include the following messages:

- Operator messages issued by the BCP and DFSMS.
- Log messages issued by the BCP and DFSMS.
- Some SYSOUT messages issued by the BCP and DFSMS. SYSOUT messages are issued by utilities that normally run in batch, such as SPZAP.
- Batch job messages issued by the BCP. Messages issued by JES2 or JES3 for batch jobs are in the JES messages documents.

For the most part, messages issued at interactive terminals (like TSO/E and CICS® terminals) are documented by the specific elements and products that support those terminals.

The titles of the MVS System Messages indicate the range of message prefixes in the documents:

- *z/OS MVS System Messages, Vol 1 (ABA-AOM)*
- *z/OS MVS System Messages, Vol 2 (ARC-ASA)*
- *z/OS MVS System Messages, Vol 3 (ASB-BPX)*
- *z/OS MVS System Messages, Vol 4 (CBD-DMO)*
- *z/OS MVS System Messages, Vol 5 (EDG-GFS)*
- *z/OS MVS System Messages, Vol 6 (GOS-IEA)*
- *z/OS MVS System Messages, Vol 7 (IEB-IEE)*
- *z/OS MVS System Messages, Vol 8 (IEF-IGD)*
- *z/OS MVS System Messages, Vol 9 (IGF-IWM)*
- *z/OS MVS System Messages, Vol 10 (IXC-IZP)*

Here are some of the other types of messages on that bookshelf:

- *z/OS MVS Dump Output Messages*
- *z/OS MVS System Codes*
- *z/OS and z/VM HCD Messages*
- *z/OS JES3 Messages*
- *z/OS TSO/E Messages*
- *z/OS UNIX System Services Messages and Codes*

This document also contains the routing and descriptor codes that IBM® assigns to the messages that z/OS® components, subsystems, and products issue. Routing and descriptor codes are specified by the ROUTCDE and DESC keyword parameters on WTO and WTOR macros, which are the primary methods that programs use to issue messages. The routing code identifies where a message will be displayed. The descriptor code identifies the significance of the message and the color of the message on operator consoles with color.

Who should use documentation for MVS System Messages

The system messages documents are for people who receive messages from the system. Usually, these people are system operators, system programmers, and application programmers who do any of the following tasks:

- Initialize the operating system and its subsystems
- Monitor system activity
- Keep the system running correctly
- Diagnose and correct system problems
- Diagnose and correct errors in problem programs

How to use these documents

The system messages contain descriptions of messages. See *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for details about z/OS message formats and descriptions.

Where to find more information

Where necessary, the message documents reference information in other books, using shortened versions of the book title. For complete titles and order numbers of the books for all products that are part of z/OS, see *z/OS V2R2 Information Roadmap*.

Many message descriptions refer to the following terms. You need to consult the reference listed below for more information:

- **Data areas and control blocks:** See *z/OS MVS Data Areas* in the z/OS Internet Library (<http://www.ibm.com/systems/z/os/zos/bkserv/>).
- **Dumps:** For examples of ABEND, stand-alone, and SVC dumps and how to read them, see *z/OS MVS Diagnosis: Tools and Service Aids*. For examples of component output from dumps and how to read and request it, see *z/OS MVS Diagnosis: Reference*.
- **Identification of a component, subsystem, or product:** See the *z/OS MVS Diagnosis: Reference* to identify the component, subsystem, or product from the name of an IBM module or for a macro. The module prefix and macro tables give the program identifier to be used in a PIDS symptom in a search argument.
- **System completion and wait state codes:** See *z/OS MVS System Codes*.
- **Logrec data set error records:** For the formatted records, see *z/OS MVS Diagnosis: Reference*.
- **Trace output:** For the formats and the meaning of the information in the generalized trace facility (GTF) trace, instruction address trace, master trace, system trace, and component trace, see *z/OS MVS Diagnosis: Tools and Service Aids*.
- **hardware:** Use the appropriate *Principles of Operation* document for the hardware you have installed.

IBM Health Checker for z/OS User's Guide

SDSF also provides functions to simplify the management of checks. See *z/OS SDSF Operation and Customization* for additional information.

Where to find the most current message information

The MVS System Messages documents are cumulative. As messages are added to the system they are added to the documents. Similarly, when messages are changed on the system, they are changed in the documents. However, when a message is deleted from the system (no longer issued), the message is *not* deleted from the document. This means that users can look in the most recent message documents for the most current descriptions of system messages.

To find the most current edition of a document, go to the z/OS Internet Library (<http://www.ibm.com/systems/z/os/zos/bkserv/>) and use the messages and codes database to search for the message ID you are interested in.

How to send your comments to IBM

We appreciate your input on this publication. Feel free to comment on the clarity, accuracy, and completeness of the information or provide any other feedback that you have.

Use one of the following methods to send your comments:

1. Send an email to mhvrcfs@us.ibm.com.
2. Send an email from the "Contact us" web page for z/OS (<http://www.ibm.com/systems/z/os/zos/webqs.html>).

Include the following information:

- Your name and address.
- Your email address.
- Your telephone or fax number.
- The publication title and order number:
z/OS V2R2 MVS System Messages, Vol 2 (ARC-ASA)
SA38-0669-05
- The topic and page number that is related to your comment.
- The text of your comment.

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute the comments in any way appropriate without incurring any obligation to you.

IBM or any other organizations use the personal information that you supply to contact you only about the issues that you submit.

If you have a technical problem

Do not use the feedback methods that are listed for sending comments. Instead, take one of the following actions:

- Contact your IBM service representative.
- Call IBM technical support.
- Visit the IBM Support Portal at z/OS Support Portal (<http://www-947.ibm.com/systems/support/z/zos/>).

Summary of changes

This information includes terminology, maintenance, and editorial changes. Technical changes or additions to the text and illustrations for the current edition are indicated by a vertical line to the left of the change.

Summary of message changes for z/OS MVS System Messages, Vol 2 (ARC-ASA) for Version 2 Release 2 (V2R2) and its updates

The following lists indicate the messages that are new, changed, or no longer issued in z/OS V2R2 and its updates. Messages that have been added, updated, or that are no longer issued in an updated edition of V2R2 are identified by the quarter and year that the message was updated, in parentheses. For example, (4Q2015) indicates that a message was updated in the fourth quarter of 2015.

New

ARC0279I (4Q2015)
ARC0568I
ARC0657I (4Q2015)
ARC1127I
ARC1301I
ARC1327I
ARC1560I
ARC1562I
ARC1563I
ARC1564I
ARC1565I
ARC1566I
ARC1567I
ARC1568I
ARC1569I
ARC1627I
ARC1692I
ARC1829I
ARC1849I (4Q2015)
ARC1853I
ARC1870I
ARC1871I
ARC1873I
ASA020I (4Q2015)
ASA021I (4Q2015)
ASA120I (4Q2015)

Changed

ARC0161I
ARC0216I
ARC0216I
ARC0245I
ARC0625I
ARC0797I (4Q2015)
ARC0814I
ARC0980I
ARC0981I
ARC1220I (4Q2015)
ARC1500I
ARC1542I
ARC1806E
ARC1823I
ARC1831I
ARC1836I
ARC1846E
ASA008I (4Q2015)
ASA104I (4Q2015)

Deleted

None

Summary of message changes for z/OS MVS System Messages, Vol 2 (ARC-ASA) for Version 2 Release 1, as updated February 2015

The following messages are new, changed, or no longer issued for z/OS MVS System Messages, Vol 2 (ARC-ASA) in the February 2015 update of z/OS V2R1. For more information, see *z/OS MVS System Messages, Vol 2 (ARC-ASA)* .

New

The following messages are new.

ARC1849I

Changed

The following messages are changed.

ARC1806E

Summary of message changes for z/OS MVS System Messages, Vol 2 (ARC-ASA) for Version 2 Release 1, as updated September 2014

The following messages are new, changed, or no longer issued.

Changed

The following messages are changed.

ARC0216I - New return code 48

ARC0336I - Mention of new ZCOMPRESS parameter

ARC0340I - New ZCOMPRESS options

z/OS Version 2 Release 1 summary of changes

See the following publications for all enhancements to z/OS Version 2 Release 1 (V2R1):

- *z/OS V2R2 Migration*
- *z/OS Planning for Installation*
- *z/OS V2R2 Summary of Message and Interface Changes*
- *z/OS V2R2 Introduction and Release Guide*

Chapter 1. ARC messages

ARC0001I DFSMShsm *version.release.modlevel* STARTING HOST=*hostid* IN HOSTMODE=*mode*

Explanation: The DFSMShsm product is starting with the parameters HOST=*hostid* and HOSTMODE=*mode*. In the message, *version* refers to the version of DFSMShsm that has been installed, *release* refers to the release level of DFSMShsm that has been installed, and *modlevel* refers to the modification level of DFSMShsm that has been installed.

System action: DFSMShsm starting.

Programmer response: None.

Source: DFSMShsm

ARC0002I DFSMSHSM SHUTDOWN HAS COMPLETED

Explanation: DFSMShsm shutdown processing occurred because a STOP command was issued or DFSMShsm could not recover from an error that occurred.

System action: DFSMShsm ends.

Operator response: If the shutdown is because of a STOP command, take no action. If the shutdown is because DFSMShsm could not recover from an error, other messages identify the problem. Take the corrective action indicated by those messages.

Source: DFSMShsm

ARC0003I *taskname* TASK ABENDED, CODE *ffssuuu* IN MODULE *modname* AT OFFSET *offset*, STORAGE LOCATION *location*

Explanation: A DFSMShsm task has abnormally ended (abended).

- *taskname* is the name of the failing task.
- *ffssuuu* is the abend code.
 - *ff* is the indicator flags.
 - *sss* is the system completion code.
 - *uuu* is the user completion code.
- *modname* is the name of the abend module.
- *offset* is the abend module offset.
- *location* is the address where the abend has occurred.

For more information about the abend code, see *z/OS MVS System Codes*.

If *modname* is UNKNOWN and the storage location is a valid address, the name of the failing module is determined in the dump. DFSMShsm can intercept abend processing from other components. In that case, *modname* is UNKNOWN since it is not a valid DFSMShsm module. Often, this indicates a problem in the other component. Search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center. Please have the failing module name available when contacting the IBM Support Center.

System action: For tasks other than ARCCTL, DFSMShsm processing continues. If the task is ARCCTL, DFSMShsm processing ends.

Operator response: Notify the storage administrator.

Programmer response: The storage administrator should determine the effect of the abend on the data. If ARCCTL is the failing task, restart DFSMShsm. Notify the system programmer of recurrent abends.

Source: DFSMShsm

ARC0004I • ARC0006I

ARC0004I INSTALLATION-WIDE EXIT, MODULE *installation-wide-exit-name* ABEND, ABEND CODE=*code*

Explanation: An abnormal end (abend) occurred during processing in the user written exit *installation-wide-exit-name*. The failure was detected by the ESTAE routine in the module that invoked the written, installation-wide exit. The reason for the abend is the value printed in the code field of the message. To determine the action taken after an abend of an installation-wide exit, see the appropriate ARC*nn*54I message following this message.

System action: DFSMSHsm processing continues.

Programmer response: Correct the problem in the installation-wide exit.

Source: DFSMSHsm

ARC0005I ERROR IN INITIALIZATION COMMANDS - RESTART DFSMSHSM

Explanation: During the startup process of DFSMSHsm, either an erroneous member name has been requested in the initialization command, or there is insufficient space to process initialization commands for DFSMSHsm. This message is preceded by message ARC0105I, which contains the erroneous member name; or message ARC0107I, which indicates insufficient available storage; or ARC0108I indicating that the initialization command is too long.

System action: DFSMSHsm ends.

Operator response: See "System Messages" manual for the preceding ARC0105I, ARC0107I, or ARC0108I messages. Take corrective actions per the messages. Restart DFSMSHsm.

Programmer response: See Operator Response.

Source: DFSMSHsm

ARC0006I DFSMSHsm CANNOT BE STARTED AS HOST=*hostid*, HOSTMODE=*mode*, REASON=*retcode*

Explanation: An attempt has been made to start DFSMSHsm, with startup parameters HOST=*hostid* and HOSTMODE=*mode*. The *retcode* has the following meanings:

Retcode Meaning

- 1 Another DFSMSHsm, for an earlier release, has already started in this z/OS image.
- 4 Another DFSMSHsm has already been started as HOST=*hostid* in this HSMplex.
- 8 HOSTMODE is MAIN, and another DFSMSHsm host is currently active in the z/OS image with HOSTMODE=MAIN.
- 12 The data set name of one or more control data sets in the startup procedure for HOST=*hostid* is not the same as that used for already started DFSMSHsm host(s).
- 16 HOSTMODE is AUX, and the attempted method of CDS serialization does not comply with the following:
 - CDSSHR not specified, CDSQ=YES, and MCDS index on a DASD VOLUME defined as shared
 - CDSSHR=YES, CDSQ=YES
 - CDSSHR=RLS
- 20 DFSMSHsm support for JES3 is disabled for a host started with HOSTMODE=AUX.
- 24 In a MASH environment a DFSMSHsm host cannot be started when an active DFSMSHsm host is performing CDS backup on the same LPAR.

System action: DFSMSHsm startup ends. Existing DFSMSHsm hosts continue.

Programmer response:

Retcode Action

- 1 If you want to run multiple DFSMSHsm hosts in this image, shut down the earlier version.
- 4 Choose another value for HOST= that does not appear in the list of hosts identified by the command QUERY IMAGE, executed for each z/OS image in this HSMplex.
- 8 Review your intent for this second host and update the HOSTMODE, if applicable.
- 12 Update the startup procedure to correct whichever data set names are incorrect.

- 16 Update the startup procedure to correct the keyword values for CDS serialization.
- 20 The use of JES3 for an AUX host is not supported.
- 24 Wait for CDS backup to complete on the active DFSMSHsm host, then attempt to start the indicated DFSMSHsm host again.

Source: DFSMSHsm

ARC0007I THERE ARE NO VOLUMES IN THE DFSMSHSM GENERAL POOL

Explanation: During DFSMSHsm initialization in a JES3 environment, there are no volumes in the DFSMSHsm general pool. Any job that requires a volume in this pool will fail. For a volume to be in the DFSMSHsm general pool, it must be mounted as a storage or private volume before DFSMSHsm initialization. An ADDVOL command for the volume as a primary volume must be issued from the ARCCMDxx member of the data set identified by the HSM Parm DD statement of the DFSMSHsm startup procedure.

System action: DFSMSHsm initialization continues. Any job that requires volume selection by DFSMSHsm from its general pool will fail.

Operator response: Ensure all DFSMSHsm primary volumes are mounted with the correct USE attribute. If they are not, but no jobs have been entered, correct the problem and restart DFSMSHsm. Jobs in the system could fail if they require a volume from the DFSMSHsm general pool. If all volumes have been mounted correctly, notify the storage administrator unless you know your installation does not use the DFSMSHsm general pool.

Programmer response: If the DFSMSHsm general pool is to be used, the volumes in this pool must be mounted as storage or private volumes before DFSMSHsm initialization. An ADDVOL command for each volume as a primary volume must be issued from the ARCCMDxx member. If you require the DFSMSHsm general pool, correct the ADDVOL commands, ensure that the volumes are appropriately mounted, and restart DFSMSHsm before submitting any jobs that use it.

Source: DFSMSHsm

ARC0008I DFSMSHSM INITIALIZATION SUCCESSFUL

Explanation: DFSMSHsm is now ready to receive commands.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0009I DFSMSHSM STARTUP ATTEMPT FAILED, NOT A STARTED TASK

Explanation: The system made an attempt to invoke DFSMSHsm as other than a started task. DFSMSHsm can only be invoked as a started task.

System action: DFSMSHsm ends.

Operator response: Notify the system programmer that this message has occurred.

Programmer response: If DFSMSHsm needs to be started, issue an MVS operator START command from the system console.

Source: DFSMSHsm

ARC0010E INVALID PARAMETER OR ERROR READING STARTUP PARMS - RESTART DFSMSHSM

Explanation: One of the initialization parameters supplied to DFSMSHsm is incorrect (see preceding message ARC0106I), or member ARCSTRxx containing startup parameters could not be found, opened, and read (see preceding message ARC0043E).

System action: DFSMSHsm ends.

Operator response: Notify the storage administrator.

Programmer response: Correct the parameter or member, and restart DFSMSHsm.

ARC0011I • ARC0014I

Source: DFSMSHsm

ARC0011I TOO MANY VOLUMES OF ONE DEVICE TYPE TO RETURN THE ENTIRE DFSMSHSM GENERAL POOL

Explanation: While processing an LJES3-directed RECALL command, DFSMSHsm determined that there was more than 254 volumes in the general volumes pool. JES3 does not support pools with more than 254 volumes of a single device type. The JES3 directed RECALL ended. Subsequent recall processing of the data set during allocation will fail.

System action: The JES3/DFSMSHsm setup for directed RECALL ended and allocation of the migrated data set also failed. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: Ensure that the number of volumes intended for the DFSMSHsm general pool does not exceed 254 of any single device type.

Source: DFSMSHsm

ARC0012I {TAPE VOLUME TABLE | DASD L2 AVAILABLE TABLE} COULD NOT BE CREATED - MIGRATION IS HELD

Explanation: During initialization of DFSMSHsm, an attempt was made to create either the tape volume table or DASD level 2 available table, but the table could not be created. There will be one or more messages preceding this one describing the failure.

System action: DFSMSHsm continues initializing nonmigration functions, with migration held. If the problem is not resolved, but migration is released, DFSMSHsm tries again to create the table on each request for migration. The result of each failure is that each migration request (if migrating to tape) is written to a separate scratch tape volume.

Operator response: Restart DFSMSHsm when the problem has been corrected.

Programmer response: From the messages preceding this one, determine the source of the error and correct the error before releasing migration.

Source: DFSMSHsm

ARC0013I SYSTEM TIMER INACTIVE, AUTO SPACE MANAGEMENT INOPERATIVE

Explanation: The DFSMSHsm migration task attempted to set a timer but the system timer function was inoperative.

System action: DFSMSHsm continues to process command requests, but will not automatically begin space management or periodic space checks with its associated interval migration.

Operator response: Notify the system programmer that the system timer function is inoperative.

Programmer response: Determine the type of hardware malfunction and take appropriate action to correct the problem.

Source: DFSMSHsm

ARC0014I VTOC/VVDS INTERFACE MODULE IGDCSP00 COULD NOT BE LOADED, ABEND CODE=xx. DFSMSHSM CANNOT MIGRATE OR BACK UP SMS MANAGED VOLUMES

Explanation: During initialization, DFSMSHsm has attempted to load module IGDCSP00 but the load processing fails. The abnormal end (abend) code from the attempted load is indicated by xx.

System action: DFSMSHsm processing continues. Volume backup and migration of SMS-managed volumes will not occur.

Programmer response: Determine the reason for the load failure based upon the explanation of the abend code, which is found in *z/OS MVS System Codes*. Correct the error; then stop DFSMSHsm and restart it.

Source: DFSMSHsm

ARC0015I DFSMSDSS COULD NOT BE LOADED, ABEND CODE=xxx, REASON CODE=xxx. DFSMSDSS CANNOT BE USED AS DFSMSHSM DATA MOVER.

Explanation: During initialization or in response to a SETSYS DATAMOVER command DFSMSHsm has attempted to load module ADRDSSU but the load fails. The abnormal end (abend) and reason codes from the attempted load are indicated in the message.

System action: DFSMSHsm processing continues with DFSMSHsm as the data mover. Subsequent functions that require DFSMSdss as the data mover might fail.

Programmer response: Use the explanations of the abend and reason codes, which are found in *z/OS MVS System Codes* to determine the reason for the load failure. Correct the error; then issue the SETSYS command with the DATAMOVER parameter along with the appropriate data movement subparameter.

Source: DFSMSHsm

ARC0016I DFSMSHSM SHUTDOWN HAS BEEN REQUESTED

Explanation: The STOP command was issued requesting that DFSMSHsm stop processing.

System action: DFSMSHsm will continue processing the commands currently running. No new commands will be started, and shutdown will occur upon completion of all currently processing commands.

Programmer response: None.

Source: DFSMSHsm

ARC0017I PSEUDO USER UNIT TABLE NOT CREATED, DEFAULTS WILL BE USED FOR TAPE LIMITING CRITERIA

Explanation: The pseudo user unit table could not be created during DFSMSHsm initialization. The DFSMSHsm defaults for tape limiting will be used.

System action: DFSMSHsm processing continues.

Programmer response: If the DFSMSHsm defaults for tape limiting are acceptable, no action is required. However, if other criteria is desired for tape limiting, determine the cause of the GETMAIN failure and restart DFSMSHsm when the problem is resolved.

Source: DFSMSHsm

ARC0018I DFSMSHSM IS NOT LICENSED FOR USE ON THIS SYSTEM

Explanation: DFSMSHsm is not licensed for use on this system.

System action: DFSMSHsm processing ends.

Programmer response: None.

Source: DFSMSHsm

ARC0019I CELL POOL *pool_number* ENCOUNTERED A SHORTAGE OF *number* CELLS. PERFORMANCE IS DEGRADED.

Explanation: All of the cells allocated to the cell pool (*pool_number*) were used. The MVS GETMAIN instruction is used in place of that cell pool. The number of GETMAIN instructions used in place of cell pool is *number*.

System action: DFSMSHsm continues; however, DFSMSHsm performance might be impacted.

Programmer response: Search the DFSMSHsm activity log for all occurrences of message ARC0019I. Then, increase each identified cell pool by (at least) the number of cells indicated as the shortage.

To increase the cell pool size, change the corresponding entry in the DFSMSHsm startup procedure CELLS keyword. Restart DFSMSHsm.

For more information about adjusting the cell pool size, see the topic about the DFSMSHsm startup procedure and about adjusting the size of a cell pool in *z/OS DFSMSHsm Implementation and Customization Guide*.

ARC0020I • ARC0023I

Source: DFSMSHsm

ARC0020I

Explanation: This message is a separator.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0021I DFSMSHSM LOGGING FUNCTION DISABLED

Explanation: During DFSMSHsm startup, either one or both of the DFSMSHsm log data sets was not specified or was specified as DD DUMMY on the startup procedure through the DD names of ARCLOGX and ARCLOGY. This message also occurs if the log data set's JFCB or data set VTOC entry cannot be read.

Both log data sets must be specified on the startup procedure before the logging function is enabled.

System action: DFSMSHsm processing continues. DFSMSHsm logging is not performed.

Operator response: Notify the storage administrator if your installation procedures require that DFSMSHsm functions be recorded in DFSMSHsm log data sets.

Programmer response: Shut down DFSMSHsm. Before restarting DFSMSHsm, ensure that two DFSMSHsm log data sets are specified on the DFSMSHsm startup procedure.

Source: DFSMSHsm

ARC0022I DFSMSHSM LOG RENAME ERROR *type* DATA SET NAME *dsname* TO *type* DATA SET NAME *dsname*. RC=*return-code*, REAS=*reason-code*

Explanation: During a switch of the DFSMSHsm log data sets, DFSMSHsm attempted to rename the log data sets. The type of log data set is indicated by *type* and the log data set that is being switched is indicated by *dsname*. The return code is indicated by *return-code*. The status code returned from the RENAME macro is shown by *reason-code*. A return code of 8 along with a reason code of 1 has been found when the ARCLOGX and ARCLOGY data sets are not on the same volume. DFSMSHsm does not switch the log data sets.

System action: DFSMSHsm processing continues.

If the log switch was requested during DFSMSHsm initialization through the startup procedure or the DFSMSHsm input parameter, logging remains functional using the log data set referred to by the DD statement ARCLOGX.

If the log switch was requested by the SWAPLOG command or internally after an error occurred in processing the log data set, the logging function is inhibited and remains inhibited until the rename problem is resolved and the SWAPLOG command is issued again to attempt switching of the logs.

Operator response: Notify the storage administrator. If your installation procedures require the DFSMSHsm log data, shut down DFSMSHsm.

Programmer response: Shut down DFSMSHsm. Ensure that two DFSMSHsm log data sets are allocated and available. Ensure that the data set named HSMLOG.TEMP has been deleted. Restart DFSMSHsm.

Source: DFSMSHsm

ARC0023I UNABLE TO READ JOURNAL CONTROL RECORD

Explanation: DFSMSHsm is unable to read the journal control record.

System action: Journaling is inhibited. DFSMSHsm processing continues.

Operator response: Notify the system programmer and the storage administrator. If your installation requires DFSMSHsm journaling, stop DFSMSHsm activity.

Programmer response: Determine the cause of the failure for the control record. Take appropriate action to correct the problem. Restart DFSMSHsm if it has been stopped.

Source: DFSMSHsm

ARC0024I DFSMSHSM LOGGING INHIBITED DUE TO *errortext*

Explanation: While processing the log data set, an error occurred. The DFSMSHsm logging function is disabled.

The *errortext* specifies LOG I/O ERROR, EOVS ERROR ON LOG, or *nnn* ABEND PROCESSING LOG, where *nnn* shows the system abnormal end (abend) code, or STRIPED LOG DATA SET. If *errortext* is LOG I/O ERROR, the I/O error message generated by the SYNADAF macro precedes this message.

System action: LOG I/O ERROR and ERROR PROCESSING LOGS: DFSMSHsm attempts to switch the log data sets. If successful, then logging will continue.

STRIPED LOG DATA SET: Logging is disabled.

EOVS ERROR: Logging is disabled because an attempt to switch the log data sets has failed.

LOG DATA SET HAS FORMAT 8 DSCB: Logging is disabled.

Operator response: Notify the system programmer.

Programmer response: For I/O errors or abends, reallocate the log data set in error. If the data set is striped, reallocate it as a nonstriped data set. For an EOVS condition, see the preceding messages to determine why the switch of the log has failed.

Source: DFSMSHsm

ARC0025E DFSMSHSM JOURNAL NOT OPENED

Explanation: The open for the DFSMSHsm journal data set failed.

System action: DFSMSHsm processing continues. Updates to the DFSMSHsm control data sets are not journaled and DFSMSHsm is placed in emergency mode if journaling is requested through the SETSYS JOURNAL command (the DFSMSHsm default is JOURNAL).

Operator response: Notify the storage administrator. If your installation procedures specify that DFSMSHsm journaling is required, shut down DFSMSHsm.

Source: DFSMSHsm

ARC0026E JOURNALING DISABLED DUE TO *errortext*. MIGRATION, BACKUP, FRBACKUP, DUMP, TAPECOPY, TAPEREP, RECYCLE, ARECOVER, AUDIT, AND EXPIREBV HELD

Explanation: An error has occurred while attempting to write data in the DFSMSHsm journal data set.

The *errortext* specifies JOURNAL I/O ERROR, EOVS ERROR ON JOURNAL, or *nnn* ABEND PROCESSING JOURNAL, where *nnn* shows the system abnormal end (abend) code. If the *errortext* is JOURNAL I/O ERROR, the I/O error generated precedes this message.

System action: The DFSMSHsm commands of MIGRATION, BACKUP, FRBACKUP, DUMP, TAPECOPY, TAPEREP, RECYCLE, ARECOVER, AUDIT, and EXPIREBV are held.

Operator response: Notify the system programmer. When the problem is corrected or the message is no longer needed, take the following action to delete the message:

- If the message identifier *id* is not available, issue the DISPLAY R,I command to get the ID.
- To delete the message, issue the following command using the message identifier obtained from the DISPLAY R,I command listed above:

```
CONTROL C,I,id
```

- That's

Programmer response: The operator or system programmer should take immediate action to resolve the situation in order to retain the system integrity for those data sets under DFSMSHsm control. See *z/OS DFSMSHsm Storage Administration* to determine the functions to be performed when the journal data set is disabled.

If you want to continue processing with the journal, you must stop DFSMSHsm and delete and reallocate the journal in a different place to avoid getting another I/O error while processing the data set. This process is described in *z/OS DFSMSHsm Storage Administration* in the section "Maintaining Control Data Sets". A hardware problem could be causing the I/O error on the journal data set. Be sure you do not reallocate the journal data set where it has been allocated before the I/O error occurred.

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If an error occurs which specifies EOV ERROR ON JOURNAL, begin CDS backup processing by using the BACKVOL CDS command or the SETSYS command with the AUTOBACKUPSTART parameter. (For information about controlling automatic backup of control data sets, see "Maintaining DFSMSHsm Control Data Sets" in the *z/OS DFSMSHsm Storage Administration*.) It is preferable that the backup of the control data sets be initiated on the system that encountered the error. This creates backup copies of the MCDS, BCDS, OCDS and nulls the journal data set so that all the space in it becomes available. If you are in a multihost environment, issue the RELEASE ALL command on each system that received the ARC0026E message after the completion of the backup of the data set.

Source: DFSMSHsm

ARC0027I DFSMSHSM LOG SWITCHED, ARCLOGX=*dsn1*, ARCLOGY=*dsn2*

Explanation: DFSMSHsm has successfully switched log data sets and is now using the alternate log data set *dsn1*. This message might be preceded by ARC0024I and followed by ARC0020I.

System action: DFSMSHsm processing continues.

Operator response: Follow your installation's procedures for processing DFSMSHsm log data, *dsn2*.

Source: DFSMSHsm

ARC0028I {BACKUP | DUMP | COMMAND | MIGRATION} ACTIVITY LOG {DISABLED | RELEASED} DUE TO { ERROR OPENING LOG | LOG I/O ERROR}. {*explanation*}.

Explanation: DFSMSHsm generates this message whenever an error is detected opening an activity log or an I/O error is detected writing a message to the log.

For ERROR OPENING LOG, another message that displays the reason for the error will precede this message. The possible reasons are:

- An error in getting storage
- An allocation error
- An open error

For LOG I/O ERROR, an ARC0645I message indicating why the log is released will precede this message. The *explanation* part of the message will not appear.

The following inserts are possible for the *explanation*:

- COMMAND ACTIVITY LOGGING DISABLED
Messages that are intended for the command activity log will not be issued.
- BACKUP ACTIVITY LOGGING DISABLED
Messages that are intended for the backup activity log will not be issued.
- MIGRATION ACTIVITY LOGGING DISABLED
Messages that are intended for the migration activity log will not be issued.
- DUMP ACTIVITY LOGGING DISABLED
Messages that are intended for the dump activity log will not be issued.
- BACKUP ACTIVITY LOGGING SWITCHED TO COMMAND LOG
Messages that are intended for the backup activity log will be rerouted to the command activity log.
- MIGRATION ACTIVITY LOGGING SWITCHED TO COMMAND LOG
Messages that are intended for the migration activity log will be rerouted to the command activity log.
- DUMP ACTIVITY LOGGING SWITCHED TO COMMAND LOG
Messages that are intended for the dump activity log will be rerouted to the command activity log.

System action: The following describes the system action on the basis of the error condition and log type:

- OPEN error (an error in getting storage, during allocation, or while opening the log).
 - For the command activity log, command activity messages disabled.
 - For the backup, dump, or migration activity log, if a command activity log exists:
 1. ACTIVITY LOGGING SWITCHED is written to the command activity log.

2. The messages that normally are written to the affected activity log will be routed to the command activity log.
- If no command activity log exists:
 1. ACTIVITY LOGGING DISABLED is written to the system operator.
 2. The messages that normally would be written to the affected activity log will be disabled.
- I/O Error - When an I/O error is detected on an activity log, the affected log will be closed and deallocated. A new name will be generated for the log if output is to DASD, and a new log will be allocated and opened. The message that was being written when the I/O error occurred will be written to the new log when it is successfully allocated and opened.

Messages intended for a particular activity log can be rerouted to the command log after an open error occurs if the command activity log is open. Otherwise, the messages will be lost.

Programmer response: Issue RELEASE HARDCOPY to cause existing activity logs to be closed and deallocated, and all logs to be allocated and opened.

Source: DFSMSHsm

ARC0029E A MINIMUM LEVEL OF MVS IS REQUIRED TO PERFORM *function*, FUNCTIONS ARE DISABLED

Explanation: The system was not found to be at the minimum required level of MVS for the requested function during either DFSMSHsm initialization or invocation of the function. One of the following functions is disabled:

- Aggregate Backup/Recovery
- CDS Assurance

System action: If the function was aggregate backup or recovery, DFSMSHsm aggregate backup and aggregate recovery have been disabled. Subsequent ABACKUP, ARECOVER, and DEFINE ARPOOL commands will fail.

If the function was CDS assurance, the following AUDIT functions have been disabled:

- MEDIACONTROLS, Tape and SDSP
- DIRECTORYCONTROLS
- VOLUMECONTROLS, Backup, Migration, and Recoverable
- DATASETCONTROLS, Backup and Migration

Other DFSMSHsm processing continues.

Operator response: Notify the system programmer.

Programmer response: If the function was aggregate backup or recovery, do not issue any aggregate backup or recovery commands until the system is at the proper level.

If the function was CDS Assurance, do not issue any CDS Assurance commands until the system is at the proper level.

Source: DFSMSHsm

ARC0030I GENERIC UNIT 3590-1 HAD SETUP ERRORS AT DFSMSHSM INITIALIZATION.

Explanation: One of the following was true during DFSMSHsm initialization:

- The devices were not all 3590s
- The devices were a mix of incompatible 3590 devices
- No valid tape device UCBs were found for this generic

An example of an incompatible mix would be 128-track 3590 devices mixed with 256-track 3590 devices.

System action: The allocation continues.

Operator response: Notify the system programmer.

System programmer response: Bring the devices online and restart DFSMSHsm if no associated devices were online when DFSMSHsm was started. An alternative to restarting DFSMSHsm is to set up an esoteric unit for the devices and issue the SETSYS UUT command, including the esoteric. If more than 1 type of 3590 device is used by the

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system, make sure each type has defined its own esoteric and make the esoteric known to DFSMSHsm. Use the esoteric name as the unit name in the appropriate DFSMSHsm functions.

Note:

1. In an SMS tape environment, this message will not be issued. See APAR OW57282 or the *z/OS DFSMSHsm Implementation and Customization Guide* if you want to disable this message in a non-SMS environment. If you continue using the 3590-1 generic unit without taking corrective action, you may have tape allocation problems.
2. If message ARC0030I is received, the following command can be used to determine differences with drives:
DS QT,0570,1,UCB,RDC,RCD.

Programmer response: Update the 3590-1 generic in the system IODF file to contain only addresses of 3590 devices with the same track geometry. If more than one type of 3590 device is used by the system, make sure each type has its own defined esoteric and make the esoteric known to DFSMSHsm. Use the esoteric name as the unit name in the appropriate DFSMSHsm functions.

Source: DFSMSHsm

ARC0031E TSO/E AND REXX LANGUAGE ENVIRONMENT INITIALIZATION DID NOT COMPLETE

Explanation: During startup, DFSMSHsm calls IKJTSOEV to initialize the TSO/E environment and the REXX language processor environment. This message reports the return and reason codes provided by IKJTSOEV, along with RC4 REAS0 returned by DFSMSHsm when IKJTSOEV cannot be loaded. RC=*return-code*, Reason=*reason-code*, Reason2=*extended reason code*

Related reading: For additional information about IKJTSOEV return codes and reason codes, see *z/OS TSO/E Programming Services*.

System action: DFSMSHsm attempts to complete initialization. Although DFSMSHsm might complete startup, the environment is incomplete. Functions might not be able to process appropriately. For example, dynamic allocation of tapes might fail.

Operator response: Notify the storage administrator or the system programmer.

Programmer response: Take corrective action based on the meaning of the return and reason codes, and restart DFSMSHsm.

Source: DFSMSHsm

ARC0032I RENAME ERROR SWITCHING DFSMSHSM PROBLEM DETERMINATION OUTPUT DATA SETS, OLD DATA SET NAME = *old-dsname*, NEW DATA SET NAME = *new-dsname*, RC=*return-code*, REAS=*reason-code*

Explanation: During an attempt to switch the ARCPDOX/ARCPDOY output data sets, an error has been encountered in the rename function. In the message, *old-dsname* is the old data set name that the rename macro is changing from, and *new-dsname* is the new data set name that the RENAME macro is renaming to.

In the message, *return-code* is the register 15 return code from the RENAME macro and *reason-code* is the status value from the RENAME CAMLST. A return code of 8 and a reason code of 1 occurs when the PDA data sets are not on the same volume. See *z/OS DFSMSHsm Implementation and Customization Guide* for instructions on PDA data set allocation.

System action: Internal tracing continues; however, no trace data blocks are written to the output data set. DFSMSHsm processing continues.

Programmer response: See *z/OS DFSMSdfp Advanced Services* for the meaning of the status value from the RENAME macro to determine the problem. To restart the DFSMSHsm problem determination aid, issue the SWAPLOG PDA command.

Source: DFSMSHsm

ARC0033E DFSMSHSM INITIALIZATION FAILED, REASON=*retcode* FOR HOST=*hostid*

Explanation: An unrecoverable error occurred during DFSMSHsm initialization. There might be other messages preceding this one describing the failure. The meanings for return-code are:

Retcode Meaning

- | | |
|----|---|
| 1 | The journal was defined as striped, non-contiguous or with secondary space requested. |
| 4 | CDS open error. |
| 8 | DFSMSHsm SVC initialization error. |
| 12 | Startup command error. |
| 16 | DFSMSHsm could not load ARCEXIT. |
| 52 | DFSMSHsm could not access storage for the complete QCT structure. |

System action: DFSMSHsm shuts down.

Operator response: None.

Source: DFSMSHsm

ARC0034I {I/O ERROR | *nnn* ABEND} PROCESSING DFSMSHSM PROBLEM DETERMINATION OUTPUT DATA SET

Explanation: While writing to the output data set, DFSMSHsm encountered an I/O error or *nnn* ABEND (where *nnn* is the abend code).

You may also see this message if a X'37' abend code has occurred within 4 minutes or less of the previous X'37' abend code.

System action: On nonconsecutive occurrences, DFSMSHsm switches the ARCPDOX/ARCPDOY output data sets and makes one attempt to retry the output operation. For consecutive failures, the output data set is considered no longer usable. Internal tracing continues; however, no trace data blocks are written to the output data set.

Operator response: If the abend code is *x37*, no action is required. For an I/O error or an abend code other than *x37*, contact your system programmer.

System programmer response: If the abend code is X'37', generally no action is required. However, if you are receiving this message frequently, you should review the size of your ARCPDOX/ARCPDOY output data sets as they may be too small.

Programmer response: Determine the cause of the I/O error or abend and take appropriate action to correct the problem. If it is necessary to recreate the output data set, stop and restart DFSMSHsm.

Source: DFSMSHsm

ARC0035E DFSMSHSM JOURNAL IS PERMANENTLY DISABLED, REASON=*reasoncode*

Explanation: The DFSMSHsm journal is disabled.

The possible values for *reasoncode* are:

Reason code**Meaning**

- | | |
|----|---|
| 0 | Journal is disabled. See previous messages to determine the reason. Commands related to the journal cannot be performed. |
| 4 | DFSMSHsm startup procedure contains a DD DUMMY card for the journal data set. |
| 8 | An RDJFCB macro failed for the journal data set. The DD card for the journal data set might be missing from the DFSMSHsm startup procedure. |
| 12 | Journal OBTAIN macro failed. It is likely that an I/O error occurred on the journal data set VTOC entry. |
| 16 | Journal lock request failed. |

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20 Journal control record and data set type are inconsistent. The journal might be corrupted.

System action: DFSMSHsm processing continues. Updates to the DFSMSHsm control data sets are not journaled. DFSMSHsm is placed in emergency mode if journaling is requested through the SETSYS JOURNAL command (the DFSMSHsm default is JOURNAL).

Operator response: If journaling is required, stop DFSMSHsm and contact your application programmer.

Source: DFSMSHsm

ARC0036E I/O {INHIBITED | DISABLED} FOR DFSMSHSM PROBLEM DETERMINATION OUTPUT DATA SET, REAS=*reason-code*

Explanation: Due to an error (defined by *reason-code*), DFSMSHsm determines that the output data set is unusable.

The values for *reason-code* are:

- 1 JFCB read error or DD DUMMY specified for the ARCPDOY data set.
- 2 JFCB read error or DD DUMMY specified for the ARCPDOX data set.
- 3 A failure occurred while attempting to open the ARCPDOX data set.
- 4 A failure occurred while attempting to write to the ARCPDOX data set. Message ARC0034I was issued previously.
- 5 A failure occurred while attempting to switch the ARCPDOX/ARCPDOY data sets. Message ARC0032I was issued previously.
- 6 There is a deallocation error on the ARCPDOY data set.
- 7 There is a deallocation error on the ARCPDOX data set.
- 8 There is an allocation error on the ARCPDOX data set. See message ARC0503E for more information.
- 9 The ARCPDOX data set is extended format.
- 10 The ARCPDOY data set is extended format.
- 11 There is an OBTAIN error for a PDA data set.
- 12 The ARCPDOX data set has a format-8 DSCB.
- 13 The ARCPDOY data set has a format-8 DSCB.

System action: Internal tracing continues; however, no trace data blocks are written to the output data set.

Programmer response: For reason codes 1 and 2, make sure a valid DD statement exists in the DFSMSHsm startup procedure for ARCPDOX and ARCPDOY. For the other reason codes, see the associated messages to determine the cause of the problem. Correct the error; then re-enable PDA tracing by issuing the SWAPLOG PDA command.

Source: DFSMSHsm

ARC0037I DFSMSHSM PROBLEM DETERMINATION OUTPUT DATA SETS SWITCHED, ARCPDOX=*dsn1*, ARCPDOY=*dsn2*

Explanation: DFSMSHsm renames the ARCPDOX data set to the ARCPDOY data set name *dsn2* and the ARCPDOY data set to the ARCPDOX data set name *dsn1*.

System action: Processing continues with trace output data being written to the data set currently identified by the ARCPDOX data set name.

Operator response: The data set named by the ARCPDOY DD statement might be dumped or archived at this time if specified by local procedures.

Source: DFSMSHsm

ARC0038I RESOURCE MANAGER {SUCCESSFULLY | UNSUCCESSFULLY} ADDED, RETCODE = *return-code*,
TYPE = {ADDRSPC | TASK}

Explanation: This message explains the status of adding the DFSMSHsm Resource Manager to the system. If *return-code* is not 0 or 10, then the TYPE identifies the type of resource manager that has not been added to the system. If *return-code* is 0 or 10, then TYPE is not displayed. The *return-code* has the following meanings:

Retcode Meaning

- 0 The operation has been successful.
- 2 Not enough storage exists to process the request.
- 4 The resource manager system lock is not available.
- 6 DFSMSHsm has already been ending when the request is made.
- 8 An unrecoverable error has occurred while processing the request.
- 10 A resource manager can only be added to the system in an ESA environment.
- 12 An invalid request has been made. This represents an internal DFSMSHsm programming error.
- 14 An unknown error has occurred while processing the request.

System action: DFSMSHsm processing continues. If the *return-code* is not 0, then the resource manager will not be invoked when DFSMSHsm ends.

Programmer response: For *return-code* 0, 2, 4, 6, 8, and 10, this is an informational message only. For *return-code* 12 and 14, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

Source: DFSMSHsm

ARC0039I SYSTEM TIMER INOPERATIVE, AUTOMATIC BACKUP FUNCTION IS INOPERATIVE

Explanation: The DFSMSHsm backup control task issued the STIMER macro in an effort to schedule the start of automatic backup. An error occurred indicating the system timer function was inoperative.

System action: DFSMSHsm continues to process command requests for backup volumes, but DFSMSHsm will not begin the automatic backup process.

Operator response: If the RELEASE command, with the backup or ALL parameter is issued between the earliest and latest automatic backup start times, automatic backup will begin.

Programmer response: Determine if the error is caused by a hardware or software malfunction.

Source: DFSMSHsm

ARC0040I COMMAND SENT TO DFSMSHSM, REQUEST NUMBER=*request-number*

Explanation: DFSMSHsm generates this message for each command entered from the operator's console. A request number *request-number* is assigned to each request. This request number can be used to cancel this request with the (H)CANCEL REQUEST command.

System action: USERID is notified of request number assigned and DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0041I MEMBER *membername* USED IN *parmdsname*

Explanation: The parmlib member *membername* is being used during DFSMSHsm startup. It is located in *parmdsname*, which is either the data set on the HSMPARM DD statement or the data set in the concatenated parmlib.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0042I *msgtext*

Explanation: DFSMSHsm has invoked the MVS concatenated PARMLIB service to locate the requested ARCSTR xx or ARCCMD xx member. During the process, MVS concatenated PARMLIB services issued a message and DFSMSHsm intercepted the message for retransmission to the DFSMSHsm user or to one of the activity logs. *msgtext* is the actual MVS concatenated PARMLIB service message.

System action: DFSMSHsm processing continues.

Programmer response: See IEF messages for a description for the MVS concatenated PARMLIB service message.

Source: DFSMSHsm

ARC0043E ERROR OPENING OR READING MEMBER ARCSTR xx

Explanation: In the DFSMSHsm startup procedure, keyword STR= xx refers to PARMLIB member ARCSTR xx . When DFSMSHsm attempted to open and read the member, it encountered an error.

System action: DFSMSHsm ends.

Operator response: Notify the storage administrator.

Programmer response: Ensure that the member ARCSTR xx exists in the data set specified in the HSMPARM DD statement (if specified) or in MVS concatenated PARMLIBs. Restart DFSMSHsm.

Source: DFSMSHsm

ARC0045I MWE QUEUE DAMAGED, CORRECTIONS COMPLETED, POSSIBILITY OF LOST MWES

Explanation: During DFSMSHsm processing, the queue of MWEs (management work elements) located in CSA (common storage area) have been found to be damaged or missing. Corrections have been performed to repair the queue of MWEs. There exists a possibility that one or more MWEs have been lost.

System action: DFSMSHsm processing continues.

Operator response: Contact the system programmer.

Source: DFSMSHsm

ARC0046I DFSMSHSM ADDRESS SPACE HAS ISSUED THE MVS START COMMAND *start-command-text* TO RESTART DFSMSHSM

Explanation: The RESTART parameter specified in the DFSMSHsm startup procedure has been utilized to restart DFSMSHsm due to terminating errors. The command that DFSMSHsm issues to restart is specified as *start-command-text*.

System action: DFSMSHsm shutdown/restart processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0047I DFSMSHSM AUTOMATIC RESTART SEQUENCE FAILED

Explanation: During DFSMSHsm shutdown processing, automatic restart was requested (as specified by the RESTART parameter in the DFSMSHsm startup procedure) and attempted but a failure in this process was detected. DFSMSHsm has *not* been automatically restarted.

System action: DFSMSHsm shutdown processing continues.

Operator response: Contact the system programmer.

System programmer response: This error will most likely occur if adequate system storage is not available or if the system has exceeded the maximum number of address spaces allowed by DFSMS/MVS.

Source: DFSMSHsm

ARC0048I DFSMSHSM HAS EXCEEDED THE 5 MINUTE RESTART LIMIT, THE RESTART SEQUENCE HAS NOT BEEN INITIATED

Explanation: During DFSMSHsm shutdown processing, automatic restart was requested (as specified by the RESTART parameter in the DFSMSHsm startup procedure). DFSMSHsm has determined that 5 restart attempts have been tried in the prior 5 minute period. The restart sequence has not been initiated.

System action: DFSMSHsm shutdown processing continues.

Operator response: Contact the system programmer.

Source: DFSMSHsm

ARC0050A DFSMSHSM IS NOT ACTIVE - START DFSMSHSM

Explanation: A DFSMSHsm request was issued, but a DFSMSHsm host with HOSTMODE=MAIN is not active. This message can also occur if you are using DFSMSHsm in a test environment (which is established by issuing the DFSMSHsm SETSYS DEBUG command).

System action: System processing continues.

Operator response: Start DFSMSHsm. If you are executing DFSMSHsm in multiple address spaces, start DFSMSHsm with HOSTMODE=MAIN.

Source: DFSMSHsm

Automation: If the DFSMSHsm SETSYS DEBUG command is issued prior to the STOP command, this message will be suppressed after DFSMSHsm is no longer active.

ARC0051A JOB *jobname* WAITING FOR DFSMSHSM TO RECALL DSN=*dsname*

Explanation: A DFSMSHsm RECALL request was issued, but a DFSMSHsm host with HOSTMODE=MAIN is not active. The job *jobname* initiated the RECALL of the data set *dsname*. This message is issued only under all of the following conditions:

- A batch job has been run.
- A cataloged data set cannot be located on the volume pointed to by its catalog entry, whether or not it is migrated (which results in an implicit recall with WAIT option).
- DFSMSHsm is not active, or (if you are executing DFSMSHsm in multiple address spaces) no DFSMSHsm host was started with HOSTMODE=MAIN.

System action: System processing continues. The RECALL command is queued for processing after DFSMSHsm has been started.

Operator response: Start DFSMSHsm, or (if you are executing DFSMSHsm in multiple address spaces) start DFSMSHsm with HOSTMODE=MAIN, or cancel the job *jobname* according to your installation instructions.

Source: DFSMSHsm

ARC0052A JOB *jobname* WAITING ON DFSMSHSM

Explanation: A system with DFSMSHsm received a DFSMSHsm request. A DFSMSHsm host with HOSTMODE=MAIN is not active. The job *jobname* initiated the request.

System action: System processing continues. The DFSMSHsm request is queued for processing after DFSMSHsm is started.

Operator response: Start DFSMSHsm, or (if you are executing DFSMSHsm in multiple address spaces) start DFSMSHsm with HOSTMODE=MAIN, or cancel the job *jobname* according to your installation procedures.

Source: DFSMSHsm

ARC0055A REPLY 'GO' OR 'CANCEL'

Explanation: A background request is waiting for DFSMSHsm to be started or (if you are executing DFSMSHsm in multiple address spaces) started with HOSTMODE=MAIN. The operator is given the chance to cancel the request or to allow the request to be processed after DFSMSHsm has started in a mode to service this request. This message is preceded by message ARC0051A or ARC0052A, which gives the name of the job making the request.

System action: System processing continues.

Operator response: According to your installation procedures, reply CANCEL to cancel the request, or reply GO after DFSMSHsm has become active.

Source: DFSMSHsm

ARC0056A JES3 JOB FAILED — START DFSMSHSM

Explanation: In a JES3 system, a DFSMSHsm wait-type request was issued while DFSMSHsm was not active with HOSTMODE=MAIN. The request was rejected.

Note: If JES3 Converter/Interpreter (C/I) attempted to locate the resource indicated in the job and the locate fails because DFSMSHsm is not active, JES3 then reschedules the attempt on a local partition (another >system image). If DFSMSHsm was started with HOSTMODE=MAIN in that image, the C/I will continue successfully and the job will be successful, too.

System action: The DFSMSHsm wait-type request was rejected. System processing continues.

Operator response: Start DFSMSHsm.

Programmer response: Request that DFSMSHsm be started in an appropriate mode. Reissue the job when DFSMSHsm is ready.

Source: DFSMSHsm

ARC0057I CSA USAGE BY DFSMSHSM HAS REACHED DFSMSHSM INACTIVE THRESHOLD OF xxxxxxK BYTES, REQUEST FAILED

Explanation: The DFSMSHsm common service area (CSA) usage maximum limit of xxxxxxK-bytes has been reached while DFSMSHsm is inactive.

System action: Until DFSMSHsm is started, no further requests are added to the CSA queue. All requests fail.

Operator response: Start DFSMSHsm or contact your DFSMSHsm storage administrator.

Programmer response: To determine the action needed to alleviate the problem, see *z/OS DFSMSHsm Implementation and Customization Guide* and the *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC0058I CSA USAGE BY DFSMSHSM HAS REACHED THE ACTIVE THRESHOLD OF xxxxxxK BYTES, ALL BUT BATCH WAIT REQUESTS FAILED

Explanation: The DFSMSHsm limit of xxxxxxK-bytes for nonwait action requests has been reached.

System action: Until common service area (CSA) usage drops under this threshold, only BATCH WAIT management work elements (MWEs) are added to the DFSMSHsm CSA queue. All other requests will fail.

Operator response: Start DFSMSHsm or contact your DFSMSHsm storage administrator.

Programmer response: To determine the action needed to alleviate the problem, see *z/OS DFSMSHsm Implementation and Customization Guide*.

Source: DFSMSHsm

ARC0059I CSA USAGE BY DFSMSHSM HAS REACHED MAXIMUM LIMIT OF xxxxxxK BYTES,
JOB=*jobname* FAILED

Explanation: Job *jobname* has failed because the maximum limit of CSA bytes of storage xxxxxxK-bytes has been reached.

System action: Until normal DFSMSHsm processing frees some CSA storage, no more requests involving MWEs are processed.

Programmer response: To determine the action needed to alleviate the problem, *z/OS DFSMSHsm Implementation and Customization Guide* and *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC0060A WARNING: DFSMSHSM IS NOT ACTIVE

Explanation: The open or end-of-volume routine, or both, could not find the VTOC entry for the data set. DFSMSHsm is not active.

System action: Processing continues.

Programmer response: If the data set being opened has migrated, have the operator or system programmer start DFSMSHsm with HOSTMODE=MAIN, and then rerun the job.

Source: DFSMSHsm

ARC0061I DFSMSHSM SHUTTING DOWN DUE TO SMSVSAM SERVER ERROR

Explanation: An error with the SMSVSAM server has caused DFSMSHsm to lose access to its control data sets. Either the SMSVSAM server did not initialize within the allotted amount of time, the SMSVSAM server was repeatedly terminating, or DFSMSHsm was unable to open one or more of the CDSs after a server error occurred. All attempts to read, write, delete or update control data set records will fail. Most functions currently being processed will fail. Only those functions that are allowed to continue while DFSMSHsm is in emergency mode will continue to be processed. To regain access to the control data sets, DFSMSHsm must shutdown and be restarted.

System action: DFSMSHsm is placed into emergency and shutdown modes. An abend is issued.

Programmer response: Restart DFSMSHsm after it has shut down and the SMSVSAM server has restarted. Examine all DFSMSHsm messages associated with the SMSVSAM server error. Issue any FIXCDS commands that are documented in the messages that were received. Perform audit processing if it appears that the failure might have caused inconsistencies between the control data sets and the data that DFSMSHsm is managing. For more information, see "DFSMSHsm Abnormal End Considerations" in the *z/OS DFSMSHsm Implementation and Customization Guide*.

Source: DFSMSHsm

ARC0062I DFSMSHsm ADDRESS SPACE HAS BEEN SET TO {NON-SWAPPABLE | SWAPPABLE}

Explanation: If NON-SWAPPABLE is displayed, DFSMSHsm has made itself non-swappable so that it can support cross-address space communication.

If SWAPPABLE is displayed, DFSMSHsm reset to being swappable after unsuccessfully trying to establish cross-address space communication.

System action: DFSMSHsm processing continue.

Programmer response: None.

Source: DFSMSHsm

ARC0063I DFSMSHsm WILL {HOLD FUNCTIONS | SHUT DOWN} DUE TO A VSAM TRAP FINDING A
CORRUPT INDEX IN THE {MCDS | BCDS | OCDS}

Explanation: The VSAM INDEX TRAP has detected a corrupt index and VSAM will no longer allow access to the control data set specified in the message. All attempts to read, write, delete, or update the control data set records fail.

ARC0064E • ARC0073I

System action: In order to minimize the functions affected, the actions taken will depend on which data set has the corrupt index. The control data set and related actions follow:

- MCDS — Set emergency mode and shut down.
- BCDS — Hold backup, recover, dump, expirebv, ABARS, recycle, tapecopy, tapereplace, audit, and list.
- OCDS — Hold recycle, tapecopy, tapereplace, migration, recover, arecover, recall from tape, data set backup to tape, volume and autobackup, audit and list.
- BCDS and OCDS — if some processing continues attempting to access the corrupt CDS, then after 50 failed attempts, DFSMSHsm shuts down.

Note: It takes time to quiesce functions for both shut down and for hold commands. Additional CDS errors and function failures can be expected during this process.

Programmer response: If the problem resulted in DFSMSHsm shutting down, after the index and the associated control data set have been corrected, restart DFSMSHsm. If the problem resulted in DFSMSHsm functions being held:

- You can still run DFSMSHsm functions that are not affected by the corrupt CDS.
- DFSMSHsm must be shut down in order to correct the corrupt CDS.

When the CDS has been repaired, DFSMSHsm can be restarted. Perform AUDIT processing if it appears that the CDS failure might have caused inconsistencies between the CDS and the data that DFSMSHsm is managing.

Source: DFSMSHsm

ARC0064E SMSVSAM SERVER ERROR OCCURRED

Explanation: An SMSVSAM server error caused DFSMSHsm to lose access to its control data sets, and the CDS's had to be closed and reopened. One or more DFSMSHsm requests may have failed due to the server error.

System action: DFSMSHsm processing continue.

System programmer response: Search for DFSMSHsm failure messages that were issued soon after the SMSVSAM server initialized. If errors occurred, we recommend you run AUDIT for the function(s) that failed. For example, for data set migration, backup or recycle errors, run AUDIT DATASETCONTROLS, for Fast Replication errors, run AUDIT COPYPOOLCONTROLS, etc.. After the AUDIT is complete, failed requests can be reissued if necessary.

Programmer response: None.

Source: DFSMSHsm

ARC0073I AN ERROR OCCURRED WHILE DFSMSHSM WAS PROCESSING A REQUEST FROM IDCAMS TO UPDATE A DFSMSHSM RECORD FOR A MIGRATED DATA SET.

Explanation: The user submitted an ALTER dsn STORAGECLASS(*storageclassname*) or a MANAGEMENTCLASS(*managementclassname*) command, or both, to IDCAMS for a migrated data set. DFSMSHsm failed to update the DFSMSHsm record used for SMS space management processing. The reason codes have the following meanings:

- 4 Data Set in use
- 5 Parsing error on internal ALTERDS command from Catalog Services.
- 6 Catalog Services has indicated that the data set being processed is migrated. The DFSMSHsm information indicates that the data set is not migrated.
- 7 The DFSMSHsm information indicates that this data set is not SMS managed.
- 8 Update error for MCD record. DFSMSHsm could not update the MCD record.
- 9 Read error for MCD record. DFSMSHsm failed when it tried to read the MCD record.
- 10 Needed enqueue not obtained.
- 92 DFSMSHsm could not service the update request from Catalog Services because the DFSMSHsm task abended, DFSMSHsm was shutting down, the DFSMSHsm address space was being cancelled, or the DFSMSHsm request was cancelled.

System action: The IDCAMS ALTER command fails.

Programmer response: Perform the action assigned to the reason code you received.

4,8,10,92

Resubmit the IDCAMS command.

5 Interface restricted for use by Catalog. Use this interface only when an ALTER command has been issued through IDCAMS.

6,7 Verify the status of the data set or DFSMSHsm record. Correct any discrepancies and reissue the command.

9 Use the FIXCDS command to verify that the MCD record can be found. Correct any problems and resubmit the command.

ARC0075E RECALL OF DATASET *dsname* FAILED, ORIGINAL DEVICE = *unitname*.

Explanation: DFSMSHsm was unable to recall a data set (*dsname*), because the DFSMSdss datamover detected, during restore (recall), the data set had internal errors when dumped (migrated). The original device name from which the data set migrated was *unitname*.

System action: Processing of the data set ends.

Programmer response: The data set can be recalled, using the Storage Administrator command RECALL DFDSSOPTION(RETRY), to a device having the same geometry as the device from which it is migrated. RECALL DFDSSOPTION(RETRY) causes DFSMSdss to restore the data set using the NOPACKING option.

ARC0085I (H)BDELETE REQUIRES ONE OF THE FOLLOWING MUTUALLY EXCLUSIVE KEYWORDS: ALL, VERSIONS, OR DATE

Explanation: A parse error occurred while processing the BDELETE or HBDELETE command. One of the required keywords, ALL, VERSIONS, or DATE, was not present or more than one was present.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the command with one of the required keywords.

ARC0086I INVALID VERSION FOUND IN EXISTING MCB FOR DSN *dsn*. BACKUP CREATED AS VERSION 1. DUPLICATE OR INVALID VERSIONS MAY EXIST.

Explanation: During backup of a dataset, DFSMSHsm encountered an invalid version value in the MCB record for data set *dsn*. The erroneous MCB field does not prevent the data set from being backed up, but may indicate a problem that will prevent recovery of an earlier version if the VERSION parameter is used. Recover of a specific errant version might be accomplished using the GENERATION parameter of the (H)RECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: No immediate action is required. To allow recovery with the VERSION parameter, run AUDIT DATASETCONTROLS(BACKUP)FIX to correct the discrepancies reported in this message. APAR OA28434 is required for AUDIT to correct these errors.

ARC0087I CDS VERSION BACKUP SHOULD BE PERFORMED AT THIS TIME

Explanation: During DFSMSHsm startup, it was detected that the number of clusters for the MCDS or BCDS, or both, has changed since the last time DFSMSHsm was active. To create a point of recovery for the new CDS structure, perform CDS version backup at this time. This simplifies the CDS recovery process, should it need to be performed.

Note: This message can also be issued when starting a DFSMSHsm host for the first time on a new release or maintenance level of DFSMSHsm.

System action: DFSMSHsm processing continues.

Programmer response: Perform a CDS version backup.

**ARC0089I SETSYS TAPEFORMAT(MULTIFILE) IS NOT SUPPORTED FOR TAPE CARTRIDGES.
TAPEFORMAT IS NOT CHANGED.**

Explanation: A SETSYS command was entered specifying TAPEFORMAT(MULTIFILE). MULTIFILE format is not supported for tape cartridges (3480, 3480X or 3490). This specification is ignored.

System action: The TAPEFORMAT(MULTIFILE) subparameter is ignored. Any remaining parameters on the SETSYS command are processed. DFSMSHsm processing continues.

Programmer response: Do not specify SETSYS TAPEFORMAT(MULTIFILE).

Source: DFSMSHsm

ARC0090I FAILURE TRYING TO ATTACH MODULE *name1* BY *name2*

Explanation: A DFSMSHsm module *name1* has issued an MVS ATTACH macro for module *name2*. The attach attempt is unsuccessful. The return code from MVS is nonzero and is given in the reason code field of the following ARC1001I, ARC0744E, or ARC0839I message. The return codes are explained in *z/OS DFSMS Macro Instructions for Data Sets*. The function is ended.

System action: The module is not attached. DFSMSHsm processing continues.

Programmer response: Determine the cause of the error from the return code and take corrective action.

Source: DFSMSHsm

ARC0091I ARCCKEY CALLED WITH INVALID TYPE='type'X KEY=key

Explanation: The DFSMSHsm module ARCCKEY was called with invalid input of *type* and *key*. The 1-byte *type* is printed in hexadecimal and the 44-byte *key* is printed in alphanumeric characters.

System action: DFSMSHsm processing continues.

Programmer response: Search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

Source: DFSMSHsm

**ARC0092I INVALID SETSYS - TAPEHARDWARECOMPACT SPECIFIED - DATA FACILITY PRODUCT(DFP)
NOT INSTALLED OR INSUFFICIENT LEVEL OF DATA FACILITY PRODUCT INSTALLED**

Explanation: The required level of DFSMS/MVS is not installed on the system to perform tape hardware compaction.

System action: DFSMSHsm processing continues. Hardware compaction will not be used. All other SETSYS parameters are processed.

Programmer response: The required level of DFP for tape hardware compaction is 2.4.0 or greater, except DFP 3.1.1. MVS/SP-JES3

Source: DFSMSHsm

ARC0093I INCONSISTENT CDS SERIALIZATION TECHNIQUE

Explanation: The control data set serialization technique of the starting DFSMSHsm differs from the serialization technique of another active DFSMSHsm. When record level sharing is used or is to be used, all DFSMSHsm systems sharing the same control data sets must use record level sharing.

System action: DFSMSHsm startup ends.

Programmer response: For the starting DFSMSHsm system, use the same control data set serialization technique that is already being used. Examine the startup procedures for the conflicting DFSMSHsm systems to determine which ones are using record level sharing. If the serialization technique needs to be changed, stop all DFSMSHsm systems, change the startup procedure, and restart each DFSMSHsm system individually. If record level sharing is used, verify that the minimum system level for the starting DFSMSHsm is DFSMS/MVS 1.4.0.

ARC0095I CATALOGVOLUME SUBPARAMETER OF SETSYS RECALL NOT SUPPORTED - RECALL TARGET SELECTION OPTION IS UNCHANGED

Explanation: A SETSYS command with the RECALL parameter and CATALOGVOLUME subparameter was specified. This parameter is not supported in the current release of DFSMSHsm. No change is made to the current DFSMSHsm recall target selection parameters.

System action: If no SETSYS command has been issued with the RECALL parameter, the default is ANYSTORAGEVOLUME(LIKE).

Other parameters on the SETSYS command are processed. DFSMSHsm processing continues.

Programmer response: If a function similar to the CATALOGVOLUME subparameter is required, the volume pool function can be used to associate volumes for the recall of non-SMS-managed data sets.

Source: DFSMSHsm

ARC0096I INVALID VALUE SPECIFIED FOR CSALIMITS SUBPARAMETERS (MWE, ACTIVE, INACTIVE, MAXIMUM)

Explanation: An invalid value has been specified for the indicated subparameter of the SETSYS CSALIMITS command.

System action: The CSALIMITS parameter is ignored. Any remaining parameters on the SETSYS command are processed. DFSMSHsm processing continues.

Programmer response: For details on specifying the SETSYS CSALIMITS subparameter, see *z/OS DFSMSHsm Storage Administration*. Specify the subparameter values correctly and resubmit the SETSYS command.

Source: DFSMSHsm

ARC0097I INVALID SETSYS {TAPESECURITY | SELECTVOLUME} SUBPARAMETER - {RACF | RACFINCLUDE | SPECIFIC}, DATA FACILITY PRODUCT (DFP) NOT INSTALLED OR INSUFFICIENT LEVEL OF DATA FACILITY PRODUCT INSTALLED

Explanation: One of the following two conditions occurred:

- A SETSYS command was entered with the TAPESECURITY parameter and either RACF® or RACFINCLUDE subparameter was specified.
- A SETSYS command was entered with the SELECTVOLUME parameter and SPECIFIC subparameter.

System action: The TAPESECURITY or SELECTVOLUME parameter and any of their subparameters are ignored. Any remaining parameters on the SETSYS command are processed. DFSMSHsm processing continues.

Programmer response: The use of the RACF or RACFINCLUDE subparameter with the TAPESECURITY parameter or the SPECIFIC subparameter with the SELECTVOLUME parameter requires that a sufficient level of the Data Facility Product be installed on the system. One of the following licensed programs, or a later release of one, must be installed on the system:

- MVS/370 Data Facility Product (DFP) Release 1.0 (Program Number 5665-295)
- MVS/XA Data Facility Product (DFP) 1.1.2 (Program Number 5665-284) or MVS/XA Data Facility Product (DFP) 2.1.0 (5665-XA2)

Source: DFSMSHsm

ARC0098I INVALID SETSYS TAPESECURITY SUBPARAMETERS, {{PASSWORD | PD} AND EXPIRATIONINCLUDE CANNOT BE SPECIFIED TOGETHER | {PASSWORD | PD} AND RACFINCLUDE CANNOT BE SPECIFIED TOGETHER | {RACF | RACFINCLUDE} SPECIFIED BUT RACF NOT INSTALLED | {RACF | RACFINCLUDE} SPECIFIED BUT RACF TAPEVOL RESOURCE CLASS NOT DEFINED}

Explanation: A SETSYS command has been entered with the TAPESECURITY parameter and an invalid combination of subparameters. One of the following four conditions has occurred. Each condition listed below corresponds to the respective insert in the message text.

- The PASSWORD (or PD) and the EXPIRATIONINCLUDE subparameters are specified with the TAPESECURITY parameter on the SETSYS command.

ARC0099E

- The PASSWORD (or PD) and the RACFINCLUDE subparameters are specified with the TAPESECURITY parameter on the SETSYS command.
- The RACF or RACFINCLUDE subparameter is specified with the TAPESECURITY parameter on the SETSYS command but RACF is not installed in the system.
- The RACF or RACFINCLUDE subparameter is specified with the TAPESECURITY parameter on the SETSYS command but the resource class TAPEVOL is not defined in the RACF class descriptor table (CDT).

System action: The TAPESECURITY parameter and its subparameters are ignored. The previous tape security options remain unchanged and in effect. Any remaining parameters on the SETSYS command are processed. DFSMShsm processing continues.

Programmer response: For each of the error conditions listed above, the following programmer response applies:

- It is inconsistent to specify both the PASSWORD (or PD) and EXPIRATIONINCLUDE subparameters with the TAPESECURITY parameter on the SETSYS command. By specifying the PASSWORD (or PD) subparameter, you indicate that DFSMShsm should password protect its tape volumes. The EXPIRATIONINCLUDE subparameter indicates that it is acceptable for DFSMShsm to migrate or back up password-protected data sets to non-password-protected tape volumes. The EXPIRATIONINCLUDE is intended to be used when the PASSWORD tape security option is not being used. If the intent is for DFSMShsm to protect its tape volumes with both password and expiration date protect, both the PASSWORD and EXPIRATION subparameters should be specified with the TAPESECURITY parameter.
- It is inconsistent to specify both the PASSWORD (or PD) and RACFINCLUDE subparameters with the TAPESECURITY parameter on the SETSYS command. By specifying the PASSWORD (or PD) subparameter, you indicate that DFSMShsm should password protect its tape volumes. The RACFINCLUDE subparameter indicates that it is acceptable for DFSMShsm to migrate or backup password-protected data sets to non-password-protected tape volumes. The RACFINCLUDE subparameter is intended to be used when the PASSWORD tape security option is not being used. If the intent is for DFSMShsm to protect its tape volumes with both password and RACF, both the PASSWORD and RACF subparameters are specified with the TAPESECURITY parameter.
- Specifying the RACF or RACFINCLUDE subparameter is not valid when RACF is not installed in the system. If you want DFSMShsm to RACF-protect its tape volumes, RACF must be installed in the system.
- Specifying the RACF or RACFINCLUDE subparameter is not valid if the RACF TAPEVOL resource class is not defined in the RACF class descriptor table (CDT). If you want DFSMShsm to RACF protect its tape volumes, RACF must be installed and the TAPEVOL resource class must be defined in the RACF CDT. For information about the RACF CDT, see *z/OS Security Server RACF Command Language Reference*.

Source: DFSMShsm

ARC0099E WARNING - {RACF | RACFINCLUDE} SPECIFIED WITH TAPESECURITY PARAMETER BUT {RACF NOT ACTIVE | RACF TAPEVOL RESOURCE CLASS NOT ACTIVE}

Explanation: A SETSYS command has been entered with the TAPESECURITY parameter and the RACF or RACFINCLUDE subparameter, but RACF has not been activated.

System action: The TAPESECURITY parameter and its subparameters are processed. Either the RACF or RACFINCLUDE tape security option is in effect. All other parameters on the SETSYS command are processed. DFSMShsm processing continues.

Operator response: When the problem is corrected or the message is no longer needed, take the following action to delete the message:

- If the message identifier *id* is not available, issue the DISPLAY R,I command to get the ID.
- To delete the message, issue the following command using the message identifier *id* obtained from the DISPLAY R,I command listed above:

```
CONTROL C,I,id
```

Programmer response: This message is an attention message. The installation has requested DFSMShsm, by way of the TAPESECURITY parameter on the SETSYS command, to RACF-protect the tape volumes it uses. RACF is installed in the system, but one of the two following conditions exist:

- RACF is not active.
- RACF is active but the system-wide tape protection option of RACF is not active.

If your installation has defined multiple RACF resource names for DFSMSHsm tape volume sets since the last initialization of DFSMSHsm, you must reinitialize DFSMSHsm on each processing unit in which you have defined the resources for them to take effect. For more information, see *z/OS DFSMSHsm Implementation and Customization Guide*.

A RACF-defined user can reactivate RACF by entering the following RACF command: RVPARY ACTIVE

The operator (at the master console or security console) must approve the change of RACF status to active or inactive.

A RACF-defined user with the SPECIAL attribute can start the system-wide tape protection option by entering the following RACF command: SETROPTS CLASSACT(TAPEVOL)

For more information, see *z/OS Security Server RACF Command Language Reference*.

Source: DFSMSHsm

ARC0100I {RELEASE | HOLD | SETSYS} COMMAND COMPLETED

Explanation: The DFSMSHsm command appearing in the message text has completed processing. However, the function request might have had errors, as indicated by previous messages.

If directed to an AUX host, the SETSYS command might have specified ABARS or CSALIMITS parameters, which were not processed.

System action: Existing DFSMSHsm hosts continue.

Programmer response: If ABARS or CSALIMITS parameters were not processed (see message ARC0103I), reissue the command directed to a host started with HOSTMODE=MAIN.

Source: DFSMSHsm

ARC0101I QUERY {ACTIVE | ABARS | ARPOOL | AUTOPROGRESS | BACKUP | CDSVERSIONBACKUP | CONTROLDATASETS | CSALIMITS | DATASETNAME | MIGRATIONLEVEL2 | POOL/VOLUMEPOOL | REQUEST | RETAIN | SETSYS | SPACE | STARTUP | STATISTICS | TRAPS | USER | WAITING} COMMAND {STARTING | COMPLETED | IGNORED} ON HOST=x

Explanation: A QUERY command was issued. STARTING indicates that the response to the command follows this message. COMPLETED indicates that the response to the command precedes this message.

IGNORED indicates that the command was directed to an AUX host, specifying ABARS, ARPOOL, or CSALIMITS.

System action: Existing DFSMSHsm hosts continue.

Programmer response: If IGNORED appears, reissue the command directed to a host with HOSTMODE=MAIN.

Source: DFSMSHsm

ARC0102I SETSYS WITH {JES2 | JES3} REJECTED, SUBSYSTEM ALREADY ESTABLISHED, RC=retcode

Explanation: During DFSMSHsm initialization, the JES2 or JES3 parameter was specified on a SETSYS command after DFSMSHsm had already established the job entry system by default or prior system command.

Retcode Meaning

- 4 For this host, DFSMSHsm had already established a job-entry subsystem by default or by a specific command.
- 8 One or more already-started DFSMSHsm hosts had the other job-entry subsystem specified or established.

System action: The JES2 or JES3 parameter on the SETSYS command is rejected. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response:

Retcode Action

ARC0103I

- 4 Specify JES2 or JES3 in the SETSYS command before all pool-configuring ADDVOL or DEFINE commands in the ARCCMDxx member.
- 8 Decide which job-entry subsystem properly describes the environment for all the DFSMSHsm hosts in this z/OS MVS image. You might need to update the ARCCMDxx PARMLIB members used for this host or the other hosts, or both, before restarting one or more hosts.

Source: DFSMSHsm

ARC0103I INVALID SETSYS PARAMETER

Explanation: A SETSYS command was issued to establish or change the current setting of a parameter. An ABARS or CSALIMITS parameter may have been specified for a host started with HOSTMODE=AUX. The parameters indicated in this message are:

ABARSACTLOGMSGLVL

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSACTLOGTYPE

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSBUFFERS

This parameter was specified with an invalid number. Valid values are 1–9. If the SETSYS command was issued to an AUX host, the parameter was ignored.

ABARSDELETEACTIVITY

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSKIP

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSOPTIMIZE

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSPROCNAME

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSTAPES

This parameter is ignored for a SETSYS command issued to an AUX host.

ABARSUNITNAME

This parameter was specified with an invalid device type. This parameter applies only to tape. If the SETSYS command was issued to an AUX host, the parameter was ignored.

ABARSVOLCOUNT

This parameter is ignored for a SETSYS command issued to an AUX host.

ABSTART

The specified time value is invalid. The automatic backup planned start time, the automatic backup late start time, and the quiesce time are the time values used with ABSTART.

ACCEPTPSCBUSERID

This parameter was issued in an MVS system where RACF is active. This parameter is invalid in an active RACF environment.

ACTLOGMSGLVL

This parameter was issued with an invalid parameter. There are 3 valid parameters: FULL, REDUCED and EXCEPTIONONLY

ADSTART

The specified time value is invalid. The automatic dump planned start time, the automatic dump late start time, and the quiesce time are the time values used with ADSTART.

AMSTART

The specified time value is invalid. The automatic migration planned start time, the automatic migration late start time, and the quiesce time are the time values used with AMSTART.

ARECOVERML2UNIT

This parameter was specified with an invalid device type. This parameter applies only to tape. If the SETSYS command was issued to an AUX host, the parameter was ignored.

ARECOVERPERCENTUTILIZED

This parameter was specified with a value outside the range 1–100. If the SETSYS command was issued to an AUX host, the parameter was ignored.

ARECOVERTGTGDS

This parameter is ignored for a SETSYS command issued to an AUX host.

ARECOVERUNITNAME

This parameter was specified with an invalid device type. This parameter applies only to tape. If the SETSYS command was issued to an AUX host, the parameter was ignored.

BACKUP

If DFSMSHsm was started without the OCDS DD or the BCDS DD statement defined in the startup JCL, this message appears. Also, this message appears if an incorrect unit type was specified for tape.

CDSVERSIONBACKUP

This parameter was specified with conflicting parameters:

- DATAMOVER(DSS) is specified along with: BACKUPDEVICECATEGORY(TAPE(NOPARALLEL))
- The CDSVERSIONBACKUP parameter has been issued with both the BACKUPDEVICECATEGORY(TAPE) and EXPIRATIONDATE parameters. However, *date* is not a valid date, is a date in the past, or is in the form *yyddd* when the current date is after 1999.

CONFLICTING TRANSLATIONS FOR USER UNIT TABLE UNITNAME=*unitname*.

A duplicate unit name was specified. The translation specified for one does not match the translation specified for the other. The second occurrence is removed from the table.

CSALIMITS

This parameter is ignored for a SETSYS command issued to an AUX host.

DATA SET BACKUP TASKS OUT OF RANGE

The number of DSBACKUP TASKS exceeds the maximum of 64. Either the number of DASD TASKS exceeds 64, the number of TAPE TASKS exceeds 64, or the sum of the DASD and TAPE TASKS exceeds 64.

DAYS

The DAYS parameter was specified to establish the minimum age a data set must remain unopened until it is eligible for migration. The age value specified on the DAYS parameter is less than the DFSMSHsm data set integrity age. The integrity age for DFSMSHsm is 1 day in a single processing unit environment and 2 days in a multiple processing unit environment.

DEMOUNTDELAY

The number of minutes specified for the DEMOUNTDELAY cannot be greater than 1440.

DENSITY

This parameter is in error due to the following condition:

- The CDSVERSIONBACKUP parameter was specified with BACKUPDEVICECATEGORY and TAPE as the subparameters. Valid values for DENSITY are 2, 3, or 4. The DENSITY subparameter of the TAPE subparameter was specified with an invalid value.

DUMPIO

This parameter was specified to control DFSMSdss read characteristics during dump processing. One or both of the DUMPIO subparameters are specified with a value outside the range of 1–4.

EXITON

The EXITON (*exitname*) parameter was specified to enable the exit (*exitname*), but the exit was not loaded and its address is not available.

EXITS

The EXITS(*abcdefghi*) parameter of the SETSYS command was specified for identifying those user-written exits to be enabled or disabled. There must be a string of 9 Ys or Ns, or a combination of both, representing those exits. Either there are not exactly 9 Ys or Ns, or a combination of both, or there are characters in the string other than Y or N.

ARC0103I

FASTREPLICATION(DATASETRECOVERY)

A required subparameter was not specified or was specified incorrectly.

INCOMPATIBLE DENSITY=*n*

The *n* indicates the density value specified on the command. This message will be issued for the following condition:

- The CDSVERSIONBACKUP parameter was specified with BACKUPDEVICECATEGORY and TAPE as the subparameters. The DENSITY parameter of the TAPE subparameter was specified with a density value (2, 3, or 4) that does not match the density capability of the device specified in the UNITNAME subparameter of the TAPE parameter.

INVALID USER UNIT TABLE ENTRY, UNITNAME=*unitname* CONTAINS INCOMPATIBLE DEVICES

The USERUNITTABLE parameter was specified on a SETSYS command. The esoteric name *unitname* contains incompatible device types. For example, DFSMSHsm does not allow a 3480X unit and a 3490 unit to be in the same esoteric.

DFSMSHsm only considers an esoteric for cartridge type devices, (3480, 3480X, 3490, or 3590-1), valid if any method of writing on any tape unit belonging to an esoteric group can be read on any tape unit belonging to the same esoteric group.

Note: If an esoteric group includes one set of the tape drives defined with compaction on and another set defined with compaction off, this latter group of drives will not be able to read compacted data by the first group. Thus, the esoteric is considered invalid.

INVALID USER UNIT TABLE ENTRY, UNITNAME=*unitname* IS A RESERVED SYSTEM NAME

The USERUNITTABLE parameter was specified on a SETSYS command. The esoteric name *unitname* is reserved by the system. The possible values for *unitname* are:

- SYS3480R — Special esoteric name provided by the system that is associated with all 3480, 3480X, and 3490 devices. Any device in this esoteric is capable of reading a cartridge written by a 3480 device.
- SYS348XR — Special esoteric name provided by the system that is associated with all 3480X and 3490 devices. Any device in this esoteric is capable of reading a cartridge written by a 3480X device.

INVALID USER UNIT TABLE ENTRY, UNITNAME=*unitname* UNKNOWN

The USERUNITTABLE parameter was specified on a SETSYS command. The *unitname* is unknown to the operating system and so cannot be included in the DFSMSHsm user unit table.

MAXABARSADDRESSSPACE

The MAXABARSADDRESSSPACE parameter is invalid. It is specified with a value outside the range of 1–64. If the SETSYS command was issued to an AUX host, the parameter was ignored.

MAXBACKUPTASKS

The MAXBACKUPTASKS parameter was specified with a value outside the range of 1–15.

MAXCOPYPOOLTASKS

One or more of the MAXCOPYPOOLTASKS keywords has an invalid parameter. At least one of the following is true:

- The FRBACKUP parameter was specified outside of the range of 1–64.
- The FRRECOV parameter was specified outside of the range of 1–64.
- The DSS parameter was specified outside of the range of 1–254.

MAXDSRECOVERTASKS

This parameter is specified with a value outside the range of 1–64.

MAXSTAPERECOVERTASKS

This parameter specified is out of the range of 0 - 64, or is greater than the value specified for MAXDSRECOVERTASKS.

MAXDUMPTASKS

This parameter is specified with a value outside the range of 1–64.

MAXIDLETASKS

The number specified is greater than 64, which is the maximum number of tasks allowed.

MAXINTERVALTASKS

This parameter is outside the range 1–15.

MAXMIGRATIONTASKS

This parameter is outside the range 1–15.

MAXRECYCLETASKS, VALUE OUT OF RANGE

The MAXRECYCLETASKS parameter is specified with a value outside of the range of 1–15.

MAXSINGLEFILEBLOCKS - NO LONGER SUPPORTED USE SETSYS TAPEUTILIZATION

The MAXSINGLEFILEBLOCKS parameter is specified; however, it is no longer supported. Use the SETSYS TAPEUTILIZATION command.

MAXSSMTASKS (TAPEMOVEMENT)

This parameter is outside the range of 0–15.

MAXSSMTASKS (CLEANUP)

This parameter is outside the range of 0–15.

MIGRATIONSUBTASKS

This parameter was specified with an invalid option, invalid range in the ADDITIONALSUBTASKS subparameter, or in a DFHSM DATASET SERIALIZATION environment.

MIGUNITNAME=*unitname*

The value specified for UNITNAME is not a tape device unit name. The valid values for MIGUNITNAME are 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter of the SETSYS command.

ML1OVERFLOW DATASETSIZE

DATASETSIZE parameter is outside the range of 1–704642988.

ML1OVERFLOW THRESHOLD

THRESHOLD parameter is outside the range of 1–100.

ML2PARTIALSNOTASSOCIATEDGOAL

The specified value is not NOLIMIT and is outside the range of 0–999.

ML2RECYCLEPERCENT OUT OF RANGE

The ML2RECYCLEPERCENT parameter is specified with a value outside the range of 0–100.

MOUNTWAITTIME

This parameter was specified to establish how much time can go by while waiting for a tape to be mounted for a DFSMSHsm operation. The value is outside the range of 1–120 minutes.

NOACCEPTPSCBUSERID

This parameter was issued in an MVS system where RACF is active. This parameter is invalid in an active RACF environment.

NOARECOVERREPLACE

This parameter was specified; however, it is no longer supported.

NOCDVERSIONBACKUP

This parameter was specified; however, it is no longer supported.

NOCSALIMITS

This parameter is ignored for a SETSYS command issued to an AUX host.

NODEFERMOUNT NOT SUPPORTED. DEFERMOUNT WILL BE USED

The NODEFERMOUNT parameter is specified; however, it is no longer supported. The DEFERMOUNT parameter is used.

NOTRACE

The NOTRACE parameter was specified; however, it is no longer supported.

NO ONLINE DEVICES FOR UNIT NAME

At least one device of the unitname specified must be online at the time HSM validates the unit type.

ODMNOTIFICATIONLIMIT

The parameter is outside the range 1–99999.

OUTPUT UNITNAME=*es2out* CANNOT BE TRANSLATED TO INPUT UNITNAME=*es2in*, DEVICE TYPE CONFLICT.

The USERUNITTABLE parameter was specified on a SETSYS command with *es2out:es2in*. The devices associated with the two unit names write data in incompatible formats. For example:

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- The output unit name cannot be associated with 3490 devices when the input unit name is associated with 3480 or 3480X devices.
- The output unit name cannot be associated with 3480 or 3480X devices when the input unit name is associated with 3490 devices.

OUTPUT UNITNAME=es2out CANNOT BE TRANSLATED TO INPUT UNITNAME=es2in, INVALID INPUT UNIT NAME.

The USERUNITTABLE parameter was specified on a SETSYS command with *es2out:es2in*. The input unit name is unknown to the operating system, so the translation is ignored. The output unit name is still defined in the DFSMSHsm user unit table, but without the intended translation

OUTPUT UNITNAME=es2out CANNOT BE TRANSLATED TO INPUT UNITNAME=es2in, NO ONLINE DEVICES FOR OUTPUT UNIT NAME OR NOT ALL ONLINE DEVICES FOR OUTPUT UNIT NAME HAVE ACLS.

The USERUNITTABLE parameter was specified on a SETSYS command with *es2out:es2in*.

- The output unit name must have at least one of its associated devices online in order for the translation to be processed successfully.
- All of the devices currently online for the output unit name must have ACLs.

PARTIALTAPE

This parameter was specified on a SETSYS command with conflicting subparameters. MARKFULL or REUSE was specified along with MIGRATION or BACKUP. Specifying a global value and a specific function on a single command is not allowed.

PLEXNAME

The name of the HSMplex can only be specified in the parmlib. An attempt was made to name the sysplex after start-up.

PRIMARYSPMGMTSTART

The hours digits are outside the range 00–24 or the minutes are outside the range 00–59 or the time is greater than 2400.

PROCESSING WILL BE DONE WITHOUT USING IDRC FORMAT FOR ESOTERIC=unitname

DFSMSHsm detected a mixture of 3480 and 3480X devices defined in the same esoteric. Processing continues, but DFSMSHsm does not use the IDRC format when processing with this esoteric.

PROMOTE

The PROMOTE keyword was specified without any other parameter specified.

RECYCLE INPUT DEALLOC FREQUENCY (BACKUP) OUT OF RANGE

The BACKUP subparameter of RECYCLEINPUTDEALLOCFREQUENCY is specified with a value greater than 255.

RECYCLE INPUT DEALLOC FREQUENCY (MIGRATION) OUT OF RANGE

The MIGRATION subparameter of RECYCLEINPUTDEALLOCFREQUENCY is specified with a value greater than 255.

RECYCLEOUTPUT

The value specified for RECYCLEOUTPUT(*unittype*) is not a valid tape device unit name.

The RECYCLEOUTPUT parameter of the SETSYS command was issued to limit the selection and allocation of an output volume during recycle processing. *unittype* for either BACKUP or MIGRATION subparameters indicates a generic or esoteric unit name for a tape output device during recycle processing. Valid values for *unittype* are 3480, 3480X, 3490, and 3590-1. If you specify an esoteric unit name, it must already have been defined to DFSMSHsm using the USERUNITTABLE parameter of the SETSYS command.

RECYCLEPERCENT OUT OF RANGE

The RECYCLEPERCENT parameter is specified with a value outside the range of 0–100.

SECONDARYSPMGMTSTART

The hours digits are outside the range 00–24 or the minutes are outside the range 00–59 or the time is greater than 2400.

SELECTVOLUME

This parameter was specified on a SETSYS command with conflicting subparameters. SCRATCH or SPECIFIC was specified along with MIGRATION, BACKUP, or DUMP. Specifying a global value and a specific function on a single command is not allowed.

SMALLDATASETPACKING

The SMALLDATASETPACKING parameter was specified with a value for deciding the eligibility of a data set for migration to a small data set packing data set. If the value specified is in tracks, only values from 1–18 are valid. If the value specified is in kilobytes, only values from 1–800 are valid.

SPILL

The value specified for SPILL TAPE*unittype* is not a valid tape device unit name.

The SPILL parameter of the SETSYS command specifies that DFSMSHsm spills full DASD daily backup volumes when a DASD daily backup volume is needed and none is available. The TAPE*unittype* subparameter specifies that only tape spill backup volumes can be mounted and written on a specified *unittype* during spill processing. Valid values for *unittype* are 3480, 3480X, 3490, and 3590-1. If you specify an esoteric unit name, it must already have been defined to DFSMSHsm using the USERUNITTABLE parameter of the SETSYS command.

STANDARD DASDSELECTIONSIZE EXCEEDS MAXIMUM DASDSELECTIONSIZE

The number specified for standard DASDSELECTIONSIZE exceeds the number of Kbytes specified for maximum DASDSELECTIONSIZE.

SWAP

An attempt was made to make DFSMSHsm swappable. DFSMSHsm must be nonswappable to support interaddress and cross-address space communication.

TAPEDATASETORDER

This parameter was specified on a SETSYS command with conflicting sub-parameters. The general parameter FBID or PRIORITY was specified in combination with the specific functional parameter RECALL(FBID|PRIORITY) or RECOVER(FBID|PRIORITY). Specifying a general option and a specific functional option on a single command is not allowed.

TAPEDELETION

The TAPEDELETION parameter was specified on a SETSYS command with conflicting subparameters. SCRATCHTAPE or HSMTAPE was specified along with MIGRATION, BACKUP, or DUMP. Specifying a global value and a specific function on a single command is not allowed.

TAPEMAXRECALLTASKS

This parameter was specified with a value of zero.

TAPEMAXRECALLTASKS > MAXRECALLTASKS

A SETSYS command with the TAPEMAXRECALLTASKS parameter was specified with a value greater than the value currently indicated for the MAXRECALLTASKS.

TAPEMIGRATION

This parameter was specified with either the DIRECT(ANY) | unit), ML2TAPE(ANY | unit), or NONE(ROUTETOTAPE(ANY | unit)) subparameters. This indicates the type of tape unit to be used in several DFSMSHsm tape destination environments. Migration to tape volumes requires the offline control data set (OCDS). This message appears if DFSMSHsm is started without the OCDS DD statement in the DFSMSHsm startup JCL or the OCDS is not defined. This message also appears if the unit name specified with the DIRECT, ML2TAPE, or NONE(ROUTETOTAPE) subparameters is incorrect.

TAPEMIGRATION(RECONNECT)

The TAPEMIGRATION(RECONNECT) command was specified without a required subparameter of ALL, NONE, or ML2DIRECTEDONLY.

TAPERECALLLIMITS

The required parameter is not specified.

TAPESPANSIZE

This parameter was specified with a value outside the range 0–1000.

TAPEUTILIZATION UNIT

unit has not been defined to the DFSMSHsm user unit table or the unit is not valid

TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH LIBRARYBACKUP OR LIBRARYMIGRATION

This parameter must be specified with a user-defined esoteric containing only CAPACITYMODE switchable drives,

TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH A GENERIC UNIT NAME

This parameter must be specified with a user-defined esoteric that contains only CAPACITYMODE switchable drives.

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TAPEUTILIZATION, ESOTERIC DOES NOT SUPPORT CAPACITYMODE(EXTENDED)

This parameter must be specified with a user-defined esoteric that contains only CAPACITYMODE switchable drives.

TRACE

The TRACE parameter was specified; however, it is no longer supported.

UNITNAME=*unitname*

Specify a tape unit name that you want DFSMShsm to use.

- The UNITNAME parameter of the SETSYS command was issued to establish the type of tape device selected the first time DFSMShsm selects a scratch tape for backup. Valid values for UNITNAME are 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter of the SETSYS command.
- The CDSVERSIONBACKUP parameter was issued with the BACKUPDEVICECATEGORY and TAPE subparameters. The UNITNAME subparameter establishes the type of tape device selected for control data set version backup (CDSVERSIONBACKUP). Valid values for UNITNAME are 3400-3, 3400-4, 3400-5, 3400-6, 3400-9, 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter of the SETSYS command.

USER UNIT TABLE CREATE FAILED, A FREEMAIN FAILURE OCCURRED

Memory needed to build the user unit table could not be freed, so no new table is built.

USER UNIT TABLE CREATE FAILED, A MACRO FAILED WHILE BUILDING THE UCB LIST

One of the system service macros required for building the table fails, so no new table is built.

USER UNIT TABLE CREATE FAILED, A MODULE'S ESTAE SETUP FAILED

Critical error recovery paths could not be established for the table build process, so no new table is built.

USER UNIT TABLE CREATE FAILED, AN ABEND OCCURRED IN A MODULE OR MACRO

An abnormal end (abend) occurred while building the table, so no new table is built.

USER UNIT TABLE CREATE FAILED, THE CAUSE OF FAILURE IS UNKNOWN

An unanticipated return code was received from a service module during table build, so no new table is built.

USER UNIT TABLE CREATE FAILED, THERE ARE NO VALID USER UNIT TABLE ENTRIES

None of the specified unit names is valid and the new user unit table contains no information. If a previous user unit table existed, it was kept.

System action: The SETSYS TAPEUTILIZATION command fails. For TAPEUTILIZATION CAPACITYMODE(EXTENDED)-related messages, CAPACITYMODE is ignored, but the remainder of the command is processed.

DFSMShsm fails the SETSYS ML1OVERFLOW command. DFSMShsm processing continues.

Programmer response: The correction necessary for the parameter indicated is specified below (a reference to HOSTMODE=MAIN assumes you are executing DFSMShsm in multiple address spaces):

ABARSACTLOGMSGLVL

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSACTLOGTYPE

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSBUFFERS

Enter the command again with a valid number between 1–9. Ensure that the SETSYS command is directed to a host started with HOSTMODE=MAIN.

ABARSDELETEACTIVITY

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSKIP

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSOPTIMIZE

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSPROCNAME

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSTAPES

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABARSUNITNAME

Enter the command again with a valid tape unit type. Ensure that the SETSYS command is directed to a host started with HOSTMODE=MAIN.

ABARSVOLCOUNT

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ABSTART

Set the quiesce time to a value outside the time frame defined by the planned start time and the late start time.

ACCEPTPSCBUSERID

RACF is active in the system from which this message was issued. If this command is in your startup procedure, remove it.

ACTLOGMSGLVL

Correct the subparameter for the ACTLOGMSGLVL parameter and issue the command again.

ADSTART

Set the quiesce time to a value outside the time frame defined by the planned start time and the late start time.

AMSTART

Set the quiesce time to a value outside the time frame defined by the planned start time and the late start time.

ARECOVERML2UNIT

Enter the command again with a valid tape unit type. Ensure that the SETSYS command is directed to a host with HOSTMODE=MAIN.

ARECOVERPERCENTUTILIZED

Issue the SETSYS command again specifying the ARECOVERPERCENTUTILIZED parameter with an associated value of 1–100 enclosed in parentheses. Ensure that the SETSYS command is directed to a host with HOSTMODE=MAIN.

ARECOVERTGTGDS

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

ARECOVERUNITNAME

Enter the command again with a valid tape unit type. Ensure that the SETSYS command is directed to a host started with HOSTMODE=MAIN.

BACKUP

If you intend to use BACKUP, ensure that DDs for the BCDS and OCDS are defined in the startup JCL. Also ensure that the unit type defined for BACKUP(TAPE) is correct.

CDSVERSIONBACKUP

The CDSVERSIONBACKUP parameter was specified with conflicting parameters:

- DATAMOVER(DSS) is specified along with: BACKUPDEVICECATEGORY(TAPE(NOPARALLEL))
- The specified dates conflict. If *date* is invalid or in the past, correct the value and issue the command again. If the current date is before 2000 and the desired expiration date is after 1999, ensure that *date* is specified in the format *yyyddd*.

CONFLICTING TRANSLATION FOR USER UNIT TABLE UNITNAME=*unitname*.

Do not ask for two different translations for the same output unit name.

CSALIMITS

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

DATA SET BACKUP TASKS OUT OF RANGE

Verify that the specified number of DASD(TASKS), TAPE(TASKS), or their sum does not exceed 64.

DAYS

Specify a minimum age greater than the DFSMSHsm data set integrity age and issue the command again.

DEMOUNTDELAY

Specify a value for minutes in the range of 0–1440.

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DENSITY

Specify a density value of 2, 3, or 4 for DFSMSHsm to use when it selects a scratch tape for backup.

DUMPIO

The values supplied with this parameter must be from 1–4. Correct the values and issue the command again.

EXITON

Link edit the exit into SYS1.LINKLIB so it can be loaded by DFSMSHsm. Issue the SETSYS command again to enable the exit.

EXITS

Ensure that exactly 9 Ys or Ns, or a combination of both, must follow the EXITS parameter and only Ys and Ns follow the parameter.

FASTREPLICATION(DATASETRECOVERY)

Specify the SETSYS command again with a valid subparameter.

INCOMPATIBLE DENSITY=*n*

Specify a density value that coincides with the density capability of the device type specified in the UNITNAME parameter with the SETSYS CDSVERSIONBACKUP command.

INVALID USER UNIT TABLE ENTRY, UNITNAME=*unitname* CONTAINS INCOMPATIBLE DEVICES.

Only specify an esoteric name that contains all compatible devices. DFSMSHsm only considers an esoteric for cartridge type devices (3480, 3480X, 3490, or 3590-1) valid if any method of writing on any tape unit belonging to an esoteric group can be read on any tape unit belonging to the same esoteric group.

INVALID USER UNIT TABLE ENTRY, UNITNAME=*unitname* IS A RESERVED SYSTEM NAME

Issue the SETSYS command again without specifying any of the following reserved system names:

- SYS3480R
- SYS348XR

INVALID USER UNIT TABLE ENTRY, UNITNAME *unitname*=UNKNOWN

Define the unit name to the operating system so it can be included in the DFSMSHsm user unit table.

MAXABARSADDRESSSPACE

Specify a value from 1–64. Ensure that the SETSYS command is directed to a host started with HOSTMODE=MAIN.

MAXBACKUPTASKS

The value supplied with the parameter must be from 1–15. Correct the value and issue the command again.

MAXCOPYPOOLTASKS

The values specified with the FRBACKUP and FRRECOV keywords must be in the range of 1–64. The value specified with the DSS keywords must be in the range of 1–254. Correct the parameter values and issue the command again.

MAXDSRECOVERTASKS

The value supplied with the parameter must be from 1–64. Correct the value and issue the command again.

MAXDSTAPERECOVERTASKS

Specify a value from 0-64 and less than or equal to the value of MAXDSRECOVERTASKS.

MAXDUMPTASKS

The value supplied with this parameter must be from 1–64. Correct the value and issue the command again.

MAXIDLETASKS

Specify a value for tasks in the range of 0–64.

MAXINTERVALTASKS

Specify a value in the range of 1–15.

MAXMIGRATIONTASKS

Specify a value in the range of 1–15.

MAXRECYCLETASKS, VALUE OUT OF RANGE

Specify a value in the range of 1–15.

MAXSINGLEFILEBLOCKS

This parameter is no longer supported.

MAXSSMTASKS (TAPEMOVEMENT)

Specify a value in the range of 0–15.

MAXSSMTASKS (CLEANUP)

Specify a value in the range of 0–15.

MIGRATIONSUBTASKS

If the ADDITIONALSUBTASKS subparameter is specified, ensure the value provided is within the valid range. Ensure the SETSYS USERDATASETSERIALIZATION is specified PRIOR to the SETSYS MIGRATIONSUBTASKS command in the ARCCMDxx parmlib member.

MIGUNITNAME=*unitname*

Specify a tape unit name you want DFSMSHsm to use. The valid units are 3400-3, 3400-4, 3400-5, 3400-6, 3400-9, 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter in the SETSYS command.

ML1OVERFLOW DATASETSIZE

Specify a value within the range of 1–704642988 and issue the command again.

ML1OVERFLOW THRESHOLD

Specify a value within the range of 1–100 and issue the command again.

ML2PARTIALSNOTASSOCIATEDGOAL

Issue the command again with a value either of NOLIMIT or from 0–999.

ML2RECYCLEPERCENT OUT OF RANGE

Specify a value in the range of 0–100.

MOUNTWAITTIME

Specify a value from 1–120 and issue the command again.

NOACCEPTPSCBUSERID

RACF is active in the system from which this message was issued. If this command is in your startup procedure, remove it.

NOARECOVERREPLACE

This parameter is no longer supported.

NOCDVERSIONBACKUP

This parameter is no longer supported.

NOCSALIMITS

Specify the parameter on a SETSYS command again directed to a host started with HOSTMODE=MAIN.

NODEFERMOUNT

This parameter is no longer supported.

NOTRACE

This parameter is no longer supported.

ODMNOTIFICATIONLIMIT

Specify a value in the range of 1–99999.

OUTPUT UNITNAME=*es2out* CANNOT BE TRANSLATED TO INPUT UNITNAME=*es2in*, DEVICE TYPE CONFLICT.

Specify two unit names that contain compatible devices.

OUTPUT UNITNAME=*es2out* CANNOT BE TRANSLATED TO INPUT UNITNAME=*es2in*, INVALID INPUT UNIT NAME.

The USERUNITTABLE PARAMETER was specified on a SETSYS command with *es2out:es2in*. Define the input unit name to the operating system so it can be included in the DFSMSHsm user unit table.

OUTPUT UNITNAME=*es2out* CANNOT BE TRANSLATED TO INPUT UNITNAME=*es2in* – NO ONLINE DEVICES FOR OUTPUT UNIT NAME OR NOT ALL ONLINE DEVICES FOR OUTPUT UNIT NAME HAVE ACLS.

Make sure at least one device for the output unit name is online. Make sure all online devices for the output unit name have ACLs.

PARTIALTAPE

Do not specify MARKFULL or REUSE along with MIGRATION or BACKUP on the same SETSYS command.

PLEXNAME

Specify the name of the HSMplex only in the parmlib.

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PRIMARYSPMGMTSTART

The times must be in the range 0000–2400. The second time is optional and is set to 2400 if defaulted. A defaulted second time implies a late start time of 2400, which causes automatic primary space management to run until it is finished.

PROCESSING WILL BE DONE WITHOUT USING IDRC FORMAT FOR ESOTERIC=*unitname*

If IDRC format is required, define the named esoteric without 3480 devices. If IDRC format is not required, no further action needs to be taken.

PROMOTE

Specify PROMOTE with the appropriate parameters.

RECYCLE INPUT DEALLOC FREQUENCY (BACKUP) OUT OF RANGE

Specify a value for BACKUP in the range of 0–255.

RECYCLE INPUT DEALLOC FREQUENCY (MIGRATION) OUT OF RANGE

Specify a value for MIGRATION in the range of 0–255.

RECYCLEOUTPUT

Specify a tape unit name that you want DFSMSHsm to use. Valid units are 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter with the SETSYS command.

RECYCLEPERCENT OUT OF RANGE

Specify a value in the range of 0–100.

SECONDARYSPMGMTSTART

The times must be in the range 0000–2400. The second time is optional and is set to 2400 if defaulted. A defaulted second time implies a late start time of 2400, which causes automatic secondary space management to run until it is finished.

SELECTVOLUME

Do not specify SCRATCH or SPECIFIC along with MIGRATION, BACKUP or DUMP on the same SETSYS command.

SMALLDATASETPACKING

If the data set size value is to be in tracks, the value must be from 1–18. If the data set size value is to be in kilobytes, you must specify KB and use a value from 1–800. For example, SETSYS SMALLDATASETPACKING(KB(200)).

SPILL

Specify a tape unit name that you want DFSMSHsm to use. Valid units are 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter with the SETSYS command.

STANDARD DASDSELECTIONSIZE EXCEEDS MAXIMUM DASDSELECTIONSIZE

Verify that the number of kilobytes specified for the standard DASDSELECTIONSIZE is less than or equal to the number of kilobytes specified for the maximum DASDSELECTIONSIZE.

SWAP

If you are in a sysplex environment, do not attempt to make DFSMSHsm swappable. Otherwise, wait for all secondary address spaces to shut down, and then enter the SETSYS SWAP command.

TAPEDATASETORDER

Do not specify a general parameter option and a specific functional option on a single command. See *z/OS DFSMSHsm Storage Administration* for more information on the SETSYS TAPEDATASETORDER command.

TAPEDELETION

Do not specify SCRATCHTAPE or HSMTAPE along with MIGRATION, BACKUP or DUMP on the same SETSYS command.

TAPEMAXRECALLTASKS

The value supplied with the parameter must be from 1–15 and must be equal to or less than the value specified for MAXRECALLTASKS.

TAPEMAXRECALLTASKS > MAXRECALLTASKS

If the parameter for TAPEMAXRECALLTASKS is less than the value for the MAXRECALLTASKS parameter, the MAXRECALLTASKS parameter must appear before the TAPEMAXRECALLTASKS parameter in your command. The value supplied for the TAPEMAXRECALLTASKS parameter cannot be greater than the value for MAXRECALLTASKS.

TAPEMIGRATION

If the OCDS DD statement is missing in the DFSMSHsm startup procedure, add it to the startup JCL. If the OCDS is not defined, define it and add a JCL DD statement to your DFSMSHsm startup procedure. An example of the define procedure and the JCL DD statement is in *z/OS DFSMSHsm Implementation and Customization Guide*. To activate the tape migration function after you have received this message, stop DFSMSHsm and restart it with your new startup procedure containing the DD statement for the OCDS.

If there is an invalid subparameter of the TAPEMIGRATION parameter, correct the subparameter and issue the command again.

TAPEMIGRATION(RECONNECT)

Specify a subparameter of NONE, ALL, or ML2DIRECTEDONLY.

TAPERECALLLIMITS

Set the TASK or the TAPE time, or both.

TAPESPANSIZE

Issue the command again specifying a value from 0–1000.

TAPEUTILIZATION UNIT

If either the device or the esoteric is valid, then issue the SETSYS USERUNITTABLE(*unit*) command. For complete details, see SETSYS USERUNITTABLE in the *z/OS DFSMSHsm Storage Administration*.

TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH LIBRARYBACKUP OR LIBRARYMIGRATION

Correct the command and issue it again.

TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH A GENERIC UNIT NAME

Correct the command and issue it again.

TAPEUTILIZATION, ESOTERIC DOES NOT SUPPORT CAPACITYMODE(EXTENDED)

Correct the command and issue it again.

TRACE

This parameter is no longer supported.

UNITNAME=*unitname*

Specify a tape unit name you want DFSMSHsm to use.

If you specify the UNITNAME parameter, valid units are 34080, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter of the SETSYS command.

If you specify the CDSVERSIONBACKUP parameter with BACKUPDEVICE CATEGORY and TAPE subparameters, valid values for UNITNAME are 3400-3, 3400-4, 3400-5, 3400-6, 3400-9, 3480, 3480X, 3490, 3590-1, or an esoteric name that you previously specified with the USERUNITTABLE parameter of the SETSYS command.

USER UNIT TABLE CREATE FAILED, A FREEMAIN FAILURE OCCURRED

See associated message ARC0307I.

USER UNIT TABLE CREATE FAILED, A MACRO FAILED WHILE BUILDING THE UCB LIST

See associated message ARC0334I.

USER UNIT TABLE CREATE FAILED, A MODULE'S ESTAE SETUP FAILED

See associated message ARC0304I.

USER UNIT TABLE CREATE FAILED, AN ABEND OCCURRED IN A MODULE OR MACRO

See associated system abend messages.

USER UNIT TABLE CREATE FAILED, THE CAUSE OF FAILURE IS UNKNOWN

Search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

USER UNIT TABLE CREATE FAILED, THERE ARE NO VALID USER UNIT TABLE ENTRIES

See associated messages saying why entries are invalid.

Source: DFSMSHsm

ARC0104I INVALID INITIALIZATION COMMAND

Explanation: An initialization command was received, but is not valid during DFSMSHsm initialization.

System action: The command is rejected. DFSMSHsm initialization command processing continues.

Operator response: Because the command is part of the startup procedure, inform the system programmer of the invalid command.

Programmer response: Remove this command from the startup procedure or correct the command name. The DFSMSHsm initialization commands are explained in the *z/OS DFSMSHsm Implementation and Customization Guide* under the topic, "Specifying Commands that Define Your DFSMSHsm Environment".

Source: DFSMSHsm

ARC0105I INITIALIZATION COMMAND MEMBER *membername* NOT FOUND - RESTART DFSMSHSM

Explanation: During DFSMSHsm initialization, an attempt was made to read DFSMSHsm initialization commands from the specified member *membername*, which was not found.

System action: DFSMSHsm processing ends.

Operator response: Restart DFSMSHsm with the correct member name.

Programmer response: Make sure the data set and member with DFSMSHsm commands are available.

Source: DFSMSHsm

ARC0106I INVALID DFSMSHSM PARAMETER LIST *parameter* — RESTART DFSMSHSM

Explanation: The DFSMSHsm invocation parameter list contains an invalid parameter value *parameter*. The parameters and their possible values are explained in *z/OS DFSMSHsm Implementation and Customization Guide* under the topic, "DFSMSHsm Libraries and Procedures".

The error might be in the PARM=parameters on the EXEC statement or in a record in PARMLIB member ARCSTRxx.

System action: DFSMSHsm ends.

Operator response: Notify the storage administrator or system programmer.

Programmer response: Correct the invalid parameter and restart DFSMSHsm.

Source: DFSMSHsm

ARC0107I INSUFFICIENT MAIN STORAGE TO PROCESS INITIALIZATION COMMANDS

Explanation: The DFSMSHsm region size is insufficient for processing the specified initialization commands. A GETBUF request from DFSMSHsm for storage used for I/O processing failed to obtain the required storage.

System action: MVS processing continues without DFSMSHsm.

Operator response: Notify the storage administrator or system programmer. Restart DFSMSHsm when the problem has been corrected.

Programmer response: Examine the initialization commands for any DFSMSHsm commands that might cause unusual requirements for I/O buffers. Change the commands if necessary. An increase in the region size of DFSMSHsm might be necessary if the commands cannot be changed to correct the problem. Change the size specified in the cataloged procedure for DFSMSHsm and have the operator restart DFSMSHsm.

Source: DFSMSHsm

ARC0108I INITIALIZATION COMMAND REJECTED - COMMAND TOO LONG

Explanation: A command issued to DFSMSHsm during initialization had a length greater than 1024 characters. The maximum length of a DFSMSHsm initialization command is 1024 characters.

System action: All further DFSMSHsm command processing ends.

Programmer response: Correct and reissue the commands. If the failing command contains a minus sign (-) for a

continuation character, this does not allow for suppression of leading blanks in the subsequent record. Using a plus sign (+) suppresses the leading blanks in subsequent records and might reduce the number of characters for the command.

Source: DFSMSHsm

ARC0109I ACTIVITY LOGGING COULD NOT BE SWITCHED FROM {SYSOUT TO DASD | DASD TO SYSOUT | SYSOUT TO SYSOUT} DUE TO A GETMAIN ERROR

Explanation: The activity log could not be switched from SYSOUT to DASD, DASD to SYSOUT, or SYSOUT to SYSOUT because a GETMAIN error occurred that prevented the switch logic from completing the processing. Message ARC0307I will precede this message indicating the reason the GETMAIN failed.

System action: The activity log does not switch. DFSMSHsm will continue processing the logs with the current allocations.

Programmer response: Reduce the number of active DFSMSHsm tasks. You might need to stop and restart DFSMSHsm if storage is fragmented. Use the return code in message ARC0307I to determine the cause of the GETMAIN error.

Source: DFSMSHsm

ARC0110I {COMMAND | MIGRATION | BACKUP | DUMP} ACTIVITY LOG COULD NOT BE CLOSED/REOPENED DUE TO A GETMAIN ERROR

Explanation: The activity log could not be closed and reopened after the completion of a DFSMSHsm function that normally causes the activity log to be spooled for output. Message ARC0307I precedes this message indicating the reason the GETMAIN failed.

System action: The spooling of the activity log to output will not be done now. Messages will continue to be written to the current activity log. DFSMSHsm processing continues.

Programmer response: Determine the cause of the problem and issue the RELEASE HARDCOPY command to cause the logs to be closed and reopened. Reduce the number of active DFSMSHsm tasks. You might need to stop and restart DFSMSHsm if storage is fragmented. Use the return code in message ARC0307I to determine the cause of the GETMAIN error.

Source: DFSMSHsm

ARC0111I SUBFUNCTION {RECALL(TAPE) | RECALL(TAPE(TSO)) | BACKUP(AUTO) | DUMP(AUTO) | DUMP(FRBACKUP) | MIGRATION(AUTO) | ABACKUP(*agname*) | ARECOVER(*agname* | *controlfiledsname*) | DSCOMMAND | DSCOMMAND (TAPE) | DSCOMMAND(DASD) | COMMONQUEUE(RECALL) | COMMONQUEUE (RECALL(PLACEMENT)) | COMMONQUEUE(RECALL (SELECTION)) | FRRECOV(TAPE) | FRRECOV(DATASET)} CANNOT BE RELEASED WHILE MAIN FUNCTION{RECALL | RECALL(TAPE) | BACKUP | DUMP | RECOVER | RECOVER(TAPEDATASET) | MIGRATION | ABACKUP | ARECOVER | DSBACKUP | COMMONQUEUE | COMMONQUEUE(RECALL) | FRRECOV} IS HELD

Explanation: A RELEASE command was issued, but the request cannot be honored because it asks for release of a subfunction while the main function is still held.

- *agname* is the aggregate group that was specified in the RELEASE ABACKUP or RELEASE ARECOVER command.
- *controlfiledsname* is the name of the data set specified for the control file in the RELEASE ARECOVER command.
- *DSCOMMAND* refers to any of the following data set backup commands, macros, and programs: HBACKDS, BACKDS, ARCHBACK, and ARCINBACK.
- *DSBACKUP* refers to the data set backup function capable of processing any of the data set backup commands (*DSCOMMAND*).
- If *DSCOMMAND* and *BACKUP* are displayed, then a request was issued to release *DSCOMMAND* while *BACKUP* was held.
- If *TAPE* is displayed, a request to release *DSCOMMAND* to *TAPE* was issued while *DSCOMMAND* or *BACKUP* was held.
- If *DASD* is displayed, a request to release *DSCOMMAND* to *DASD* was issued while either *DSCOMMAND* or *BACKUP* was held.

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- If *DUMP* or *FRRECOV* is held, it must be released to allow its sub functions to be processed.

System action: The subfunction is still held and other DFSMSHsm processing continues.

Programmer response: The main function must be released to release the subfunction. For example, releasing RECALL will also release RECALL(TAPE).

Source: DFSMSHsm

ARC0112I AUTOMIGRATION NOT RELEASED - PREVIOUS HOLD COMMAND STILL IN PROGRESS

Explanation: A DFSMSHsm RELEASE command affecting automatic migration was issued while a previous HOLD command was still processing for that function.

System action: The AUTOMIGRATION subfunction of the RELEASE command is not processed. Other functions are released as requested.

Programmer response: Reissue the RELEASE command after all AUTOMIGRATION tasks have ended.

Source: DFSMSHsm

ARC0113I INVALID BACKUP CYCLE DAY GIVEN FOR ADDVOL

Explanation: The cycle day specified for a backup volume was greater than the defined backup cycle length or the cycle day specified was 0. The volume will be added as an unassigned daily backup volume if it does not already exist elsewhere.

System action: DFSMSHsm processing continues.

Programmer response: If the volume is to be assigned to a given day, reissue the ADDVOL command with the backup cycle length increased or the cycle day specified within the backup cycle length.

Source: DFSMSHsm

ARC0114I INVALID BACKUP DEVICE CATEGORY

Explanation: An invalid backup device category was specified on an ADDVOL command for a primary volume. The command will be processed, but no backup device category will be assigned to the volume. If the volume had been previously assigned with a valid backup device category specified, the volume will be backed up to the type of device specified in the previous ADDVOL command. Otherwise, the volume will be backed up to any available volume, regardless of type.

System action: DFSMSHsm processing continues.

Programmer response: If the volume is to be assigned to a device category, reissue the ADDVOL command with the proper device category specified. The valid types of backup device categories are DASD, tape, and none.

Source: DFSMSHsm

ARC0115I CAUTION - VOLUME *volser* IS CHANGING TO A {DELETE BY AGE | DELETE IF BACKED UP} VOLUME WITH DELETION AGE OF *days* DAY(S)

Explanation: A volume *volser* already added to DFSMSHsm with the space management attribute of migration is being added again. However, the volume is being added again with the space management attribute of delete-by-age *days* or delete-if-backed-up. DFSMSHsm will no longer select this volume to receive data sets during undirected recalls.

System action: DFSMSHsm processing continues.

Programmer response: If the volume is not meant to be a delete-by-age volume, reissue an ADDVOL command for the volume specifying the migration space management attribute.

Source: DFSMSHsm

ARC0116I PRIMARY VOLUME *volser* ACKNOWLEDGED

Explanation: DFSMSHsm received an ADDVOL command for a primary volume *volser* that is not online to the processor receiving the command. DFSMSHsm on the receiving processor supporting JES3 has accepted the volume as managed by DFSMSHsm and will work with JES3 to cause data set reservation on this volume as a DFSMSHsm volume. However, DFSMSHsm on the receiving processor does not completely add this volume to DFSMSHsm control or select the volume for data set recall. The volume must be online to at least one processor that has an active DFSMSHsm and an ADDVOL command must be issued to that processor to complete the addition.

System action: DFSMSHsm processing continues.

Operator response: If you want the volume to be online to the processor that acknowledged the volume, specify the volume online to that processor and restart DFSMSHsm.

Source: DFSMSHsm

ARC0117I ADDVOL *volser* REJECTED, PRIMARY VOLUME CANNOT BE DEMOUNTABLE WITH JES3

Explanation: An ADDVOL *volser* command has been issued to add a primary volume to a JES3 system. The volume is online, but not permanently resident or reserved and cannot be accepted when DFSMSHsm and a JES3 system are being used together.

System action: The command ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: To use this volume as a primary volume in a JES3 system, be sure it is mounted either permanently resident or reserved, before DFSMSHsm initialization. At initialization, the volume can be added to DFSMSHsm control.

Source: DFSMSHsm

ARC0118I ADDVOL REJECTED. VOLUME *volser* HAS CHANGED STATUS

Explanation: An ADDVOL command has been issued for a primary volume *volser* for which the AUTORECALL | NOAUTORECALL specification, the unit control block (UCB) storage status, or the unit type has been changed since the volume has previously been added. A combined JES3 and DFSMSHsm system might not function properly with such a change.

System action: The command ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: Correct the recall specification or the unit type to agree with the value in effect when DFSMSHsm has been initialized and reissue the request. To change the recall specification or the unit type for a primary volume in a JES3 environment, insert an ADDVOL command containing the desired changes in the ARCCMDxx member of the data set identified by the HSMPARM DD statement of the DFSMSHsm startup procedure.

Source: DFSMSHsm

ARC0119I ADDVOL REJECTED. VOLUME *volser* HAS BEEN DELETED

Explanation: An ADDVOL command has been issued to add a primary volume *volser* that has been deleted by a DELVOL command since DFSMSHsm last started. DFSMSHsm in a JES3 environment cannot accept the command.

System action: The command ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: Ensure that the ADDVOL command is in the ARCCMDxx member of the data set identified by the HSMPARM DD statement of the DFSMSHsm startup procedure and the ADDVOL command is not preceded by a DELVOL command for the same volume. Restart DFSMSHsm if necessary.

Source: DFSMSHsm

ARC0120I {BACKUP | MIGRATION | PRIMARY | DUMP} VOLUME *volser* {ADDED | NOT ADDED}, RC=
return-code, REAS= *reason-code*

Explanation: An ADDVOL command has been processed for the type of volume *volser* specified in the message. If the volume record is successfully created or updated, the return code will be zero.

The values for *return-code* are:

Retcode Meaning

- 0 Volume added or updated successfully.
 - 2 Tape migration level 2 volume already exists with valid data on it.
 - 4 Volume entry not found for the backup cycle volume record (BVR) update.
 - 8 Error in reading the BVR record.
 - 11 Error in writing the BVR record during internal ADDVOL command processing of a tape volume during recycle.
 - 12 Error in writing the BVR record.
 - 16 BVR record in use by another processor.
 - 20 Invalid days have been specified for data set deletion. The day must be between 0 and 999 inclusive.
 - 22 Invalid days have been specified on the MIGRATE subparameter. The only valid values are 0-999.
 - 25 A read or write error has occurred for the BVR or backup control data set backup volume record (MCT) during internal processing of an ADDVOL command and type change of a tape volume (for example, unassigned to SPILL). The error and record type are defined in a preceding ARC0184I message.
 - 28 There has been a read or write error on a migration control data set volume record (MCV) or MCT record. See message ARC0184I for details.
 - 30 The specified density is not supported by the specified unit name.
 - 31 A nonempty CAPACITYMODE(EXTENDED) ML2 or backup tape cannot be re-ADDVOLed to a unit that is not capable of reading the tape. To be capable of reading in CAPACITYMODE(EXTENDED), the unit must be an esoteric and contain only CAPACITYMODE switchable drives.
 - 32 Invalid density specified. Valid for dump volumes only, density must be 2, 3, or 4.
- Note:** The DENSITY parameter is no longer supported for tape backup or ML2 volumes. However, the DENSITY parameter is still supported for dump volumes and for existing volumes already defined to DFSMSHsm.
- 36 The MCV, MCT or dump volume record (DVL) is not found when read. Whichever record is being searched for, the other types are read to make sure the volume has not already been defined as another type of record than specified on the ADDVOL command. When reading another type of record, an error occurs in the read.
 - 37 There has been an error writing a new DVL record or reading or updating an existing DVL record. See message ARC0184I for details on the particular record that has caused the error.
 - 38 An attempt has been made to add a primary volume by using the ADDVOL command. The addition is not made because the ADDVOL command has specified more than 5 dump classes or 1 dump class has been specified more than once. Five dump classes are the maximum that can be specified in the ADDVOL of a primary volume and a given class can be specified only once.
 - 39 There has been an error reading an existing DCL record. While adding a primary or dump volume with the ADDVOL command, the dump class records associated with the volume are read to confirm that the classes exist and are not disabled. See message ARC0184I for details on the particular record that caused the error.
 - 40 For a primary volume, the high threshold has been given, but no low threshold has been specified. Specify either the high threshold and low threshold or neither.
 - 41 The track-managed threshold (TRACKMANAGEDTHRESHOLD) optional keyword has been specified either for a BACKUP or DUMP or MIGRATION volume or for PRIMARY volume that has less than 65520 cylinders (a non-Extended Address Volume). Specify the track-managed threshold optional keyword only for primary Extended Address Volumes.

- 44 The creation of the tape table of contents record (TTOC) has failed.
- 46 An internal ADDVOL command for a tape backup volume has failed because the volume already contains valid DFSMSHsm data.
- 48 The deletion of the TTOC record has failed.
- 52 The read for update of the MCT record has failed.
- 56 Internal error in module ARCCPADV.
- 58 DRAIN and NODRAIN parameters are valid only for DASD migration volumes.
- 61 An internal ADDVOL command has failed. See *reason-code* for additional information.
- 70 The dump volume has not been added because it is currently in use.
- 72 A specified dump class has been disabled as the result of a DEFINE DUMPCLASS DISABLE command. No further dumps are processed to this class and no dump volumes can be added to this class with the ADDVOL command. During the process of adding a primary volume with the ADDVOL command, if the AUTODUMP(*class*,...) parameter has not been specified, the MCV record is checked for dump classes specified on a previous ADDVOL command. If DUMPCLASS(*class*) has not been specified while adding a dump volume with the ADDVOL command, then the DVL record is checked for the dump class specified on a previous volume added with the ADDVOL command. If a dump class specified while adding a previous volume with the ADDVOL command is now disabled, this return code is issued and the ADDVOL command fails.
- 80 The volume is SMS managed or is in SMS-managed initial status. SMS-managed volumes cannot be explicitly added to DFSMSHsm, but are only added internally by DFSMSHsm when needed.
- 82 An error has occurred on OBTAIN while determining if the volume is SMS managed.
- 98 Internal ADDVOL command has failed. The number of tape volumes allocated under the current allocation exceeds the limit of 254 volumes.

The following reason codes *reason-code* apply only to return codes 44, 48, and 52:

- 4 The deletion of the BVR record has also failed. An error in reading the BVR record has caused the failure of the BVR record deletion.
- 8 The deletion of the BVR record has also failed. An error in writing the BVR record has caused the failure of the BVR record deletion.
- 12 The deletion of the BVR record has also failed. The BVR record has been in use by another processor causing the failure of the BVR record deletion.

The following reason codes apply only to return code 61:

- 4 Error in creating the MCV record.
- 8 Error in deleting the MCV record.
- 12 Error in reading the MCV record.
- 16 Error in writing the MCV record.
- 20 Error in creating the MCT record.
- 22 Error in creating the DVL record.
- 24 Error in deleting the MCT record.
- 26 Error in deleting the DVL record.
- 28 Error in reading the MCT record.
- 30 Error in reading the DVL record.
- 32 Error in writing the MCT record.
- 34 Error in updating the DVL record.
- 36 Error in creating the TTOC record.

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- 38 Error in reading a dump class record (DCL).
- 40 Error in reading the TTOC record.
- 44 Error in writing the TTOC record.
- 48 Error in changing the key of a TTOC record.
- 52 Error in deleting a BVR volume entry.
- 56 Error in creating a BVR volume entry.
- 60 Error in updating a BVR volume entry.
- 64 Tape volume contains valid DFSMSHsm data. The file sequence number in the MCV or MCT record is nonzero.
- 68 The tape volume is RACF-protected, but does not appear in DFSMSHsm's RACF tape volume set. Also, the tape volume is not in DFSMSHsm's inventory of backup or migration volumes.
- 72 The tape volume is RACF-protected, but does not appear in DFSMSHsm's RACF tape volume set. Also, the tape volume has been in DFSMSHsm's inventory of backup or migration volumes. The DFSMSHsm control data set record (MCV or MCT) indicates the tape volume is empty (the file sequence number is zero). The tape volume is being removed from DFSMSHsm's inventory of backup or migration volumes. For additional information, see the explanation of message ARC0357I.
- 76 The tape volume is RACF-protected, but does not appear in DFSMSHsm's RACF tape volume set. Also, the tape volume is in DFSMSHsm's inventory of backup or migration volumes. The DFSMSHsm control data set record (MCV or MCT) indicates the tape volume is not empty (the file sequence number is nonzero). The tape volume is being marked full in the necessary control data set records to prevent its further use by DFSMSHsm. For additional information, see the explanation of message ARC0360I.
- 80 An error has occurred when DFSMSHsm attempted to add the tape volume to its RACF tape volume set named either HSMHSM or DFHSMx.
- 84 An error has occurred when DFSMSHsm attempted to delete the tape volume from its RACF tape volume set named either HSMHSM or DFHSMx.
- 97 Internal error in module ARCTEOV.
- 108 Error in reading the previous volume's MCV record.

The following reason codes apply only to return code 82 and are the return codes from the OBTAIN:

- 4 Volume is not mounted.
- 12 An I/O error or invalid volume VTOC entry.
- 16 Invalid work area pointer.

System action: ADDVOL processing ends if the return code is not 0. DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: Notify the storage administrator or system programmer for return codes 4, 8, 11, 12, 16, 25, 28, 36, 37, 39, 44, 48, 52, or 61.

- For return code 20, reissue the ADDVOL command with a DELETEBYAGE(*days*) parameter between 0 and 999 inclusive.
- For return code 22, reissue the ADDVOL command with the MIGRATE(*days*) subparameter, with a day value between 0 and 999 inclusive.
- For return codes 30 and 32, reissue the ADDVOL command, specifying the correct tape density. Specify a tape density of 2, 3, or 4 only for valid dump volumes.
- For return code 38, reissue the ADDVOL command with no more than 5 dump classes specified.
- For return code 40, reissue the ADDVOL command specifying both high thresholds and low thresholds or neither.
- For return code 41, reissue the ADDVOL command without the optional TRACKMANAGEDTHRESHOLD keyword.

- For return code 56, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.
- For return code 72, reissue the ADDVOL command with a dump class that has not been disabled. If the dump class is needed again, use the DEFINE command to redefine it. After the dump class is redefined, reissue the ADDVOL command.
- For return code 80, remove the ADDVOL command from the startup member if the command is being issued during startup.
- For return code 82, determine the cause of the error from the reason code, correct the problem, and reenter the ADDVOL command.

Source: DFSMSHsm

ARC0121I ADDVOL OR DELVOL *volser* REJECTED - VOLUME TYPE NOT SPECIFIED

Explanation: Using the ADDVOL command, you attempted to add a volume to the set of volumes managed by DFSMSHsm or using the DELVOL command, you attempted to delete a volume from that set. You must specify the type of use intended for the volume; it was not specified with this command. The volume serial number in the command is *volser*.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with a volume type of PRIMARY, MIGRATION, BACKUP or DUMP.

Source: DFSMSHsm

ARC0122I ADDVOL *volser* REJECTED - UNIT NOT SPECIFIED

Explanation: Using the ADDVOL command, you attempted to add a volume to DFSMSHsm control. The command failed because you did not specify the unit type. The volume serial number of the volume in the command is *volser*.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with the desired unit type specified.

Source: DFSMSHsm

ARC0123I INVALID VOLUME SERIAL NUMBER *volser*

Explanation: An ADDVOL, DELVOL, ARECOVER, AUDIT, BACKDS, BACKVOL, FREEVOL, BDELETE, DEFINE, HBDELETE, MIGRATE, RECALL, RECOVER, RECYCLE, LIST, or HLIST command was issued. The specified volume serial number *volser* is more than 6 characters long or contains invalid characters.

System action: For BACKVOL, processing continues with the next volume serial number specified. For other commands, the command ends and DFSMSHsm processing continues.

Programmer response: Determine the correct volume serial number and reissue the command.

Source: DFSMSHsm

ARC0124I CAUTION - VSAM SMALL-DATA-SET-PACKING DATA SET WAS NOT FOUND ON VOLUME *volser*, THE VOLUME WILL BE ADDED TO DFSMSHSM WITH THE NOSDSP ATTRIBUTE, RC = *return-code* REAS = *reason-code*

Explanation: An ADDVOL command adding a ML1 volume with an SDSPP attribute is being processed. However, the SDSPP data set does not exist on the volume. DFSMSHsm will attempt to continue processing ADDVOL of this volume with NOSDSP attribute. Look for message ARC0120I to confirm that the ADDVOL is successful.

The values for *return-code* are:

Retcode Meaning

- | | |
|---|---|
| 4 | An SDSPP data set for the volume was cataloged, but the SDSPP data set does not exist on the ML1 volume being ADDVOLed. |
| 8 | SDSP data set not found. |

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The *reason-code* is the return code from VSAM LOCATE.

System action: DFSMSHsm processing continues.

Programmer response: Change the SDSP keyword to NOSDSP on the ADDVOL command if the ML1 volume (*volser*) is to be added without an SDSP data set on it. If the ML1 volume (*volser*) is to be added with an SDSP attribute, then verify that the volume associated SDSP data set is allocated on the volume and reissue the ADDVOL command.

Source: DFSMSHsm

ARC0125I ADDVOL *volser* REJECTED - INVALID UNIT TYPE *unittype*

Explanation: An ADDVOL command was issued to add a volume to DFSMSHsm control. The command failed because the unit type specified in the command was invalid or a tape volume was specified as a primary or migration level 1 volume. Tape volumes are only supported as backup, dump, or migration level 2 volumes. Dump volumes cannot be DASD volumes. The volume serial number is *volser* and the invalid unit type is *unittype*.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with the desired unit type correctly specified. Be sure this unit type is supported by DFSMSHsm.

Note: Reel-type tapes associated with devices prior to 3480 are no longer supported by DFSMSHsm for backup and migration functions. However, dump volumes can still use reel-type tapes.

Source: DFSMSHsm

ARC0126I ADDVOL *volser* REJECTED - TYPE INCONSISTENT WITH DFSMSHSM CDS, RC = *return-code*

Explanation: The ADDVOL command was issued to add a volume with volume serial number *volser* to DFSMSHsm control. This command failed because the unit type or volume type (primary, migration level 1, migration level 2, daily backup, dump, or spill backup) was inconsistent with a previous control data set entry for the same volume.

Associated with each return code *return-code* is an example of why the message was issued:

Retcode Meaning

- 2 The volume was previously added as a primary volume, but is now being added as a different kind of volume.
- 4 The volume was previously added as a migration level 1 volume, but is now being added as a different kind of volume.
- 6 The volume was previously added as a migration level 2 volume, but is now being added as a different kind of volume.
- 8 The volume was previously added as a daily backup volume, but is now being added as a different kind of volume.
- 10 The volume was previously added as a spill backup volume, but is now being added as a different kind of volume.
- 12 The volume was previously added as an unassigned backup volume, but is now being added as a different kind of volume.
- 14 The volume was previously added as a dump volume, but is now being added as a different kind of volume.
- 20 The volume was previously added with a different unit type.
- 22 The daily backup volume was previously added for a different day in the backup cycle.
- 24 The dump volume is already assigned to a dump class and contains part of a valid dump copy.
- 27 An attempt was made to ADDVOL a volume. This attempt has created an incompatibility in the IDRC status of the volume.
- 28 The unit name specified on the ADDVOL command is incompatible with the unit name that was already defined for the volume *volser*. One of the following incompatible conditions was detected by DFSMSHsm:

- The device type of the unit name used to create the tape was 3490, which is incompatible with the device type of the new unit name, which is 3590. This inconsistency might have resulted from an attempt to convert from 3591 (emulated 3490s) to 3590-1.
- The unit name specified on the ADDVOL command was 3490 and the volume *volser* already contained valid data that was written by a 3480 or 3480X tape device.
- The unit name specified on the ADDVOL command was 3480 or 3480X and the volume *volser* was previously defined as a 3490.
- The unit name specified on the ADDVOL command was 3480, 3480X, or 3490 and the volume *volser* was previously defined as 3590-1.
- The unit name specified on the ADDVOL command was 3590-1 and the volume *volser* was previously defined as 3480, 3480X, or 3490.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Determine the cause of the inconsistencies with a LIST or HLIST command and correct them by changing the ADDVOL command or by issuing a DELVOL command to remove the conflicting control data set information. For *reason-code 28*, perform one of the following:

- If you are converting a 3591 to a 3590-1 device, first use the FIXCDS command to change the device type from 3490 to 3590 in the migration, backup, or dump volume record. Then reissue the ADDVOL command to change the unit name.

FIXCDS commands for volumes being converted are as follows:

For ML2

```
FIXCDS V volser PATCH(X'1C' X'78048083')
```

For BACKUP

```
FIXCDS X volser PATCH(X'48' X'78048083')
```

For DUMP

```
FIXCDS Y volser PATCH(X'0C' X'78048083')
```

- Issue the ADDVOL command with a unit name that is compatible with how the tape volume has already been defined.
- Remove the volume from DFSMSHsm's control by issuing the DELVOL command with the PURGE parameter. Then reissue the ADDVOL command and specify the desired unit name.

Note: Issue the DELVOL PURGE command only if the tape is empty or if you no longer need the contents of the tape. If you issue the DELVOL PURGE command on an ML2 tape that contains valid data, the command will fail. If you issue the DELVOL PURGE command for a backup tape containing valid data, you will lose the data.

Source: DFSMSHsm

ARC0127I INVALID {SETSYS | ADDVOL | DEFINE} REQUEST AFTER DFSMSHSM INITIALIZATION

Explanation: You issued a DFSMSHsm command that contains parameters or exposes conditions that prohibit its processing other than from the ARCCMDxx member of the data set identified by the HSM Parm DD statement of the DFSMSHsm startup procedure in a JES3 environment. The command was received from a different source. The specified command is not accepted at times other than initialization.

System action: The prohibited parameters on a SETSYS command are ignored. An ADDVOL or DEFINE command ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: To process this command, place it in the ARCCMDxx member and restart DFSMSHsm.

Source: DFSMSHsm

ARC0128I CYCLE LENGTH TOO LONG OR CYCLE DEFINITION HAS OTHER THAN Y OR N

Explanation: A DEFINE command was issued to define a backup cycle, dump cycle, migration cleanup cycle, primary space management cycle, or secondary space management cycle. The command failed because the cycle length exceeded 31 days or characters other than Y and N were used to define the cycle. A Y means automatic backup, automatic dump, automatic migration cleanup, automatic primary space management, or automatic secondary space management will be done that day. An N means no automatic backup, no automatic dump, no automatic migration cleanup, no automatic primary space management, or no automatic secondary space management will be done that day.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Examine the BACKUP, DUMP, MIGRATIONCLEANUPCYCLE, PRIMARYSPMGMTCYCLE, or SECONDARYSPMGMTCYCLE parameter of the DEFINE command for accuracy and reissue the command. Be sure the cycle length does not exceed 31 days and a Y or N was used to define the cycle.

Source: DFSMSHsm

ARC0129I DEFINE REJECTED. NO PRIOR ADDVOL FOR VOLUME *volser*

Explanation: A DEFINE command with the POOL parameter has been issued that contains the volume *volser*. Either the volume has not been specified in a previous ADDVOL command or has not been specified as a primary volume in a previous ADDVOL command. In a JES3 environment, DFSMSHsm does not accept a DEFINE command for a volume that has not been added previously.

System action: The command ends without defining any volumes in the pool. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: Ensure that a previous ADDVOL command has been issued for the volume, the volume has been added as a primary volume, and the volume serial number has been spelled correctly in the DEFINE command with the POOL parameter. Correct the problem and restart DFSMSHsm if necessary.

Source: DFSMSHsm

ARC0130I CONTROL DATA SET DEFINITION RULES FOR THE {MCDS | BCDS | OCDS} WERE NOT FOLLOWED, RETURN CODE=*return-code*

Explanation: The migration control data set (MCDS), backup control data set (BCDS), or offline control data set (OCDS) does not agree with the DFSMSHsm recommended definition. The rules for defining this data set were not followed. The *return-code* describes the problem found with the definition.

The values for *return-code* are:

Retcode Meaning

- 1 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The key ranges are not contiguous. The low key range of the first cluster must be X'00' and the high key range of the last cluster must be X'FF'. For all other ranges, there must be no gap or overlap between the high key range of one cluster and the low key range of the subsequent cluster.
- 2 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The maximum record size defined for all clusters must be the same.
- 3 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The record key must start at relative position 0 and be 44 characters long for all clusters.
- 4 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The control interval (CI) size defined for all clusters must be the same.
- 5 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The number of CIs per control area (CA) must be the same for all clusters.

- 6 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The volume device type must be the same for all clusters.
- 7 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The device share option for all devices that contain the cluster must be the same.
- 8 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. The high key range for each cluster must contain X'FF'. X'FF' is the fill character for this key range when it is less than 44 characters.
- 9 The MCDS or the BCDS was defined as a multicluster data set that allows separate clusters to exist for the data set key ranges. However, the rules for defining these clusters were not followed. Only primary space on one volume may be specified when the data set is not accessed in RLS mode.
- 10 The MCDS, BCDS, or OCDS may not be defined as an extended format VSAM KSDS unless it is accessed in RLS mode.
- 11 The MCDS, BCDS, or OCDS was defined as a single volume data set that allows secondary allocation. Only primary allocation should be specified. Specifying secondary allocation can result in performance and deadlock problems when it is not accessed in RLS mode. In all cases, DFSMSHsm continues processing.
- 13 The MCDS or BCDS is defined as a multicluster data set. DFSMSHsm has determined that the clusters' key boundaries have changed since the last time that DFSMSHsm was started. Refer to System programmer response below for additional information about this return code.
- 14 The MCDS was defined as a multicluster data set without key ranges. During processing to calculate the dynamic key boundaries, DFSMSHsm determined that the high key of the first cluster was set at less than the acceptable value (X'10' | | C'MHCR').
- 15 An MCDS, BCDS, or OCDS cluster was defined as multivolume, but is being accessed in CDSR mode. This can cause problems, such as inaccurate CDS space calculations.
- 19 OCDS cluster was defined with a record size of 6144 on a level of DFSMSHsm that does not support the extended TTOC feature.
- 20 DFSMSHsm detected a change in the number of clusters specified for this CDS and the operator indicated this cluster count change was not intended.

System action: If RC=13 or 14, or if the error occurs with the MCDS, the startup of DFSMSHsm is incomplete. If the error occurs with the BCDS or OCDS, the startup continues, but all related functions are disabled. For RC=15, DFSMSHsm initialization continues.

System programmer response: Correct the reported error and restart DFSMSHsm.

For RC=13, this situation occurs if the CDS clusters' key boundaries have been restructured. To correct the situation, return the CDS clusters' key boundaries to their previous state and restart DFSMSHsm. See the *z/OS DFSMSHsm Storage Administration* for details on the correct method to restructure the CDS clusters' key boundaries.

For RC=14, restructure the CDS clusters so that the high key of the first cluster is greater than or equal to X'10' | | C'MHCR'. See the *z/OS DFSMSHsm Storage Administration* for details on the correct method to restructure the CDS clusters' key boundaries.

For RC=20, refer to the preceding ARC0264A message for details on the cluster count conflict.

Source: DFSMSHsm

ARC0131I MIGRATE REJECTED - VOLUME OR DSNAME REQUIRED

Explanation: The MIGRATE command was issued to cause space management. The required volume serial number or data set name was not supplied.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Supply the identification of the volume or data set to be migrated. Reissue the command.

Source: DFSMSHsm

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ARC0132I {MIGRATE | BACKVOL | ABACKUP | ARECOVER} REJECTED - INVALID UNIT TYPE *unittype*
FOR *volser*

Explanation: A MIGRATE, BACKVOL, ABACKUP, or ARECOVER command was issued. The UNIT or CONVERT parameter was specified with an invalid *unittype*. For BACKVOL, *volser* indicates a volume for which the unit type *unittype* would have been used, if valid.

System action: The MIGRATE, ABACKUP, or ARECOVER command ends and DFSMSHsm processing continues. The BACKVOL command continues with any other volumes specified.

Programmer response: Verify the *unittype* specified on the UNIT parameter of the MIGRATE, BACKVOL, ABACKUP, or ARECOVER command or the CONVERT parameter of the MIGRATE command. Reissue the MIGRATE, ABACKUP, or ARECOVER command. For BACKVOL, reissue the command with the list of volume serial numbers appearing in message ARC0132I.

Source: DFSMSHsm

ARC0133I OFFLINE CONTROL DATA SET NOT OPENED, TAPE SUPPORT WILL NOT BE ACTIVE

Explanation: During initialization and startup processing of DFSMSHsm, an attempt was made to open the offline control data set, but no DD statement was provided.

System action: DFSMSHsm processing continues.

Programmer response: If tape support for migration or backup is desired, stop DFSMSHsm, and restart it with the proper DD statement inserted in the JCL for the offline control data set (OCDS).

If tape support for migration or backup is not to be used or if tape support is only required for the volume dump function, ignore the message. The OCDS is not required when tape support is not used in migration or backup and is not required by the volume dump function.

Source: DFSMSHsm

ARC0134I BACKUP CONTROL DATA SET NOT OPENED, BACKUP WILL NOT BE ENABLED

Explanation: One of the following conditions occurred:

- An attempt to open the BCDS during DFSMSHsm initialization failed. Either no DD statement was provided or opening the BCDS failed for some other reason.
- During processing of the DEFINE command with the BACKUP parameter, it was determined that the BCDS was not open.

System action: Backup is disabled. DFSMSHsm processing continues.

Programmer response: If either backup or dump is desired, this message represents an error and DFSMSHsm should be stopped and restarted with the proper DD statement inserted in the JCL for the BCDS. If neither backup nor dump is desired, ignore the message and do not issue the DEFINE command with the BACKUP parameter. If the DD statement appears to be correct, consider running EXAMINE or VERIFY against the BCDS to look for errors in the data set.

Source: DFSMSHsm

ARC0135I INVALID UNIT TYPE *unittype*

Explanation: The *unittype* specified with the UNIT parameter of a command requesting a recall, recovery, or backup operation is not supported by DFSMSHsm.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Correct the *unittype*, and reissue the command.

Source: DFSMSHsm

ARC0136I UNIT AND VOLUME NOT SPECIFIED, BOTH REQUIRED

Explanation: In a request to DFSMSHsm for a recall, recovery, or backup operation, either the VOLUME or UNIT parameter was specified, but not both. If either parameter is specified, both parameters must be specified.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with all the required information.

Source: DFSMSHsm

ARC0137I MIGRATE REJECTED - INVALID OR NO DELETE DAYS SPECIFIED

Explanation: The delete-by-age or delete-if-backed-up space management attribute was specified on the MIGRATE command. Either the days subparameter specified was greater than 999 or less than 0 or the required value for the DELETEBYAGE or DELETEIFBACKEDUP parameter was not specified at all.

System action: The MIGRATE command ends. DFSMSHsm processing continues.

Programmer response: Reissue the MIGRATE command with the correct *days* specified in the command.

Source: DFSMSHsm

**ARC0138I NO {MCDS | BCDS} INFORMATION FOUND FOR {VOLUME | DATASET | DUMPVOLUME |
 DUMPCLASS | LEVEL | COPYPOOL | AGGREGATE GROUP} *key* {VERSION(*vvvv*) |
 DATE(*yyyy/mm/dd*)}**

Explanation: A LIST or HLIST command was issued to list the following:

- Backup control data set (BCDS) information about a data set, volume *key*, dump class, aggregate group or copy pool *key*.
- Migration control data set (MCDS) information about a data set or volume *key*.
- Information from both MCDS and BCDS about a data set or volume *key*.
- AGGREGATE GROUP *key* — The ABR record information was requested by the LIST command. *key* was the aggregate group name specified. * indicates that ABR record information was requested for all aggregate groups.
- VERSION(*vvvv*) — VERSION was specified on the LIST AGGREGATE command. ABR records for VERSION(*vvvv*) for the specified aggregate groups were to be listed.
- DATE(*yyyy/mm/dd*) — DATE was specified on the LIST AGGREGATE command. ABR records dated *yyyy/mm/dd* for the specified aggregate groups were to be listed.

No information was found for the data set, volume, level, dump class, aggregate group, or copy pool with the serial number or name of *key*.

System action: LIST or HLIST processing ends. DFSMSHsm processing continues.

Programmer response: The command might have been issued with the wrong control data set specified or implied. Reissue the LIST or HLIST command with the correct parameters.

Source: DFSMSHsm

**ARC0139I MAXINTERVALTASKS = *xx*, ONDEMANDMIGRATION={YES | NO},
 ODMNOTIFICATIONLIMIT=*limit* MAXSSMTASKS (TAPEMOVEMENT=*mm*, CLEANUP=*nn*)**

Explanation: A QUERY command was issued with the SETSYS parameter.

This message is issued by DFSMSHsm to describe its current operating environment.

MAXINTERVALTASKS is the maximum number of interval migration tasks or on-demand migration tasks that can run concurrently. If this parameter is not specified, then the MAXMIGRATIONTASKS value is used.

ONDEMANDMIGRATION=YES indicates that on-demand migration is used instead of interval migration on SMS-managed volumes with the storage group setting AM=Y (Auto Migrate, yes).

ONDEMANDMIGRATION=NO indicates that interval migration is performed each hour.

ODMNOTIFICATIONLIMIT=*limit* indicates the notification limit for the number of volumes concurrently queued for

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on-demand migration. If the number of volumes concurrently queued for on-demand migration is equal to or greater than the notification limit, message ARC1901I is issued.

MAXSSMTASKS(TAPEMOVEMENT) is the maximum number of secondary space management tape migration tasks that can run concurrently.

MAXSSMTASKS(CLEANUP) is the maximum number of statistics and migration cleanup tasks that can run concurrently.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0140I LIST COMPLETED, *linecount* LINE(S) OF DATA OUTPUT

Explanation: A LIST or HLIST command was issued. LIST functional processing has completed and *linecount* lines of data were either written to an output data set or written to the terminal of the person who issued the command. Header lines, trailer lines, and any error messages are not counted.

System action: DFSMSHsm processing continues.

Programmer response: If the message indicates that there were zero lines of data, see any accompanying error messages and check to see that you issued the command correctly.

If there are no accompanying error messages, then none of the selected information was found for the volume.

Source: DFSMSHsm

ARC0141I ERROR ALLOCATING OUTPUT DATA SET

Explanation: You issued the DFSMSHsm LIST, HLIST, AUDIT, REPORT, RECYCLE, or EXPIREBV command. The output of the command was to be written to an output data set or a spool data set. However, the data set could not be created.

System action: Except in the following case, the command ends, and DFSMSHsm processing continues.

Exception case: You specified the RECYCLE ALL command with a prefix or a full data set name for the TAPELIST data sets, and the failure occurred when DFSMSHsm tried to open the data set for level 2 volumes. RECYCLE processing continues to attempt to process backup volumes.

Programmer response: Check for the following conditions:

- Check to see if the OUTDATASET parameter was specified. If so, verify whether the data set exists or not.
- Check to see if there is an associated system I/O error message.
- Check to see if there is enough space available to create the data set.
- Check to see if the data set was preallocated. If so, its characteristics might be incompatible with those required for the output data set.

Source: DFSMSHsm

ARC0142I {BACKUP OF MCDS(n) | BACKUP OF BCDS(n) | BACKUP OF OCDS | BACKUP OF JRNL | MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | MIGRATION CLEANUP | LEVEL 1 TO LEVEL 2 MIGRATION | CDS BACKUP}, CURRENTLY IN PROCESS,TCB=*tcaddress*

Explanation: A QUERY command was issued with the ACTIVE parameter. When DFSMSHsm receives the QUERY command, it issues this message for each of the following active functions:

- Backup of the MCDS
- Backup of the BCDS
- Backup of the OCDS
- Backup of the journal
- Movement of backup versions
- Backup of migrated data sets

- Migration cleanup
- Level 1 to level 2 migration
- The CDS backup process is pending due to a WAIT for the enqueue on ARCGPA ARCCAT.

If the TCBADDRESS subparameter is specified with the ACTIVE parameter, each CDS cluster currently being backed up will be displayed. The TCBADDRESS value represents the unique task identifier for the function and can be used with the CANCEL command to end the active task. See the DFSMSHsm CANCEL command for usage information.

System action: DFSMSHsm processing continues. The insert of CDS BACKUP occurs when some function other than CDS backup is held because a reply from the operator is outstanding or a tape mount was issued but has not yet completed.

Operator response: If the insert of CDS BACKUP is displayed, check for outstanding mounts and replies.

Programmer response: None.

Source: DFSMSHsm

ARC0143I PARMLIB MEMBER=ARCCMD xx , DFSMSHSM AUTHORIZED USERID= uid , HOSTID= $procid$, PRIMARY HOST={YES | NO}, LOGSW={YES | NO}, STARTUP={YES | NO}, EMERGENCY={YES | NO}, CDSQ={YES | NO}, CDSR={YES | NO}, PDA={YES | NO}, RESTART={IS SPECIFIED | NOT SPECIFIED}, CDSSHR={YES | NO | RLS}, RNAMEDSN={YES | NO}, STARTUP PARMLIB MEMBER={ARCSTR yy | NONE}

Explanation: A QUERY command has been issued with the STARTUP parameter. This message gives those parameters specified on the operator-issued START HSM command or those values specified on the HSM PROC statement in the DFSMSHsm startup procedure in SYS1.PROCLIB. If no values are specified, it displays the system default values.

- ARCCMD xx indicates the SYS1.PARMLIB or system concatenated parmlib member containing the DFSMSHsm commands that have been processed during startup.
- uid is the authorized user identifier for DFSMSHsm that has been specified at startup time.
- $procid$ is the processing unit identifier that has been specified at startup time for this processing unit.
- PRIMARY HOST indicates whether this processing unit is to perform level 1 functions.
- LOGSW indicates whether the DFSMSHsm log has been swapped at startup time.

The following values for STARTUP and EMERGENCY are the values specified when DFSMSHsm has been started, but they do not necessarily reflect the current values with which DFSMSHsm is operating.

- STARTUP indicates whether DFSMSHsm sends startup messages to the operator console at startup time.
- EMERGENCY indicates whether DFSMSHsm has been in emergency mode at startup time.
- CDSQ indicates whether CDS serialization is done globally.
- CDSR indicates whether CDS uses hardware reserves.
- PDA indicates if PDA TRACE has been specified at startup.
- RESTART indicates that DFSMSHsm automatically restarts itself after abnormally ending. If RESTART=IS SPECIFIED, message ARC0248I follows with the restart parameters.
- CDSSHR indicates if DFSMSHsm will run in a multiple z/OS image environment. It also indicates if RLS access is being used.
- RNAMEDSN indicates whether minor resource names are translated. If RNAMEDSN=Y is displayed, DFSMSHsm translates the resource names. If RNAMEDSN=N is displayed, the resource names are compatible with down-level releases.
- If keyword STR= yy is specified at startup, ARCSTR yy is the name of the PARMLIB member DFSMSHsm scans for additional startup parameters.

See following message ARC0249I for additional startup parameters.

System action: DFSMSHsm/MVS processing continues.

Programmer response: None.

Source: DFSMSHsm

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ARC0144I AUDIT={HELD | NOT HELD} AND {ACTIVE | INACTIVE}, LIST={HELD | NOT HELD} AND {ACTIVE | INACTIVE}, RECYCLE={HELD | NOT HELD} AND {ACTIVE | INACTIVE}, REPORT={HELD | NOT HELD} AND {ACTIVE | INACTIVE}

Explanation: A QUERY command was issued with the ACTIVE parameter. This message gives the status of the potentially long running commands (AUDIT, LIST, RECYCLE and REPORT). HELD and NOT HELD indicate whether the operator issued a HOLD command to hold the function. ACTIVE and INACTIVE indicate whether a command is currently in progress.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0145I DS DELETED=*datasets*, DS DELETE FAILED=*fails*

Explanation: A QUERY command was issued with the STATISTICS parameter. This message contains data set deletion statistics for the current day. The number of data sets deleted is *datasets*. The number of data set deletions that failed is *fails*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0146I RECYCLED {BACKUP | MIGRATION} VOLUMES=*volumes*, DS=*datasets*, BLOCKS=*blocks*

Explanation: A QUERY command was issued with the STATISTICS parameter. This message contains recycle statistics for the number of volumes *volumes* recycled, the number of data sets *datasets* moved and the number of 16K blocks *blocks* processed during recycle for the current day.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0147I BUDENSITY=*density*, BUUNIT=*unit*, BU RECYCLE PERCENTAGE=*percent%*, MOUNT WAIT TIME=*min* MINUTE(S), TAPESPANSIZE(*mbytes*)

Explanation: A QUERY command was issued with the SETSYS parameter. DFSMSHsm issues this message to describe its current environment.

The current tape density for either backup scratch tapes or recycle scratch tapes, or both, is *density*.

For 3420 tape drives, the default density can be 2, 3, or 4.

For 3480 tape drives that simulate 3420 tape drives, the default density is 4.

For 3480 tape drives that use all the functions of the 3480 Magnetic Tape Subsystem, the default is an *. The default tape unit for scratch tapes is *unit*. The default recycle percentage is *percent*. When the percent of valid data remaining on a tape backup volume is less than or equal to the specified percentage, message ARC0365I is issued stating that the tape volume is eligible for recycle. The elapsed time during which DFSMSHsm will wait for the correct tape to be mounted before issuing message ARC0310A is *min* minutes.

mbytes is the maximum number of megabytes of tape that DFSMSHsm might leave unused while it is trying to eliminate spanning data sets.

Note: ARC0310A is a message to the operator inquiring about the requested tape.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0148I {MCDS | BCDS | OCDS | JOURNAL} TOTAL SPACE=*kbytes* K-BYTES CURRENTLY ABOUT *percent%* FULL, WARNING THRESHOLD=*thresh%*, TOTAL FREESPACE=*percent%*, EA={YES | NO}, CANDIDATE VOLUMES=*numvols*

Explanation: A QUERY command was issued with the CONTROLDATASETS parameter. This message contains information about the migration control data set (MCDS), backup control data set (BCDS), offline control data set (OCDS), or journal data set. DFSMSHsm issues this message once for each control data set and the journal data set.

Note: If a number is concatenated to the CDS name (such as MCDS2), then the message refers to a single volume of a multicluster CDS.

For JOURNAL, the end of the data set figure used in the following calculations is based on the last journal updates on the host that the message was issued on. Dpdates made on another host might have extended the actual end of the data set.

TOTAL SPACE=*kbytes* K-BYTES is the total space allocated in kilobytes. This space figure is based on the amount of space between the beginning and end of the data set (high-allocated). If the data set is defined so it can extend, this value increases. This value is used as the denominator in the calculation of the % FULL and % FREESPACE as described later in this section.

CURRENTLY ABOUT *percent%* FULL is the percentage of space used in the data set.

The numerator is the amount of space between the beginning of the data set and the high-used point in the data set. For the CDSs, DFSMSHsm does not subtract the free space below the high-used point, since free space below can still exist when VSAM indicates the data set is full. For example, there can be free space in some control intervals (CI) and control areas (CA) below the high-used point in a key-sequenced data set (KSDS); however, an insert of a new logical record can still receive a return code indicating an out-of-space condition if there is no more space available above the high-used point in the KSDS. Space utilization in a VSAM KSDS is dependent on the location of a new record insert. For example, space must be free in the CI, or a CI must be free in the CA where the insert is to be performed. Otherwise, VSAM tries to obtain a new CA after the high-used point to split the current CA.

The denominator is the TOTAL SPACE in the data set as described above.

This value might vary in size if the data set is defined so it can extend, or if records are inserted or deleted.

WARNING THRESHOLD=*thresh%* is the installation-specified threshold percentage of occupancy specified by the SETSYS MONITOR command which, when exceeded, issues a warning message (ARC0909E).

TOTAL FREESPACE=*percent%* is the percentage of free space (not occupied).

For the CDSs, the numerator is the free space in the data set as indicated in a LISTCAT command plus the free space between the high-used and the end of the data set (high-allocated). For the journal, the numerator is the free space between the high-used point and the end of the data set.

The denominator is the TOTAL SPACE as described above.

EA={YES | NO}: indicates whether or not the CDS is defined as an extended addressability (EA) data set. EA=NO is always indicated for the Journal data set.

CANDIDATE VOLUMES=*numvols* is a number of candidate volumes for the CDS. For the Journal data set, *numvols* is always be zero.

Special Note:

For the CDSs, *percent%*FULL+*percent%*TOTAL FREESPACE is not intended to add up to 100% unless a reorganization with freespace (0 0) was recently completed. This is due to the difference in the way freespace is handled in the two calculations to make the statistics regarding the CDSs more useful. The *percent%*FULL calculation counts all space between the beginning of the data set and the high-used point (HURBA) as used space in the data set. DFSMSHsm does not subtract the freespace below the high-used point for the reasons described above. Whereas the *percent%*TOTAL FREESPACE calculation counts all empty CIs, not just the ones above the high-used point. Both

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statistics are useful for making decisions regarding the CDSs. If this QUERY CDS was issued in response to the ARC0909E warning message, we recommend you perform the following actions:

1. Follow the system programmer Response in the ARC0909E message to reclaim fragmented space and allocate a larger control data set (if necessary) when the *percent%FULL* value is high.
2. Monitor your CDS usage when the *percent%FULL* value is in the mid to high range but the TOTAL FREESPACE value is high. If TOTAL FREESPACE decreases and *percent%FULL* does not change much, then most of the new data is being inserted into the already available freespace and action can be delayed. However, if *percent%FULL* is increasing rapidly, follow the steps outlined in the ARC0909E message to reorganize the CDS.

Note: If *percent%TOTAL FREESPACE* is much higher than expected, check the CDS index control interval size. Premature CA splits might occur if the CDS index CI size is too small.

3. Consider changing the THRESHOLD for issuing message ARC0909E with the SETSYS MONITOR(...) command if, after periodic monitoring, it appears to be too low or too high for the current CDS usage.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

Note: For the CDSs, *percent%FULL+percent%TOTAL FREESPACE* is not intended to add up to 100% unless a reorganization with freespace (0 0) was recently completed. This is due to the difference in the way freespace is handled in the two calculations to make the statistics regarding the CDSs more useful. The *percent%FULL* calculation counts all space between the beginning of the data set and the high-used point (HURBA) as used space in the data set. DFSMSHsm does not subtract the freespace below the high-used point for the reasons described above. Whereas the *percent%TOTAL FREESPACE* calculation counts all empty CIs, not just the ones above the high-used point. Both statistics are useful for making decisions regarding the CDSs. If this QUERY CDS was issued in response to the ARC0909E warning message, we recommend you perform the following actions:

1. Follow the system programmer Response in the ARC0909E message to reclaim fragmented space and allocate a larger control data set (if necessary) when the *percent%FULL* value is high.
2. Monitor your CDS usage when the *percent%FULL* value is in the mid to high range but the TOTAL FREESPACE value is high. If TOTAL FREESPACE decreases and *percent%FULL* does not change much, then most of the new data is being inserted into the already available freespace and action can be delayed. However, if *percent%FULL* is increasing rapidly, follow the steps outlined in the ARC0909E message to reorganize the CDS.

Special Note: If *percent%TOTAL FREESPACE* is much higher than expected, check the CDS index control interval size. Premature CA splits might occur if the CDS index CI size is too small.

3. Consider changing the THRESHOLD for issuing message ARC0909E with the SETSYS MONITOR(...) command if, after periodic monitoring, it appears to be too low or too high for the current CDS usage.

ARC0149I MONITOR ({STARTUP | NOSTARTUP} {SPACE | NOSPACE}) {VOLUME | NOVOLUME},
MCDS(*thresh*), BCDS (*thresh*), OCDS(*thresh*), JOURNAL(*thresh*)

Explanation: A QUERY command was issued with the SETSYS parameter. DFSMSHsm issues this message to describe its current environment.

The subparameters in effect for the MONITOR parameter of the SETSYS command are displayed. The subparameters can be:

- STARTUP or NOSTARTUP
- SPACE or NOSPACE
- VOLUME or NOVOLUME
- MCDS for the migration control data set
- BCDS for the backup control data set
- OCDS for the offline control data set
- JOURNAL for the journal data set

thresh is the threshold percentage of occupancy which issues an attention message when it is exceeded.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0150I JOURNAL={NONE | SPEED | RECOVERY}, LOG={YES | NO | HELD}, TRACE={YES | NO}, SMFID={*smfid* | NONE}, DEBUG={YES | NO}, EMERG={YES | NO}, JES={2 | 3}, SYS1DUMP={YES | NO}, RACFIND={YES | NO}, ERASEONSCRATCH={YES | NO}, PDA={NONE | OFF | ON}, DSSXMMODE={YES | NO}

Explanation: A QUERY command was issued with the SETSYS parameter. This message describes DFSMSHsm's current environment.

Parameter

Meaning

JOURNAL=NONE

DFSMSHsm is not adding journal information.

JOURNAL=SPEED

DFSMSHsm is adding journal information asynchronously.

JOURNAL=RECOVERY

DFSMSHsm is adding journal information synchronously.

LOG=YES

DFSMSHsm is logging information.

LOG=NO

DFSMSHsm is not logging information because of a log error.

LOG=HELD

An operator issued the HOLD command to hold logging.

TRACE=YES

Changes to the DFSMSHsm control data sets are being written to the DFSMSHsm log.

TRACE=NO

Changes to the control data sets are not being logged.

SMFID=*smfid*

The identifier for SMF records is written by DFSMSHsm.

SMFID=NONE

DFSMSHsm is not writing any SMF records.

DEBUG=YES

DFSMSHsm is operating in debug mode.

DEBUG=NO

DFSMSHsm is not operating in debug mode.

In debug mode, DFSMSHsm carries out volume functions just as it would normally except that no data is moved, created, or deleted. Debug mode does not apply to data set commands such as BACKDS, RECALL, RECOVER, or MIGRATE DATASETNAME.

EMERG=YES

DFSMSHsm is operating in emergency mode and does not perform any data movement.

EMERG=NO

DFSMSHsm is not operating in emergency mode.

JES=2 DFSMSHsm is initialized for a JES2 system.

JES=3 DFSMSHsm is initialized for a JES3 system.

SYS1DUMP=YES

When an abnormal end (abend) occurs within the address space of DFSMSHsm, a dump is written to a system dump data set (for example, SYS1.DUMP01).

SYS1DUMP=NO

When an abend occurs within the address space of DFSMSHsm, a dump is written to the data set identified by SYSABEND, SYSMDUMP, or SYSUDUMP.

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RACFIND=YES

DFSMSHsm marks migration copies and backup versions as RACF-indicated.

RACFIND=NO

A RACF always-call environment is in effect.

SETSYS RACFIND reestablishes the default value and causes DFSMSHsm to place RACF-indication on backup versions and migration copies of RACF-indicated and password-protected data sets.

ERASEONSCRATCH=YES

DFSMSHsm asks RACF to determine if the original user data had the ERASE attribute. If it did, a backup version or migration copy is erased when the data set is scratched.

ERASEONSCRATCH=NO

Backup versions or migration copies are not erased when they are scratched.

PDA=NONE

The PDA facility was not started at DFSMSHsm startup. No internal storage exists and the trace output data sets were not opened. DFSMSHsm must be restarted to activate PDA tracing.

PDA=ON

The PDA function is tracing to internal storage and to trace output data sets, if the datasets were allocated at startup time.

PDA=OFF

The trace facilities are suspended, but the primary module is left active. The trace buffer storage area remains allocated and the output data sets remain open, but the bit to allow tracing is turned off.

DSSXMMODE=YES

A DFSMSdss address space is started automatically with the cross memory interface whenever a dump, full volume recover, migration, backup, dataset recover, or CDS backup function is first invoked. The address space terminates when DFSMSHsm terminates.

DSSXMMODE=NO

DFSMSdss is used in the DFSMSHsm ASID for dump, full volume recover, migration, backup, dataset recover, or CDS backup functions.

Note: This message does not reflect FRBACKUP and FRRECOV use of the DFSMSdss cross memory interface.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0151I DAYS=*days1*, ML1DAYS=*days2*, PRIMARYSPMGMTSTART=(*time1 time2* | NONE),
MAXMIGRATIONTASKS=*nn*, INTERVALMIGRATION={YES | NO},
MIGRATIONCLEANUPDAYS=(*days3 days4 days5*), SDSP={*number* KB | NONE}, MIGRATION
PREFIX=*mprefix*, SCRATCH EXPIRED DATA SETS={YES | NO},
SECONDARYSPMGMTSTART=(*time1 time2* | NONE)

Explanation: A QUERY command was issued with the SETSYS parameter. This message is issued by DFSMSHsm to describe its current operating environment. System defaults include:

- *days1* indicates the number of days a data set is not used before it is eligible for automatic primary space management.
- *days2* indicates the number of days a data set is not used before it is eligible for level 1 to level 2 migration.

Times set for automatic primary space management:

- *time1* (*hhmm* — hours, minutes) indicates the earliest time automatic primary space management can start.
- *time2* (*hhmm* — hours, minutes) indicates the latest time automatic primary space management can start and the time automatic primary space management will not start processing any additional volumes. If SETSYS PRIMARYSPMGMTSTART was issued to set up the automatic primary space management times and NONE appears in this field, then the ending time was either not specified or was specified as 0. If SETSYS AMSTART was issued, *time2* represents the ending time (*time3*) and NONE appears if it was either 0 or not specified.

MAXMIGRATIONTASKS is the maximum number of automatic migration (Automatic Primary Space Management and Interval Migration) tasks that can run concurrently.

If INTERVALMIGRATION=YES, DFSMSHsm is permitted to perform interval migration.

If INTERVALMIGRATION=NO, DFSMSHsm will not perform interval migration.

The variables for MIGRATIONCLEANUPDAYS are:

- *days3* indicates the number of days that must elapse before the migration control data set (MCDS) data set record for a recalled data set is deleted, if the data set is not a candidate for reconnection.
- *days4* indicates the number of days that must elapse before the migration control data set statistics records (VSR and DSR) are deleted.
- *days5* indicates the number of days that are added to the predicted date of remigration for a recalled data set that is a candidate for reconnection. The predicted date is based on the inactive age of the data set when last migrated. The resulting sum represents the date on which the migration control data set record can be deleted.

If small data set packing is being performed, the number of kilobytes is always shown even when the data set size eligibility limit was originally specified in tracks. Any data set whose size is equal to or less than the value specified with the SMALLDATASETPACKING parameter of the SETSYS command is a candidate for packing into a small data set packing data set when it migrates.

If no small data set packing is being performed, SDSP=NONE is indicated.

If SCRATCH EXPIRED DATA SETS=YES, DFSMSHsm scratches expired data sets during space management processing.

If SCRATCH EXPIRED DATA SETS=NO, DFSMSHsm processes the data sets during space management as if the expiration date had not been reached.

Time set for automatic secondary space management:

- *time1* (*hhmm* — hours, minutes) indicates the earliest time automatic secondary space management can start.
- *time2* (*hhmm* — hours, minutes) indicates the latest time automatic secondary space management can start and the time automatic secondary space management will not start processing any additional data sets. If NONE appears in this field, then the ending time was either not specified or it was specified as 0.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0152I MAXRECALLTASKS=*tasks*, RECALL={ANYSTORAGEVOLUME(LIKE | UNLIKE) | PRIVATEVOLUME(LIKE | UNLIKE)}, MAXEXTENTS=*extents*, CONVERSION={NO | REBLOCKBASE | REBLOCKTOANY | REBLOCKTOUNLIKE}, VOLCOUNT>(*NONE* | ANY) TAPERECALLLIMITS (TASK=*time1*, TAPE=*time2*)

Explanation: A QUERY command was issued with the SETSYS parameter. This message is issued by DFSMSHsm to describe its current environment.

The maximum number of recall tasks allowed to process concurrently is *tasks*.

If RECALL=ANYSTORAGEVOLUME(LIKE), DFSMSHsm recalls a data set to any primary storage volume whose volume attributes match those of the primary volume from which the data set migrated, but not to any primary storage volume mounted private. If RECALL=ANYSTORAGEVOLUME(UNLIKE), DFSMSHsm recalls a data set to any primary storage volume except a volume mounted private.

If RECALL=PRIVATEVOLUME(LIKE), DFSMSHsm recalls a data set to any primary storage volume whose volume attributes match those of the primary volume from which the data set migrated, including volumes mounted private. If RECALL=PRIVATEVOLUME(UNLIKE), DFSMSHsm recalls a data set to any primary storage volume, including volumes mounted private.

The maximum number of extents a data set can occupy is *extents*. A data set that exceeds this number of extents is

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eligible for reduction. Reblocking is performed to permit better use of space.

If `CONVERSION=NO`, DFSMSHsm will not reblock any data set during recall or recovery.

If `CONVERSION=REBLOCKBASE`, DFSMSHsm is permitted to reblock a data set during recall or recovery if the target volume of the recall or recovery is a 3375 or 3380 DASD and the volume the data set migrated from or was backed up from is not a 3375 or 3380 DASD.

If `CONVERSION=REBLOCKTOANY`, DFSMSHsm is permitted to reblock a data set during recall or recovery regardless of the target device type and regardless of the type of device the data set migrated from or was backed up from.

If `CONVERSION=REBLOCKTOUNLIKE`, DFSMSHsm is permitted to reblock a data set during recall or recovery only if the target volume resides on a type of device different from the type of device the data set migrated from or was backed up from.

If `VOLCOUNT=*NONE*`, the `VOLCOUNT` keyword is not passed to DFSMSdss.

If `VOLCOUNT=ANY`, the `VOLCOUNT(ANY)` keyword is passed to DFSMSdss.

time1 of the `TASK` parameter is the number of minutes that is allowed for a recall task to process tape recall requests from a single tape mount before DFSMSHsm checks to see if the task is needed to perform a higher priority tape recall request on this host.

time2 of the `TAPE` parameter is the number of minutes that is allowed for a recall task to process tape recall requests from a single tape mount before the tape becomes eligible for other DFSMSHsm host recall tasks to take the tape away from the current host.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC0153I `SCRATCHFREQ=days, SYSOUT(CLASS=class, COPIES=number, SPECIAL FORMS={form | NONE}), SWAP={YES | NO}, PERMISSION={YES | NO}, EXITS={NONE | exits}, UNLOAD={YES | NO}, DATASETSERIALIZATION={USER | DFHSM}, USECMS={YES | NO}`

Explanation: A `QUERY` command was issued with the `SETSYS` parameter. DFSMSHsm issues this message to describe the current environment.

- *days* is the number of days DFSMSHsm keeps list data sets before scratching them.
- *class* is the system default for the hard copy `SYSOUT` class.
- *number* is the number of `SYSOUT` copies.
- *form* is the `SYSOUT` hard copy special form.

In the message text:

- **SWAP=YES** indicates that the DFSMSHsm address space can be swapped by the MVS system resource manager. If `SWAP=NO`, the DFSMSHsm address space cannot be swapped by the MVS system resource manager.
- **PERMISSION=YES** indicates that the operator's permission is required to start:
 - Automatic backup
 - Automatic dump
 - Primary space management
 - Secondary space management
- **PERMISSION=NO** indicates that the operator's permission is not required to start:
 - Automatic backup
 - Automatic dump
 - Primary space management
 - Secondary space management
- **EXITS=NONE** indicates that no installation-wide exits are active. In the `EXITS=exits`, 2 character abbreviations appear specifying the active written installation-wide exits. For example, if the second level migrate data set exit (`ARCMEXT`) and the space management volume exit (`ARCMVEXT`) are active, the following message appears:
EXITS=MM,MV.

The *exits* are:

- AD — Data set deletion exit (ARCADEXT)
 - BD — Data set backup exit (ARCBDEXT)
 - BE — ABARS backup error exit (ARCBEEEXT)
 - CB — Control data set backup exit (ARCCBEXT)
 - CR — ABARS conflict resolution exit (ARCCREXT)
 - CV — Data set reblock exit (ARCCVEXT)
 - ED — ABACKUP output file tape expiration date exit (ARCEDEXT)
 - IN — Initialization exit (ARCINEXT)
 - MD — Data set migration exit (ARCMDEXT)
 - MM — Second level migrate data set exit (ARCMMEXT)
 - MV — Space management volume exit (ARCMVEXT)
 - M2 — ABARS ML2 data set exit (ARCM2EXT)
 - RD — Recall exit (ARCRDEXT)
 - RP — Return - priority exit (ARCRPEXT)
 - SA — Space management and backup data set exit (ARCSAEXT)
 - SD — Shutdown exit (ARCSDEXT)
 - SK — ABARS data set skip exit (ARCSKEXT)
 - TD — Tape data set exit (ARCTDEXT)
 - TV — Tape volume exit (ARCTVEXT)
- **UNLOAD=YES** indicates that virtual backup and migration level 2 volumes are unloaded after DFSMSHsm finishes using them. If UNLOAD=NO, virtual backup and migration level 2 volumes are not unloaded.
 - **DATASETSERIALIZATION=USER** indicates that system data set serialization is active, such as global resource serialization or JES3 data set serialization, and DFSMSHsm should not serialize resources.
 - **DATASETSERIALIZATION=DFHSM** indicates that system data set serialization is not active and DFSMSHsm should serialize resources.
 - **USECMS=YES** indicates that migration copies and backup versions can be allocated in the cylinder management space.
 - **USECMS=NO** indicates that migration copies and backup will be allocated in the track management space.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0154I MAXBACKUPTASKS=*tasks*, ABSTART=(*time1 time2 time3*), VERSIONS=*versions*, FREQUENCY=*days*, SKIPABPRIMARY={YES | NO}, BACKUP PREFIX=*bprefix*, INCREMENTALBACKUP = {CHANGEDONLY | ORIGINAL}, PROFILEBACKUP={YES | NO} INUSE=(RETRY={NO | YES}, DELAY=*min*, SERIALIZATION={PREFERRED | REQUIRED})

Explanation: A QUERY command was issued with the SETSYS or BACKUP parameter. DFSMSHsm issues this message to describe the current parameter settings for backup.

The maximum number of volume backup tasks allowed concurrently to process is *tasks*.

Times set for automatic backup:

- *time1* (*hhmm* — hours, minutes) indicates the earliest time automatic backup can start.
- *time2* (*hhmm* — hours, minutes) indicates the latest time automatic backup can start.
- *time3* (*hhmm* — hours, minutes) indicates the time for automatic backup to stop processing any additional volumes.

System defaults for automatic backup:

- *versions* — indicates the maximum number of backup versions for a data set.
- *days* indicates the minimum number of days between backup versions of a data set.

If SKIPABPRIMARY=YES, the primary volumes with the automatic backup attribute are not backed up during automatic backup.

If SKIPABPRIMARY=NO, the primary volumes with the automatic backup attribute are backed up during automatic backup.

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If INCREMENTALBACKUP=CHANGEDONLY, DFSMSHsm only backs up non-VSAM and ICF VSAM data sets when the change flag is on in the data set VTOC entry of the volume table of contents (VTOC).

If INCREMENTALBACKUP=ORIGINAL, DFSMSHsm creates an initial backup version for each non-VSAM and ICF VSAM data set regardless of the setting of the change flag. Incremental backup of old VSAM data sets are affected if they changed since they were last backed up.

If PROFILEBACKUP=YES, DFSMSHsm creates a new RACF profile based on the original data set, but with the backup version name and volume serial number of MIGRAT. The profile is available during recovery so discrete profiles deleted between the time of backup and time of recovery can be re-created.

If PROFILEBACKUP=NO, DFSMSHsm does not create a new RACF profile. If the data set is later recovered, any backup profiles created during earlier backups can still be used during recovery.

If RETRY=NO, DFSMSHsm does not retry a backup attempt which failed because the data set was in use.

If RETRY=YES:

- DFSMSHsm attempts only one retry of a backup attempt which fails because:
 - the data set is currently in use, or
 - a BWO candidate suffers a CI split and the backup is discarded.
- If DELAY=*min*, DFSMSHsm delays for *min* minutes before retrying a backup which failed because the data set was in use. For a BWO candidate failing backup due to a CI split, no delay occurs before the retry.
- If SERIALIZATION=PREFERRED, DFSMSHsm retries backing up a data set that was in use and finds it still (or again) in use, and it backs up the data set anyway.
- If SERIALIZATION=REQUIRED, DFSMSHsm retries backing up a data set that was in use and finds it still (or again) in use, and it fails the backup.

Note: The data set backup exit ARCBDEXT can override the RETRY and SERIALIZATION parameters for a given data set. Note that serialization must be attempted for a BWO candidate and these data sets are not retried if SERIALIZATION(PREFERRED) is specified.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0155I DFSMSHSM STATISTICS FOR *date*

Explanation: A QUERY command was issued with the STATISTICS parameter. This message is a header line and the first of the statistical data messages. The current date *date* is expressed as *yy/mm/dd* (year, month, day).

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0156I STARTUPS=*starts*, SHUTDOWNS=*stops*, ABENDS=*abends*, MWES=*requests*, CPU TIME=*time* SECONDS

Explanation: A QUERY command has been issued with the STATISTICS parameter.

- *starts* indicates the number of DFSMSHsm startups for the current day.
- *stops* indicates the number of DFSMSHsm shutdowns.
- *abends* indicates the number of DFSMSHsm abnormal ends.
- *requests* indicates the number of DFSMSHsm requests or work elements.
- *time* (*sssss.hh* — seconds, hundredths of seconds) indicates the elapsed DFSMSHsm CPU time used for the day.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0157I DS MIGRATE L1=*nlevel1*, DS MIGRATE L2=*nlevel2*, DS EXTENT REDUCTIONS=*exts*, DS MIGRATE FAIL=*fails*, {TRKS | KTRKS} MIGRATE=*ntracks*, {BYTES | KBYTES | MBYTES | GBYTES | TBYTES} MIGRATE=*nbytes*

Explanation: A QUERY command was issued with the STATISTICS parameter. Migration statistics for the current day are:

- *nlevel1* indicates the number of data sets that have migrated to level 1.
- *nlevel2* indicates the number of data sets that have migrated to level 2.
- *exts* indicates the number of data sets that have been migrated then recalled for extent reduction.
- *fails* indicates the number of data set migrations that failed.
- *ntracks* indicates the number of data set tracks that migrated, in the following units:

Unit	Meaning	Bytes Per Unit
TRKS	tracks	1
KTRKS	kilotracks	1024

To convert to tracks, use the following formula:

ntracks x tracks per unit (unit) = total tracks:

Example: If ntracks = 2 and unit = KTRKS, then 2 x 1024 = 2048 tracks.

- *nbytes* indicates the number of bytes of data sets that migrated, in the following units:

Unit	Meaning	Bytes Per Unit
BYTES	bytes	1
KBYTES	kilobytes	1 024
MBYTES	megabytes	1 048 576
GBYTES	gigabytes	1 073 741 824
TBYTES	terabytes	1 099 511 627 776

To convert to bytes, use the following formula:

nbytes x bytes per unit (unit) = total bytes:

Example: If nbytes = 2 and unit = KBYTES, then 2 x 1024 = 2048 bytes

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0158I DS RECALL L1=*ndatasets1*, DS RECALL L2=*ndatasets2*, DS RECALL FAIL=*fails*, {BYTES | KBYTES | MBYTES | GBYTES | TBYTES} RECALL=*nbytes*, RECALL MOUNTS AVOIDED=*avoided*, EXTRA ABACKUP MOUNTS=*extras*

Explanation: A QUERY command was issued with the STATISTICS parameter. Recall statistics for the current day are:

- *ndatasets1* indicates the number of data sets recalled from level 1.
- *ndatasets2* indicates the number of data sets recalled from level 2.
- *fails* indicates the number of recalls that failed.
- *nbytes* indicates the number of bytes of data sets recalled, in the following units:

Unit	Meaning	Bytes Per Unit
BYTES	bytes	1
KBYTES	kilobytes	1 024
MBYTES	megabytes	1 048 576
GBYTES	gigabytes	1 073 741 824

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Unit	Meaning	Bytes Per Unit
TBYTES	terabytes	1 099 511 627 776

To convert to bytes, use the following formula:

nbytes x bytes per unit (unit) = total bytes:

Example: If nbytes = 2 and unit = KBYTES, then 2 x 1024 = 2048 bytes

- *avoided* indicates the number of times a recall request was satisfied by a tape already mounted, thus saving a mount each time.
- *extras* indicates the number of times an ABACKUP command had to remount an ML2 tape taken away by a recall request

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0159I DS BACKUP=*ndatasets1*, DS BACKUP FAIL=*fails1*, DS RECOVER=*ndatasets2*, DS RECOVER FAIL=*fails2*, RECOVER MOUNTS AVOIDED=*avoided*

Explanation: A QUERY command was issued with the STATISTICS parameter. Backup and recovery statistics for the current day are:

- *ndatasets1* indicates the number of data sets backed up.
- *fails1* indicates the number of data sets whose backups failed.
- *ndatasets2* indicates the number of data sets recovered.
- *fails2* indicates the number of data sets where the recovery failed.
- *avoided* indicates the number of times a recover request was satisfied by a tape already mounted, thus saving a mount each time.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0160I MIGRATION={NOT HELD | HELD AT END OF VOLUME | HELD | LIMITED}, AUTOMIGRATION={NOT HELD | HELD AT END OF VOLUME | HELD | LIMITED}, RECALL={TOTALLY HELD | PARTIALLY HELD | NOT HELD}, TAPERECALL={TOTALLY HELD | TSO HELD | NOT HELD}, DATA SET MIGRATION={ACTIVE | INACTIVE}, VOLUME MIGRATION={ACTIVE | INACTIVE}, DATA SET RECALL={ACTIVE | INACTIVE}

Explanation: A QUERY command was issued with the ACTIVE parameter. This message gives the status of the space management functions (MIGRATION, AUTOMIGRATION, and RECALL) that can be held by the operator HOLD command and the space management operations (DATA SET MIGRATION, VOLUME MIGRATION, and DATA SET RECALL) that are currently in progress.

- HELD and NOT HELD indicate if the function is being held by a HOLD command issued by the operator.
- HELD AT END OF VOLUME indicates that volume processing is stopped after processing of the current volume.
- LIMITED indicates that when DFSMSHsm finds that the migration target device is not available, data set migration is limited to those data sets assigned to the available target devices. Data sets targeted to the unavailable device type will not be migrated.
- RECALL=TOTALLY HELD indicates an operator HOLD command was entered for the recall function.
- RECALL=PARTIALLY HELD indicates an abnormal end occurred in the data set recall exit. All undirected recalls that cause the exit to be invoked have failed. When the target volume is specified, the recall will be processed.
- TAPERECALL= TOTALLY HELD indicates an operator HOLD RECALL(TAPE) command was entered for the recall function.
- TAPERECALL= TSO HELD indicates an operator HOLD RECALL(TAPE(TSO)) command was entered for the recall function. For a wait-type recall request, message ARC0389E is issued indicating that the request will be processed as a NOWAIT request when the function is released.

- ACTIVE and INACTIVE indicate if the operation is currently in progress.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

```
ARC0161I  {MIGRATING | MIGRATION PREPROCESSING | FREEVOL PROCESSING | DBA/DBU
PROCESSING | BACKING UP | RECOVERING | RECYCLING | AUDITING | {DUMPING |
FRBACKUP DUMP OF | FRBACKUP DUMPNLY OF} | MOUNTING INITIAL TAPE FOR DS
BACKUP, | RESTORING } VOLUME {volser | volser, SGROUP=sg | volser, COPY POOL = cpname }
FOR USER {userid | **AUTO** | * } REQUEST {request-number [ON HOST=hostid] | NONE | * }
[,TASK=taskname] [, TCB=X'tcbaddress' | TCB2=X'tcbaddress' | TCB3=X'tcbaddress' | TCB=X'****?***':
VOL = {volser1 | NONE}, ADDR = {address1 | NONE}; VOL = {volser2 | NONE}, ADDR = {address2 |
NONE}; VOL = {volser3 | NONE}, ADDR = {address3 | NONE}]
```

Explanation: The system has issued a QUERY command with the ACTIVE, USER, or REQUEST parameter.

DFSMSHsm space management (which includes MIGRATING, MIGRATION PREPROCESSING, FREEVOL PROCESSING and DBA/DBU PROCESSING), backup, recovery, recycle, full volume dump, volume restore, or audit is processing the volume with the volume serial number *volser*. If DS BACKUP is indicated, the *volser* is the output tape volume. If SGROUP follows *volser*, the request was for a BACKVOL specifying storage group *sg*. If COPY POOL follows *volser*, the request was for a dump initiated by a FRBACKUP command with copy pool *cpname* specified.

userid is the user identification of the initiator. The *request* is the DFSMSHsm request number, except for automatic primary space management, automatic backup, automatic dump or internal copy when NONE is indicated. The request number is nonzero only for requests received by DFSMSHsm through the DFSMSHsm SVC console. The *request-number* is the number of the request. The optional *hostid* is the host that request originated when distributed tape processing is enabled. *user* and *request* are both '*' when DS BACKUP is indicated. If the TCBADDRESS subparameter was used with the ACTIVE parameter, the *tcbaddress* value represents the unique task identifier for the function and can be used with the CANCEL command to end the active task. See the DFSMSHsm CANCEL command for usage information.

The *tcbaddress* value represents the unique task identifier for the function and can be used with the CANCEL command to end the active task. See the DFSMSHsm CANCEL command for usage information. 'TCB' is the first *tcbaddress* to cancel. If the function does not end and a 'TCB2' address is given, the *tcbaddress* in 'TCB2' can then be used. If the TCB value is '****?***', no TCB was found.

Note: The actual number of migration tasks can be equal to the number of tasks specified on the MAXMIGRATIONTASKS or the MAXINTERVALTASKS and up to twice the specified number of tasks because of DFSMSHsm's preprocessing enhancement. This is reflected in the number of ARC0161I messages issued in response to the QUERY ACTIVE and/or QUERY ACTIVE(TCB) commands. With migration subtasking, there will be additional ARC0161I messages per migration volume task, up to the number of subtasks running. MIGRATING, MIGRATION PREPROCESSING, FREEVOL PROCESSING, and DBA/DBU PROCESSING differentiate the type of space management DFSMSHsm is performing and these are displayed in the ARC0161I message.

taskname is the task name of movement task. *volser1*, *volser2* and *volser3* are the tape volume serial numbers of movement task. *address1*, *address2* and *address3* are the device address of the tape volumes.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

```
ARC0162I  {MIGRATING | BACKING UP | RECALLING | RECOVERING | DELETING | RESTORING |
FRRECOV OF} DATA SET dsname FOR USER userid, REQUEST request ON HOST hostid
[,TCB=X'tcbaddress"]: VOL = {volser1 | NONE}, ADDR = {address1 | NONE}; VOL = {volser2 | NONE},
ADDR = {address2 | NONE}; VOL = {volser3 | NONE}, ADDR = {address3 | NONE}]
```

Explanation: A QUERY command was issued with the ACTIVE, USER, REQUEST, or DATASETNAME parameter. DFSMSHsm migration, backup, recall, recovery, delete, or data set restore is processing the data set.

The user identification of the initiator is *userid*. The request number *request* is nonzero only for requests that

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DFSMSHsm received through the DFSMSHsm SVC. *hostid* is the ID of the DFSMSHsm host that is processing the request.

If the TCBADDRESS subparameter was specified with the ACTIVE parameter, the *tcbaddress* value represents the unique task identifier for the function and can be used with the CANCEL command to end the active task. See the DFSMSHsm CANCEL command for usage information.

For FRRECOV DSNAME, an individual request is created for the data on each volume of a multivolume data set. '*MULTIVOL*' is appended to the data set name of these requests to distinguish them from single volume requests.

volser1, *volser2* and *volser3* are the tape volume serial numbers of movement task. *address1*, *address2* and *address3* are the device address of the tape volumes.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0163I **BACKUP={NOT HELD | HELD AT END OF VOLUME | HELD}, AUTOBACKUP={NOT HELD | HELD AT END OF VOLUME | HELD}, RECOVERY={NOT HELD | HELD AT END OF VOLUME | HELD}, TAPEDATASETRECOVERY={HELD | NOT HELD}, DATA SET BACKUP={HELD | NOT HELD | TAPE HELD | DASD HELD}, VOLUME BACKUP={ACTIVE | INACTIVE}, DATA SET RECOVERY={ACTIVE | INACTIVE}, VOLUME RECOVERY={ACTIVE | INACTIVE}**

Explanation: A QUERY command was issued with the ACTIVE parameter. This message gives the status of the BACKUP, AUTOBACKUP, and RECOVERY functions and indicates which backup and recovery operations (DATA SET BACKUP, VOLUME BACKUP, DATA SET RECOVERY, and VOLUME RECOVERY) are currently in progress.

- HELD and NOT HELD indicate if the function is being held by a HOLD command issued by the operator.
- HELD AT END OF VOLUME indicates the volume processing is stopped after processing of the current volume.
- ACTIVE and INACTIVE indicate if the operation is currently in progress.
- TAPE HELD indicates that only data set backup to tape is held.
- DASD HELD indicates that only data set backup to DASD is held.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0164I **{DAY=*day* | SPILL | UNASSIGNED} VOLS = {*volser-flag volser-flag*}**

Explanation: A QUERY command was issued with the BACKUP parameter and one of the following subparameters specified:

- DAILY
- SPILL
- UNASSIGNED
- ALL

This message lists the backup volumes of the type requested. If the message contains the DAY=*day*, the day in the backup cycle is *day* and one or more volume serial numbers (*volser*) are listed for the daily backup volumes assigned to this day in the backup cycle. Each volume serial number is followed by a 1-character indicator (*flag*).

If a U appears as the indicator, the volume is unavailable and is not being used for backup for one of the following reasons:

- DFSMSHsm requested that the volume be mounted and it was not.
- A permanent write error occurred while writing to a tape.
- An error occurred while allocating the volume.
- An error occurred while reading the backup control data set backup volume record (MCT) for the volume.

If an I appears as the indicator, the volume is currently being used.

If an F appears as the indicator, the volume is full.

If an A appears as the indicator, the volume is available for use during a backup operation.

If an E appears as the indicator, the volume is empty.

If the message contains SPILL, one or more volume serial numbers (*volser*) are listed for the spill backup volumes defined to DFSMSHsm. The 1-character flag has the same meaning for the spill volumes as it does for the daily backup volumes.

If the message contains UNASSIGNED, one or more volume serial numbers are listed describing the unassigned backup volumes available to DFSMSHsm. Each volume serial number is followed by a 1-character indicator (*flag*).

D (day) indicates that the volume has been added to DFSMSHsm as a daily backup volume but not associated with any day in the backup cycle.

U (unspecified) indicates that the volume has been added to DFSMSHsm as a backup volume but not specified as either a daily or spill backup volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0165I USER NOT AUTHORIZED TO QUERY REQUESTS FOR OTHER USERIDS OR REQNUM MISSING

Explanation: A user issued an HQUERY command specifying the REQUEST parameter but no request number was specified.

Users issuing the HQUERY REQUEST command can only request information for their own userid or request information by specific request numbers.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Specify a request number on the HQUERY command with the REQUEST parameter. Issuing the HQUERY command alone will return all requests associated with the issuing userid. Authorized users can issue the HSEND QUERY command instead of the HQUERY command. Users must follow the installation procedures to obtain additional authorization if required.

Source: DFSMSHsm

ARC0166I NO DFSMSHSM REQUEST FOUND FOR QUERY

Explanation: A QUERY or HQUERY command was issued with the REQUESTS, USER, or DSNAME parameter. DFSMSHsm searched all queues and the active DFSMSHsm work elements, but no such request could be found. The queried request or requests have completed.

System action: DFSMSHsm processing continues.

Programmer response: If the request is not yet completed, verify that the request was correctly specified and reissue the command.

Source: DFSMSHsm

ARC0167I *type* MWE FOR {VOLUME | DATA SET | COMMAND | AGGREGATE GROUP | CONTROL FILE DATA SET | COPY POOL} { *name* | *name*, SGROUP = *sg* | *name*, COPY POOL = *cpname*} FOR USER *userid*, REQUEST *request*, WAITING TO BE PROCESSED, *nmwe* MWE(S) AHEAD OF THIS ONE

Explanation: A QUERY command has been issued with the USER, REQUEST, or DATASETNAME parameter. This message is issued for each management work element (MWE) that is not selected for processing, and it matches the information about the QUERY command.

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Possible values for *type* are MIGRATE, BACKUP, DUMP, RECOVER, RECALL, DELETE, COMMAND, ABACKUP, ARECOVER, FRBACKUP, or FRRECOV.

name is the:

- volume serial number, if the VOLUME appears. If SGROUP follows *name*, the request was for the BACKVOL command specifying storage group *sg*. If COPY POOL follows *name*, the request was for a dump initiated by a FRBACKUP command specifying copy pool *cpname*.
- data set name if DATA SET appears. 'name, ***' will appear when a FRRECOV DSNAME request is issued with multiple data set names.
- command, if COMMAND appears.

Note: The entire command may not be displayed for long commands. The message includes enough of the command text to identify the command.

- aggregate group name, if AGGREGATE GROUP appears.
- name of the control file data set used in the ARECOVER command, if CONTROL FILE DATA SET appears.
- copy pool name if COPYPOOL appears.

userid is the user identification of the initiator of this MWE. *request-number* is the request number which is nonzero only for requests received by DFSMSHsm through the DFSMSHsm supervisor call (SVC). *nmwv* is the number of MWEs ahead of this MWE on the same DFSMSHsm functional queue.

For FRRECOV DSNAME, the system creates an individual request for the data on each volume of a multivolume data set. '*MULTIVOL*' is appended to the data set name of these requests to distinguish them from single volume requests.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0168I WAITING MWES: MIGRATE=*nmigrate*, RECALL=*nrecall*, DELETE=*ndelete*, BACKUP=*nbackup*, RECOVER=*nrecover*, COMMAND=*ncommand*, ABACKUP=*nabackup*, ARECOVER=*narecover*, FRBACKUP=*nfrbackup*, FRRECOV=*nfrrecov*, TOTAL=*ntotal*

Explanation: A QUERY command has been issued with waiting. This message contains the number and type of MWEs waiting for processing on the various DFSMSHsm queues.

- *nmigrate* indicates the number of migration MWEs.
- *nrecall* indicates the number of recall MWEs.
- *ndelete* indicates the number of delete MWEs.
- *nbackup* indicates the number of backup MWEs and volume DUMP MWEs initiated by the FRBACKUP DUMP or FRBACKUP DUMPOONLY command or the number of BACKVOL MWEs initiated.
- *nrecover* indicates the number of recovery MWEs.
- *ncommand* indicates the number of command MWEs.
- *nabackup* indicates the number of aggregate backup MWEs .
- *narecover* indicates the number of aggregate recovery MWEs.
- *nfrbackup* indicates the number of FRBACKUP MWEs.
- *nfrrecov* indicates the number of FRRECOV MWEs.
- *ntotal* indicates the total number of MWEs waiting for processing on all DFSMSHsm queues.

For command MWEs, the MWE is not removed from the queue until the command processing is completed. One of the MWEs on the command queue will be the MWE for the QUERY command.

Note:

1. This message only reports requests that reside on DFSMSHsm local queues. If one or more common queues are being used, see message ARC1542I for the number of requests that are waiting on those common queues.

2. If any of the MWE counts on any of the DFSMSHsm queues exceed 99999999, then the syntax for message ARC0168I is changed, and the = sign is removed and replaced with >.

Example of message ARC0168I with MWE queues exceeding 99999999:

- ARC0168I WAITING MWES: MIGRATE>99999999
- ARC0168I (CONT.) RECALL>99999999, DELETE>99999999, BACKUP>99999999
- ARC0168I (CONT.) RECOVER>99999999, COMMAND>99999999, ABACKUP>99999999
- ARC0168I (CONT.) ARECOVER>99999999, FRBACKUP>99999999
- ARC0168I (CONT.) FRRECOV>99999999, TOTAL>99999999

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0169I USER UNIT NAMES=*unitnames*

Explanation: The QUERY command was issued with the SETSYS parameter. This message lists the user unit names *unitnames* as specified with the USERUNITTABLE parameter of the SETSYS command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0170I SETMIG DSN *dsname* PROCESSED

Explanation: The space management status of the data set *dsname* was successfully changed according to the SETMIG command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0171I SETMIG LEVEL *qualifier* PROCESSED

Explanation: All data sets controlled by DFSMSHsm beginning with the initial characters of the data set name, *qualifier*, had their space management status changed by the SETMIG command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0172I SETMIG VOLUME *volser* PROCESSED

Explanation: The space management status of data sets on the volume with the volume serial number *volser* was successfully changed as specified in a SETMIG command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0173I ALTERDS *dsname* {SUCCESSFULLY | UNSUCCESSFULLY} PROCESSED

Explanation: The ALTERDS or HALTERDS command was issued to alter backup parameters for the data set *dsname*. DFSMSHsm processed the command. If processing of the ALTERDS or HALTERDS command was unsuccessful, one or more messages has preceded this one.

System action: DFSMSHsm processing continues.

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Programmer response: None.

Source: DFSMSHsm

ARC0174I NO RETAIN LEVEL ENTRIES

Explanation: A QUERY command was issued with the RETAIN parameter to list by the initial characters of the data set name, those data sets that have a space management restriction. No such level entries were defined to DFSMSHsm with the SETMIG command or defaulted to by DFSMSHsm at startup.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0175I LEVEL QUALIFIER AND MIGRATION RESTRICTION TYPE

Explanation: A QUERY command was issued with the RETAIN parameter to list by the initial characters of the data set name, those data sets that have a space management restriction. This message is the header line for the report and is followed by one or more ARC0176I messages.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0176I QUALIFIER=*qualifier* RESTRICTION TYPE=*type*

Explanation: A QUERY command was issued with the RETAIN parameter to list by qualifier, those data sets that have a space management restriction. This is the report-line message that follows message ARC0175I. It is repeated to provide a list of all qualifiers in the names of data sets where there is some type of restriction on space management. *qualifier* is the initial characters of the data set name. The restriction is that no space management is allowed (NOMIGRATION) or space management by command only is allowed (COMMANDONLY) as indicated in the message.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0177I VOLUME *volser* NOT FOUND

Explanation: A SETMIG command was issued to change the space management status for a volume. The volume serial number *volser* specified was not found in the DFSMSHsm mounted volume table or it is an SMS-managed volume.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: If the specified volume is SMS-managed and you want to change its space management status, you must use ISMF panels to indicate any changes. DFSMSHsm uses SMS storage group attributes to manage SMS volumes within a storage group. If the specified volume is not SMS-managed, check the volume serial specified in the VOLUME parameter and make sure the volume is available to DFSMSHsm. Reissue the command.

Source: DFSMSHsm

ARC0178I VOLUME *volser* NOT IN DFSMSHSM MIGRATION CONTROL DATA SET

Explanation: An attempt was made to read the migration control data set entry for a volume *volser* during the processing of the SETMIG command to change the space management status of the volume. No entry was found. This message can be preceded by an associated message from device allocation.

System action: The SETMIG command ends. DFSMSHsm processing continues.

Programmer response: Examine the VOLUME parameter of the SETMIG command and determine if the volume is

specified correctly and is available to DFSMSHsm. If there was an earlier message, make the necessary corrections and reissue the command.

Source: DFSMSHsm

ARC0179I DATA SET NAME IS MISSING

Explanation: DFSMSHsm received a request that must identify one or more data sets. No data set name was specified in the request.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Be sure to specify a data set name on the command.

Source: DFSMSHsm

ARC0180I USER *userid* AUTHORIZATION {IS | IS NOT} CHANGED {, RC=*n*}

Explanation: An AUTH command was issued for user *userid*.

IS indicates that the authorization is changed as requested

IS NOT indicates that the authorization change did not occur as requested

RC=*n* indicates the error condition

n	Meaning
1	Error reading the migration control data set user record (MCU).
2	Error writing the MCU record.
3	Error updating the MCU record.
4	DFSMSHsm is using FACILITY class profiles for protection of storage administrator commands. The AUTH command is executed, but authorization is not changed.

System action: Command processing ends. DFSMSHsm processing continues.

Programmer response: Only if IS NOT is specified.

Source: DFSMSHsm

ARC0181I NO BACKUP VERSIONS FOUND FOR {CATALOGED | UNCATALOGED} DATA SET *dsname*

Explanation: A BDELETE storage administrator command or HBDELETE user command was issued to delete a backup version of data set *dsname*. If the message specifies CATALOGED, no backup versions were found for cataloged data set *dsname*. Backup versions might exist for *dsname* as an uncataloged data set.

If the message specifies UNCATALOGED, no backup versions were found for uncataloged data set *dsname*. Backup versions might exist for *dsname* as a cataloged data set.

System action: Command processing ends. DFSMSHsm processing continues.

Programmer response: The command was probably issued with improper use of the FROMVOLUME parameter. The FROMVOLUME parameter should be specified if the backup versions of the uncataloged data set are to be deleted. Reissue the command with the correct parameters.

Issue a LIST or HLIST command specifying the data set name and the BACKUPCONTROLDATASET parameter for information about the backup versions of the data set.

Source: DFSMSHsm

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ARC0182I {NO | *nbv*} **BACKUP VERSION(S) DELETED FOR** *dsname*

Explanation: A BDELETE or HBDELETE command was issued to delete backup versions of the data set identified by *dsname*. If NO is specified, the specified backup versions were not found for *dsname*; otherwise the number of backup versions deleted is *nbv*.

System action: The BDELETE or HBDELETE command processing continues with any remaining data set names specified.

Operator response: If the message specifies *nbv*, there is no response. If the message specifies NO, ensure that the *dsname*, *volser* (if an uncataloged data set), date and time (if specified), and version numbers (if specified) are correctly specified. If not, make corrections and reissue the command. Issue a LIST or HLIST command specifying the data set name and the BACKUPCONTROLDATASET parameter for information about the backup versions of the data set. If the data set and backup versions were correctly specified and should exist, notify the system programmer or storage administrator.

Source: DFSMSHsm

ARC0183I **BACKUP VERSION NUMBER** *nbv* **OF DATA SET** *dsname* {DELETED | NOT DELETED}

Explanation: A BDELETE or HBDELETE command was issued with the VERSIONS parameter to delete backup version *nbv* of data set *dsname*. If the message specifies DELETED, the specified backup version was deleted.

If the message specifies NOT DELETED, the backup version does not exist or a nonzero return code was generated in an attempt to read the BCDS record for the backup version. If the latter prevents deletion of the data set, message ARC0184I precedes this message and gives the backup version name and the return code.

System action: The BDELETE or HBDELETE command continues processing. DFSMSHsm processing continues.

Programmer response: If the message specifies NOT DELETED, check LIST or HLIST output for *dsname* to verify the correct version number was specified. If the output reveals no errors, notify the system programmer or storage administrator. If the problem was caused by a nonzero return code, see the operator response for message ARC0184I.

Source: DFSMSHsm

ARC0184I **ERROR WHEN {READING | WRITING} THE DFSMSHSM CONTROL DATA SET** *type* **RECORD FOR** *key*, **RC=***return-code*

Explanation: An attempt to read or write the DFSMSHsm control data set record for *key* has resulted in a nonzero return code *return-code*. Return code 4 has the following meaning:

RC=4 — For disaster alternate volumes, this return code is not an indication of an error condition. DFSMSHsm allocates the disaster alternate volumes and the recovery process continues. If a data set being recovered spans to more than one volume and resides on disaster alternate volumes in a tape library, DFSMSHsm verifies and corrects only the tape library volume record for the first volume and the original volumes in the volume list.

The following example shows a volume list for a data set spanning four volumes:

```
TAPEA - DISASTER ALTERNATE VOLUME -  
TAPE LIBRARY RECORD VERIFIED  
TAPEB - DISASTER ALTERNATE VOLUME -  
MESSAGE ARC0184I RC=4  
TAPEC - ORIGINAL TAPE VOLUME -  
TAPE LIBRARY RECORD VERIFIED  
TAPED - DISASTER ALTERNATE VOLUME -  
MESSAGE ARC184I RC=4
```

DFSMSHsm issues *return-code* 4 for all other disaster alternate volumes because they do not have the backup volume record (MCT). The MCT is issued only for the original volume. For other retcode values, see Table 9 on page 559.

If *type* is 0, the first character of the external key is not printed.

System action: DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: Notify the storage administrator or system programmer.

Source: DFSMSHsm

ARC0185I {HBDELETE | BDELETE} COMMAND FAILED, DSN=*dsname*, BDSN=*backupdsname*, FROM VOL=*original-volser*, BACKUP DATE=*date-version-was-made*, CAT={YES | NO}, VER=*version-number*, RETURN CODE=*return-code*, REASON CODE=*reason-code*

Explanation: An HBDELETE or BDELETE command was issued to delete one or more backup versions of data set *dsname*. When the failure is due to a security check and either more than one version exists for a cataloged data set, or there are multiple versions for an uncataloged data set from the same volume, the message is issued once. The values for *return-code* are:

Retcode Meaning

- 2 The migration control data set data set record (MCD) for the data set is found in the migration control data set (MCDS), but the MCD record does not indicate the data set is migrated.
- 3 MIGRAT is returned as the volume serial of the volume where the data set resides, but no MCD record is found in the MCDS.
- 14 An error is detected while obtaining VSAM data set information.

The meanings for *reason-code* are:

Code Meaning

- 5 An attempt was made to backup a GDG base entry. The data set is only an entry in the catalog and not a cataloged data set.
- 6 There is an error in a catalog entry for a non-VSAM data set.
- 9 Unsupported data set for BACKUP. The catalog entry shows the VSAM data set is a non-SMS-managed data set defined with key ranges.
- 10 The catalog entry indicates that the data set is a multivolume data set. If the data set is VSAM, it is not an SMS-managed data set, and one component is multivolume.
- 11 Unsupported data set for backup. The catalog entry shows at least one AIX[®] defined with key ranges and the base cluster is *not* defined with key ranges.
- 12 The components of the non-SMS-managed VSAM cluster are on different volumes.
- 14 The catalog entry is not a VSAM base cluster or a non-VSAM data set; the catalog entry is a VSAM page space, or a LOCATE error occurred for the data set name.
- 15 A component of the VSAM data set has a logical record length that is too large for DFSMSHsm. The maximum allowable logical record length is 32,752 bytes for a relative record data set and 32,756 bytes for an entry-sequenced or key-sequenced data set.
- 16 A component of the VSAM data set is open for output.
- 18 A LOCATE error occurred for the data or index component of the VSAM base cluster.
- 19 A LOCATE error occurred for the path component of the VSAM base cluster.
- 20 The data set name is a VSAM component name instead of a cluster name.
- 24 The catalog entry indicates that the data set is a non-VSAM multivolume data set. The data set's *volser* list also indicates multiple volumes.
- 28 A LOCATE error occurred for a VSAM AIX* (alternate index) cluster.
- 38 A LOCATE error occurred for the data or index component of the VSAM AIX cluster.
- 39 A LOCATE error occurred for the path component of the VSAM AIX cluster.
- 40 At least one component of the VSAM data set is empty.
- 42 One or more retained copies exist for data set *dsname*. Active and retained backup copies of this data set can only be deleted on a z/OS V1R11 or later system.
- 52 a GETMAIN error occurred during the process of getting the catalog information about a VSAM data set.

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- 20 An ARCBZKEY error has occurred obtaining the key for the BCDS Z record. See additional information in previously issued TRAP message.
- 22 Password check fails. The *reason-code* 8 indicates the password is not specified or the password is incorrectly specified.
- 30 Check fails on allocation authority. The user does not have allocation authority, because a RACF generic profile exists for the data set and it denies access to the user.
- 32 The backup version for deletion is the most recent backup version of a retired data set. The backup version is not deleted unless the VERSION parameter and the version number of the retired version are specified, or the DATE and TIME parameters and the date and time when the retired version was created are specified.
- 39 RACF check fails. The *reason-code* is the return code from ARCRACF. For the meanings of *reason-code*, see Table 19 on page 571.

System action: DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: If it is necessary to delete backup versions of data sets for which you do not have the required level of access, notify the storage administrator or system programmer for assistance. For RETURN CODE=42, reissue the BDELETE command on a z/OS V1R11 or later system.

Source: DFSMSHsm

ARC0186I {HALTERDS | ALTERDS} COMMAND FAILED FOR DATA SET *dsname*, RETURN CODE=*return-code*, REASON CODE=*reason-code*

Explanation: An HALTERDS command has been issued to alter backup parameters for the data set *dsname*.

If *return-code* is 39, return code *reason-code* has been received from the authorization checking program installed on the system. When RACF is installed, the level of authorization required to issue the HALTERDS command to the original data set is ALTER. If *reason-code* is 0, then there is a LOCATE error on an AIX (alternate index) component.

Additional values for *return-code* are defined for the ARC0186I message to handle errors reading from or writing to the backup control data set (BCDS) as follows:

Retcode Meaning

- 1 An error has occurred reading the BCDS B record for the data set. *reason-code* is the return code from ARCZREAD.
- 2 An error has occurred updating the BCDS B record for the data set. The *reason-code* is the return code from ARCZUPDT.
- 3 An error has occurred writing a record for the data set. The *reason-code* is the return code from ARCZWRIT.
- 5 There is a parse error (invalid syntax) in the command.
- 6 There is error in a catalog entry for a non-VSAM data set.
- 9 Unsupported data set. The catalog entry shows that the VSAM data set is a non-SMS-managed data set defined with key ranges.
- 10 The catalog entry indicates that the data set is a multivolume data set. If the data set is VSAM, it is not an SMS-managed data set, and one component is multivolume.
- 12 The components of a non-SMS VSAM cluster are on different volumes.
- 14 A LOCATE failure has occurred. The *reason-code* is the VSAM catalog return code. A *reason-code* of zero is received if the data set is a nonintegrated catalog facility (ICF) catalog or a VSAM page or swap data set. For detailed information about the *reason-code*, see *z/OS MVS System Messages, Vol 6 (GOS-IEA)*, message IDC3009I.
- 18 A LOCATE error has occurred for the data or index component of the VSAM base cluster.
- 20 The data set is a data or index component. Only cluster names are allowed.

- 22 Password check has failed. *reason-code* 8 indicates the password is not specified or the password is incorrectly specified.
- 24 The data set is a non-VSAM multivolume data set which is not allowed.
- 25 Inconsistency reading the migration control data set (MCDS) D record. The dataset is cataloged as MIGRAT, indicating the data set is migrated. However, an error has occurred reading the D record or the D record indicates that no migration copy exists (*reason-code* = 0). For other reason codes see ARC1325I.
- 28 A LOCATE error has occurred for a VSAM AIX cluster.
- 30 The check on allocation authority has failed. The user does not have allocation authority because a RACF generic profile exists for the data set and it denies access to the user.
- 38 A LOCATE error has occurred for the data or index component of the VSAM AIX cluster.
- 39 For *reason-code*=0, LOCATE error has occurred on an AIX path component. For any other *reason-code*, RACF authorization check fails. See message ARC1139I for *reason-code* explanation.
- 70 The ALTERDS or HALTERDS command is not allowed for SMS-managed data sets.

System action: DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: If it is necessary to alter backup parameters for data sets to which you do not have the required level of access, notify the storage administrator or system programmer for assistance.

Source: DFSMSHsm

ARC0187I I/O ERROR {POSITIONING TO | READING NEXT} DFSMSHSM CONTROL DATA SET *type* RECORD, KEY=*key*, RC=*return-code*

Explanation: There has been a failure in positioning or sequentially reading the next control data set *type* record with *key*. For *return-code* values, see Table 9 on page 559.

System action: Scanning of control data set records ends for the function being processed. DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC0188I ERROR DELETING DFSMSHSM CONTROL DATA SET *type* RECORD, KEY=*key*, RC=*return-code*

Explanation: There has been a failure to delete the control data set *type* record with *key*. For *return-code* values, see Table 9 on page 559.

System action: DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: Notify the storage administrator or system programmer.

Source: DFSMSHsm

ARC0189I NO DFSMSHsm CONTROL DATA SET C RECORD FOUND FOR BACKUP VERSION *backupdsname* OF {CATALOGED | UNCATALOGED} DATA SET *dsname*, BACKUP VERSION ENTRY DELETED FROM DFSMSHSM BACKUP CONTROL DATA SET [B | Z] RECORD

Explanation: An HBDELETE user command or a BDELETE storage administrator command was issued to delete active, retained, or both backup version(s) of data set *dsname*. If B record is specified, an active backup version entry in the BCDS data set record for *dsname* indicated the existence of active backup version *backupdsname* but there was no BCDS backup version record found for that active backup version. If Z record is specified, a retained backup version entry in the BCDS data set record for *dsname* indicated the existence of retained backup version *backupdsname* but there was no BCDS backup version record found for that retained backup version. The specified

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backup version entry was deleted from the BCDS data set record.

System action: DFSMSHsm processing continues. BDELETE or HBDELETE command processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0190I DISPLAY COMPLETE

Explanation: The DISPLAY command completed processing.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0191I INVALID ADDRESS

Explanation: The DISPLAY or PATCH command was issued to display or patch data at a DFSMSHsm storage location. The command failed because an invalid address was specified. Addressing using registers, expressions, variable names, and indirect addressing is not allowed.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Correct the address parameter and reissue the command.

Source: DFSMSHsm

ARC0192I MODULE *modname* NOT FOUND

Explanation: DFSMSHsm received a DISPLAY or PATCH command with a module name specified as part of the address. The entry point for the requested module is not known to DFSMSHsm. It could not be found in the DFSMSHsm external symbol directory table. The name of the requested module is *modname*.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Verify the module name and reissue the command.

Source: DFSMSHsm

ARC0193I DISPLAY FAILED - PROTECTION/ADDRESSING INTERRUPT OCCURRED

Explanation: During an attempt to display the data at a DFSMSHsm storage address during DISPLAY or PATCH command processing, a protection or addressing interruption occurred.

System action: The DISPLAY or PATCH command ends. The previous DFSMSHsm environment is restored. DFSMSHsm processing continues.

Programmer response: Verify the address specified in the command. The address must be within the DFSMSHsm address space. Notify the system programmer if the problem occurs again.

Source: DFSMSHsm

ARC0194I {DISPLAY | PATCH} PROCESSING FOR EXIT *exitname* FAILED. EXIT DOES NOT EXIST IN SYSTEM

Explanation: A DISPLAY or PATCH command was issued for an installation-wide exit *exitname* that was not loaded into the DFSMSHsm system at startup time. The command fails.

System action: DFSMSHsm processing continues.

Programmer response: If the exit should be in the system, see the storage administrator to determine why the exit is not in the system. If the exit name was incorrect, reissue the command with the proper exit name.

Source: DFSMSHsm

ARC0195I TYPE *type*, KEY *key*, FIXCDS *option*, ERROR=*error*

Explanation: A FIXCDS command failed. The control data set record type is *type*. The control data set record key is *key*. The name of the *option* specified on the FIXCDS command is DISPLAY, PATCH, ADD MDS, DELETE, ASSIGNED, EXPAND, NEWKEY, CREATE, VERIFY, PATCH ENTRY, DELETE ENTRY, VERIFY ENTRY, PATCH GENERATION or DISPLAY GENERATION. Type *error* has several inserts indicating a specific error condition.

- CDS ACCESS ERROR — There was an error in reading, writing, or deleting a control data set record.
- {CREATE | DELETE | NEWKEY} MCU RECORD — The FIXCDS command cannot be used to create, delete or change a new key of the MCDS user record.
- INVALID KEY LENGTH
 - Either no key was entered on the command or a key with more than the allowable characters was entered on the command.
 - The DFSMSHsm internal key for the record does not match the external key of the record after the external key was converted.
- INVALID OFFSET OR LENGTH
 - The offset or length value entered on the FIXCDS DISPLAY command addresses an area beyond the end of the record specified in the command.
 - The length value entered on the FIXCDS CREATE or FIXCDS ADDMIGRATEDDATASET command is incorrect. Either a value was entered less than the size of the record specified in the command, or the value was greater than the maximum size for the data portion of any DFSMSHsm record (1976 bytes).
 - The length of the data patched into the record specified in the FIXCDS PATCH or FIXCDS CREATE command is 0, or the data extends beyond the end of the record when patched into the record starting at the indicated offset in the command.
 - The length value specified on the FIXCDS EXPAND command causes the record specified in the command to exceed the maximum supported record size of 1976 bytes.
- INVALID RECORD TYPE
 - No record type was entered in the command.
 - The record type entered was not one of the recognized DFSMSHsm record types.
 - The option was ADDMIGRATEDDATASET or ASSIGNEDBIT, but the record type entered was not a D (data set).
- NEW KEY EXISTS—The key specified on the FIXCDS NEWKEY command already exists as the key of another record in the control data set.
- PATCH MCU AUTHORIZATION FIELDS—The FIXCDS command cannot be used to patch any authorization control fields in the MCDS user record.
- PATCH VSAM PASSWORD—The offset specified in the FIXCDS PATCH command causes an overlay of the VSAM password storage area in the MCD or MCB record.
- VERIFY FAILED—The data specified in the FIXCDS VERIFY command did not match the data in the control data set record at the specified location.
- ENTRY EXISTS—The key specified on the FIXCDS ENTRY command exists as the entry name of another record entry in the specified control data set record.
- ENTRY NOT FOUND—The key specified on the FIXCDS ENTRY command was not found in the specified control data set record.
- NO SPACE—The control data set record specified on the FIXCDS CREATE ENTRY command does not have enough space remaining to add the requested entry.
- RECORD EXISTS—The control data set record specified already exists.
- PATCH MCL RECORD KEY—The offset specified for either the FIXCDS PATCH or FIXCDS CREATE command specified in the first 2 bytes of the MCL record data area. This area is not changeable.
- MCD RECORD NOT FOUND—The associated MCD record was not found for the data set name specified on the FIXCDS CREATE command. An associated MCD record must already exist for the MCL record creation. FIXCDS PATCH or FIXCDS CREATE command specified in the first 2 bytes of the MCL record data area. This area is not changeable.
- MCD RECORD NOT FOUND—The associated MCD record was not found for the data set name specified on the FIXCDS CREATE command. An associated MCD record must already exist for the MCL record creation.
- INVALID OPERATION

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- The VERIFY parameter is only valid when used alone or with the PATCH, DELETE, or DISPLAY parameters.
- The ENTRY parameter is valid only when specified with BVR or TTOC records.
- The GENERATE keyword only is valid when used with the PATCH or DISPLAY parameters and specified with the MCB record.
- RECORD NOT FOUND—The indicated record was not found; you could not delete or update it.
- RECORD IN USE—The indicated record was in use; you could not delete or update it.
- NEWKEY MCL RECORD—You could not use the FIXCDS NEWKEY command to change the MCL record. If an MCL record is desired for a different data set, use the FIXCDS CREATE command.

System action: The FIXCDS request fails. DFSMSHsm processing continues.

Programmer response: Verify the original command, correct the input parameters where necessary, and reissue the command. Should this message recur, notify the system programmer. If *error* is CDS ACCESS ERROR, the error is probably caused by a system problem. If the *error* is one of the following, the error is probably a user error.

INVALID KEY LENGTH
INVALID OFFSET OR LENGTH
PATCH VSAM PASSWORD
INVALID RECORD TYPE

Other values for *error* indicate either a user or a system problem.

- You can modify the contents of the authorization control fields in the MCU record by entering the AUTH command with the DBA (USER) or DBA (CONTROL) parameters.
- You can create the MCU record by entering the AUTH command with the DBA (USER) or DBA (CONTROL) parameters.
- You can delete the MCU record by entering the AUTH command with the REVOKE parameter.
- You cannot use the FIXCDS NEWKEY command for user (MCU) records. To authorize a person who is not currently authorized for DFSMSHsm commands, use the AUTH command to create a new MCU record for the user. If the other user should no longer be authorized, use the AUTH command to revoke the user's authorization.
- You cannot use the FIXCDS CREATE or PATCH command to change the first 2 bytes of the MCL record. If you change these 2 bytes, you also change the data set name associated with the record. If you need an MCL record for a different data set, use the FIXCDS CREATE command.

Source: DFSMSHsm

ARC0197I TYPE *type*, KEY *key*, FIXCDS *option* SUCCESSFUL

Explanation: The FIXCDS command processor successfully performed the requested option on the specified control data set record. The type of record processed is *type*, the key of the processed record is *key*, and the operation performed on the record is *option*. The options are DISPLAY, PATCH, DELETE, EXPAND, NEWKEY, ADDMIGRATEDDATASET, ASSIGNEDBIT, DISPLAY ENTRY, CREATE ENTRY, DELETE ENTRY and PATCH ENTRY.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0198I FIXCDS {MCT | TTOC} DELETION FAILED, RC = *return-code*, REASON = *reason-code*

Explanation: A FIXCDS command has been issued to delete a backup control data set backup volume record (MCT) or tape table of contents (TTOC) entry. When an MCT record is deleted, the backup cycle volume record (BVR) entry for the volume is also deleted as well as the TTOC record for the volume, if the volume is a tape volume. The TTOC record is the last of the records that are deleted. If any delete fails, the MCT deletion also fails.

When a deletion of the base TTOC and all of the extension records is requested, the BVR entry and the MCT record for the volume are also deleted. The TTOC record is the last of the records to be deleted. If any delete fails, the TTOC deletion also fails.

The values for *return-code* are:

Retcode Meaning

- 4 Read of the MCT fails.
- 8 Delete of the BVR fails.
- 10 Delete of the MCT fails.
- 12 Delete of the TTOC record fails.

If the return code is 4, see Table 9 on page 559 for *reason-code* values.

If the return code is 8, the values for *reason-code* are:

- 4 The record is not found.
- 8 A read error has occurred.
- 12 A write error has occurred.
- 16 The record is in use by another processing unit.

If the return code is 10, the values for *reason-code* are:

- 10 A read error has occurred.
- 16 A physical error has occurred.
- 20 A logical error has occurred.

If the return code is 12, the values for *reason-code* are:

- 11 A read error has occurred.
- 25 A write error has occurred.
- 45 A delete failure has occurred.
- 49 A failure to release RACF protection has occurred.

System action: The FIXCDS command ends. DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: If the command failed because the MCT for the key specified in the command is not found or if the key specified is incorrect, reissue the command. If the key specified is correct, the MCT has been either deleted earlier or a DELVOL command with the PURGE parameter has been processed and the record no longer exists. For all other return codes, notify the storage administrator or system programmer.

Source: DFSMSHsm

ARC0199I {MCT | BVR} RE-CREATION {SUCCESSFUL | FAILED}, RC = *return-code*

Explanation: A FIXCDS command has been issued to delete a backup control data set backup volume record (MCT). During the deletion of the record, an error has occurred. The record specified in the message is deleted when the error occurs. A re-creation of the deleted record has been attempted. The result of the re-creation is given in the message.

For MCT re-creation, see Table 9 on page 559 for return code values.

For backup cycle volume record (BVR) re-creation, the values for *return-code* are:

Retcode Meaning

- 4 The record is not found.
- 8 A read error has occurred.
- 12 A write error has occurred.
- 16 The record is in use by another processing unit.

System action: FIXCDS command processing ends. DFSMSHsm processing continues.

ARC0200I

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: Notify the storage administrator or system programmer.

Source: DFSMSHsm

ARC0200I TRAP IN MODULE *modname*, CODE=*errcode*, {LOG ALWAYS ADDED | NODUMP ONCE ADDED | FATAL ONCE ADDED | DEBUG ALWAYS ADDED | SNAP {ALWAYS | ONCE | NEVER} ADDED | ABEND {ALWAYS | ONCE | NEVER} ADDED | REMOVED}

Explanation: DFSMSHsm finished adding or removing a trap for module *modname* when an error *errcode* occurred. The rest of the message indicates what action DFSMSHsm takes. This message is in response to a user who entered the TRAP command. In certain cases, this message is also issued the first time an error occurs in DFSMSHsm and for which a TRAP command for the specific error condition was not entered.

errcode is one of the following:

- When the message is issued for the first time the error occurs, an entry is made in the trap table. ARCERP manages the trap table and also contains the action to take. For those entries added to the trap table, *errcode* is the error code sent to ARCERP by the module recognizing the error condition. The TRAP command overrides the error procedures in ARCERP and causes the error processing to take a different action when the error occurs.
- If *errcode* is ANY, this message is issued in response to the TRAP command where the ERRCODE parameter of the TRAP command was either entered as 0 or omitted.
- If *errcode* is SYSTEM ABEND CODE a system abnormal end (abend) occurred in the module *modname*.
- If *errcode* is a number from 400-499, a second message appears with the same error condition, but with a different module name. This error represents an error in a module path. Search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

If the *modname* is ARCZWRT and the *errcode* is 8, the message indicates a record with a duplicate key already existed when DFSMSHsm tried to write the record. This condition is an error.

More information about modules and error codes can be found in *z/OS DFSMSHsm Diagnosis* under "Diagnosing From Return Codes and Reason Codes" in the table titled "Entries that Pass Error Codes to ARCERP".

System action: If the message is the result of a TRAP command, no action is taken by the system; however, an entry is placed in the trap table that invokes the requested TRAP command action when the specified error occurs.

If the message is issued as a result of an error, the following actions are taken depending on the action indicated in the message:

- LOG ALWAYS ADDED
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- FATAL ONCE ADDED
The DFSMSHsm task that had the error is abended with a dump request.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
DFSMSHsm is shut down immediately.
- NODUMP ONCE ADDED | ABEND ONCE ADDED
The DFSMSHsm task that had the error is abended.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- SNAP NEVER ADDED | ABEND NEVER ADDED
No action is taken, but a table entry is created and the number of times this error occurred is set to 1 in the entry.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- SNAP ALWAYS ADDED
A SNAP dump of the DFSMSHsm address space is taken.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- SNAP ONCE ADDED

The DFSMSHsm task that had the error is snapped if this is the first occurrence of the condition. If this is not the first occurrence of the condition, a table entry is created and the number of times this error occurred is set to 1 in the entry.

A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.

- ABEND ALWAYS ADDED

The DFSMSHsm task that had the error is abended.

A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.

- DEBUG ALWAYS ADDED

A log entry of the error is written to the DFSMSHsm log.

Programmer response: If FATAL ONCE is added, restart DFSMSHsm.

If you want DFSMSHsm to stop issuing this message, issue the TRAP command with the OFF parameter.

Source: DFSMSHsm

ARC0202W ENTRY POINT *modname* NOT FOUND IN MODULE ENTRY TABLE

Explanation: A TRAP command was issued for a DFSMSHsm module or entry point name that it did not find in its module entry table. Since some entry points are not contained in this table, this message serves only as a attention that the TRAP command might have been incorrectly specified.

System action: The TRAP command is accepted as entered. DFSMSHsm processing continues.

Programmer response: Verify that the *modname* specified by the TRAP command is correct and reissue the command if it was not correct.

Source: DFSMSHsm

ARC0203I CSALIMITS={NO | YES}, CSA CURRENTLY USED=*nnnnnn* BYTES, MWE=*www*, MAXIMUM=*xxxxxx*K BYTES, ACTIVE=*yyy*%, INACTIVE=*zzz*%

Explanation: A QUERY command was issued with the SETSYS or CSALIMITS parameter. This message gives the values for the CSALIMITS parameter specifiable on the SETSYS command.

nnnnnn is the number of common service area (CSA) bytes currently in use by DFSMSHsm.

www is the number of nonwait-type management work elements (MWEs) per address space to retain in CSA.

xxxxxx is the maximum amount of CSA storage that is allocated to MWEs during DFSMSHsm processing in K-bytes.

yyy is the percent of the maximum amount of CSA storage that is allocated to all types of MWEs while DFSMSHsm is active.

zzz is the percent of the maximum amount of CSA storage that is allocated to nonwait-type MWEs when DFSMSHsm is inactive.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0204I NO ACTIVE TRAP ENTRIES

Explanation: The QUERY command has been issued with the TRAPS parameter. There were no DFSMSHsm modules with active traps for error codes.

System action: DFSMSHsm processing continues.

Programmer response: None

Source: DFSMSHsm

ARC0205I TRAP IN MODULE *modname* FOR CODE *errcode*, TIMES=*errtimes*, TYPE={LOG ALWAYS | BY OCCURRENCE | SNAP {ALWAYS | ONCE | NEVER} | ABEND {ALWAYS | ONCE | NEVER}}

Explanation: The QUERY command was issued with the TRAPS parameter. This message provides data about active trap requests.

- *modname* indicates the trap is specified as a module or entry point name.
- *errcode* indicates the error code being trapped.
- *errtimes* indicates the number of times the error has been trapped.

The type of action taken during processing of the TRAP command is LOG ALWAYS, BY OCCURRENCE, SNAP, or ABEND. If the type of action taken is BY OCCURRENCE, the trap was not set by a user command but by an internal call to the DFSMSHsm error handling routine.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0206I *address data*

Explanation: Either a DISPLAY or PATCH command was issued. This message is the data line that starts with the display or patch *address* and continues with the variable *data* that follows that address.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0207I VOLSER NOT SPECIFIED WITH PATCH OF CONTROL BLOCK COMMAND

Explanation: A PATCH command has been issued for a control block and no VOLSER has been specified. A VOLSER is required when a PATCH command is issued for a control block.

System action: The PATCH command processing ends.

Programmer response: Specify the VOLSER of the control block that is to be PATCHed.

Source: DFSMSHsm

ARC0208I TRAP FOR ERROR CODE *errcode*, MODULE *modname*, {NODUMP ONCE | FATAL ONCE | DEBUG ALWAYS | *nnnn* MAXLIMIT | SNAP {ALWAYS | ONCE | NEVER} | ABEND {ALWAYS | ONCE | NEVER}} DONE

Explanation: The error processing routine has been called to perform the action indicated in the message. The module calling the error processing routine is *modname*. If *modname* is UNKNOWN, the module that has issued this error could not be determined accurately. The error code being trapped is *errcode*.

The message is issued when an error occurs that has either occurred before or for which there is an entry in the trap table as a result of a prior TRAP command for that exact condition.

If *errcode* is a number from 400–499, a second message appears with the same error condition but a different module name. This error represents an internal error in a module-to-module path. Search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

If the *modname* is ARZWRIT and the *errcode* is 8, the message indicates that a record with a duplicate key already existed when DFSMSHsm tried to write the record. This condition is an error.

More information about modules and error codes can be found in *z/OS DFSMSHsm Diagnosis*, in Appendix A, in the section “Diagnosing from Return Codes and Reason Codes”, in Figure 5, “Entries that Pass Error Codes to ARCERP.”

System action: The system issues this message as a result of an error occurring in one of the DFSMSHsm processes. ARCERP determines what error action is taken in response to that error. The user can change the designed action by issuing a TRAP command. For information concerning the TRAP command, see *z/OS DFSMSHsm Diagnosis*.

The action taken as a result of the error appears in the message. Details of the action taken are listed below:

- LOG ALWAYS
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- FATAL ONCE
The DFSMSHsm task that had the error is abnormally ended (abend) with a dump request.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
DFSMSHsm is shut down immediately.
- *nnn* MAXLIMIT
The number specified by MAXLIMIT has been exceeded for this day.
The DFSMSHsm task that had the error has been abended with a dump request.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
DFSMSHsm is shut down immediately.
- NODUMP ONCE | ABEND ONCE
NODUMP ONCE is an internally set error trap that requires the current task to abend (if this is the first occurrence of the error), but does not process a dump of the abend. ABEND ONCE will process a dump.
The DFSMSHsm task that had the error is abended if this is the first occurrence of the condition. If this is not the first occurrence of the condition, the count of this abend condition is incremented by 1.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- SNAP NEVER | ABEND NEVER
No action is taken, but the table entry containing the number of times this error has occurred is incremented by 1.
A log entry of the error is written to the DFSMSHsm log.
- SNAP ALWAYS
A SNAP dump of the DFSMSHsm address space is taken and the count of the error condition is incremented by 1.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- SNAP ONCE
The DFSMSHsm task that had the error is snapped if this is the first occurrence of the condition. Otherwise, no system action is taken, but the count of this error condition is incremented by 1.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- ABEND ALWAYS
The DFSMSHsm task that had the error is abended. The count of this error condition is incremented by 1.
A log entry of the error is written to the DFSMSHsm log and message ARC0900I is issued to the operator.
- DEBUG ALWAYS
A log entry of the error is written to the DFSMSHsm log.

Programmer response: If FATAL ONCE or *nnn* MAXLIMIT is the DFSMSHsm action, restart DFSMSHsm. Otherwise, no action is necessary.

If you want DFSMSHsm to stop issuing this message, issue the TRAP command with the OFF parameter.

Source: DFSMSHsm

ARC0210I PATCH PROCESSING COMPLETE

Explanation: The PATCH command was issued. Patch processing has completed.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0211I INVALID PATCH DATA

Explanation: The PATCH command processor was given verify data or patch data with length greater than 256 or with length of 0.

System action: The command ends. DFSMSHsm processing continues.

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Programmer response: Verify the patch data and the length of patch input and reissue the command.

Source: DFSMSHsm

ARC0212I PATCH FAILED - {PROTECTION/ADDRESSING INTERRUPT OCCURRED | VOLUME NOT SPECIFIED}

Explanation: DFSMSHsm received a PATCH command. During an attempt to patch a location in the DFSMSHsm address space, a protection or addressing interruption occurred. This message is also issued when a PATCH command is issued for a DFSMSHsm control block and the volume parameter is not specified.

System action: The command ends. The previous DFSMSHsm environment is restored. DFSMSHsm processing continues.

Programmer response: Verify the PATCH command and reissue the command. If the error is PROTECTION/ ADDRESSING INTERRUPT OCCURRED, the patch address space must be within the DFSMSHsm address space. For VOLUME NOT SPECIFIED, a volume must be specified to patch the DFSMSHsm control block.

Source: DFSMSHsm

ARC0213I VERIFY SUCCESSFUL

Explanation: DFSMSHsm received a PATCH command. The data at the specified address is compared to the verification data supplied. The comparison was correct.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0214I VERIFY FAILED - DATA FOLLOWS

Explanation: DFSMSHsm received a PATCH command. The verification data did not match the contents of the specified storage location. The data following the message shows the contents of the location.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Verify that the contents of the location to be patched is the required data. Retry the patch when the correct location is determined or investigate the reason for the unexpected data at the location.

Source: DFSMSHsm

ARC0215I VERIFY FAILED - PROTECTION/ADDRESSING INTERRUPT OCCURRED

Explanation: DFSMSHsm has received a PATCH command. During an attempt to verify the data at a DFSMSHsm location, a protection or addressing interruption has occurred.

System action: The command ends. The previous operating environment is restored. DFSMSHsm processing continues.

Programmer response: Change the verification address to a location within the DFSMSHsm address space.

Source: DFSMSHsm

ARC0216I DUMPCLASS DEFINITION {SUCCESSFUL | MODIFIED | DISABLED | UNSUCCESSFUL}, CLASS=*class*, RC=*return-code*

Explanation: A DEFINE command was issued to define a dump *class*. If MODIFIED is indicated, the dump class that existed before the DEFINE command was issued and the dump class attributes that were changed were successfully recorded in the DFSMSHsm backup control data set (BCDS). If SUCCESSFUL is indicated, a new class was defined without an error or the definition did not change any attributes of an existing class. A value of 0 is returned for *return-code* for SUCCESSFUL and MODIFIED.

If DISABLED is indicated, the dump class existed before the DEFINE command was issued and before you specified the DISABLE parameter. The dump class record was marked disabled. You can neither do further dumps nor add dump volumes to this class.

When DISABLED, the values for *return-code* are:

Retcode Meaning

- 0 No dump volumes in the dump class contained valid dump copies. Any empty volume assigned to this class is now unassigned.
- 1 At least one dump volume assigned to the class contained part of a valid dump copy. Any volumes containing valid data in the class remain unchanged. Any volumes that did not contain part of a valid dump copy were unassigned.

If UNSUCCESSFUL is indicated, the dump class definition failed. Possible *return-code* value are:

Retcode Meaning

- 2 An error reading, writing, or updating the dump class record (DSR) occurred. See an accompanying ARC0184I message for further details.
- 4 The RETENTIONPERIOD specified was less than 1 or greater than 9999, or it was not NOLIMIT.
- 6 The FREQUENCY specified was less than 0 or greater than 999.
- 8 The UNIT specified is invalid. Only the following tape units are valid: 3400-4, 3400-5, 3400-6, 3400-9, 3480, 3480X, 3490, or valid esoteric tape unit names.
- 10 The DAY specified is invalid. It is either less than 1 or greater than the number of days in the dump cycle, or it is the number of an N day in the cycle.
- 12 A DEFINE command was issued with the DISABLE parameter for a dump class that does not exist.
- 14 A DEFINE command was issued with the VTOCCOPIES parameter. The value specified for this parameter was not a numeric value between 0 and 100.
- 16 A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The year value specified for this parameter was not a valid year from the current year (YY) to 99, or from the current year (YYYY) to 2155.
- 18 A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The value specified was not 5 or 7 numeric characters.
- 20 A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The year specified for this parameter was a valid year after 1999; however, the level of MVS or DFP installed does not support expiration dates past 1999. A year between 1900 and 1999 is required.
- 22 A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The days value specified for this parameter was not in the range between 001 to 366.
- 24 A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The date specified was in the past.
- 26 A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The date was specified using the form *yyddd*, but the current date is after 1999.
- 28 A DEFINE command was issued with the STACK, MAXSTACK, or MINSTACK parameter. The stack value specified is out of the valid range of 1 - 255.
- 30 A DEFINE command was issued with the ENCRYPT parameter. One of RSA, KEYPASSWORD, and NONE must be specified with ENCRYPT when a new dump class is being defined.
- 32 A DEFINE command was issued with the ENCRYPT parameter. The NONE keyword was specified with conflicting encryption keywords.
- 34 A DEFINE command was issued with the ENCRYPT parameter. The TYPE keyword was specified without its required parameter.
- 36 A DEFINE command was issued with the ENCRYPT parameter. Both KEYPASSWORD and TYPE(ENCTDES) were specified on the command, or one was specified on the command while the other was previously set in the dump class. Encryption type ENCTDES and KEYPASSWORD cannot both be set in a dump class definition.

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- 38 A DEFINE command was issued with the ENCRYPT parameter. KEYPASSWORD was specified with an invalid password. The password must be 8 to 32 characters in length.
- 40 A DEFINE command was issued with the ENCRYPT parameter. ICOUNT was specified without the KEYPASSWORD keyword.
- 42 A DEFINE command was issued with the ENCRYPT parameter. The ICOUNT value specified was not in the range between 1 to 10000.
- 44 A DEFINE command was issued with the HWCOMPRESS parameter. The required YES/NO parameter was not specified with the HWCOMPRESS keyword.
- 46 A DEFINE DUMPCLASS command was issued with FASTREPLICATIONDUMP and the RESET parameter or the dump class specified on the FRBACKUP DUMP command was previously defined with RESET. FASTREPLICATIONDUMP and RESET cannot both be set in a dump class definition and a dump class defined with the RESET parameter cannot be used for a fast replication dump.
- | 48 A DEFINE command was issued with the ZCOMPRESS parameter. The required YES/NO parameter was
| not specified with the ZCOMPRESS keyword.
- | 50 A DEFINE command was issued:
| • MINSTACK value was specified.
| • No STACK was specified.
| • The STACK value defined in the class is less than the specified MINSTACK value in the DEFINE
| command.
- | 52 A DEFINE command was issued:
| • STACK or MAXSTACK value was specified.
| • No MINSTACK was specified.
| • The MINSTACK value defined in the class is greater than the specified STACK value in the DEFINE
| command.
- | 54 A DEFINE command was issued:
| • Both MINSTACK and STACK or MAXSTACK value was specified.
| • The MINSTACK value is greater than the specified STACK value in the DEFINE command

System action: If UNSUCCESSFUL, the DEFINE command fails. DFSMSHsm processing continues.

Programmer response: If UNSUCCESSFUL and the return code is not 2, determine the incorrect parameter, correct it, and issue the DEFINE command again. For return code 2, determine the cause of the control data set access error, correct it, and issue the DEFINE command again.

Source: DFSMSHsm

ARC0217I DEFINE POOL *char* REJECTED. POOL ALREADY EXISTS

Explanation: DFSMSHsm received a DEFINE command to define a pool *char* of the data set name in a JES3 environment. The pool name already exists. Redefinition of the same pool is not acceptable in a JES3 environment.

System action: The command ends. The existing pool definition remains. DFSMSHsm processing continues.

Operator response: Notify the storage administrator.

Programmer response: Before DFSMSHsm is initialized, be sure the definition for each pool is a unique definition in the ARCCMDxx member of the data set identified by the HSMPARM DD statement of the DFSMSHsm startup procedure.

Source: DFSMSHsm

ARC0219I DEFINE MIGRATION LEVEL 2 REJECTED - {TAPE VOLUME CANNOT BE ASSOCIATED WITH KEY RANGE | I/O ERROR | MIGRATION TO LEVEL 2 DASD IN PROCESS | DRAIN ATTRIBUTE | TOO MANY KEYS PREVIOUSLY SPECIFIED FOR VOLUME=*volser*}

Explanation: A DEFINE command was issued to define the structure of migration level 2 storage to DFSMSHsm, but one of the following conditions occurred:

1. An attempt was made to associate one or more tape migration level 2 volumes to key ranges, which is not allowed.

2. An I/O error occurred when positioning or reading the migration control record in a multiple processing unit environment. See the preceding message ARC0187I for the I/O error.
3. One of the following types of migration was in process:
 - Migration of a migration level 1 or level 2 volume to level 2 DASD.
 - Migration of all level 1 to level 2 DASD.
4. An ADDVOL command with the DRAIN parameter was previously processed for the volume. The volume is no longer eligible to be a target volume for migration. The volume specified in the message is the first volume with the DRAIN attribute in the list of volumes specified in the DEFINE command. There may be others with the same problem.
5. An attempt was made to define more than 61 key ranges.

System action: The MIGRATIONLEVEL2 parameter is ignored. Processing continues for the POOL, MIGRATIONCLEANUPCYCLE, and BACKUP parameters.

Programmer response:

1. If the error is TAPE VOLUME CANNOT BE ASSOCIATED WITH KEY RANGE, reenter the command specifying only DASD migration level 2 volumes.
2. If the error is I/O ERROR, reenter the DEFINE command with the MIGRATIONLEVEL2 parameter after the I/O error is fixed as described in the preceding message ARC0187I.
3. If the error is MIGRATION TO LEVEL 2 DASD IN PROCESS, wait until the migration is complete and reenter the DEFINE command with the MIGRATIONLEVEL2 parameter. If DFSMSHsm is in a multiple processing unit environment and the processing of the migration to level 2 DASD fails before the migration completes, DFSMSHsm will not allow a DEFINE command to be issued on any processor until DFSMSHsm is started up in the processor that failed. If the processor will be unavailable for an extended time and you want to issue a DEFINE command with the MIGRATIONLEVEL2 parameter, the DFSMSHsm migration control data set migration control record (MCR) for the inoperative processor must be modified. Enter a FIXCDS command for the MCR record for the inoperative processor so that DFSMSHsm will set off the indicator that migration to level 2 DASD is running. This indicator is MCRFML2. Once the migration to level 2 DASD indicator is set off in the MCR of the inoperative processor, DFSMSHsm will allow a DEFINE command with the MIGRATIONLEVEL2 parameter to be processed.
4. If the error is DRAIN ATTRIBUTE, reenter the command specifying only DASD migration level 2 volumes that do not have the DRAIN attribute already turned on. Use the LIST command to find those volumes that do not have the drain attribute turned on.
5. If the error is TOO MANY KEYS PREVIOUSLY SPECIFIED FOR VOLUME = *volser*, 61 or less key ranges must be specified for VOLUME = *volser*.

Source: DFSMSHsm

ARC0220I DEFINE LEVEL 2 VOLUMES SUCCESSFUL

Explanation: DFSMSHsm received a DEFINE command with the MIGRATIONLEVEL2 parameter. DFSMSHsm has successfully assigned new key ranges to the level 2 migration storage.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0221I DEFINE MIGRATION LEVEL 2 KEYS NOT IN ORDER

Explanation: The key range was not specified in ascending collating sequence, as required, when the DEFINE command was issued to define the structure of migration level 2 storage to DFSMSHsm.

System action: The MIGRATIONLEVEL2 parameter is ignored. Processing continues for the POOL and BACKUP parameters if you specified them.

Programmer response: Examine the key ranges specified with the KEYS subparameter. The keys must be in ascending collating sequence. Reissue the command after correcting the KEYS subparameter.

Source: DFSMSHsm

ARC0222I DEFINE MIGRATION LEVEL 2 VOLUME *volser* COULD NOT BE OBTAINED

Explanation: A DEFINE command was issued to define a migration level 2 volume with the volume serial number *volser* to a level 2 key range. There is no migration control data set volume record (MCV) for this volume or there was an I/O error reading the record. If the volume has been added to DFSMSHsm as a level 2 migration volume, a previous message was issued indicating the type of I/O failure.

System action: The command ends. The volume is not defined to the level 2 key range. DFSMSHsm processing continues.

Programmer response: If an I/O failure occurred, follow the directions indicated by the I/O failure message. If the volume was not a part of the owned volumes of DFSMSHsm, add the volume to DFSMSHsm by using the ADDVOL command. When corrective action has been taken, reissue the DEFINE command.

Source: DFSMSHsm

ARC0223I DEFINE LEVEL 2 - NO MORE FREE VOLUMES {KEYRANGES MAY BE SKIPPED}

Explanation: DFSMSHsm attempted to cause migration of a data set to a level 2 DASD volume. There are no more DASD level 2 volumes with space for the data set.

If KEYRANGES MAY BE SKIPPED is stated in the message during level migration to DASD or during migration of a volume to level 2 DASD, then migration failed to associate a level 2 DASD volume to a key range. A level 2 DASD volume could not be associated to a key range for one of the following reasons:

- No level 2 DASD volume was associated to the key range when the level 2 DASD key ranges were defined.
- An attempt was made to cause the migration of a data set to level 2 DASD. There was either not enough space for the data or there was no space left in the VTOC. Message ARC0503E was issued to the command activity log and gives the reason for the allocation error.
- The allocation of the level 2 DASD volume that was associated to the key range failed. Message ARC0500I was issued to the command activity log and gives more information about the allocation error.

System action: The data set being processed does not migrate. DFSMSHsm processing continues.

If KEYRANGES MAY BE SKIPPED is stated in the message, level migration to DASD or migration of a volume to level 2 DASD will not cause the migration of any more data sets from the key range that caused ARC0223I to be issued. No data sets will migrate from any subsequent key range that needs to associate a level 2 DASD volume.

Programmer response: Use the ADDVOL command to make additional level 2 DASD volumes available to DFSMSHsm. To reuse the current level 2 volumes, issue a DELVOL MIGRATION (UNASSIGN) command for each volume in the key range, followed by a DEFINE command for the specific key range.

If the indexed VTOC is full, redefine the level 2 DASD with a larger indexed VTOC.

If an allocation error occurred, indicated by message ARC0500I or ARC0503E in the command activity log, perform problem determination as indicated by the message.

Source: DFSMSHsm

ARC0224I LOW KEY HIGH KEY VOLSER

Explanation: A DEFINE or QUERY command was issued with the MIGRATIONLEVEL2 parameter. This message is a header line for a report and is immediately followed by message ARC0225I, indicating the level 2 key range structure.

System action: DFSMSHsm processing continues with message ARC0225I following this header line.

Programmer response: None.

Source: DFSMSHsm

ARC0225I *lowkey highkey* {*volser* | *NONE*}

Explanation: A DEFINE or QUERY command was issued with the MIGRATIONLEVEL2 parameter. This message is the data line that is immediately preceded by the header line message ARC0224I. The low key value assigned to this level 2 volume is *lowkey*. The high key value assigned to this level 2 volume is *highkey*. A key range includes data sets with names beginning with *lowkey* up to but not including *highkey*. The volume serial number of this level 2 volume

is *volser*. *NONE* means that no level 2 volume is assigned to the key range.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0226I MIGRATION LEVEL 2 UNDEFINED

Explanation: A QUERY command was issued with the MIGRATIONLEVEL2 parameter to request the status of the current level 2 structure. There is no level 2 structure defined.

System action: DFSMSHsm processing continues.

Programmer response: If a migration level 2 structure is required, define it to DFSMSHsm and provide volumes for it.

Source: DFSMSHsm

ARC0227I ML2 TAPE TARGET VOLS: {DSMIG=*volserA*, VOLMIG=(T01=*volser1*,..., T15=*volser15*[,T16=*volser16*]) | SSMMIG=(S01=*volser1*,..., S15=*volser15*)}

Explanation: A QUERY command was issued with the MIGRATIONLEVEL2 parameter.

The currently selected target tape volume for data set migration is *volserA*.

The currently selected target tape volumes for volume space management (initiated by command or automatically) and level 1 to level 2 migration (initiated by command) are (T01=*volser1*,...,T15=*volser15*). T01 is the task identifier for the first migration task and T15 is the task identifier for the fifteenth migration task.

If single task secondary space management (SSM) is running, the currently selected target tape volume for level 1 to level 2 migration that is initiated by automatic SSM is (T16=*volser16*). T16 is the task identifier for the single threaded automatic SSM task.

Note: Single task SSM only runs if the storage administrator was directed by IBM Service to place SSM in single task mode.

If multitask SSM is running, the currently selected target tape volumes for level 1 to level 2 migration that is initiated by automatic SSM are (S01=*volser1*,...S15=*volser15*). S01 is the task identifier for the first automatic SSM tape movement task and S15 is the task identifier for the fifteenth automatic SSM tape movement task.

If tape is not used for migration level 2, or if a task is not running, a *NONE* appears in place of a volume serial number.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0228I {DATA SET | VOLUME | AGGREGATE RECOVERY} POOL DELETED FOR {*char* | *poolid*}

Explanation: A DEFINE command was issued with either the POOL, VOLUMEPOOL, or ARPOOL parameters.

If DATA SET POOL, the initial characters, *char*, of the data sets to be recalled were specified, but no volume or list of volumes to be used were specified. If a data set pool existed for the specified character string, it was deleted. If no data set pool existed for the specified character string, no action was taken.

If VOLUME POOL, the volume pool name *poolid* was specified, but no volume or list of volumes to be used were specified for the volume pool. If volume pool *poolid* existed, it was deleted. If no volume pool existed with name *poolid*, no action was taken.

If AGGREGATE RECOVERY POOL, a DEFINE ARPOOL command was issued with neither the MVOLS nor the L0VOLS parameter. If the aggregate recovery pool existed, it was deleted. If the pool did not exist, no action was taken.

System action: DFSMSHsm processing continues.

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Programmer response: None.

Source: DFSMSHsm

ARC0229I {DATA SET | VOLUME} POOL DEFINED FOR {char | poolid}

Explanation: A DEFINE command was issued with either the POOL or VOLUMEPOOL parameters. If DATA SET POOL, a data set pool has been successfully created to control the recall of data sets *char* to the list of volumes specified.

If VOLUME POOL, the volume pool name *poolid* was specified to successfully create a volume pool. A data set that has migrated from a volume in the volume pool will be recalled to a volume in the volume pool unless the data set belongs to a data set pool or SETSYS RECALL(CATALOGVOLUME) has been specified.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0230I NO {DATA SET | VOLUME | AGGREGATE RECOVERY} POOLS DEFINED

Explanation: A QUERY command was issued with the POOL, VOLUMEPOOL or ARPOOL parameters. If DATA SET POOLS, no data set pools are defined for DFSMSHsm. If VOLUME POOLS, no volume pools have been defined for DFSMSHsm. If AGGREGATERECOVERY POOLS, no aggregate recovery pools have been defined for DFSMSHsm or no aggregate recovery pool has been defined that matches the *agname* specified in the QUERY command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0231I CANNOT OBTAIN SPACE INFORMATION FOR (MCDS | BCDS | OCDS) BECAUSE ACB CONTROL BLOCK IS UNAVAILABLE

Explanation: An ACB pointer was not found when trying to determine space usage of a CDS record. If a CDS is split into more than one data set, this message could be issued one or more times.

System action: The ARC0148 and ARC0948 messages are skipped for this data set.

Programmer response: Check if the CDS record is full. The ACB pointer may not be available after a CDS record is allowed to become full.

Source: DFSMSHsm

ARC0232I {DATA SET | VOLUME} POOLS= {char | poolid} VOLS=volser {volser ... volser}

Explanation: A QUERY command was issued with either the POOL or VOLUMEPOOL parameters. If the POOL parameter was specified, a list of data set pools is displayed. If the VOLUMEPOOL parameter was specified, a list of volume pools is displayed.

If DATA SET POOL NAME, a data set pool is being displayed. In this case, *char* are the initial characters of the data set names of the data sets recalled to the data set pool. One or more volume serial numbers *volser* are listed for the volumes in the data set pool.

If VOLUME POOL NAME, a volume pool is being displayed. In this case, *poolid* is the name of the volume pool. A data set that has migrated from a volume in the volume pool will be recalled to a volume in the volume pool unless it belongs to a data set pool or SETSYS RECALL(CATALOGVOLUME) is in effect. One or more volume serial numbers *volser* are listed for the volumes in the volume pool.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0233I DUMPCLASS DEFINITION PARAMETER(S) {AUTOREUSE | DATASETRESTORE | AUTOREUSE AND DATASETRESTORE} OVERRIDDEN, RETENTION PERIOD IS 'NOLIMIT', CLASS=*class*

Explanation: A DEFINE command was issued to define a dump *class*. The command specified AUTOREUSE, DATASETRESTORE, or both. Also, the RETENTIONPERIOD(NOLIMIT) parameter was specified, either on the same command or on an earlier definition of the dump class.

The AUTOREUSE parameter for dump volumes is not allowed when a retention of NOLIMIT is specified.

The DATASETRESTORE parameter is not allowed for a dump class that has a retention period of NOLIMIT.

To reuse dump volumes with no retention periods, you must delete the dump volume with the DELVOL command and then add a volume with the ADDVOL command. Individual data set restores can be performed from volumes with no retention period only if the RECOVER command is used and explicitly specifies a dump class or dump volume with the FROMDUMP parameter.

System action: DFSMSHsm processing continues.

Programmer response: If a retention period is now desired, issue a DEFINE command with the RETENTIONPERIOD parameter and a valid number.

Source: DFSMSHsm

ARC0234I VOLUME POOL *poolid* NOT DEFINED. AT LEAST ONE POOL VOLUME MUST BE ADDVOLED

Explanation: A DEFINE command was issued with the VOLUMEPOOL parameter in a JES3 environment. At least one volume in a volume pool must be mounted to the processor receiving the command in a JES3 environment.

System action: The volume pool *poolid* is not defined. DFSMSHsm processing continues.

Programmer response: Establish and verify pool volume accessibility before initializing DFSMSHsm. Make sure the volume serial numbers in the DEFINE command are correct and at least one volume is added to DFSMSHsm by using the ADDVOL command.

Source: DFSMSHsm

ARC0235I CANNOT PATCH PROTECTED DATA

Explanation: One of the following has occurred:

- An attempt was made to patch data that is located in protected fields.
- An attempt was made to patch a field in the DFSMSHsm MCVT record. Requests to patch this field are only permitted during DFSMSHsm startup initialization processing.

System action: The command ends with no data modified. DFSMSHsm processing continues.

Programmer response: If attempting to patch a field that is only patchable during initialization, the patch command will complete successfully if placed in the DFSMSHsm startup member of the SYS1.PARMLIB (ARCCMDxx).

Source: DFSMSHsm

ARC0236I DEFINE BACKUP REJECTED, AUTO BACKUP IN PROGRESS

Explanation: A DEFINE command with the BACKUP parameter was issued while automatic backup is in progress. DFSMSHsm does not allow any redefinition of automatic backup parameters while automatic backup processing is active.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the DEFINE BACKUP command when automatic backup is not in progress.

Source: DFSMSHsm

ARC0237I VOLUME *volser* NOT ADDED TO DATA SET POOL *qual*. VOLUME IS SMS-MANAGED.

Explanation: A DEFINE command was issued with the POOL parameter. A volume was specified to be added to the data set pool, identified by *qual*. The specified volume was an SMS-managed volume. SMS-managed volumes may not belong to data set pools.

System action: DFSMSHsm processing continues. The specified volume is not added to the data set pool. Other volumes specified on the DEFINE POOL command are evaluated separately for inclusion in the data set pool.

Programmer response: Specify the DEFINE POOL command without this volume.

Source: DFSMSHsm

ARC0238I VOLUME *volser* NOT ADDED TO DATA SET POOL *qual*. VOLUME IS UNAVAILABLE.

Explanation: A DEFINE command with the POOL parameter was issued in a JES3 system. The volume *volser* could not be added to the data set pool identified by *qual*. DFSMSHsm detected that the volume is either not mounted or is mounted but varied offline.

System action: DEFINE command processing continues. DFSMSHsm processing continues. The specified volume is not added to the data set pool. Other volumes specified on the DEFINE POOL command are evaluated separately for inclusion in the data set pool.

Operator response: Complete the following steps:

- Establish and verify pool volume accessibility.
- If the pool volume is not mounted, mount the volume.
- If the pool volume is not online, vary it online.
- Restart DFSMSHsm if the specified volume can be mounted and varied online.
- If volume cannot be mounted and varied online, notify the storage administrator.

Source: DFSMSHsm

ARC0239I {MVT | TCIE} CONTROL BLOCK - VOLUME *volser*

Explanation: A DISPLAY command was issued for a DFSMSHsm control block. This message is issued at the beginning of each control block to be displayed.

System action: The command continues to completion.

Programmer response: None.

Source: DFSMSHsm

ARC0240I {TCIE | MVT} CONTROL BLOCK {VOLUME *volser*} NOT FOUND

Explanation: A DISPLAY or PATCH command was issued for a DFSMSHsm control block. ARC0240I is issued when:

- A DISPLAY command was issued to display all control blocks on the control block queue and there are no control blocks on the control block queue.
- A DISPLAY or PATCH command was issued with the (*volume*) specified and there was no control block with the specified *volser* on the control block queue.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: If a *volser* was specified, verify the *volser* name and reissue the command.

Source: DFSMSHsm

ARC0241I INVALID BACKVOL COMMAND - VOLUME/STORAGE REQUIRED

Explanation: A BACKVOL command was issued, but the required volume identification or storage group was not specified. Either the VOLUMES, PRIMARY, CONTROLDATASETS or STORAGEEGROUP parameter must be specified. The VOLUMES or STORAGEEGROUP parameter and the volume serial number or the list of storage groups are required when the DUMP parameter is specified.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the BACKVOL command with the desired parameter and its values.

Source: DFSMSHsm

ARC0242I INVALID BACKVOL COMMAND, {BACKUP | DUMP} OF {MIGRATION | BACKUP | DUMP | TAPE | VOLUME *volser*} NOT ALLOWED

Explanation: This message was issued for one of the following reasons:

- The BACKVOL command was issued without the DUMP parameter for a volume defined as a migration, backup, or dump volume.
- The BACKVOL command was issued with the DUMP parameter for a tape volume or a dump volume.

System action: Processing of the BACKVOL command continues for any other volumes specified. DFSMSHsm processing continues.

Programmer response: Check the volume serial number of the volume to be backed up or dumped. If the volume is a migration or backup volume and not tape, issue the command with the DUMP parameter. If backup (not dump) is desired, be sure the specified volume is a primary or user (level 0) volume. If corrective action is taken, retry the operation.

Source: DFSMSHsm

ARC0243I INVALID FREEVOL COMMAND - {VOLUME REQUIRED | MIGRATION SOURCE VOLUME IS ML2 AND TARGET VOLUME IS ML1 | INCORRECT TARGET LEVEL FOR SOURCE VOLUME}

Explanation: A FREEVOL command was issued, but the required volume serial number was not supplied or the type of volume was specified with an invalid target level. This can occur when a migration volume is specified with a backup volume, a backup volume is specified with a migration volume, or the FREEVOL was specified from a migration level 2 volume to a migration level 1 volume.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the FREEVOL command with the correct combination of source and target volumes and correct the command syntax.

Source: DFSMSHsm

ARC0244I INVALID TIME SPECIFIED

Explanation: An invalid time was specified on a DEFINE command.

System action: The command is rejected.

Programmer response: Reissue the command with an appropriate time.

Source: DFSMSHsm

ARC0245I INVALID BACKVOL COMMAND - RULES FOR DUMPClass OR RETENTIONPERIOD OR STACK VIOLATED, RC=*return-code*

Explanation: A BACKVOL command was issued with the DUMP parameter. This command failed because the rules for DUMPClass, RETENTIONPERIOD, or STACK were violated.

The values for *return-code* are:

Retcode Meaning

- | | |
|----|---|
| 4 | DUMPClass is specified with more than 5 dump classes. |
| 6 | DUMPClass is specified with a dump class specified more than once. |
| 8 | RETENTIONPERIOD is specified and the number of retention periods exceeds the number of dump classes. |
| 12 | Invalid retention periods are specified. The only valid possibilities are the numbers 1 to 9999 inclusive, the word NOLIMIT, or an asterisk as a place holder, as in RETPD(*,90). |
| 14 | STACK or MAXSTACK is specified, and the number of stack values exceeds the number of dump classes. |

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- | 16 Invalid STACK or MAXSTACK values are specified. Valid values are the numbers 1 through 255, or an asterisk as a place holder.
- | 20 Invalid MINSTACK value is specified. A valid value is a number 1 through 255, or an asterisk as a place holder.
- | 24 Incompatible MINSTACK value specified. The MINSTACK value must be less than or equal to the smallest STACK or MAXSTACK value specified on the BACKVOL command. If the STACK or MAXSTACK value is not specified, then the MINSTACK specified value must be less than or equal to the STACK or MAXSTACK value defined in the DUMPCLASS.
- | 28 MINSTACK is specified without any dump class or more than one MINSTACK value was specified
- | 32 Incompatible STACK or MAXSTACK value(s) specified. The STACK or MAXSTACK value(s) must be greater than or equal to the MINSTACK value specified on the BACKVOL command. If the MINSTACK value is not specified, then the STACK or MAXSTACK specified value must greater than or equal to the MINSTACK value defined in the DUMPCLASS.

System action: The BACKVOL command ends. DFSMSHsm processing continues.

| **Programmer response:** Reissue the command with the correct syntax and valid values for the DUMP subparameter indicated in error. IF RETENTIONPERIOD or STACK/MINSTACK is specified, ensure that DUMPCLASS is also specified, and that the number of values for STACK or RETENTIONPERIOD are not greater than the number of values for DUMPCLASS.

Source: DFSMSHsm

ARC0246I {SMS | ODM} VOLUMES RESTRICTED TO PROCESSING BY THIS PROCESSING UNIT: NOT PROCESSED =uu, TOTAL =vv, {SMS | ODM} VOLUMES NOT RESTRICTED TO PROCESSING BY ANY PROCESSING UNIT: NOT PROCESSED =ww, TOTAL =xx NON-SMS VOLUMES: NOT PROCESSED =yy, TOTAL =zz

Explanation: A QUERY AUTOPROGRESS command was issued, the following is reported:

- An indication of the number of volumes that have not yet been processed by an active automatic function.
- The total number of volumes that are eligible for processing by an active automatic function.

For each automatic function that is processing DFSMSHsm managed volumes in the processing unit were the QUERY AUTOPROGRESS command is issued, the following is reported:

ODM Information is about SMS-managed volumes eligible for on-demand migration (ODM).

SMS Information is about SMS-managed volumes eligible for other automatic functions.

uu The number of eligible SMS-managed volumes restricted to this processing unit that have not been processed. Restricted to this processing unit means that the storage group with which a volume is associated specifies processing for this function only by the processing unit in which the QUERY AUTOPROGRESS command was issued.

For on-demand migration (ODM), *uu* - the number of SMS-managed volumes restricted to this processing unit and currently queued for ODM processing that are eligible for processing. This value includes those volumes that are currently being processed.

vv The total number of eligible SMS-managed volumes restricted to this processing unit. Restricted to this processing unit means that the storage group with which a volume is associated specifies processing for this function only by the processing unit in which the QUERY AUTOPROGRESS command was issued.

For on-demand migration (ODM), *vv* - the total number of SMS-managed volumes restricted to this processing unit and currently queued for ODM processing. This value includes the volumes that have not yet been selected and also those volumes that have been processed by ODM but still remain over their high threshold. When *uu* and *vv* are not equal, the remaining volumes will not become re-eligible for processing until the retry delay has expired.

ww The number of eligible SMS-managed volumes that are not restricted to processing by any processing unit and have not been processed by this function.

For on-demand migration (ODM), *ww* - the number of SMS-managed volumes that are not restricted to processing by any processing unit and currently queued for ODM processing and are eligible for processing. This value includes those volumes that are currently being processed.

xx The total number of SMS-managed volumes that are not restricted to processing by any processing unit and are eligible for processing by this function in this processing unit.

For on-demand migration (ODM), *xx* -the total number of SMS-managed volumes that are not restricted to processing by any processing unit and currently queued for ODM processing. This value includes the volumes that have not yet been selected and also those volumes that have been processed by ODM but still remain over high their threshold. When *ww* and *xx* are not equal, the remaining volumes will not become re-eligible for processing until the retry delay has expired.

yy The number of eligible non-SMS-managed volumes that have not been processed by this function.

zz The total number of non-SMS-managed volumes that are eligible for processing by this function in this processing unit.

Note:

1. The count of volumes that remain to be processed may not reflect another processing unit's activity. A volume that is eligible for processing by multiple processing units, may have been processed in a processing unit other than the one where the QUERY AUTOPROGRESS command was issued. If the processing unit running the QUERY AUTOPROGRESS command has not detected that another processing unit has processed a volume, that volume is included in the count of volumes that have not been processed.
2. A volume is considered eligible if it is defined (through the storage group for SMS-managed volumes or the ADDVOL command for non-SMS-managed volumes) as being eligible to be processed by this processing unit for the active function. For interval migration, eligible volumes are only the ones that are above their associated high threshold.
3. A volume is considered not processed when the following conditions are true:
 - The volume is not currently being processed by the active function.
 - The minimum time has elapsed since the last time the associated automatic function processed the volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0247I {AUTO BACKUP | AUTO DUMP | PRIMARY SPACE MANAGEMENT | INTERVAL MIGRATION | ON-DEMAND MIGRATION | NO AUTOMATIC FUNCTION} IS CURRENTLY PROCESSING DFSMSHSM MANAGED VOLUMES

Explanation: A QUERY AUTOPROGRESS command was issued. This message indicates the automatic function that is currently processing DFSMSHsm-managed volumes for the following ARC0246I message. This message is also issued if no automatic function is currently processing DFSMSHsm-managed volumes.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0248I RESTART PARAMETERS: *parameters*

Explanation: This message gives the restart parameters. You issued the QUERY STARTUP command and restart is specified in message ARC0143I.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0249I • ARC0252I

ARC0249I CELLS=(a,b,c,d,e), HOSTMODE={MAIN | AUX}

Explanation: A QUERY command has been issued with the STARTUP parameter. This message continues with parameters not included in the preceding ARC0143I message. If no values were specified, it displays the DFSMSHsm default values.

- a,b,c,d,e are the cell sizes for five cell pools.
- MAIN indicates this host was started as a MAIN host; AUX indicates it was started as an AUX host.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0250I HOST PROCNAME JOBID ASID MODE

Explanation: A QUERY command has been issued with the IMAGE parameter. The message is first issued with column headings as shown above. Then the message is issued once for each DFSMSHsm host currently running in the MVS image, providing in columnar form the specific values for each host: HOST is the host identifier specified at startup; PROCNAME is the name of the startup procedure; JOBID is the job (started task) identifier; ASID is the address space identifier; MODE is the HOSTMODE specified at startup. A host that has been shut down is not identified.

An example of the output from QUERY IMAGE with two hosts running follows:

```
ARC0250I HOST PROCNAME JOBID ASID MODE
ARC0250I 1 DFHSM STC00019 002B MAIN
ARC0250I 2 DFHSA S0100002 002C AUX
```

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0251I INVALID RECOVER COMMAND - VOLUME, DSN, OR COPYPOOL NAME MISSING

Explanation: A RECOVER command was issued. The required volume serial number, data set name, or copy pool name was not supplied. The data set name parameter is always required, and the volume serial number or copy pool name is required if the data set name was specified as *.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the RECOVER command, specifying the missing volume serial number, copy pool name, or data set name. If the data set name is *, all the data sets on the volume are recovered, or the volumes in the specified copy pool are recovered.

Source: DFSMSHsm

ARC0252I INVALID RECOVER COMMAND - TWO OR MORE OPTIONS ARE INCONSISTENT, RC=return-code

Explanation: A RECOVER command was issued. This command failed because 2 or more specified parameters were inconsistent with each other. Associated with each *return-code* are combinations of options that are inconsistent and not allowed.

The values for *return-code* are:

Retcode Meaning

- 8 FROMDUMP parameter was specified with either the GENERATION or VERSION parameter.
- 12 Data set name was specified with the DUMPGENERATION parameter.
- 16 DUMPVOLUME parameter is specified with the DATE parameter.
- 20 DUMPGENERATION parameter is specified with a value less than 0 or greater than 99. These are the smallest and the largest dump generation numbers allowed.

- 24 DUMPGENERATION parameter is specified with the DATE parameter.
- 28 DAOPTION parameter on a RECOVER VOLUME (*) command was specified. DAOPTION can only be used to recover a data set.
- 32 TARGETVOLUME parameter is specified with a data set name.
- 36 TARGETVOLUME parameter is specified with the TOVOLUME parameter, but FROMDUMP is not specified.
- 40 TARGETVOLUME parameter and TOVOLUME parameter both specify the same volume.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command specifying the desired parameters that are consistent.

Source: DFSMSHsm

ARC0253I SWITCHTAPES PROCESS BEGINNING

Explanation: DFSMSHsm has started the SWITCHTAPES process. See the DEFINE command in the *z/OS DFSMSHsm Storage Administration*. for further information about the SWITCHTAPES process.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0254I SWITCHTAPES PROCESS HAS ENDED

Explanation: DFSMSHsm has finished the SWITCHTAPES process. Tapes mounted for the data set backup function when the SWITCHTAPES process began are now demounted.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0255I DEFINE SWITCHTAPES COMMAND SUCCESSFUL

Explanation: The DEFINE command was entered with the SWITCHTAPES option and was accepted.

System action: DFSMSHsm operation continues.

Programmer response: None.

Source: DFSMSHsm

ARC0256I RECOVER FAILS - VARY TOVOLUME *volser* UNIT OFFLINE WHEN TARGETVOLUME AND APPLYINCREMENTAL ARE BOTH SPECIFIED

Explanation: A RECOVER command was issued with the TOVOLUME and FROMDUMP parameters to restore a dump volume. This command failed because the volser specified in TOVOLUME is ONLINE and both the TARGETVOLUME and APPLYINCREMENTAL parameters were specified.

System action: The command ends. Other DFSMSHsm processing continues.

Programmer response: List the units and note the associated volsers. Vary the TOVOLUME volser unit offline. Reissue the command.

Source: DFSMSHsm

ARC0258I TAPEDATASETORDER SPECIFIED WITHOUT 'PRIORITY' OR 'FBID' - TAPEDATASETORDER STATUS UNCHANGED

Explanation: A SETSYS command with the TAPEDATASETORDER parameter is entered, but the TAPEDATASETORDER parameter has no default sub-parameter. Either the PRIORITY or the FBID sub-parameter must be specified when the TAPEDATASETORDER parameter is used.

System action: No change to the TAPEDATASETORDER state is made. DFSMSHsm processing continues.

Programmer response: Amend the appropriate sub-parameter to the TAPEDATASETORDER parameter, and reissue the SETSYS command.

Source: DFSMSHsm

ARC0259I TAPEDATASETORDER=(PRIORITY | FBID | PRIORITY FOR RECALL, FBID FOR RECOVER | FBID FOR RECALL, PRIORITY FOR RECOVER)

Explanation: A QUERY command with the SETSYS parameter is entered. DFSMSHsm issues this message to describe its current operating environment.

The current setting of the TAPEDATASETORDER option is displayed:

- If TAPEDATASETORDER={PRIORITY | FBID} is displayed, the order specified applies to both recall and recover operations.
- If TAPEDATASETORDER=PRIORITY FOR func, FBID FOR func is displayed, the values for func are RECALL and RECOVER. These values reflect the different functional specifications that affect the order in which tape data sets are processed.

For additional information on these three options, see *z/OS DFSMSHsm Storage Administration*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0260I {PRIMARY | MIGRATION | BACKUP | DUMP} VOLUME volser ENTRY {DELETED | NOT DEFINED | NOT DELETED - CDS ERROR | NOT DELETED - VALID DATA MAY EXIST ON VOLUME | NOT DELETED - VOLUME INELIGIBLE FOR DELVOL | NOT DELETED - ERROR REMOVING VALID DATA | NOT DELETED - SELECTED BY ANOTHER HOST | DELETED - nnnn VALID VERSIONS ALSO DELETED | NOT DELETED - CONTAINS ONLY DUMP COPY | UNASSIGNED | MARKED FULL | NOT MARKEDFULL | MARKFULL INVALID | MARKFULL READERROR | NOT DELETED - PURGE NOT SPECIFIED FOR STACKED VOLUME | NOT DELETED - COPYPOOLCOPY NOT SPECIFIED | NOT DELETED - VOLUME IS PART OF THE LAST DUMP VERSION | DELETED WITH AN UPDATING COPY POOL CDS ERROR | NOT DELETED - ANOTHER DFSMSHSM FUNCTION WAS PROCESSING THE COPY POOL | NOT DELETED-COPY POOL DUMP VOLUME} {DUMP} VOLUME volser ENTRY {NOT DELETED-COPY POOL DUMP VOLUME}

Explanation: While DFSMSHsm has been processing a DELVOL command, an attempt has been made to delete the entry for the volume in one of the DFSMSHsm control data sets (CDSs). The volume is a primary, migration, backup, or dump volume and has the volume serial number *volser*. This message reports the results of the delete operation. When the ENTRY is DELETED or MARKEDFULL, this means that the command has been successful, whereas NOT MARKEDFULL means it has not been successful.

If a DELVOL UNASSIGN command is issued for a tape migration level 2 volume, DFSMSHsm marks the volume as not selected. A selected volume is a partially full volume that still has space after completion of a prior volume or data set migration. If the volume has not been selected, the DELVOL UNASSIGN command for this tape volume has no useful purpose.

If the result is NOT DEFINED, DFSMSHsm could not find the specified volume serial number with the specified volume type.

If the result is NOT DELETED — CDS ERROR, an error has occurred while trying to process one of the control data sets.

If the result is NOT DELETED — VALID DATA MAY EXIST ON VOLUME, an attempt has been made to issue a

DELVOL command with the PURGE parameter for a tape migration level 2 volume. The offline control data set (OCDS) tape table of contents record (TTOC) indicates that the volume may contain valid migration copies, so the processing ends. If the PURGE parameter has been used because the ML2 tape has been lost or destroyed and fails due to ARC0260I, issue the command MIGRATE VOLUME(xxxxxx DBA(0)), where xxxxxx is the volume, to remove all record of valid data, then issue the DELVOL PURGE command again. This should only be done when the tape is totally unusable because it removes what may be the only copy of the data. If backup copies are available, recover the data sets that the MIGRATE command deleted.

If the result is NOT DELETED — VOLUME INELIGIBLE FOR DELVOL, an attempt has been made to issue a DELVOL when the ineligible for DELVOL flag is on in the migration control data set volume record (MCV) of the volume. This flag is set on when a VSAM data set migrates to tape and there has been a failure trying to update the TTOC record to reflect this migration (see related messages ARC1285I and ARC0538I). The volume still contains valid migration copies, so DELVOL processing ends.

If the result is NOT DELETED — SELECTED BY ANOTHER HOST, an attempt has been made to issue a DELVOL command and it has been found that the volume is selected by another processing unit.

In a multiple processing unit environment, it is necessary to issue the DELVOL command on each of the processors to which a volume has been added by an ADDVOL command. This message will appear on each system after the first successful DELVOL command, in which case no further action is necessary.

If the result is NOT DELETED — CONTAINS ONLY DUMP COPY, the volume contains part of the only valid dump copy for a primary or non-DFSMSHsm-managed volume. The LASTCOPY parameter must be specified to delete such a volume.

If the result is NOT DELETED — PURGE NOT SPECIFIED FOR STACKED VOLUME, an attempt has been made to issue a DELVOL command without the PURGE option, for a dump volume with more than one valid dump copy stacked on it.

If the result is NOT DELETED — COPYPOOLCOPY NOT SPECIFIED, a DELVOL command has been issued for a tape containing valid dump copies for one or more volumes defined to a copy pool. Deleting the volume would invalidate the set of dump tapes that comprise a backup version of the copy pool.

If the result is DELETED WITH AN UPDATING COPY POOL CDS ERROR, there was an error updating the copy pool CDS record after the dump volume was invalidated.

If the result is NOT DELETED — VOLUME IS PART OF THE LAST DUMP VERSION, a user has issued a DELVOL command without LASTCOPY specified and the dump volume is part of the last dump version for the copy pool.

If the result is NOT DELETED — ANOTHER DFSMSHsm FUNCTION WAS PROCESSING THE COPY POOL, a user has issued a DELVOL command while another function is still processing the copy pool.

If the result is NOT DELETED — COPY POOL DUMP VOLUME, a user has issued a DELVOL command on a previous system other than the z/OS V1R11 system for a dump volume from a copy pool version processed on a z/OS V1R11 or later system.

If a DELVOL command with the PURGE parameter is entered for a tape backup volume that contains active and valid backup versions, the control data set records associated with each valid version are updated or deleted so the valid versions are no longer recorded in the control data sets. If all valid versions are successfully processed, the records associated with the volume are deleted or updated and the message indicates the number of valid versions that have been deleted. If DFSMSHsm encounters at least one error while deleting records associated with valid versions, the message will indicate NOT DELETED — ERROR REMOVING VALID DATA.

An internal DELVOL causes the message to be issued under the following conditions:

- If the DFSMSHsm TAPEDELETION option is HSMTAPE, either the backup control data set backup volume record (MCV) or MCT record, or both, and the TTOC record are kept (the base TTOC and the TTOC extensions are deleted). The base TTOC is then recreated without any data set entries.
- If the DFSMSHsm TAPEDELETION option is SCRATCHTAPE, either the MCV or MCT record, or both, and the TTOC record are deleted.
- FREEVOL BACKUPVOLUME (..) option has been used on a daily backup DASD volume assigned to a given day in the backup cycle.

An external DELVOL command with the UNASSIGN parameter will cause the message to be issued. Either the MCV or MCT record, or both, and the TTOC record are kept (the base TTOC and the TTOC extensions are not changed).

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If the result is MARKFULL INVALID, a DELVOL command with the MARKFULL parameter has been issued for a DASD volume. MARKFULL is only valid for tape. If the result is MARKFULL READERROR, DFSMSHsm has been unable to read the volume record. If the result is NOT MARKEDFULL, a DELVOL command with the MARKFULL parameter has failed while attempting to update CDS records.

If the result is NOT DELETED - COPY POOL DUMP VOLUME, a DELVOL command has been issued on a pre z/OS V1R11 system for a dump volume from a copy pool version processed on a z/OS V1R11 or later system.

If the result is NOT DELETED - RETAINED BACKUP COPY EXISTS ON VOLUME, a DELVOL command was issued and DFSMSHsm encountered a volume that might contain one or more retained backup versions for which RETAINDDAYS was specified at the time of backup. Retained backup versions can only be DELVOLed on a z/OS V1R11 or later system.

System action: DFSMSHsm processing continues.

Programmer response: If the entry has not been defined in the control data set, examine the parameters and the volume serial number for errors. If the entry has not been deleted because of a control data set error, see the appropriate table under problem determination.

If the entry has not been deleted because valid data may exist on the volume:

- If an ARC0378I message relating to the same volume has been issued to the migration activity log, see the z/OS *DFSMSHsm Storage Administration* for information about how to handle inconsistencies between tape media contents and OCDS TTOC records.
- If an ARC0378I message relating to the same volume has not been issued to the migration activity log, issue the LIST TAPETABLEOFCONTENTS(*volser*) command to request a list of the data set information for the tape volume that was requested to be deleted. If the LIST TAPETABLEOFCONTENTS(*volser*) command indicates there are no data sets on the tape volume, see *z/OS DFSMSHsm Storage Administration* for information about how to handle inconsistencies between tape media contents and OCDS TTOC records.

If the entry is not deleted because the volume contains the only dump copy, use the DELVOL command with the PURGE parameter to delete the dump volume.

If the DELVOL command failed because the PURGE option was not specified for a stacked dump volume, issue the LIST DUMPVOLUME(*volser*) command to find which dump copies are on the dump volume. If all copies can be deleted, reissue the DELVOL command with the PURGE option.

If the result is NOT DELETED--COPYPOOLCOPY NOT SPECIFIED, specify the keyword COPYPOOLCOPY if you want to delete a dump volser containing 2 valid dump copies for volumes defined to a copy pool.

If the result is DELETED WITH AN UPDATING COPY POOL CDS ERROR, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

If the result is NOT DELETED — COPY POOL DUMP VOLUME, issue the DELVOL command from a z/OS V1R8 or later system.

If the result is NOT DELETED — VOLUME IS PART OF THE LAST DUMP VERSION, specify DELVOL command with LASTCOPY keyword.

if the result is NOT DELETED — ANOTHER DFSMSHSM FUNCTION WAS PROCESSING THE COPY POOL, issue DELVOL command after the current DFSMSHsm copy pool function is complete.

Use LIST DVOL(*volser*) to figure out the source volser that the dump volume was dumped from and issue LIST PVOL(*volser*) BCDS to determine which copypool may be affected.

If the result is NOT DELETED - COPY POOL DUMP VOLUME, issue the DELVOL command from a z/OS V1R11 or later system.

If the result is NOT DELETED - BACKUP COPY WITH RETAINDDAYS EXISTS ON VOLUME, reissue the DELVOL command on a z/OS V1R11 or later system.

Source: DFSMSHsm

ARC0261I TAPE VOLUME *volser* NEEDS TO BE REINITIALIZED

Explanation: A tape volume *volser* was successfully recycled or a DELVOL command with the PURGE parameter was processed. You must relabel the tape before you can use it again.

System action: DFSMSHsm processing continues.

Operator response: Run the IEHINIT utility to relabel the specified tape volume.

Source: DFSMSHsm

**ARC0262I DUMP {COPY | GENERATION} INVALIDATED FOR VOLUME *volser*, CREATION DATE=
yy/mm/dd, {EXPIRATION DATE= {*yy/mm/dd* | NOLIMIT}, DUMP CLASS= *class*}**

Explanation: DFSMSHsm invalidated a dump copy or a dump generation for the source volume with a volume serial of *volser*. This was done either because:

- The dump copy's expiration date *yy/mm/dd* was reached.
- The maximum of 100 generations was reached and a new dump of the source volume has been scheduled.
- The DELVOL command was issued for a volume that contained part of a valid dump copy.

The expiration date and dump class portion of the message is included only when issued for a dump copy, not a generation.

System action: DFSMSHsm processing continues. DFSMSHsm internally deletes the volumes containing the dump copy.

Programmer response: None.

Source: DFSMSHsm

**ARC0263I DUMP VOLUME *volser* {DELETED | NOT DELETED}, VOLUME STATUS= {PURGED |
UNASSIGNED | REASSIGNED | UNAVAILABLE | UNCHANGED}{, RETCODE= *return-code* }**

Explanation: DFSMSHsm attempted to invalidate the contents of the dump volume *volser*. This was done either because:

- The dump copy's expiration date was reached.
- The dump copy was rolled off because the maximum of 100 generations was reached and a new dump of the source volume has been scheduled.
- The DELVOL command was issued for a dump volume.

If DELETED is indicated in the message, all references to the dump copy are removed from the DFSMSHsm control data sets. If NOT DELETED is indicated, the status is UNCHANGED.

The *return-code* value indicates the error.

Retcode Meaning

- | | |
|---|---|
| 0 | Deleting the volume with the DELVOL command was successful. |
| 2 | The DVL record for the volume did not indicate the dump copy was for the same source volume as was expected. |
| 4 | An I/O error occurred trying to update or delete the DVL record. Message ARC0184I preceded this message giving the type of error. |
| 6 | The DVL record was in use while DFSMSHsm was trying to process it. |

System action: DFSMSHsm processing continues.

Programmer response: If the volume was not deleted and the *return-code* is 2, a prior error probably occurred while trying to invalidate a dump copy. Use the LIST command to determine the content of the volume and to find out what the valid dump copies are for the source volume.

When a volume is deleted and marked *unavailable* do the following to remove it from DFSMSHsm's control.

- To list the tapes marked *unavailable* issue: LIST DUMPVOLUME SELECT(UNAVAILABLE)

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- Run the IEHINIT utility to relabel the tape.
- Issue the DELVOL *volser* DUMP(PURGE) command for each volume.

Source: DFSMSHsm

ARC0264A {MCDS|BCDS} CLUSTERS CHANGED FROM *m* TO *d*. IF NOT INTENDED, STARTUP WILL RESULT IN CDS CORRUPTION. INTENDED? (Y OR N)

Explanation: During initialization of this DFSMSHsm host, a conflict was detected between the number of clusters defined for the control data set (CDS) type (MCDS or BCDS) specified in the message. The Multiple Host Control Record (MHCR) has the most recently used number of clusters for the BCDS and MCDS. The recorded number of clusters for this CDS is *m*. The number of clusters specified to this host in the startup JCL is *d*.

This conflict should only occur when a CDS has been reorganized into a different number of clusters. Otherwise, this conflict will result in records being written to the incorrect cluster. Data managed by DFSMSHsm may be unavailable to some hosts.

System action: DFSMSHsm waits until a reply is received.

If the reply is Y, DFSMSHsm is allowed to initialize with *d* clusters.

If the reply is N, DFSMSHsm is terminated.

Operator response: If this message is observed after a change was made to the number of clusters for the CDS type reported in the message, verify the value of *d* is consistent with the new number of clusters. If so, reply Y. In a multiple DFSMSHsm host environment, this message should only be issued during initialization of the first host after the clusters have been reconfigured.

If either the CDS clusters were not reconfigured or if the message is issued more than once for the same CDS type after the CDS clusters were reconfigured, DFSMSHsm has detected a configuration error. Compare the number of CDS DDs specified in the startup JCL of each DFSMSHsm host that is or will be active within this HSMplex. All hosts within an HSMplex must specify the same number of CDS clusters for a given CDS type.

Source: DFSMSHsm

ARC0265I IF THIS VOLUME IS IN AN HSMPLEX, DELVOL MUST BE ISSUED ON EACH DFSMSHSM HOST IN THE HSMPLEX, DO YOU WANT TO CONTINUE? (Y OR N)

Explanation: A DELVOL command was issued to remove a volume from DFSMSHsm control. If this volume is in an HSMplex, then this DELVOL command must be issued on each DFSMSHsm host in the HSMplex to remove it entirely from DFSMSHsm control.

This is an optional message that was enabled by the PATCH .MCVT.+297 BITS(...1....) command. See *z/OS DFSMSHsm Implementation and Customization Guide* for more information.

System action: DFSMSHsm processing continues.

Programmer response: Respond 'Y' to have DFSMSHsm continue with the DELVOL and remove the volume. When responding 'Y', ensure that the DELVOL command is also issued on each DFSMSHsm host in the HSMplex. Respond 'N' to have DFSMSHsm cancel the DELVOL request.

Source: DFSMSHsm

ARC0266I DELVOL REQUEST FOR VOLUME=*volser* CANCELLED

Explanation: A DELVOL command was issued to delete a volume from DFSMSHsm control. The user responded 'N' when prompted with the ARC0265I message which asks if DFSMSHsm should continue with the DELVOL request.

System action: DFSMSHsm processing continues.

Programmer response: No action required. To DELVOL the volume, reissue the DELVOL command and respond 'Y' to the ARC0265I message.

Source: DFSMSHsm

ARC0267I MIGRATIONSUBTASKS={YES | NO}, ADDITIONALSUBTASKS=*nn*

Explanation: A QUERY command was issued with the SETSYS parameter. This message is issued by DFSMSHsm to describe its current operating environment. System defaults include:

If MIGRATIONSUBTASKS=YES is specified, DFSMSHsm is permitted to enable multiple data set migration subtasks per migration volume task for Primary Space Management, Interval Migration, and On Demand Migration functions.

If MIGRATIONSUBTASKS=NO is specified, DFSMSHsm will migrate one data set at a time per migration volume task for all migration functions.

ADDITIONALSUBTASKS set for MIGRATIONSUBTASKS:

- *nn* indicates the number of additional migration subtasks that DFSMSHsm may use beyond the system default.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC0269I DS DASED BACKUP TASKS={number of tasks}, DS TAPE BACKUP TASKS={number of tasks}, DEMOUNTDELAY={delay minutes}, MAXIDLETASKS={number of idle drives}, DS BACKUP MAX DASED SIZE={kbytes}, DS BACKUP STD DASED SIZE={kbytes}, SWITCHTAPES TIME={time to demount idle tapes}, PARTIALTAPE={MARKFULL | SETSYS | REUSE}, GENVSAMCOMP NAMES={YES | NO}

Explanation: A QUERY command was issued with the BACKUP or SETSYS parameter. DFSMSHsm issues this message to describe the current parameter settings for the data set backup function.

The maximum number of data set backup tasks to run concurrently to either tape or DASED is referred to as TASKS.

DS DASED BACKUP TASKS

The number of data set backup tasks that may use ML1 DASED as the backup target device.

DS TAPE BACKUP TASKS

The number of data set backup tasks that may use tape as the backup target device.

DEMOUNTDELAY

The number of minutes to delay the demount of a tape after it has no work to do. The number of drives that can delay tape demount is limited by MAXIDLETASKS.

MAXIDLETASKS

The number of drives for which a demount of a tape is to be delayed after it has no more data sets to be backed up to it.

DS BACKUP MAX DASED SIZE

The size in kilobytes of the largest data set that may be directed to ML1 DASED for WAIT requests that do not specify the TARGET keyword.

DS BACKUP STD DASED SIZE

The size in kilobytes of a small data set. Small data sets are directed to ML1 DASED for WAIT requests that do not specify the TARGET keyword when a tape task is not immediately available to process the request.

SWITCHTAPES TIME

The time that is specified for the DEFINE SWITCHTAPES command. If 0 is displayed, the data set backup tape will not be demounted at any specific time of the day. If a time is displayed, the data set backup tapes will be demounted at that time. If AUTOBACKUPEND is displayed, the data set backup tapes will be demounted at the end of AUTOBACKUP.

PARTIALTAPE

The action to be taken on partial tapes upon the SWITCHTAPES demount. If MARKFULL is displayed, DFSMSHsm will mark the data set backup tapes full upon SWITCHTAPES demount. If REUSE is displayed, DFSMSHsm will not mark the tapes full but will keep them available for remount. If SETSYS is displayed, DFSMSHsm will take the action specified in the SETSYS PARTIALTAPE command.

GENVSAMCOMP NAMES

If GENVSAMCOMP NAMES=YES, DFSMSHsm indicates that DFSMSDss should generate new data and index component names when processing a backup with NEWNAME request and the data set being backed up is VSAM and the newname data set is either migrated or uncataloged.

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If GENVSAMCOMPNames=NO, DFSMSHsm fails a backup with NEWNAME request when the data set being backed up is VSAM and the newname data set is either migrated or uncataloged.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0270I {BACKUP | MIGRATION CLEANUP | DUMP} CYCLE DEFINITION SUCCESSFUL

Explanation: DFSMSHsm completed processing a DEFINE command to establish a backup cycle, migration cleanup cycle, or a dump cycle.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0271I BACKUP CYCLE LENGTH=*nday(s)*, TODAY IS DAY=*n* | ** CYCLE START DATE=*yy/mm/dd*, VOLUME LIMIT/DAY=*limit*, AVAILABLE BACKUP VOLUMES=*total*

Explanation: A QUERY command was issued with the BACKUP parameter. The length of the backup cycle in days is *ndays*. The backup cycle is *string*, which is a character string of Ys and Ns. A Y represents a day in the cycle when automatic backup is allowed to take place. An N represents a day in the cycle when automatic backup will not take place. The minimum number of volumes to be used for each day backup is to be done is *limit*. The number of DASD and non-full tape backup volumes defined to DFSMSHsm is *total*.

The backup cycle day is a 24-hour period beginning at the early start time as specified in the SETSYS AUTOBACKUPSTART command, not a 24-hour calendar day beginning at midnight. Today is the *n*th day in the cycle. The first day in the cycle is *yy/mm/dd*. Note that if the QUERY BACKUP command is issued prior to the early start time, the *n*th day represents the 24-hour period that began on the prior calendar day at the early start time. For example, if the early start time is 1900 with a 7-day cycle starting on Sunday, the day in the cycle will be 1 until 1900 on Monday. After 1900, it will be 2 when a QUERY BACKUP command is issued.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0272I PRIMARY SPACE MGMT CYCLE LENGTH=*ndays* DAY(S), }, TODAY IS DAY=*n*, CYCLE START DATE=*yy/mm/dd*, SECONDARY SPACE MGMT CYCLE LENGTH=*ndays* DAY(S), }, TODAY IS DAY=*n*, CYCLE START DATE=*yy/mm/dd*, ML1OVERFLOW(DATASETSIZE=*dssize* K, THRESHOLD=*threshold*)

Explanation: SECONDARY SPACE MGMT CYCLE LENGTH=*ndays* DAY(S), }, TODAY IS DAY=*n*, CYCLE START DATE=*yy/mm/dd*.

A QUERY command was issued with the SETSYS parameter. This message describes the automatic primary and automatic secondary space management cycles. The length of the cycle, in days, is *ndays*. The cycle is *string*, which is a character string of Ys and Ns. A Y represents a day in the cycle when management is allowed to take place. An N represents a day in the cycle when management will not take place. *NONE* appears only when neither cycle nor start time were defined for the function.

The migration cycle day is a 24-hour period beginning at the early start time as specified in the SETSYS PRIMARYSPMGMTSTART or SECONDARYSPMGMTSTART command, not a 24-hour calendar day beginning at midnight. Today is the *n*th day in the cycle. The first day in the cycle is *yy/mm/dd*. Note that if the QUERY SETSYS command is issued prior to the early start time, the *n*th day represents the 24-hour period that began on the prior calendar day at the early start time. For example, if the early start time is 1900 with a 7-day cycle starting on Sunday, the day in the cycle will be 1 until 1900 on Monday. After 1900, it will be 2 when a QUERY SETSYS command is issued.

A QUERY command was issued with the SETSYS parameter. This message is issued by DFSMSHsm to describe the current operating environment. System defaults include the following values:

ML1OVERFLOW

DATASETSIZE:

DFSMSHsm will prefer OVERFLOW ML1 volumes to migrate or backup (inline backup, HBACKDS, BACKDS commands or the ARCHBACK macro) for data sets larger than *dssize* K bytes.

THRESHOLD:

OVERFLOW ML1 volume pool threshold.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0273I DUMP CYCLE LENGTH=*ndays* DAYS, *string*}, TODAY IS DAY= {*n* | **}, CYCLE START DATE={*yy/mm/dd* | *NONE*} {, {AUTODUMP | LEVEL | AUTODUMP/LEVEL} FUNCTIONS {ELIGIBLE | NOT ELIGIBLE} TO BE {STARTED | RESTARTED}} {, {DUMP CYCLE NOT DEFINED | CYCLE START TIME NOT SPECIFIED | CYCLE START TIME WAS CHANGED | CYCLE START DATE WAS CHANGED | HAVE NOT BEEN RUN FOR THIS DATE | HAVE NOT COMPLETED FOR THIS DATE | THIS IS NOT THE PRIMARY HOST | CURRENT TIME IS NOT WITHIN AUTODUMP START WINDOW | HAVE ALREADY COMPLETED FOR THIS DATE}}

Explanation: A QUERY command was issued with the BACKUP parameter. The number of days in the automatic dump cycle is *ndays*. The dump cycle definition, Y for days on which automatic full volume dump is to run and N for days it is not to run, is given by *string*.

The migration cycle day is a 24-hour period beginning at the early start time as specified in the SETSYS AUTODUMPSTART command, not a 24-hour calendar day beginning at midnight. Today is the *n*th day in the cycle. The first day in the cycle is *yy/mm/dd*. Note that if the QUERY BACKUP command is issued prior to the early start time, the *n*th day represents the 24-hour period that began on the prior calendar day at the early start time. For example, if the early start time is 1900 with a 7-day cycle starting on Sunday, the day in the cycle will be 1 until 1900 on Monday. After 1900, it will be 2 when a QUERY BACKUP command is issued. When the dump cycle has not been defined, *NONE* is the insert for the day.

If today is a Y day in the dump cycle, an explanation is provided for eligibility to start or restart automatic full volume dump. If today is an N day in the dump cycle, an explanation is provided for eligibility to start or restart dump-level functions.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0274I BACKUP={YES({ANY | DASD | TAPE{ (*unit*) }}) | NO}, SPILL={YES({ANY | DASD | TAPE {(*unit*)}}) | NO}, MAXDSRECOVERTASKS=*nn*, MAXDSTAPERECOVERTASKS=*mm*

Explanation: A QUERY command was issued with the SETSYS or BACKUP parameter. DFSMSHsm issues this message to describe its current parameter settings for backup that show whether or not backup is enabled, and what type of units backup is limited to.

If BACKUP=YES, backup processing is currently enabled.

If BACKUP=YES(ANY), DFSMSHsm selects any type of available daily backup volumes during volume backup processing.

If BACKUP=YES(DASD), DFSMSHsm selects only DASD daily backup volumes during volume backup processing.

If BACKUP=YES(TAPE), DFSMSHsm selects only tape daily backup volumes during volume backup processing.

If BACKUP=YES(TAPE(*unit*)), DFSMSHsm selects only tape daily backup volumes. The unit allocated for backup requests directed outside of SMS-managed tape libraries is *unit*.

If BACKUP=NO, backup processing is currently disabled. If backup is disabled, no DFSMSHsm backup function can be processed.

If SPILL=YES, DFSMSHsm does SPILL processing on full DASD daily backup volumes.

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If SPILL=YES(ANY), DFSMSHsm selects any type of available SPILL backup volumes during SPILL processing.

If SPILL=YES(DASD), DFSMSHsm selects only DASD SPILL backup volumes during SPILL processing.

If SPILL=YES(TAPE), DFSMSHsm selects only tape SPILL backup volumes during SPILL processing.

If SPILL=YES(TAPE(*unit*)), DFSMSHsm selects only tape SPILL backup volumes. The unit allocated for SPILL requests directed outside of SMS-managed tape libraries is *unit*.

If SPILL=NO, DFSMSHsm does not perform SPILL processing on full DASD daily backup volumes. It does perform cleanup on those volumes.

MAXDSRECOVERTASKS *nn* is the maximum number of recover tasks allowed concurrently to process. The value for *nn* must be between 1-64.

MAXDSTAPERECOVERTASKS *nn* is the maximum number of recover tasks allowed concurrently to process from DASD and tape. The value for *nn* must be between 1-64.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0275I SETMIG LEVEL FAILED, ENTRY *qualifier* NEVER PERMITTED TO BE CHANGED

Explanation: The SETMIG LEVEL *qualifier* command failed. All data sets controlled by DFSMSHsm beginning with the initial characters of the data set name, *qualifier*, are not permitted to have their space management status changed.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC0276I DATA SET BACKUP={ACTIVE | INACTIVE | DASDACTIVE | TAPEACTIVE}, DATA SET BACKUP ACTUAL IDLETASKS=(ALLOC=*allocated*, MAX=*maximum*)

Explanation: A QUERY command was issued with the ACTIVE parameter. This message gives the status of the DATA SET BACKUP function and indicates if any DATA SET BACKUP operations are currently in progress.

- ACTIVE and INACTIVE indicate if the operation is currently in progress.
- TAPEACTIVE indicates that only data set backup to tape is active.
- DASDACTIVE indicates that only data set backup to DASD is active.
- DATA SET BACKUP ACTUAL IDLETASKS=(ALLOC=*allocated*, MAX=*maximum*) identifies the number of tape drives that are currently allocated and idle, waiting for more work (*allocated*). The maximum number of drives that could be allocated and idle (*maximum*) is the minimum of the number of TAPE tasks specified and of the number of MAXIDLETASKS specified.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0277I DS TRANSITIONED=*ds*, DS TRANSITION FAIL=*fails*, {TRKS | KTRKS}TRANSITIONED=*ntracks*, {BYTES | KBYTES | MBYTES | GBYTES | TBYTES} TRANSITIONED=*nbytes*

Explanation: A QUERY command was issued with the STATISTICS parameter. DFSMSHsm issues this message to describe class transition statistics as follows:

TRANSITIONED=*ds*

Displays the number of data sets moved by class transition processing.

DS TRANSITION FAIL=*fails*

Displays the number of data sets that failed a class transition.

{TRKS | KTRKS} TRANSITIONED=*ntracks*

Displays the number of tracks of data set tracks moved by class transition processing, in the following units:

- TRKS - tracks

- KTRKS - kilotracks

{BYTES | KBYTES | MBYTES | GBYTES | TBYTES} TRANSITIONED=*nbytes*

Displays the number of bytes of data sets moved by class transition processing, in the following units:

- BYTES - bytes - 1
- KBYTES - kilobytes - 1024
- MBYTES - megabytes - 1 048 576
- GBYTES - gigabytes - 1 073 741 824
- TBYTES - terabytes - 1 099 511 627 776

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0278I CLASSTRANSITIONS EVENTDRIVENMIGRATION = { Y | N }, SERIALIZATIONEXIT = { Y | N }

Explanation: A QUERY command was issued with the SETSYS parameter. This message is issued by DFSMSHsm to describe the current environment.

There is an overall control when processing class transitions during the event driven migration windows. If EVENTDRIVENMIGRATION = Y, data sets are class transitioned during event driven migration. If EVENTDRIVENMIGRATION = N, class transitions do not occur during event driven migration processing and only occur during Primary Space Management(PSM).

If SERIALIZATIONEXIT = Y, user data set serialization error exits are used during event driven migration. If SERIALIZATIONEXIT = N, user data set serialization error exits are not used and bypassed only during event driven migration.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

| **ARC0279I** MIGRATE REJECTED {MANAGEMENT CLASS nnnnnnnn NOT FOUND | STORAGE CLASS
| nnnnnnnn NOT FOUND | STORAGE GROUP nnnnnnnn NOT FOUND | SMS NOT ACTIVE |
| SMS SUBSYSTEM ERROR }

| **Explanation:** A MIGRATE command is issued with the optional SMS parameters of TRANSITION or
| TRANSITIONALONLY keyword, but the specified management class, storage class, or storage group, are not defined
| in the active SMS configuration, or SMS not active, or SMS subsystem error.

| **System action:** DFSMSHsm processing continues.

| **System programmer response:** Correctly specify optional SMS parameters of TRANSITION or
| TRANSITIONALONLY keyword.

| **Programmer response:** None.

| **Source:** DFSMSHsm

ARC0280I REPORT COMPLETED

Explanation: The REPORT command has successfully completed processing.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0281I INVALID DATE SPECIFIED

Explanation: A DEFINE, RECOVER, or REPORT command was issued with an invalid date or invalid date format. The acceptable date format for the DEFINE command is *yy/mm/dd* (year, month, and day). The CYCLESTARTDATE *yy/mm/dd* (year, month, and day) must be today's date or a date in the past. Future dates are not recognized. The acceptable formats for the RECOVER and REPORT commands are *yy/mm/dd*, *mm/dd/yy* or *mm/dd* (where *yy* defaults to the current year), if you issue the command before 1 January 2000; and *yyyy/mm/dd*, if you issue the command after 31 December 1999.

System action: The command ends. The cycle start date remains unchanged. DFSMSHsm processing continues.

Programmer response: Correctly specify the date and reissue the command.

Source: DFSMSHsm

ARC0282I INVALID COMBINATION OF FROM DATE AND TO DATE

Explanation: A REPORT command was issued with FROMDATE() and TODATE(). The TO date is earlier than the FROM date, or the FROM date is before 2000 and the TO date is after 1999.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Correct whichever date is incorrect and reissue the command. If the FROM date is prior to 1 January 2000 and the TO date is after 1999, you must issue two REPORT commands: one for the data prior to 2000 and one for the data after 1999.

Source: DFSMSHsm

ARC0283I MM/DD/YY DATE FORMAT NOT VALID AFTER 1999

Explanation: The RECOVER command with DATE(mm/dd/yy), or the REPORT command with FROMDATE(mm/dd/yy) or TODATE(mm/dd/yy), was issued before 1 January 2000.

System action: DFSMSHsm uses the date to determine (for RECOVER) which backup version should be recovered, or (for REPORT) which range of records should be reported.

Programmer response: After 1999, the date must always be specified as *yyyy/mm/dd*.

Source: DFSMSHsm

ARC0284I YY/MM/DD DATE FORMAT NOT VALID AFTER 1999

Explanation: The DEFINE command with CYCLESTARTDATE(yy/mm/dd) was issued before 1 January 2000.

System action: DFSMSHsm uses the date to determine the start of the cycle being defined.

Programmer response: After 1999, the date must be specified as *yyyy/mm/dd*.

Source: DFSMSHsm

ARC0287I HOST IS NOT CONNECTED TO SPECIFIED COMMON QUEUE

Explanation: A DFSMSHsm command was issued with a parameter that requires a connection to a common queue, but a valid connection does not exist.

System action: The command is ignored. DFSMSHsm processing continues.

System programmer response: If a valid connection was expected, then issue the QUERY ACTIVE command and examine message ARC1540I to determine the status of the connection. Ensure that the status is CONNECTED before issuing common queue-related commands.

Programmer response: None.

ARC0298I *WARNING*** VOLUME *volser* WILL NOT BE PROCESSED FURTHER DUE TO ABENDS**

Explanation: Command, automatic space management, or backup has been in process on *volser* when an abnormal end (abend) has occurred. Processing of the volume ends. All volume-level functions that would normally include volume *volser* skip this volume.

System action: The requested processing on this volume ends. DFSMSHsm processing continues.

Programmer response: Determine if the abend that has occurred is directly related to a problem with the volume. If the abend is not the result of a problem with the volume, do one of the following to make the volume again available to volume-level functions:

- Delete the volume with the DELVOL command, then add the volume with the ADDVOL command. Use the same attributes that the volume had the last time it was ADDVOLed.
- Restart DFSMSHsm.

If you determine that the abend is the direct result of a problem with the volume, then correct the problem and perform one of the two actions listed above.

Source: DFSMSHsm

ARC0299I VOLUME *volser* WILL NOT BE {MIGRATED | BACKED UP} BECAUSE OF PREVIOUS ABENDS

Explanation: DFSMSHsm was about to perform the indicated function on volume *volser*, but the volume did not process because of previous abnormal ends (abends) while being processed by DFSMSHsm.

System action: The requested processing on the volume is not performed. DFSMSHsm processing continues.

Programmer response: The last time a volume-level function was run on this volume, an abend occurred. An ARC0298I message was issued at that time. Determine if the abend that occurred at that time was directly related to a problem with the volume. If the abend was not the result of a problem with the volume, do one of the following to make the volume again available to volume-level functions:

- Delete the volume with the DELVOL command, then add the volume with the ADDVOL command. Use the same attributes that the volume had the last time it was ADDVOLed.
- Restart DFSMSHsm.

If you determine that the abend was the direct result of a problem with the volume, then correct the problem and perform one of the above two actions.

Source: DFSMSHsm

ARC0301W VOLUME *volser* TO BE {AUDITED | BACKED UP | MIGRATED | RECOVERED | SPACE MANAGED | COMMAND SPACE MANAGED | DUMPED | RESTORED | FAST REPLICATED} ALREADY IN USE BY HOST={*procid* | THIS HOST}

Explanation: DFSMSHsm was about to perform the indicated function on the volume with volume serial number *volser*. However, the volume was already being processed. If one character appears for the *procid*, the volume is being processed by another processing unit. If HOST=THIS HOST appears, another function is being performed on the volume within the same processing unit. For automatic processes, this message is issued after all attempts to retry the process on this volume fail.

System action: The requested processing on the volume is not performed. DFSMSHsm processing continues. For automatic functions, this volume is not processed for this cycle day.

Programmer response: After the current function being performed on the volume ends, reissue the command that caused processing to be attempted on the volume. If you suspect the record should not be serialized (the information in the processing unit identifier field of the record is no longer valid), you can use the FIXCDS command to reset the processing unit identifier field. This field is not valid if a processing unit fails while the task running under that processing unit serializes the record. The LIST command with the HOST parameter can be used to list the DFSMSHsm control data set records serialized by a specified processing unit.

Source: DFSMSHsm

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ARC0302I DATA SET *dsname* WILL NOT BE REBLOCKED DURING {RECALL | RECOVERY}.
INSTALLATION-WIDE EXIT RETURN CODE= *return-code*

Explanation: The user requested control be given to the installation-wide exit so a new block size for the data set *dsname* could be specified during recall or recovery processing. However, the existing block size is used. If the *return-code* is nonzero, the user requested no reblocking of the data set. If the *return-code* is 0, reblocking does not occur as a result of one of the following conditions:

- The ESTAE macro failed for the installation-wide exit (message ARC0304I is issued).
- The installation-wide exit resulted in an abnormal end (abend) (message ARC0004I is issued).
- The user requested a block size larger than the maximum record size (32760).
- The user requested a block size smaller than the existing record size.
- The block size did not change from the existing block size.

System action: Recall or recovery of the data set continues with the existing block size. DFSMSShsm processing continues.

Programmer response: If the reblocking does not occur because of an installation-wide exit abend, the installation-wide exit is disabled until the problem is corrected and the installation-wide exit control is reestablished by issuing a SETSYS command.

Source: DFSMSShsm

ARC0303I DATA SET *dsname* WILL BE {RECALLED | RECOVERED} USING {DFSMSDSS DETERMINED VALUE | *blocksize*} FOR THE BLOCKSIZE

Explanation: Data set conversion to reblock was specified in the SETSYS command, or with DFSMSdss data movement, the data set is system reblockable for recall or recovery of the data set *dsname*. If DFSMSdss data movement was used, it indicates that DFSMSdss determined the block size and that the actual block size value is not given. If DFSMSShsm data movement was used, the new *blocksize* for the data set is specified.

System action: DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSShsm

ARC0304I SETUP OF ESTAE ENVIRONMENT FOR MODULE *modname* FAILED, RETURN CODE=*return-code*

Explanation: The DFSMSShsm module *modname* attempted to set up an ESTAE environment but the MVS function was unsuccessful. The return code from the MVS ESTAE macro is *return-code*.

System action: Module *modname* ends its processing.

Programmer response: Examine the return codes from the MVS ESTAE macro and take corrective action.

Source: DFSMSShsm

ARC0305I GETMAIN/FREEMAIN FAILURE IN MODULE *modname*, RETURN CODE=*return-code*

Explanation: The DFSMSShsm module *modname* attempted to obtain or free storage, but the MVS function was unsuccessful. The return code from the GETMAIN or FREEMAIN macro is *return-code*.

System action: If the error is a GETMAIN error, the module ends processing. If the error is a FREEMAIN error, the module continues processing.

Programmer response: Examine the return code from the MVS GETMAIN or FREEMAIN macro and take corrective action.

Source: DFSMSShsm

ARC0306I DATA SET *dsname* WILL NOT BE REBLOCKED DURING {RECALL | RECOVERY}

Explanation: Conversion to reblock the data set *dsname* during recall or recovery processing was specified, but DFSMSHsm determined the existing block size was the best default block size for the data set.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0307I ERROR {GET | FREE}MAINING STORAGE FROM SUBPOOL *subpool* IN MODULE *modname*, RC=*return-code*

Explanation: The DFSMSHsm module *modname* attempted to obtain or free some storage from subpool *subpool*, but the MVS function was unsuccessful. The return code from the GETMAIN or FREEMAIN macro is *return-code*.

System action: If the error is a GETMAIN error, the module ends processing. If the error is a FREEMAIN error, the module continues processing.

Programmer response: Examine the return code from the MVS GETMAIN or FREEMAIN macro and take corrective action.

Source: DFSMSHsm

ARC0308I RETURN CODE *return-code* RECEIVED FROM INSTALLATION EXIT *installation exit name*, EXIT MARKED INOPERATIVE

Explanation: The specified installation-wide exit *installation-wide-exit-name* returned a nonzero return code to DFSMSHsm. The return code *return-code* indicates an abnormal condition.

System action: The specified exit is disabled. DFSMSHsm processing continues.

Programmer response: Determine the reason for the specified return code from the exit. If you determine that it is an unusual circumstance, reactivate the exit. If the exit has an error, correct it and reactivate it.

Source: DFSMSHsm

ARC0309I TAPE VOLUME *volser* REJECTED, {VOLUME ALREADY CONTAINS VALID DFSMSHSM DATA | VOLUME RACF-PROTECTED BUT DOES NOT APPEAR IN DFSMSHSM.'S TAPE VOLUME SET | VOLUME IS A BACKUP VOLUME, MIGRATION VOLUME REQUIRED | VOLUME IS A MIGRATION VOLUME, BACKUP VOLUME REQUIRED | VOLUME IS A DUMP VOLUME, MIGRATION VOLUME REQUIRED | VOLUME IS A DUMP VOLUME, BACKUP VOLUME REQUIRED | VOLUME IS A BACKUP VOLUME, DUMP VOLUME REQUIRED | VOLUME IS A MIGRATION VOLUME, DUMP VOLUME REQUIRED | DUMP CLASS CONFLICT | VOLUME HAS ALREADY BEEN USED FOR OUTPUT ON ALLOCATED DEVICE | WORM MEDIA IS NOT VALID FOR THIS FUNCTION | TTOC TYPE CONFLICT }

Explanation: The DCB volume verification exit was invoked by OPEN or end-of-volume (EOV) processing for the tape volume whose volume serial number is *volser*. The tape volume is rejected by the DFSMSHsm volume verification exit for one of the following reasons:

- The tape volume mounted already contains valid DFSMSHsm data.
- The tape volume mounted is RACF-protected, but does not appear in DFSMSHsm's RACF tape volume set of HSMHSM or DFHSMx (where *x* is the last nonblank character of the tape volume's *volser*).
- The tape volume mounted is defined to DFSMSHsm as a backup volume and a migration volume is required.
- The tape volume mounted is defined to DFSMSHsm, as a migration volume and a backup volume is required.
- The tape volume mounted is defined to DFSMSHsm as a dump volume, but a migration volume is required.
- The tape volume mounted is defined to DFSMSHsm as a dump volume, but a backup volume is required.
- The tape volume mounted is defined to DFSMSHsm as a backup volume, but a dump volume is required.
- The tape volume mounted is defined to DFSMSHsm as a migration volume, but a dump volume is required.
- The dump class to which the volume is currently assigned does not match the dump class to which it is dumped.

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- A volume is mounted for output on an allocated device after a previous mount for output during the processing of the same function.
- The media which is mounted is WORM and this function is not supported for WORM.
- The tape volume mounted is defined to DFSMSHsm with TTOC type which does not match the current SETSYS EXTENDED TTOC(Y|N) setting.

System action: A keep message is sent for the tape volume. The tape volume is rewound and unloaded by OPEN or EOVS processing and a mount message is sent for another tape volume. If the SELECTVOLUME option is SPECIFIC, and it is OPEN processing, DFSMSHsm attempts to select another tape volume already defined to DFSMSHsm. If there are three consecutive specific volumes mounted and rejected with an ARC0309I message, the operator receives a nonspecific (PRIVAT) mount request. If it is EOVS processing, DFSMSHsm attempts to select another tape volume already defined to DFSMSHsm without regard to the number of rejections occurring with an ARC0309I message for this mount. If DFSMSHsm is able to select another tape volume, the operator receives a specific mount request. If DFSMSHsm is unable to select another tape volume or the SELECTVOLUME option is SCRATCH, the operator receives a nonspecific (PRIVAT) mount request. If the message indicates that WORM media is not valid for this function then the system will end OPEN processing.

Operator response: The tape operator should respond to the specific mount request by mounting the requested tape volume on the requested tape drive.

The tape operator can respond to the nonspecific (PRIVAT) mount request by mounting a scratch tape or a tape volume already defined to DFSMSHsm on the requested tape drive. If the tape operator mounts a scratch tape, the tape should not be RACF-protected by another user nor used previously for output by the DFSMSHsm function issuing the message. If the tape operator mounts a tape volume already defined to DFSMSHsm, the tape volume should not contain any valid DFSMSHsm data (it should be empty) and should not be RACF-protected by another user. Also, the type of tape volume mounted (backup, migration, or dump) should be the same as the type of tape volume that encountered the EOVS condition. To resolve a TTOC conflict, the tape operator can mount a tape volume with a compatible TTOC type.

Programmer response: The system programmer determines what valid DFSMSHsm data already exists on the tape volume by entering the DFSMSHsm space manager LIST command. For level 2 migration tape volumes and backup and SPILL tape volumes, issue the LIST command with the TTOC parameter. For dump volumes, issue the LIST command with the DUMPVOLUMES parameter.

If the message indicates the tape volume does not appear in one of DFSMSHsm's RACF tape volume sets, see *z/OS DFSMSHsm Implementation and Customization Guide* sections "Authorizing and Protecting DFSMSHsm Resources" and "Implementing DFSMSHsm Tape Environments" for a description of how to add tape volumes to DFSMSHsm's RACF tape volume sets.

If the message indicates the dump classes are in conflict, use the DELVOL command with the UNASSIGN parameter for the dump volume so the volume can be used in any other dump class for subsequent dumps.

If the message indicates the tape volume is RACF-protected by another user, the system programmer should request the RACF security administrator look into the matter. The RACF security administrator can determine if the tape volume is RACF-protected, and by whom, by entering the following RACF command:

```
RLIST TAPEVOL volser ALL
```

The sender of the command must have a certain level of access authority to the resource depending on the information requested. For additional information, see *z/OS Security Server RACF Command Language Reference*.

Source: DFSMSHsm

ARC0310A CAN TAPE *volser* BE MOUNTED ON DEVICE *devno*? REPLY Y OR N

Explanation: The wait time as established by the DFSMSHsm SETSYS command for open or end-of-volume (EOVS) processing of a tape data set has elapsed and open or EOVS processing has not returned control to DFSMSHsm. If the tape with volume serial number *volser* is available and can be mounted within the next mount wait time period, reply Y. Otherwise, reply N. If the reply is Y, and the wait time again elapses before open or EOVS processing completes, open or EOVS fails and the currently running task is detached.

System action: The current DFSMSHsm task waits until a reply is received. If the waiting task holds resources critical for DFSMSHsm processing, all of DFSMSHsm may eventually be waiting for the reply.

If the reply is Y, DFSMSHsm resets the time to the user mount wait time and continues to wait for mount completion.

If the reply is N, the mount request ends and the DFSMSHsm function (migration, recall, backup, recovery, or recycle) ends if the mount was for an input volume or continues using another volume if the mount was for an output volume. If the reply is N and the DFSMSHsm function is volume dump or volume restore using DFSMSdss, the mount request ends and the DFSMSHsm function ends.

Operator response: If the tape with volume serial number *volser* is available and can be mounted within the time allowed, reply Y and mount the specified tape. Otherwise reply N. If the time period is not known, issue the QUERY command with the SETSYS parameter and look at the MOUNT WAIT TIME value displayed in message ARC0147I.

Source: DFSMSHsm

ARC0311A SYSTEM TIMER INOPERABLE - CAN *volser* BE MOUNTED? REPLY Y OR N

Explanation: The wait time used for open or end-of-volume (EOV) processing of a tape data set cannot be measured because of an error in attempting to set the system timer. If the tape with volume serial number *volser* is available and can be mounted, reply Y. Otherwise, reply N. If the reply is N, open or EOV fails and the current DFSMSHsm task is detached.

System action: The current DFSMSHsm task waits until a reply is received. If the reply is Y, DFSMSHsm waits for mount completion. If the reply is N, the mount request ends and the DFSMSHsm function (migration, recall, backup, recovery, or recycle) ends if the mount was for an input volume or continues using another volume, if the mount was for an output volume.

Operator response: If the tape with volume serial number *volser* is available and can be mounted, reply Y and mount the specified tape. If the tape cannot be found, reply N.

Source: DFSMSHsm

ARC0312I RECALLS FROM TAPE *volser* TERMINATED FOR USAGE BY HOST *h*

Explanation: The subject tape has been in continuous use doing recalls, and the time has exceeded a SETSYS TAPERECALLLIMITS specification. If *h* is the ID of a different host than the one having the tape mounted, then a recall request exists on that host that has a higher priority than the recall request that this host was about to start.

If *volser* is the ID of the host issuing the message, then a recall request for a different tape exists on this host. The recall request is a higher priority and is being delayed because DFSMSHsm is running at the maximum number of permitted tape recall tasks than the one that this host was about to start.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC0313A TAPE VOLUME *volser* IS NEEDED FOR {RECALL | RECYCLE | RECOVER | RESTORE}

Explanation: A DFSMSHsm RECALL, RECYCLE, or RECOVER command was issued and the data to be moved resides on the tape volume *volser*. For RECYCLE, this message is issued only if the SETSYS TAPEINPUTPROMPT allows it, the volume is not in an Automated Tape Library data server (ATLDS), and there is more than one volume needed for the RECYCLE. For RECALL, RECOVER, and RESTORE, this message is issued for each tape needed if the SETSYS TAPEINPUTPROMPT allows it, and the tapes are not in an ATLDS. The message for the last tape is followed by message ARC0314A for either volume recovery or restore, or both, or recycle, or by message ARC0366A for either data set recovery or restore, or both, or recall. These messages are routed to the tape pool.

System action: Recall, recycle, or either recovery or restore processing, or both, continues. DFSMSHsm processing continues.

Operator response: Determine the availability of tape volume. If you do not want these messages issued, the SETSYS TAPEINPUTPROMPT parameter provides a way to prevent them from being issued. Prepare to respond to message ARC0314A or ARC0366A.

Source: DFSMSHsm

**ARC0314A CAN THE *nvol* VOLUME(S) ABOVE BE MOUNTED FOR {RECYCLE | RECOVER | RESTORE}?
REPLY Y OR N**

Explanation: If the number of tape volumes *nvol* specified in the preceding ARC0313A messages is available and can be mounted, reply Y. Otherwise, reply N. If the reply is N, the current volume recycle or the current data set recovery or restore fails. See the explanation for message ARC0313A.

System action: Recycle or recovery or restore processing waits for a valid reply to the message.

Operator response: Reply Y if all the volumes named in the preceding ARC0313A messages are available for mounting. Otherwise reply N.

Source: DFSMSHsm

ARC0315I OCDS NOT DEFINED

Explanation: An attempt was made to access the offline control data set, but the data set does not exist. This message can be received due to an ARC0910E message for the OCDS.

System action: The command fails. The DFSMSHsm task that is attempting to go to tape fails. If the DFSMSHsm task is backup, all the backup tasks are held. If the DFSMSHsm task is migration, the migration to tape is held. If the DFSMSHsm task is recycle, the recycle function is held. Under some conditions, all three functions are held.

Programmer response: Create the offline control data set. Messages ARC0560E and ARC0559I may be received due to the NO OCDS defined condition. These messages may or may not be pertinent to your environment. Ignore these messages until the OCDS is defined.

If your environment usually functions with an OCDS defined, check for the ARC0910E message and follow the recommended actions for this message.

Source: DFSMSHsm

**ARC0316I BAD VALUE RETURNED FROM THE RECALL INSTALLATION-WIDE EXIT ROUTINE FOR
dsname, RC=*return-code***

Explanation: The user-coded exit was taken to select volumes to recall the non-SMS-managed data set *dsname* from a list provided by DFSMSHsm. A value returned by the user-coded exit does not coincide with the position of any of the volumes in the list provided by DFSMSHsm. If there was at least one good value for DFSMSHsm to use, DFSMSHsm attempts to recall the data set to the volumes indicated by the good values. For jobs going through JES3 setup, JES3 data set reservation was performed on the volumes for the data set. However, if there were no volumes for DFSMSHsm to use (RC=8), JES3 data set reservation fails for the job requiring the given migrated data set. This permits the user to perform a DFSMSHsm command recall of the data set to any volume.

System action: DFSMSHsm processing continues.

Operator response: If you determine that the DFSMSHsm recall function can run without the installation-wide exit, turn off the installation-wide exit using a SETSYS command with the EXITOFF parameter and release the recall function. DFSMSHsm runs with its volume selection.

Programmer response: The user-coded exit generated an invalid value. Correct the cause of the bad value. If necessary, relink the exit module and turn on the installation-wide exit using a SETSYS command with the EXITON parameter.

Source: DFSMSHsm

**ARC0317I JOB FAILED DUE TO AN ERROR IN THE RECALL INSTALLATION EXIT FOR *dsname*, ABEND
CODE=*errcode***

Explanation: The ARCRDTEXT exit for the recall function has abnormally ended (abended). The data set name that ARCRDTEXT has been processing is *dsname*. DFSMSHsm has placed a hold on the recall of all undirected data sets. DFSMSHsm continues to recall any data set that is directed to a given volume, but stops returning volumes to JES3 for setup of any job requiring a migrated data set. JES3 fails all setups for any job requiring a migrated data set. To release both the recall function and JES3 setup for jobs referring to migrated data sets, issue the DFSMSHsm RELEASE command with the RECALL parameter. The reason for the abend has been passed through the *errcode*.

System action: DFSMSHsm processing continues with limited recall processing. All JES3 data set reservations for any job requiring a migrated data set will fail.

Operator response: If you determine that the DFSMSHsm recall function can run without the installation-wide exit, turn off the installation-wide exit using a SETSYS command with the EXITOFF parameter. DFSMSHsm will run with its volume selection. If you determine that the DFSMSHsm recall exit will not abend again, release the recall function.

Programmer response: Correct the cause of the abend and relink the exit module. The exit can be reactivated with a SETSYS command.

Source: DFSMSHsm

ARC0318I NO PRIMARY VOLUME AVAILABLE FOR RECALL OF *dsname*

Explanation: During JES3 data set reservation, DFSMSHsm was invoked because the data set *dsname* was migrated. DFSMSHsm was evaluating the primary volumes that should be returned to JES3 and found no acceptable primary volumes with the required space management attributes. To determine why DFSMSHsm could not find any volumes, examine the following parameters:

- RECALL parameter of the SETSYS command
- POOL parameter of the DEFINE command
- AUTORECALL parameter of the ADDVOL command
- Space management and backup device category attributes of the ADDVOL command

If the data set organization is BDAM, the data set must be recalled to a volume with the same device type from which it migrated unless the VOLUME or DAOPTION parameter of the HRECALL or RECALL command is used.

If the data set organization is not BDAM, one of the following conditions must exist:

- The data set block size plus the data set key length is less than the track size of the candidate volume.
- The candidate volume is the same device type as the device from which the data set migrated.
- The candidate volume supports track overflow and the data set record indicates track overflow.

This message can also happen in a JES3 system if all the volumes in a user-defined pool are offline during DFSMSHsm initialization (when the volumes are added and the pools defined). Even when the volumes are subsequently mounted, DFSMSHsm cannot recall data sets to those volumes with valid data set reservation by JES3, although the volumes will appear in response to a QUERY command with the POOL parameter. Therefore, the message can indicate a DFSMSHsm error that is caused by violation of an operational restriction.

System action: DFSMSHsm processing continues, but no volumes are returned to JES3. JES3 fails data set reservation for any job requiring the migrated data set. If desired, the user can perform a command recall of the data set to any volume associated with the data set.

Programmer response: Examine the DFSMSHsm parameters to ensure that they are correct for the volumes in the DFSMSHsm pool associated with the data set.

Source: DFSMSHsm

ARC0319I UNUSED SPACE NOT RELEASED DURING RECALL/RECOVER OF PARTITIONED DATA SET *dsname*

Explanation: A RECALL or RECOVERY command was issued for the data set *dsname*. When the original data set was allocated, track overflow was requested. DFSMSHsm encountered an error trying to update the JFCB that corresponds to the allocation of the primary copy of the data set.

To recall or recover partitioned data sets with track overflow whose directory spans more than one track, DFSMSHsm does the following:

- Allocates the data set without the RELEASE option.
- Opens the data set without track overflow.
- Writes the directory.
- Closes the data set. The new space is not released.
- Updates the JFCB so new space is released after the data set is closed.

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- Opens the data set with track overflow.
- Writes the members with track overflow.
- Closes the data set. The new space is released.
- Deallocates the data set.

System action: The data set was processed successfully, but new space was not released when the primary copy of the data set was closed.

Programmer response: If the data set is large or needed to be compacted before it was migrated or backed up, release the new space.

Source: DFSMSHsm

ARC0320I BVR REFRESH STARTING

Explanation: DFSMSHsm has successfully completed CDS Backup and is beginning to rebuild the BVR records into an optimal form.

System action: DFSMSHsm processing continues. The BVR records are being refreshed.

Programmer response: None.

Source: DFSMSHsm

Storage Administrator Response: None.

ARC0321I BVR REFRESH NOT COMPLETED

Explanation: For a request not to be COMPLETED, a number of errors were encountered during processing causing termination of REFRESH.

System action: BVR refresh processing ends. DFSMSHsm processing continues.

Programmer response: Notify the Storage Administrator.

Source: DFSMSHsm

Storage Administrator Response: See previous messages for reasons for failure. Take corrective action and re-execute the BVR Refresh by issuing a CDS Backup.

ARC0322I *type* VOLUME RECORD CREATED — KEY=*key*

Explanation: The BVR refresh processing successfully created the backup cycle volume record of type *type* where *type* is either DAILY ASSIGNED, BACKUP UNASSIGNED, or SPILL. This new record has a key of *key*.

System action: DFSMSHsm BVR refresh processing continues.

Programmer response: None.

Source: DFSMSHsm

Storage Administrator Response: None.

ARC0323I BVR RECORDS HAVE BEEN SUCCESSFULLY REFRESHED

Explanation: The BVR refresh processing successfully regenerated and reorganized all of the backup cycle volume records used by this DFSMSHsm complex.

System action: BVR Refresh completed successfully. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

Storage Administrator Response: None

ARC0324I OLD VERSION OF BACKUP VOLUME RECORD NOT FOUND

Explanation: The BVR conversion program issued a VSAM GET to retrieve the old backup cycle volume record, but no record was found. This condition can be expected if the DEFINE command with the BACKUP parameter had not been processed in an earlier DFSMSHsm release.

System action: Conversion processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0325I UNABLE TO CONVERT BACKUP VOLUME RECORDS. BACKUP NOT ENABLED

Explanation: The BVR conversion program did not complete successfully due to an error that was encountered during processing.

System action: Conversion processing ends. DFSMSHsm processing continues with the backup function disabled.

Programmer response: See previous messages for a specific reason for failure. Take corrective action, stop DFSMSHsm, and restart it so the conversion will be rerun.

Source: DFSMSHsm

**ARC0326I ERROR {READING | WRITING} BVR RECORD DURING {STARTUP | DEFINE BACKUP CYCLE},
BACKUP WILL NOT BE ENABLED**

Explanation: During DFSMSHsm initialization or processing of a DEFINE command, an error occurred in trying to read or write a backup cycle volume record.

System action: Backup is disabled. DFSMSHsm processing continues.

Programmer response: Take the necessary action to correct the I/O error, restart DFSMSHsm, or reenter the DEFINE command.

Source: DFSMSHsm

**ARC0327I UNEXPECTED I/O ERROR OCCURRED DURING BCDS PROCESSING, KEY = *reckey*,
CODE=*reason-code***

Explanation: The BVR conversion program did not complete successfully due to an error that was encountered during CDS processing. The *reckey* is the key of the Record where the CDS operation failed

For *reason-code* values, see Table 9 on page 559.

System action: DFSMSHsm processing continues with volume backup disabled.

Programmer response: Notify the storage administrator.

Source: DFSMSHsm

Storage Administrator Response: If the *reason-code* is 4, 8, or 12 correct the problem, possibly using the FIXCDS command.

If the *reason-code* is 16, an I/O error is the normal cause and an error message from the ERPs should be found in DFSMSHsm job log SYSMSG data set.

If the *reason-code* is 20, an internal DFSMSHsm error occurred. Call software service.

ARC0328I ERROR OPENING FILE ARCPRINT

Explanation: During the initialization of the DFSMSHsm log utility program ARCPRLLOG or ARCPEDIT, an open for the file ARCPRINT failed.

System action: Processing ended and the final condition code was set to 4.

Programmer response: This error generally occurs when the DD statement is missing. Add the DD statement to the job and rerun.

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Source: DFSMSHsm

ARC0329I ERROR OPENING FILE ARCLOG

Explanation: During the initialization of the DFSMSHsm log utility program ARCPRLOG or ARCPEDIT, an open for the file ARCLOG failed.

System action: Processing ended and the final condition code was set to 4.

Programmer response: This error generally occurs when the DD statement is missing. Add the DD statement to the job and rerun.

Source: DFSMSHsm

ARC0330I ERROR OPENING FILE ARCEDIT

Explanation: During the initialization of the DFSMSHsm log utility program ARCPRLOG, an OPEN request for the file ARCEDIT failed.

System action: Processing ended and the final condition code was set to 4.

Programmer response: This error generally occurs when the DD statement is missing. Add the DD statement to the job and rerun.

Source: DFSMSHsm

ARC0331I VOLUME *volser* NOT DUMPED - SDSP IN USE BY ANOTHER DFSMSHSM FUNCTION OR HOST

Explanation: The SDSP on the ML1 volume specified as *volser* was in use by a DFSMSHsm migration task when the volume dump process attempted to dump the volume.

System action: The volume is not dumped.

System programmer response: Ensure that the SDSP is not in use and issue a BACKVOL DUMP command for *volser*.

Source: DFSMSHsm

ARC0332R PLEASE SATISFY THE TAPE MOUNT REQUEST ON UNIT *unitaddr* USING A (STANDARD CAPACITY | ENHANCED CAPACITY | MEDIAN) CARTRIDGE, REPLY Y TO CONTINUE

Explanation: A mount for a tape volume is about to be requested on *unitaddr*. The type of tape volume specified in this message indicates the appropriate type of cartridge to be mounted. If the message indicates that the required media type is STANDARD CAPACITY, the operator should mount a tape volume of standard capacity. If the message indicates that the required media type is ENHANCED CAPACITY, the operator should mount a tape volume of enhanced capacity. If the message indicates a MEDIAN cartridge, where *n* is a number, then MEDIAN identifies the type of media needed. After a tape volume of the requested type is mounted, reply 'Y' to the outstanding message to allow processing to continue. If the requested type of tape volume cannot be mounted, also reply 'Y' to continue. In this case, the particular TAPECOPY of that volume fails, but the TAPECOPY command continues with the next volume copied. Any reply other than 'Y' causes the TAPECOPY not to continue, and the TAPECOPY waits until a reply of 'Y' is entered.

System action: DFSMSHsm processing for that task waits for the tape mount requested by OPEN to be satisfied, and the operator replies to the outstanding message before continuing. All other DFSMSHsm processing continues.

Programmer response: This message is issued only if requested by a patch of the MCVT + 4C3 BITS(.....1). Otherwise, ARC0332A is issued for the TAPEOUTPUTPROMPT processing.

Source: DFSMSHsm

ARC0333I (BACKUP/EXPIREBV | MIGRATION/TAPE RECALL | RECYCLE | MIGRATION) HELD, GETMAIN ERROR

Explanation: A GETMAIN macro was issued for virtual storage. The macro failed to get the storage.

System action: BACKUP/EXPIREBV indicates backup and expire backup versions processing were held. DFSMSHsm processing continues.

MIGRATION/TAPE RECALL indicates migration and tape recall processing were held. DFSMSHsm processing continues.

RECYCLE indicates recycle processing was held. DFSMSHsm processing continues.

MIGRATION indicates migration processing was held. DFSMSHsm processing continues.

Programmer response: BACKUP/EXPIREBV — Take corrective action based on message ARC0307I that was issued to the operator's console and the backup activity log. When the condition has been corrected, issue the following commands:

```
RELEASE BACKUP
RELEASE EXPIREBV
```

MIGRATION/TAPE RECALL — Take corrective action based on message ARC0307I that was issued to the operator's console and the migration activity log. When the condition has been corrected, issue the following commands:

```
RELEASE MIGRATION
RELEASE RECALL(TAPE)
```

RECYCLE — Take corrective action based on message ARC0307I that was issued to the operator's console and the recycle activity log. When the condition has been corrected, issue the following commands:

```
RELEASE RECYCLE
```

MIGRATION — Take corrective action based on message ARC0307I that was issued to the operator's console and the migration activity log. When the condition has been corrected, issue the following commands:

```
RELEASE MIGRATION
```

Source: DFSMSHsm

ARC0334I ERROR INVOKING *macro* MACRO SERVICE, DEVNCHAR = *dev* | UNITNAME = *unitname* | PTOKEN = *ptoken*}, RC = *return-code*, REAS = *rsncode*

Explanation: DFSMSHsm attempted to invoke IOS, UCB, or EDT interface service to perform the *macro* macro service on the volume serial number *volser*, device number *dev*, unit name *unitname*, or pin token *ptoken*. *volser* cannot be determined. The macro interface service failed.

macro indicates the particular type of IOS, UCB, or EDT interface service was being processed when the error occurred. The following are the descriptions of the possible macro service for *macro*:

- **IOSVSUCB** macro — DFSMSHsm invokes IOSVSUCB macro during DFSMSHsm automatic function processing to obtain the UCB address for a particular volume serial *volser*. This macro is only invoked if the new UCB service (e.g. UCBLOOK macro) is not installed in the system that DFSMSHsm is running.
- **IOCMape** macro — DFSMSHsm invokes IOCMape macro to obtain the channel path IDs (CHPIDs) for a given primary volume (SMS and non-SMS) *volser* which is to be processed by DFSMSHsm automatic function. This macro is only invoked if the new UCB service (e.g. UCBINFO macro) is not installed in the system that DFSMSHsm is running.
- **IOSCAPU** macro — DFSMSHsm invokes the IOSCAPU macro to capture a UCB above the 16MB line to storage below the 16MB line for a given volume serial *volser*.
- **UCBLOOK** macro — DFSMSHsm invokes UCBLOOK macro to obtain the UCB common segment address of a given volume serial *volser* or a given device number *devnumber*. A PIN is also requested with UCBLOOK macro by DFSMSHsm if a UCB obtained by UCBLOOK is to be pinned.
- **UCBPIN** macro — DFSMSHsm invokes UCBPIN macro to unpin a pinned UCB its pin token was represented in pin token *ptoken*. DFSMSHsm also invokes UCBPIN macro to pin a UCB for a given volume serial number *volser*. In the case of failure in unpinning, the ARC0335I message is issued after this message to provide the device number and volume serial number.

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- **UCBINFO** macro — DFSMSHsm invokes UCBINFO macro to obtain the CHPIDs for a given primary volume (SMS and non-SMS) *volser* which is to be processed by DFSMSHsm automatic function.
- **UCBDEVN** macro — DFSMSHsm invokes UCBDEVN macro to obtain 4-digit device number associated with the *volser* for issuing message ARC0354I. Since UCBDEVN macro failed to obtain the device number, an asterisk **** will be put in message ARC0354I.
- **EDTINFO** macro — DFSMSHsm invokes EDTINFO macro to obtain the UCB device number list associated with a particular unit name *unitname* specified in the user esoteric unit table.

IOS, UCB, or EDT service returned the return code of *return-code* and the reason code of *rsncode*. IOS, UCB, or EDT service macros return codes and reason codes are documented in the MVS/SP macro documentation. If the return code of *return-code* is 900, the indicated *macro* abended or DFSMSHsm abended when invoking the macro.

System action: DFSMSHsm processing continues with the following results:

- **IOSVSUCB** macro failure — Volume serial *volser* will not be processed during this automatic function. It will be attempted at the next automatic function.
- **IOCAPE** macro failure — The volume will be processed without updating the CHPIDs.
- **IOSCAPU** macro failure — If this is a persistent error for the Journal Volume during DFSMSHsm initialization, journaling is inhibited and messages ARC0025I and ARC0860I are issued. Migration, Dump, and Recycle are held.
- **UCBLOOK** macro failure —
 - The function requesting the UCBLOOK service for the device number *devnumber* will be failed.
 - The function requesting the UCBLOOK service for the volume serial *volser* will be failed or the volume will not be processed during this automatic function if the requestor is a DFSMSHsm's automatic function.
- **UCBPIN** macro failure — The function requesting the UCBPIN PIN service will be failed. In the case of failure in unpinning, the ARC0335I message is issued after this message to provide the device number and volume serial number. Stopping DFSMSHsm will force a pinned UCB to be unpinned.
- **UCBINFO** macro failure — The volume will be processed without updating the CHPIDs.
- **UCBDEVN** macro failure — An asterisk **** will be put in message ARC0354I.
- **EDTINFO** macro failure — The function requesting the EDTINFO service will be failed.

Programmer response: Determine the error from the return and reason codes. Correct the error and retry the failing function.

Source: DFSMSHsm

ARC0335I THE DEVICE NOT UNPINNED

Explanation: DFSMSHsm invoked UCBPIN macro to unpin the device *dddd* for the volume serial number *volser*. UCBPIN macro failed to unpin the device. Message ARC0334I will be preceded by this message indicating the failing return code and reason code from UCBPIN macro. Stop DFSMSHsm is required to unpin the device. Otherwise, the device *dev* will not be removed from the system. the device number for the volume serial number *volser*. *volser* cannot be determined.

System action: DFSMSHsm processing continues.

Programmer response: Inform the system programmer of the error, examine the error from the return and reason codes in ARC0334I, correct the error, and take the appropriate action to unpin the device.

Source: DFSMSHsm

ARC0336I CONFLICTING {COMPACTION|ZCOMPRESS} OPTIONS SPECIFIED - OPTION {ALL|NONE} WILL BE USED

Explanation: A SETSYS command was issued with the COMPACT or the ZCOMPRESS parameter specifying those compaction options that are to be in effect. ALL or NONE was also specified on the command. When you specify ALL or NONE on the SETSYS COMPACT command or on the SETSYS ZCOMPRESS command, DFSMSHsm ignores all other subparameters.

System action: If you specified the ALL subparameter on the COMPACT parameter, all compaction options are enabled. If you specified the NONE subparameter on the COMPACT parameter, all compaction options are disabled.

If you specified the ALL subparameter on the ZCOMPRESS parameter, all ZCOMPRESS options are enabled. If you

specified the NONE subparameter on the ZCOMPRESS parameter, all ZCOMPRESS options are disabled.

DFSMSHsm processing continues.

Programmer response: If you do not want all compaction options enabled or disabled, reissue the SETSYS command with the COMPACT parameter specifying the correct compaction options.

If you do not want all ZCOMPRESS options enabled or disabled, reissue the SETSYS command with the ZCOMPRESS parameter specifying the correct ZCOMPRESS option.

Source: DFSMSHsm

ARC0337I {EXIT | USER UNIT | COMPACTION NAMES | CDSVB} TABLE REQUEST FAILED - NOT ENOUGH SPACE

Explanation: A SETSYS command was issued or DFSMSHsm initialization is taking place which has requested an installation-wide exit table, an esoteric unit name table, a compaction names table, or a CDS version backup table. Not enough storage was available.

System action: DFSMSHsm uses the general compaction tables to do compaction. If a table already exists, the names in that table still use the encode table that coincides with the existing table.

Programmer response: Restart DFSMSHsm in a larger region and reissue the command.

Source: DFSMSHsm

ARC0338I AN ML2 SCRATCH TAPE *volser* WAS MOUNTED IN A PRIVATE SCRATCH POOL ENVIRONMENT

Explanation: A migration or recycle task required an ML2 tape. In a search of its internal table on this host of empty and partially full ML2 tapes, DFSMSHsm was not able to select a tape of the required type. As a result, a scratch tape was mounted instead for one of the following reasons:

- No ML2 tape volume has been ADDVOLed
- No tape of the required technology appears in the table
- An empty tape is required by end-of-volume processing, but the table contains only partial tapes
- The table has not yet been rebuilt to reflect the addition or deletion of ML2 tapes

With APAR OW30676, the capacity of the ML2 table is 907 volumes; previously, it was 224 volumes.

System action: DFSMSHsm continues.

Programmer response: Determine the candidate volumes present in the table by issuing the following command:

```
LIST TTOC SELECT(ML2 NOTFULL)
```

If the output from LIST shows that you have volumes of an older, undesired technology, for each such volume, issue the following command to remove it from the table and make it eligible for recycle:

```
DELVOL volser MIGRATION(MARKFULL)
```

If the output from LIST shows that no empty ML2 tapes exist, issue the following command to add empty tapes of the appropriate technology to the table:

```
ADDVOL volser MIGRATION(ML2) UNITunittype
```

Note: For performance reasons, the DELVOL and ADDVOL commands do not cause the table to be rebuilt immediately. Rebuilding occurs only when 1) DFSMSHsm cannot find a suitable ML2 volume in the table for some request, and 2) at least 45 minutes has elapsed since the last rebuild.

Source: DFSMSHsm

ARC0339I OPTIMUMDASDBLOCKING = {2KB | OPTIMAL}, LOGGING LEVEL = {FULL | REDUCED | EXCEPTIONONLY}, LOG TYPE = {SYSOUT(*sysout-class*) | DASD}

Explanation: A QUERY command with the SETSYS parameter was issued.

OPTIMUMDASDBLOCKING=2KB indicates that DFSMSHsm blocks its output in 2K blocks.

OPTIMUMDASDBLOCKING=OPTIMAL indicates that DFSMSHsm uses the optimum block size when writing data to an output device.

LOGGING LEVEL describes the type of messages that are written to the functional and command activity logs when data sets are processed.

FULL means that all normal completion and error messages are written to the activity logs.

REDUCED means the original space management or backup message is written but messages for subsequent movement and cleanup are suppressed.

EXCEPTIONONLY means messages are written only when a nonzero return code indicates an error has occurred processing a data set.

LOG TYPE indicates whether the activity logs are written to the spool or DASD. If SYSOUT(*sysout-class*) is shown, the activity logs are SYSOUT data sets belonging to the SYSOUT class shown. If DASD is shown, activity logs are created on DASD with names that have the following format: *authid.procid.xxxLOG.Dyyddd.Thhmmss*

authid DFSMSHsm authorized ID

procid DFSMSHsm processing unit ID from the PROC statement preceded by the letter H

xxx CMD, MIG, BAK, or DMP to identify which log type

yyddd year and day of allocation

hhmmss hour, minute, and second of allocation

System action: None. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0340I COMPACTION OPTIONS ARE: TAPEMIGRATION=[YES | NO], DASDMIGRATION=[YES | NO], TAPEBACKUP=[YES | NO], DASDBACKUP=[YES | NO], TAPEHARDWARECOMPACT=[YES | NO], ZCOMPRESS OPTIONS ARE: TAPEMIGRATE=[YES | NO], DASDMIGRATE=[YES | NO], TAPEBACKUP=[YES | NO], DASDBACKUP=[YES | NO]

Explanation: A QUERY command was issued with the SETSYS parameter. This message is issued by DFSMSHsm to describe the current environment.

For COMPACTION options:

If TAPEMIGRATION=YES, data can be compacted when it is migrated to a tape migration level 2 volume.

If TAPEMIGRATION=NO, data is not compacted when it is migrated to a tape migration level 2 volume.

If DASDMIGRATION=YES, data can be compacted when it is migrated to a DASD migration level 1 or level 2 volume.

If DASDMIGRATION=NO, data is not compacted when it is migrated to a DASD migration level 1 or level 2 volume.

If TAPEBACKUP=YES, data can be compacted when it is backed up to a tape backup volume.

If TAPEBACKUP=NO, data is not compacted when it is backed up to a tape backup volume.

If DASDBACKUP=YES, data can be compacted when it is backed up to a DASD backup volume.

If DASDBACKUP=NO, data is not compacted when it is backed up to a DASD backup volume.

If TAPEHARDWARECOMPACT=yes, data written to 3480X tapes will be in improved data recording capability (IDRC) format.

If TAPEHARDWARECOMPACT=no, data written to 3480X tapes will not be in IDRC format.

For ZCOMPRESS options:

If DASDMIGRATE=YES, zEDC Services can be used for data when it is migrated to a DASD migration level 1 or level 2 volume.

If DASDMIGRATE=NO, zEDC Service are not used for data when it is migrated to a DASD migration level 1 or level 2 volume.

If DASDBACKUP=YES, zEDC Services can be used for data when it is backed up to a DASD backup volume.

If DASDBACKUP=NO, zEDC services are not used for data when it is backed up to a DASD backup volume.

If TAPEMIGRATE=YES, zEDC Services can be used for data when it is migrated to a tape migration level 2 volume.

If TAPEMIGRATE=NO, zEDC Services are not used for data when it is migrated to a tape migration level 2 volume.

If TAPEBACKUP=YES, zEDC Services can be used for data when it is backed up to a tape backup volume.

If TAPEBACKUP=NO, zEDC Services are not used for data when it is backed up to a tape backup volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0341I COMPACT PERCENT IS *percent%*

Explanation: A QUERY command with the SETSYS parameter was issued. The percentage of space that must be saved when compacting a data set during migration or backup to make it eligible for compaction on subsequent migrations or backups is *percent*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0342I {SOURCENAMES | OBJECTNAMES}; *name(s)*

Explanation: A QUERY command with the SETSYS parameter was issued. The compaction control qualifiers of those data sets that are to be compacted with code tables intended for use with source data sets or object data sets are *names*. There can be up to 5 *names*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0343I DUPLEXING IS ENDING FOR TAPE VOLSER (*volser*) **(WITH ENHANCED CAPACITY | WITH STANDARD CAPACITY | WITH IDRC COMPACTION | WITH NO IDRC | OF TYPE MEDIA n) BECAUSE THE DUPLEX TAPE VOLSER** (*volser*) **DOES NOT MATCH**

Explanation: Duplexing has ended for the original volser specified in the message because the duplex tape specified in the message has a different capacity or one uses Improved Data Recording Capability (IDRC) and the other does not. If the type indicated is MEDIA n where n is a number and MEDIA n indicates the media type.

The capacity is either enhanced or standard. IDRC is a form of data compaction. For additional information, see SETSYS TAPEHARDWARECOMPACT in the *z/OS DFSMSHsm Storage Administration*.

System action: DFSMSHsm processing continues for the original tape. The duplex tape is released. A tapecopy is made when processing completes.

Programmer response: Provide duplex tapes that match the original tapes.

Source: DFSMSHsm

ARC0345I COMPACTION NAMES TABLES FREED DUE TO ABEND

Explanation: During DFSMSHsm processing, the command processor task abnormally ended (abended) for unknown reasons. Abend processing released all storage (including the compaction names tables) obtained by the command processor task.

System action: The command processor task is restarted. DFSMSHsm processing continues. Compaction uses only the general compaction tables.

Programmer response: You can rebuild the compaction names tables by issuing the appropriate SETSYS commands.

Source: DFSMSHsm

ARC0346A OPEN HAS NOT COMPLETED FOR TAPE *volser* MOUNTED IN DEVICE *ddd*. REPLY Y TO START ADDITIONAL *minutes* MINUTES

Explanation: A tape mount has been requested for volume serial number '*volser*.' The tape has been mounted in device '*ddd*,' but OPEN or EOVS processing has not returned control to DFSMSHsm. After a reply of Y is received, the timer is set one more time to the current mount wait time '*minutes*.'

System action: The current DFSMSHsm task waits until a reply of Y is received. If the waiting task holds resources critical for DFSMSHsm processing, all of DFSMSHsm may eventually be waiting for the reply.

When a reply of Y is received, DFSMSHsm resets the time to the SETSYS MOUNTWAITTIME and continues to wait for the specified time.

Operator response: The purpose of this message is to allow time for the operator to release any resources that may be preventing OPEN or EOVS from completing. For example, the operator knows that a long-running job is auditing the tape management system database. The operator can stop the long-running job to release the needed resources and answer Y to message ARC0346A. If the operator is not aware of any job holding resources, the operator can answer Y right away.

Source: DFSMSHsm

ARC0350I BCDS ELIGIBLE VOLUME RECORD CONVERSION ENDED FOR VOLUME *volser*, RC=*return-code*

Explanation: The MCP record has been converted to the extended format. If the return code *return-code* was 0, the conversion completed successfully. Otherwise, the conversion failed and the process that was in progress for the volume ended.

System action: DFSMSHsm processing continues.

Programmer response: If the return code is 4, a read or write of the MCP record failed. See message ARC0184I for details.

Source: DFSMSHsm

ARC0351I CANNOT UPDATE DFSMSHSM CDS ENTRY IN THE *type* RECORD HAVING KEY *key*, IN USE BY ANOTHER HOST

Explanation: DFSMSHsm attempted to gain access to a tape table of contents record or a backup cycle volume record, but the record was in use by another processor.

System action: The desired record is not updated but processing of the function continues.

Programmer response: None.

Source: DFSMSHsm

ARC0352I DATA SET *dsname* TOO LARGE FOR MAXIMUM TAPE VOLUME LIMIT

Explanation: During migration, backup, or recycle processing, a data set *dsname* was being moved to tape volumes. The number of tape volumes required exceeded the maximum tape volume limit of 254 volumes for one data set as established by DFSMSHsm.

System action: The first tape volume is marked full, all others are internally deleted and the data set is skipped.

Programmer response: None.

Source: DFSMSHsm

ARC0353I TAPE VOLUME *volser* SUCCESSFULLY {ADDED TO | REMOVED FROM} DFSMSHSM'S RACF TAPE VOLUME SET

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. If the TAPEVOL resource class is inactive, this message is issued, even though no updates are made to the RACF data base. In this case the RACF tape volume status does not change. The tape volume with a volume serial number of *volser* has been either successfully added to or deleted from DFSMSHsm's RACF tape volume set of either HSMHSM or DFHSMx (where *x* is the last nonblank character of the tape volume's *volser*), or HSMABR (DFSMSHsm's ABARS tape volume set).

If the message indicates the tape volume has been successfully added to DFSMSHsm's RACF tape volume set, DFSMSHsm has RACF-protected the tape volume as part of DFSMSHsm's RACF tape volume set of either HSMHSM or DFHSMx, or HSMABR. The tape volume has been RACF-protected by DFSMSHsm for the following reason:

- The tape security option specified with the TAPESECURITY parameter of the SETSYS command is either RACF or RACFINCLUDE. DFSMSHsm has selected the tape volume for use during migration, backup, dump, or aggregate backup and recovery processing.

If the message indicates the tape volume has been successfully deleted from DFSMSHsm's RACF tape volume set, DFSMSHsm has removed the RACF protection of the tape volume by removing the volume serial number from DFSMSHsm's RACF tape volume set of either HSMHSM, DFHSMx, or HSMABR. DFSMSHsm has removed the RACF protection of the tape volume for one of the following reasons:

- The tape volume has been successfully recycled and the TAPEDELETION option specified with the SETSYS command is SCRATCHTAPE. Because the TAPEDELETION option is SCRATCHTAPE, the tape volume is being removed from DFSMSHsm's control. All DFSMSHsm control data set records related to this tape volume are being deleted and the RACF protection is being removed by deleting the volume serial number from DFSMSHsm's RACF tape volume set.
- The percent of valid data on the tape volume has decreased to zero, causing the tape volume to be automatically recycled. The TAPEDELETION option specified on the SETSYS command is SCRATCHTAPE. Because the TAPEDELETION option is SCRATCHTAPE, the tape volume is being removed from DFSMSHsm's control. All DFSMSHsm control data set records related to this tape volume are being deleted and the RACF protection is being removed by deleting the volume serial number from DFSMSHsm's RACF tape volume set.
- An authorized user has issued a DELVOL command with the PURGE option for the tape volume. The tape volume is being removed from DFSMSHsm's control. All DFSMSHsm control data set records related to this tape volume are being deleted and the RACF protection is being removed by deleting the volume serial number from DFSMSHsm's RACF tape volume set.
- A dump volume containing part of a valid dump copy has completed dump copy expiration processing. The TAPEDELETION parameter of the SETSYS command is SCRATCHTAPE. Because the parameter is SCRATCHTAPE, the tape volume is removed from control of DFSMSHsm. Since the tape volume has been RACF-protected by DFSMSHsm in the past, RACF protection is now removed from the tape volume.
- The tape volume has been RACF-protected by DFSMSHsm some time in the past. The tape volume is now empty and DFSMSHsm has selected the tape volume for reuse during backup or migration processing. The tape security option currently in effect is not RACF or RACFINCLUDE. Because the tape volume is being overwritten and the tape security option currently in effect is not RACF or RACFINCLUDE, DFSMSHsm is removing the RACF protection of the tape volume by deleting the volume serial number from DFSMSHsm's RACF tape volume set.
- The tape volume contains DFSMSHsm ABARS data for an expired aggregate version and is being deleted as a result of aggregate version rolloff during ABACKUP, ARECOVER, or EXPIREBV ABARSVERSIONS processing.

System action: DFSMSHsm processing continues.

Programmer response: This is only an informational message for the storage administrator or system programmer responsible for DFSMSHsm operations and the RACF security administrator. This message is to inform you that DFSMSHsm is either RACF-protecting one of its tape volumes or removing the RACF protection from one of its tape volumes. An authorized user determines what is currently in a specific DFSMSHsm RACF tape volume set by issuing one of the following RACF commands:

```
RLIST TAPEVOL HSMHSM ALL
RLIST TAPEVOL DFHSMx ALL
RLIST TAPEVOL HSMABR ALL
```

ARC0354I • ARC0355I

The sender of the command must have a certain level of access authority to the resource depending on the information being requested. For additional information, see *z/OS Security Server RACF Command Language Reference*.

DFSMSHsm only removes the RACF protection from tape volumes that it has RACF-protected. The system programmer or storage administrator responsible for DFSMSHsm operations or the RACF security administrator can take the initiative of RACF-protecting the tape volumes by adding the tape volume to DFSMSHsm's RACF tape volume set with one of the following RACF commands:

```
RALTER TAPEVOL (HSMHSM) ADDVOL(volser)
RALTER TAPEVOL (DFHSMx) ADDVOL(volser)
RALTER TAPEVOL (HSMABR) ADDVOL(volser)
```

See *z/OS DFSMSHsm Implementation and Customization Guide* in the section, "Authorizing and Protecting DFSMSHsm Resources" for a description of how to add tape volumes to DFSMSHsm's RACF tape volume sets.

To add the tape volume to the tape volume set, the user entering the RALTER command must have a certain attribute or certain level of access authority to the resource being added. For additional information, see *z/OS Security Server RACF Command Language Reference*.

If you have RACF-protected a tape volume by adding the tape volume to a DFSMSHsm RACF tape volume set, you are responsible for removing the RACF protection from that tape volume when the tape volume is removed from DFSMSHsm's control. DFSMSHsm only removes the RACF protection from tape volumes it has RACF-protected. If you have protected the tape volume using one of the commands discussed above, you can remove the RACF protection from the tape volume by deleting the volume serial number from one of DFSMSHsm's RACF tape volume sets. You can delete the volume serial number from one of DFSMSHsm's RACF tape volume sets by issuing one of the following RACF commands:

```
RALTER TAPEVOL (HSMHSM) DELVOL(volser)
RALTER TAPEVOL (DFHSMx) DELVOL(volser)
RALTER TAPEVOL (HSMABR) DELVOL(volser)
```

To delete the tape volume from a tape volume set, the user entering the RALTER command must have a certain attribute or certain level of access authority to the resource being deleted. For additional information, see *z/OS Security Server RACF Command Language Reference*.

Source: DFSMSHsm

ARC0354I ERROR WRITING HEADER/TRAILER LABELS DURING EOVS PROCESSING ON DRIVE *driveid*

Explanation: End-of-volume (EOV) processing has encountered an error while attempting to write trailer labels on the end of a tape volume or header labels on the beginning of a new tape volume during migration, backup, or recycle processing. The address of the tape drive is *driveid*.

System action: The volume is marked full to prevent reallocation. A new tape volume is selected and migration, backup, or recycle processing continues by retrying the failing data set.

Programmer response: See any other associated messages to determine the cause of the failure.

Source: DFSMSHsm

ARC0355I ERROR {READING | WRITING} DFSMSHSM CONTROL DATA SET *type* RECORD FOR KEY=*key*, RC=*return-code*. DFSMSHSM RECORD UPDATING CONTINUES FOR THIS DATA SET

Explanation: While attempting to update the full flag for a volume in a migration volume record, backup volume record or offline control data set (OCDS) record, an I/O error has occurred.

For *return-code* values, see Table 9 on page 559.

System action: The update is not performed. Migration, backup, or recycle processing for the data set continues.

Programmer response: Notify the storage administrator, who can use the FIXCDS command to update the full flag in the appropriate CDS record.

Source: DFSMSHsm

ARC0356I NEW TAPE VOLUME *volser* CANNOT BE ADDED. VOLUME ALREADY CONTAINS DATA

Explanation: DFSMSHsm has attempted to add a tape volume *volser* that already contains valid data.

System action: The tape volume is rejected and DFSMSHsm processing continues.

Programmer response: Issue a LIST TTOC (*volser*) command to determine what valid data exists on the tape. If the data on the tape volume is no longer needed, issue a FIXCDS DELETE command to delete the TTOC (tape table of contents) records for the volume. Then issue the ADDVOL command again. You can find a description of the FIXCDS command in the *z/OS DFSMSHsm Diagnosis*.

Source: DFSMSHsm

ARC0357I TAPE VOLUME *volser* IS RACF-PROTECTED BUT DOES NOT APPEAR IN DFSMSHSM'S RACF TAPE VOLUME SET, IT IS BEING REMOVED FROM DFSMSHSM'S INVENTORY OF {BACKUP | DUMP | MIGRATION} VOLUMES

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. DFSMSHsm selected tape volume *volser* for use during backup, full volume dump, or migration processing. The first RACHECK macro issued by DFSMSHsm has indicated that the tape volume is RACF-protected. A second RACHECK macro issued by DFSMSHsm has indicated that the tape volume does not appear in a DFSMSHsm RACF tape volume set. Because the tape volume is RACF-protected but does not appear in a DFSMSHsm RACF tape volume set and contains no DFSMSHsm data, it is being removed from DFSMSHsm's inventory of backup, dump, or migration volumes. DFSMSHsm performs an automatic DELVOL of the tape volume just as if a DELVOL command with the PURGE parameter had been entered for this volume. Message ARC0260I should be received, following this message, indicating the results of the automatic DELVOL.

System action: DFSMSHsm processing continues.

Programmer response: The system programmer or storage administrator responsible for DFSMSHsm operations should contact the RACF security administrator for help in resolving this problem. The RACF security administrator can determine who has protected the tape volume and has access to the tape volume by entering the following RACF command:

```
RLIST TAPEVOL volser ALL
```

The sender of the command must have a certain level of access authority to the resource depending on the information being requested. For additional information, see *z/OS Security Server RACF Command Language Reference*.

If the tape volume belongs to someone else and should never have been defined to DFSMSHsm using the ADDVOL command, no further action is required because DFSMSHsm has automatically removed the tape volume from its inventory of backup or migration volumes.

If the tape volume should belong to DFSMSHsm but has been RACF-protected by someone else, the RACF security administrator should contact the owner of the tape volume to determine why he or she has RACF-protected a tape volume that should belong to DFSMSHsm. If the owner of the volume indicates that the volume does not contain any necessary data and that the tape volume can be used by DFSMSHsm, the owner should remove the RACF protection from the tape volume. The RACF protection can be removed from the tape volume by one of the following methods:

- If the tape volume is RACF-protected as a single volume, the profile in the RACF data set can be deleted by entering the following RACF command:
RDELETE TAPEVOL(*volser*)
- If the tape volume is RACF-protected as part of a tape volume set, the tape volume can be removed from a tape volume set by entering the following RACF command:
RALTER TAPEVOL(resource-name) DELVOL(*volser*)

To delete the profile from the RACF data set or to delete the volume from a tape volume set, the user entering the RDELETE or RALTER command must have a certain attribute or certain level of access authority to the resource being deleted. For additional information, see *z/OS Security Server RACF Command Language Reference*.

Source: DFSMSHsm

ARC0358I EXTENSION RECORD WITH KEY=*key* MISSING FROM DFSMSHSM CDS, {MIGRATION COPY | BACKUP VERSION} OF DSN=*dsname* NOT ADDED TO T RECORD

Explanation: A tape table of contents (TTOC) record has been scanned. An extension record with key *key* that has been previously available is missing.

System action: Updating of the TTOC record ends. The volume is marked full and another volume is selected to continue the migration, backup, or recycle process.

Programmer response: Analyze the data on the tape volume to determine which migration copies or backup versions should be described in the missing extension record and use FIXCDS to re-create the record. You can find a description of the FIXCDS command in the *z/OS DFSMSHsm Diagnosis*.

Source: DFSMSHsm

ARC0359I ERROR {ADDING | REMOVING} TAPE VOLUME *volser* {TO | FROM} DFSMSHSM'S RACF TAPE VOLUME SET, RC=*return-code*, REAS={*reason-code* | ABEND}

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. An attempt has been made by DFSMSHsm to do one of the following:

- Add the tape volume with a volume serial number of *volser* to a DFSMSHsm RACF tape volume set of HSMHSM or DFHSMx (where *x* is the last nonblank character of the tape volume's *volser*), or HSMABR (DFSMSHsm's ABARS tape volume set). See *z/OS DFSMSHsm Implementation and Customization Guide* under "Authorizing and Protecting DFSMSHsm Resources" and "Implementing DFSMSHsm Tape Environments" information about how to add tape volumes to DFSMSHsm's RACF tape volume sets.
- Remove the tape volume with a volume serial number of *volser* from one of DFSMSHsm's RACF tape volume sets.

The attempt has failed. If the *return-code* in the message is 24, DFSMSHsm has intercepted a 585 abnormal end (abend). If the *return-code* is 20, RACF has failed the request or the issuance of the RACDEF SVC has resulted in a nonzero *reason-code*. If DFSMSHsm has intercepted an abend, ABEND is indicated instead of a *reason-code*.

DFSMSHsm attempts to add a tape volume to one of its RACF tape volume sets under the following circumstance:

- The tape security option specified with the TAPESECURITY parameter of the SETSYS command is either RACF or RACFINCLUDE and DFSMSHsm has selected the tape volume for use during migration, full volume dump, backup, or aggregate backup and recovery processing.

DFSMSHsm attempts to remove a tape volume from one of its RACF tape volume sets under the following circumstances:

- The tape volume has been successfully recycled. The TAPEDELETION option specified with the SETSYS command is SCRATCHTAPE. Because the TAPEDELETION option is SCRATCHTAPE, the tape volume is being removed from DFSMSHsm's control. All DFSMSHsm control data set records related to this tape volume are being deleted. The RACF protection is being removed by deleting the volume serial number from a DFSMSHsm RACF tape volume set (HSMHSM or DFHSMx.)
- The percent of valid data on the tape volume decreased to zero, causing the tape volume to be automatically recycled. The TAPEDELETION option specified on the SETSYS command is SCRATCHTAPE. Because the TAPEDELETION option is SCRATCHTAPE, the tape volume is being removed from DFSMSHsm's control. All DFSMSHsm control data set records related to this tape volume are being deleted. The RACF protection is being removed by deleting the volume serial number from one of DFSMSHsm's RACF tape volume sets.
- An authorized user has issued a DELVOL command with the PURGE parameter for the tape volume. The tape volume is being removed from DFSMSHsm's control. All DFSMSHsm control data set records related to this tape volume are being deleted and the RACF protection is being removed by deleting the volume serial number from one of DFSMSHsm's RACF tape volume sets.
- The tape volume has previously contained valid DFSMSHsm data and has been RACF-protected by DFSMSHsm some time in the past. All the data on the tape volume has become invalid and DFSMSHsm has selected the tape volume for reuse during backup or migration processing. The tape security option currently in effect is not RACF or RACFINCLUDE. Because the tape volume is being overwritten and the tape security option currently in effect is not RACF or RACFINCLUDE, DFSMSHsm is removing the RACF-protection of the tape volume by deleting the volume serial number from one of DFSMSHsm's RACF tape volume sets.
- The tape volume contains DFSMSHsm ABARS data for an expired aggregate version and is being deleted as a result of aggregate version rolloff during ABACKUP, ARECOVER, or EXPIREBV ABARSVERSIONS processing.

System action: DFSMSHsm processing continues.

Programmer response: This message is intended for the storage administrator or system programmer responsible for DFSMSHsm operations and the RACF security administrator. This message is informing you that an error has occurred when DFSMSHsm attempted to add a tape volume to one of its RACF tape volume sets or remove a tape volume from one of its RACF tape volume sets.

If the *return-code* is 24, an ICH409I 585-*xx* message will also be issued. *xx* is the RACF reason code. For a description of the RACF abend and reason codes, see *z/OS Security Server RACF Messages and Codes*. If the *return-code* is 20 and an abend did not occur, the *reason-code* is one of the possible return codes from the RACDEF SVC in *z/OS MVS Programming: Authorized Assembler Services Guide*.

An authorized user determines what is currently in a specific DFSMSHsm RACF tape volume set by issuing one of the following RACF commands:

```
RALTER TAPEVOL HSMHSM ALL
RALTER TAPEVOL DFHSMx ALL
RALTER TAPEVOL HSMABR ALL
```

The sender of the command must have a certain level of access authority to the resource depending on the information being requested. For additional information, see *z/OS Security Server RACF Macros and Interfaces*.

DFSMSHsm only removes the RACF-protection from tape volumes that it has RACF-protected. The system programmer or storage administrator responsible for DFSMSHsm operations or the RACF security administrator can take the initiative of RACF-protecting the tape volumes before DFSMSHsm uses the tape volume by adding the tape volume to one of DFSMSHsm's RACF tape volume sets with one of the following RACF commands:

```
RALTER TAPEVOL (HSMHSM) ADDVOL(volser)
RALTER TAPEVOL (DFHSMx) ADDVOL(volser)
RALTER TAPEVOL (HSMABR) ADDVOL(volser)
```

To add the tape volume to a tape volume set, the user entering the RALTER command must have a certain attribute or certain level of access authority to the resource being added. For additional information, see *z/OS Security Server RACF Macros and Interfaces*.

If you have RACF-protected a tape volume by adding it to one of DFSMSHsm's RACF tape volume sets before DFSMSHsm uses the tape volume, you are responsible for removing the RACF protection from that tape volume when it is removed from DFSMSHsm's control. DFSMSHsm only removes the RACF protection from tape volumes that it has RACF-protected. If you protected the tape volume using one of the commands discussed previously, you can remove the RACF protection from the tape volume by deleting the volume serial number from one of DFSMSHsm's RACF tape volume sets. You can delete the volume serial number from one of DFSMSHsm's RACF tape volume sets by entering one of the following commands:

```
RALTER TAPEVOL (HSMHSM) DELVOL(volser)
RALTER TAPEVOL (DFHSMx) DELVOL(volser)
RALTER TAPEVOL (HSMABR) DELVOL(volser)
```

To delete the tape volume from a tape volume set, the user entering the RALTER command must have a certain attribute or certain level of access authority to the resource being deleted. For additional information, see *z/OS Security Server RACF Macros and Interfaces*.

Source: DFSMSHsm

ARC0360I TAPE VOLUME *volser* IS RACF-PROTECTED BUT DOES NOT APPEAR IN DFSMSHsm's RACF TAPE VOLUME SET, THE VOLUME CONTAINS VALID DFSMSHsm DATA

Explanation: The system-wide RACF tape volume protection option is in effect. The tape security option RACF or RACFINCLUDE is specified with the TAPESECURITY parameter of the SETSYS command.

DFSMSHsm has selected tape volume *volser* for use during backup or migration processing.

The records in DFSMSHsm control data sets indicate that the tape volume is not full and is not RACF-protected by DFSMSHsm. Because the RACF or RACFINCLUDE tape security option is in effect, DFSMSHsm is going to RACF-protect this tape volume in one of DFSMSHsm's RACF tape volume sets of HSMHSM or DFHSMx (where *x* is

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the last nonblank character of the tape volume's volume serial number). See *z/OS DFSMSShsm Implementation and Customization Guide*, under "Authorizing and Protecting DFSMSShsm Resources" for a description of how to add tape volumes to DFSMSShsm's RACF tape volume sets. Before RACF-protecting the tape volume, DFSMSShsm issues two RACHECK macros to determine the current protection status of the tape volume.

The first RACHECK macros issued by DFSMSShsm indicates that the tape volume is RACF-protected. The second RACHECK macro issued by DFSMSShsm indicates that the tape volume does not appear in a DFSMSShsm RACF tape volume set of either HSMHSM or DFHSMx.

Because the tape volume is RACF-protected but does not appear in a DFSMSShsm RACF tape volume set, DFSMSShsm will not use it. The tape volume is indicated as full in all necessary records in the DFSMSShsm control data sets to prevent DFSMSShsm from using it again. DFSMSShsm control data set records indicate that the tape volume already contains valid DFSMSShsm data.

Programmer response: The system programmer or storage administrator responsible for DFSMSShsm operations should contact the RACF security administrator for assistance in resolving this problem. The RACF security administrator can determine who has protected the tape volume (owner) and who has access to the tape volume by entering the following RACF command:

```
RLIST TAPEVOL volser ALL
```

The sender of the command must have a certain level of access authority to the resource depending on the information being requested.

For additional information, see *z/OS Security Server RACF Command Language Reference*.

If the volume is defined to DFSMSShsm as a backup volume or a tape migration volume, the system programmer or storage administrator responsible for DFSMSShsm operations can determine which valid data is on the tape volume by entering the following DFSMSShsm space manager command: LIST TTOC(*volser*) TERMINAL

If the volume is defined to DFSMSShsm as a dump volume, the following command will appear if the volume contains a valid dump copy: LIST DUMPVOLUME (*volser*)

If a DUMP VTOC data set is associated with the dump copy of the tape volume, the following command will display the contents of the tape volume at the time of the dump: LIST DUMPVOLUME (*volser*) BACKUPCONTENTS

The system programmer should print the data on the tape volume to determine what data actually exists on the volume. The data printed should be visually inspected to determine if the volume contains DFSMSShsm backup versions or migration copies. DFSMSShsm backup versions or migration copies are written in 16K records. The beginning of the first 16K record of a backup version or migration copy contains a control block known as the common data set descriptor record (CDD). For additional information, see *z/OS DFSMSShsm Diagnosis*.

The header labels (HDR1 and HDR2) and trailer labels (EOF1 and EOF2) of the data sets on the tape volume can also be useful in determining if data sets are DFSMSShsm backup version or migration copies.

If the tape volume physically contains DFSMSShsm backup versions or migration copies, the RACF security administrator should inform the owner of the tape volume that the tape volume contains DFSMSShsm backup versions or migration copies. If the volume does not contain necessary data and can be used by DFSMSShsm, the owner should remove the RACF protection.

RACF protection can be removed from the tape volume by one of the following methods:

- If the tape volume is RACF-protected as a single volume, the profile in the RACF data set can be deleted by entering the following RACF command: RDELETE TAPEVOL (*volser*)
- If the tape volume is RACF-protected as part of a tape volume set, the tape volume can be removed from the tape volume set by entering the following RACF command: RALTER TAPEVOL (*resource-name*) DELVOL (*volser*)

To delete the profile from the RACF data set or delete the volume from a tape volume set, the user entering the RDELETE or RALTER command must have a certain attribute or certain level of access authority to the resource being deleted. For additional information, see *z/OS Security Server RACF Command Language Reference*.

If the owner suggests the tape volume contains the data and is needed, the system programmer should help in retrieving, recovering, and re-creating the user's data.

If the tape volume is defined to DFSMSHsm as a backup volume and the volume does not physically contain any DFSMSHsm backup versions but DFSMSHsm thinks that valid backup versions exist on the tape volume, the system programmer should delete each backup version that DFSMSHsm thinks is on the tape volume. To logically delete each backup version that resides on the tape backup volume, the system programmer should remove the volume from DFSMSHsm's control by entering the following DFSMSHsm space manager command: DELVOL (*volser*) BACKUP(PURGE)

The DELVOL command causes each valid backup version that DFSMSHsm thinks is on the tape volume to be marked invalid in the tape table of contents record (TTOC) in the offline control data set (OCDS). Also, all records about this volume are deleted from the DFSMSHsm control data sets. The system programmer should consider creating a new backup version for each data set that has a backup version deleted.

If the tape volume is defined to DFSMSHsm as a migration volume and the volume does not physically contain any DFSMSHsm migration copies but DFSMSHsm thinks that valid migration copies exist on the tape volume, the system programmer should delete each migrated data set that DFSMSHsm thinks is on the tape volume. To logically delete each migrated data set that resides on the tape migration, the system program should enter the following DFSMSHsm space manager command: MIGRATE VOLUME(*volser* DBA (0))

The MIGRATE command with the DBA parameter causes data set deletion to be performed on the tape migration level 2 volume. Any migrated data sets residing on the tape level 2 migration volume that are not referred to in the specified number of days (zero) will be logically deleted. Because the number of days specified is zero, DFSMSHsm logically deletes all valid migrated data sets that reside on the volume. After data set deletion is completed on the tape migration volume, the system programmer can remove the volume from DFSMSHsm's control by entering the following DFSMSHsm space manager command: DELVOL *volser* MIGRATION(PURGE)

The DELVOL command causes all records associated with the tape volume to be deleted from the DFSMSHsm control data sets. The system programmer should consider how her or she is going to recover a copy of each of the migrated data sets that has been logically deleted during data set deletion.

If the tape volume is defined to DFSMSHsm as a dump volume, the volume can be removed from the control of DFSMSHsm with the following command: DELVOL *volser* DUMP(PURGE)

The entire dump copy that the volume belongs to will be invalidated.

Source: DFSMSHsm

ARC0361I VOLUME *volser* DELETED BUT CONTAINS {RACF ONLY | PASSWORD ONLY | RACF AND PASSWORD } PROTECTED DATA

Explanation: Volume *volser* deletion is successful, but the deleted volume contains protected data of the specified type.

System action: DFSMSHsm processing continues.

Programmer response: Clear the contents of the tape to maintain security.

Source: DFSMSHsm

ARC0362I TAPE VOLUME *volser* WAS DEFINED AS *oldtype* AND IS NOW A *newtype*

Explanation: The tape volume with a volume serial number of *volser* was mounted by the tape operator in response to a nonspecific (PRIVAT) tape volume mount request. The tape volume mounted by the tape operator was empty and already defined to DFSMSHsm as the volume type indicated by *oldtype*. The possible message inserts for *oldtype* are:

- UNASSIGNED BACKUP VOLUME
- UNASSIGNED DAILY BACKUP VOLUME
- DAILY BACKUP VOLUME ASSIGNED TO DAY *nn*
- SPILL BACKUP VOLUME
- LEVEL 2 MIGRATION VOLUME

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However, the previous tape volume (the tape volume on which the end-of-volume condition was encountered resulting in the nonspecific (PRIVAT) tape volume mount request) is defined to DFSMSHsm as the volume type indicated by *newtype*. The possible message inserts for *newtype* are:

- DAILY BACKUP VOLUME ASSIGNED TO DAY *nn*
- SPILL BACKUP VOLUME
- LEVEL 2 MIGRATION VOLUME

All necessary records in the DFSMSHsm control data sets have been either modified, deleted, or created to reflect that the tape volume that the operator mounted (the one with a volume serial number of *volser*) is no longer defined to DFSMSHsm as the type of volume indicated by *oldtype* but it defined to DFSMSHsm as the type of volume indicated by *newtype*.

System action: DFSMSHsm processing continues.

Operator response: Check for one of the following two conditions:

- *oldtype* indicates that the tape volume was defined as a backup volume and *newtype* indicates that the volume is being changed to a migration volume.
- *oldtype* indicates that the tape volume was defined as a migration volume and *newtype* indicates that the volume is being changed to a backup volume.

If one of the two conditions exist, a possible operational problem might exist and the system programmer or storage administrator responsible for DFSMSHsm operations should be notified of the occurrence of this message.

Programmer response: Check for the following conditions:

- *oldtype* indicates that the tape volume was defined as a backup volume and *newtype* indicates that the volume is being changed to a migration volume; the tape operator mounted a tape volume that was defined to DFSMSHsm as a backup volume when an end-of-volume condition occurred on a tape migration level 2 volume. The mount request was for a nonspecific (PRIVAT) tape volume.
- *oldtype* indicates that the tape volume was defined as a migration volume and *newtype* indicates that the volume is being changed to a backup volume; the tape operator mounted a tape volume that was defined to DFSMSHsm as a migration volume when an end-of-volume condition occurred on a tape backup 2 volume. The mount request was for a nonspecific (PRIVAT) tape volume.

If one of the two conditions exist, a possible operational problem might exist, especially if your installation has a separate group of tape volumes with similar volume serial numbers (such as ML2001, ML2002, ML2003) defined as migration level 2 volumes with similar volume serial numbers (such as BV0001, BV0002, BV0003) defined as backup volumes. Even if this is not so, the grouping set up by the system programmer or storage administrator responsible for DFSMSHsm operations is being compromised by the tape operators. Tape volumes originally defined as backup volumes are being redefined as migration volumes and being used for migration, or tape volumes originally defined as migration volumes are being redefined as backup volumes and used for backup.

You should determine the extent of the problem and what possible impact, if any, this problem may have on recall or recovery processing. If the problem occurs often or is having some adverse impact on recall or recovery processing, you should consider providing additional education or more explicit instructions to your tape operators. If you wish to stop the problem altogether, you should consider installing one of the following levels of the Data Facility Product (DFP) on your computing system:

- MVS/370 DFP 1.0 (5665-295)
- MVS/XA DFP Version 1 Release 1.2 (5665-284) or MVS/XA DFP Version 2 Release 1.0 (5665-XA2)

If DFP is installed, DFSMSHsm will not allow the tape operator to:

- Mount a tape volume that is already defined as a migration volume when a backup volume is required.
- Mount a tape volume that is already defined as a backup volume when a migration volume is required.

Source: DFSMSHsm

ARC0364I DATA SET ENTRY FOR DSN=*dsname* CANNOT BE FOUND IN THE T RECORD WITH KEY=*key*

Explanation: The data set entry for *dsname* has not been found during an attempt to invalidate the data set entry in the tape table of contents (TTOC) record.

System action: The update of the data set entry is not made. DFSMSHsm processing continues.

Programmer response: Run the AUDIT MEDIACONTROLS VOLUMES(*volser*) command against the affected tape volume. If this failure is due to an inconsistency in the CDS records, the audit function may be able to correct it.

Source: DFSMSHsm

ARC0365I {MIGRATION | BACKUP } VOLUME *volser* NOW AVAILABLE FOR RECYCLE

Explanation: A data set on a tape volume is invalid as a result of one of the following operations:

- A BDELETE or HBDELETE of a back version
- Creation of a backup version causing a previous version to exceed the maximum number of versions saved
- Recall of data set from a tape migration level 2 volume
- Data set deletion or data set retirement of a data set on a tape migration level 2 volume
- DELETE or HDELETE of a migration copy

Marking the data set invalid in the tape table of contents record has caused the percentage of valid data to drop to or below the recycle-percent-valid criteria established for migration and backup volumes by the SETSYS command.

System action: DFSMSHsm processing continues.

Programmer response: If tape volumes are needed, see *z/OS DFSMSHsm Storage Administration* for information about the use of the RECYCLE command.

Source: DFSMSHsm

ARC0366A REPLY Y ONLY WHEN ALL *all* TAPE VOLUMES(S) IS/ARE COLLECTED, N IF ANY NOT AVAILABLE

Explanation: The *nn* tape volumes specified in the preceding ARC0313A message are needed to process the recovery or the recall of a data set.

System action: DFSMSHsm will continue processing until the operator replies to the message. After the reply of Y is received, DFSMSHsm processing stops until the tape mount request is satisfied.

Programmer response: After all the requested tapes have been collected and are ready for mounting, reply Y to the message. If all of the requested tapes are not available, reply N to the message.

Source: DFSMSHsm

**ARC0367I {A RECALL TASK DISABLED | MAXIMUM NUMBER OF RECALL TASKS REDUCED}, ARCFREE
RC=*return-code***

Explanation: In a previous recall task, an error occurred that left an allocated DD name. This problem was detected on a subsequent attempt to reuse the recall task. The recall task has now been marked disabled and a different recall task will process the data set being recalled.

If the message said TASK DISABLED, the requested level of recall tasks is still being supported. If the message said MAXIMUM NUMBER OF RECALL TASKS REDUCED, enough recall tasks have been disabled so that the DFSMSHsm design limit of 15 does not permit support of the requested maximum number of recall tasks.

System action: The data set is recalled. However, a different recall task recalls the data set. DFSMSHsm processing continues.

Programmer response: If the number of recall tasks is reduced and the maximum number of recall tasks requested is important, the system programmer responsible for DFSMSHsm should plan to stop and restart DFSMSHsm

Source: DFSMSHsm

ARC0368I VOLUME *volser* HAS BEEN MARKED FULL

Explanation: The tape mounted for DFSMSHsm output was rejected by DFSMSHsm because it was a protected tape. Its label indicated that it either contained user password-protected data or unexpired date-protected data. However, if DFSMSHsm had previously written on the tape and then emptied it, DFSMSHsm would have written on the tape even though it was protected.

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Note: Once DFSMSHsm initially writes on a tape, it can continue to reuse the tape until the tape is released to become a scratch tape.

System action: DFSMSHsm marks the volume *volser* full, then selects another tape.

Operator response: Notify the storage administrator.

Programmer response: None.

Source: DFSMSHsm

ARC0370I FAILED TO RESET HOSTID IN DFSMSHSM CONTROL DATA SET *type* RECORD, KEY=*key*, I/O OPERATION={READING | WRITING}, RC=*return-code*

Explanation: The DFSMSHsm control data set *type* record with key *key* has been serialized with the processing unit identifier of the processing unit in which the current task is running. In an attempt to release serialization of the control data set record, an I/O error has occurred. The processing unit identifier remains in the record. The I/O operation that has failed has been reading or writing as specified in the message text. For *return-code* values, see Table 9 on page 559.

System action: The current DFSMSHsm function continues processing.

Programmer response: Correct the error and issue a FIXCDS command to reset the processing unit ID in the specified record. You can find a description of the FIXCDS command in *z/OS DFSMSHsm Diagnosis*.

Source: DFSMSHsm

ARC0371I DFSMSHSM CONTROL DATA SET *type* RECORD IN USE BY HOST *procid*, KEY=*recordkey*

Explanation: An attempt has been made to serialize on the DFSMSHsm control data set *type* record having key *recordkey* by writing into the record the processing unit identifier of the processing unit in which the current task is running. A task running in a different processing unit with processing unit identifier *procid* has already serialized the record.

System action: The current function fails. DFSMSHsm processing continues.

Programmer response: If it is suspected that the record should not be serialized (the information in the processing unit identifier field of the record is no longer valid), the FIXCDS command is used to reset the *procid* field. You can find a description of the FIXCDS command in the *z/OS DFSMSHsm Diagnosis*. This problem can be caused when a processing unit fails while records are serialized by that processing unit. Issue the LIST command with the HOST parameter to list DFSMSHsm control data set records serialized by a specified processing unit. Issue the LIST command with the HOST and RESET parameters to reset all DFSMSHsm control data set records serialized by the specified processing unit.

Source: DFSMSHsm

ARC0372I {NON-SMS | SMS} VSAM DATA SET *dsname* {TO BE UNCATALOGED | CATALOGED | IMPORTED | RESTORED BY DFSMSDSS} FOR RECALL, VOLSER=*volser*

Explanation: During a recall of the VSAM data set with name *dsname*, DFSMSHsm has found it necessary to delete the data set's catalog entry.

If TO BE UNCATALOGED is indicated in the message, this message precedes the operation and serves as a reference in case some unrecoverable error occurs during or after the uncatalog operation and DFSMSHsm is unable to recatalog the data set. If DFSMSHsm is unable to complete the processing of the data set, no subsequent message will be issued. The lack of a message indicating successful completion of processing means that the recall has failed and DFSMSHsm has been unable to recreate a catalog entry for the data set.

If DFSMSHsm is able to complete the processing of the data set either successfully or in an error situation, this same message number (ARC0372I) is issued with either the CATALOGED, IMPORTED or RESTORED BY DFSMSDSS insert. IMPORTED or RESTORED BY DFSMSDSS is used when the recall is a success and the data set has been correctly cataloged. CATALOGED is used when the recall has failed and DFSMSHsm has detected the error. When CATALOGED is used, DFSMSHsm has cataloged the data set as a non-VSAM data set using a volume serial number of MIGRAT.

This message is only issued for the base cluster even though other components of the sphere may be processed similarly. Even though a failure can occur on an associated alternate index, the recall operation is considered a

success. If the recall of an associated alternate index fails, the failure is reported with message ARC0767I. In addition to the ARC0767I message, each successfully recalled alternate index is reported with message ARC0768I.

System action: The recall operation continues. DFSMSHsm processing continues.

Programmer response: If a pair of messages with this message number do not exist for the same data set, the recall has not been completed. In this case, the catalog entry will have to be recreated using the IDCAMS DEFINE command with the non-VSAM parameter. A non-VSAM catalog entry should always be redefined, even though a VSAM data set is being processed. MIGRAT is the volume serial number in all cases.

If the data set is SMS managed (the message text begins with SMS VSAM), it is recommend that the catalog entry that you recreate should be for an SMS-managed data set. A data set is considered SMS managed if the STORCLAS keyword is used with the data set DEFINE. If the data set is associated with a management class, the MGMTCLAS keyword should also be used.

The SMS class names to use when redefining the entry can be found in the data set's migration control data set data set record (MCD). The FIXCDS command is used to display the portion of the MCD record that contains the SMS class names. See *z/OS DFSMSHsm Diagnosis* for the correct location of the class names in the MCD.

Source: DFSMSHsm

ARC0373I ERROR OCCURRED IN MACRO *macro* WHEN OBTAINING SYSTEM CHANNEL PATH CONFIGURATION FOR VOLUME *volser*, RC=*return-code*, REAS=*rsncode*

Explanation: While attempting to obtain the system channel path configuration, an error occurred in the macro *macro*.

The *macro* is one of the following macros:

- IOCMAP macro — DFSMSHsm invokes IOCMAP macro to obtain the CHPIDs for the primary volume (SMS or non-SMS) during automatic processing. IOCMAP is only invoked if the new UCB service (e.g. UCBINFO macro) is not installed in the system that DFSMSHsm is running.
- UCBINFO macro — DFSMSHsm invokes UCBINFO macro, if it is installed in the system that DFSMSHsm is running, to obtain the CHPIDs for the primary volume (SMS or non-SMS) during automatic processing.

The *return-code* value indicates the error. The return code *return-code* is the return code passed from the system macro IOCMAP or UCBINFO macro. The reason code *rsncode* is the reason code passed from the system macro IOCMAP or UCBINFO macro. If the return code *return-code* is 900 and the reason code is 0, the macro *macro* abnormally ended (abended) or DFSMSHsm abended when invoking the macro *macro*.

This message will go to the log of the function that the configuration was being retrieved for.

System action: DFSMSHsm processing continues. Volume channel paths are not updated. Volume selection continues using channel path identifiers saved from previous processing. SMS volumes restricted to this processing unit with no channel path identifiers will be selected after SMS volumes restricted to this processing unit that have channel path identifiers. SMS volumes not restricted to processing by any processing unit with no channel path identifiers will be selected after SMS volumes not restricted to processing by any processing unit that have channel path identifiers. The channel load save area is not updated with the contributed load from processing a volume that has no channel path identifier.

Programmer response: Inform the system programmer of the message or examine the return code from IOCMAP or UCBINFO macro which is documented in MVS/SP macro documentation.

Source: DFSMSHsm

ARC0374I ACCEPTPSCBUSERID = {YES | NO}

Explanation: A QUERY command was issued with the SETSYS parameter.

ACCEPTPSCBUSERID=YES indicates that DFSMSHsm attempts to retrieve a user ID from the TSO protected step control block (PSCB) when RACF is not installed and a batch job containing TSO commands for DFSMSHsm is being processed.

ACCEPTPSCBUSERID=NO indicates that DFSMSHsm does not attempt to retrieve a user ID from the protected step control block (PSCB) when RACF is not installed and a batch job containing TSO commands for DFSMSHsm is being processed.

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These parameters have no meaning when RACF is installed on the processing unit system.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0375I CDSVERSIONBACKUP, MCDSBACKUPDSN=*dsname1*, BCDSBACKUPDSN=*dsname2*,
OCDSBACKUPDSN=*dsname3*, JRNLBACKUPDSN=*dsname4*

Explanation: A QUERY command has been issued with the SETSYS or CDSVERSIONBACKUP parameter. DFSMSHsm issues this message to describe its current parameter settings for multiple backup versions of the control data sets.

dsname1 indicates the set of initial qualifiers of the set of MCDS backup data sets.

dsname2 indicates the set of initial qualifiers of the set of BCDS backup data sets.

dsname3 indicates the set of initial qualifiers of the set of OCDS backup data sets.

dsname4 indicates the set of initial qualifiers of the set of journal backup data sets.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0376I BACKUPCOPIES=*backupcopies*, BACKUPDEVICECATEGORY={DASD |
TAPE(UNITNAME=*unitname*, DENSITY=*density*, {RETPD=*retentionperiod* | EXPDT=*expirationdate*},
{PARALLEL | NOPARALLEL})} LATESTFINALQUALIFIER=*xnnnnnnnn*, DATAMOVER = {HSM |
DSS}

Explanation: A QUERY command was issued with the CDSVERSIONBACKUP parameter.

BACKUPCOPIES indicates the number of backup copies DFSMSHsm maintains for each of the control data sets and the journal data set. The number of backup copies being maintained is indicated by *backupcopies*.

BACKUPDEVICECATEGORY indicates the device type to which the backups are made. DASD indicates a direct access device; TAPE indicates tape.

For TAPE:

- The *unitname* indicates the type of tape unit to which the backups are made.
- *density* indicates the density at which the backup copy is written to tape.
- *retentionperiod* indicates the number of days each backup data set should be kept after the backup copy is made.
- *expirationdate* indicates the date on which the backup copy is no longer required.
- PARALLEL indicates that the CDSs and the journal are to be backed up in parallel. There must be one tape drive available for each data set to be backed up.
- NOPARALLEL indicates that the CDSs and the journal are not to be backed up in parallel. Only one tape drive is required.

LATESTFINALQUALIFIER *Vnnnnnnnn* or *Dnnnnnnnn* indicates the last final qualifier that DFSMSHsm used for the backups of the control data sets and the journal data sets. V indicates DFSMSHsm was the data mover, and D indicates that DFSMSdss was the data mover.

DATAMOVER indicates the last data mover specified on a SETSYS command. The default, if no SETSYS CDSVERSIONBACKUP DATAMOVER command was issued, is DFSMSHsm

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC0378I TTOC RECORD AND TAPE MEDIA CONTENTS ARE INCONSISTENT ON TAPE VOLUME *volser*, {TAPE VOLUME CANNOT BE RECYCLED AT THIS TIME | RECYCLE PROCESSING HAS BEEN FORCED, ONLY KNOWN DATA SETS HAVE BEEN PROCESSED | TAPE VOLUME CANNOT BE DELETED, VALID DATA SETS MAY EXIST ON THE VOLUME | REUSE CAPACITY, VALID BLOCKS, PCT VALID, AND NUM REC DO NOT CONTAIN VALUES CONSISTENT WITH THE TAPE MEDIA}

Explanation: TAPE VOLUME CANNOT BE RECYCLED AT THIS TIME indicates that a RECYCLE command has failed as a result of a mismatch between the indicated data sets on the tape volume *volser* as described in the offline control data set record (OCDS) tape table of contents record (TTOC) and the actual data sets residing on the volume.

RECYCLE PROCESSING HAS BEEN FORCED, ONLY KNOWN DATA SETS HAVE BEEN PROCESSED, indicates that a RECYCLE command with FORCE parameter has been allowed to run to completion. This mismatch between indicated data sets on the tape volume *volser* as described in the OCDS TTOC record and the actual data sets residing on the volume did not prevent recycle processing of known data sets.

TAPE VOLUME CANNOT BE DELETED, VALID DATA SETS MAY EXIST ON THE VOLUME, indicates a DELVOL command has failed as a result of a mismatch between the indicated data sets on the tape volume *volser* as described in the OCDS TTOC record and the actual data sets residing on the volume. This message is followed by an ARC0260I message.

REUSE CAPACITY, VALID BLOCKS, PCT VALID, AND NUM REC DO NOT CONTAIN VALUES CONSISTENT WITH THE TAPE MEDIA, indicates that a LIST TAPETABLEOFCONTENTS command has been issued and a mismatch between the indicated data sets on the tape volume *volser* as described in the OCDS TTOC record and the actual data sets residing on the volume has been found.

Without any message insert an error or a system outage has occurred while DFSMSHsm has attempted to copy data sets to the tape volume *volser*. The result is a mismatch between the indicated data sets on the tape volume as described in the OCDS TTOC record and the actual data sets residing on the volume.

System action: DFSMSHsm will not select the tape volume *volser* for output processing until after the mismatch is resolved (see programmer response). DFSMSHsm processing continues.

Programmer response: The extended AUDIT MEDIACONTROLS function is used to resolve the missing TTOC data set entries for the tape volume *volser*, except when RECYCLE processing has been forced. For information about extended AUDIT MEDIACONTROLS and RECYCLE FORCE commands, see the *z/OS DFSMSHsm Storage Administration*.

See the *z/OS DFSMSHsm Storage Administration* for the procedure that documents how to handle inconsistencies between tape media contents and OCDS TTOC records.

Source: DFSMSHsm

ARC0379I INVALID BLOCK COUNT OF *number* NOT SUBTRACTED FROM THE RECORD FOR TAPE VOLUME *volser*, RC=*return-code*

Explanation: An error has occurred in attempting to update the OCDS TTOC record with the accumulated invalid block count *number* from an in-storage TTOC invalidation element. The number of valid blocks on the tape volume *volser* is overstated by *number* in the tape volume's OCDS TTOC record.

The values for *return-code* are:

Retcode Meaning

- 11 Error in updating OCDS TTOC record.
- 25 Error in reading OCDS TTOC record.
- 52 GETMAIN error.
- 64 Data set entry not found in OCDS TTOC record.
- nnn* Three digit abnormal ending code.

System action: DFSMSHsm processing continues.

Programmer response: The AUDIT MEDIACONTROLS function can be used to reconstruct the valid block count in the OCDS TTOC record for the tape volume *volser* when the number of lost blocks is significant.

ARC0380A • ARC0382I

Source: DFSMSHsm

ARC0380A RECALL WAITING FOR VOLUME *volser* IN USE BY HOST *procid*, FUNCTION *function*. REPLY WAIT, CANCEL, OR MOUNT

Explanation: A recall request needs a tape migration volume *volser* that has been in use by another processing unit *procid* or another task on this processing unit for the past 30 minutes. The operator is being asked for direction. The *function* that has the volume is recycle, tapecopy, migration, recall, DBA/DBU, audit, ABACKUP, or ARECOVER.

Note: For RECYCLE and TAPECOPY functions, this time may be changed or you may choose to immediately fail recalls when the volume is in use by RECYCLE or TAPECOPY processing. See the supported PATCH commands in the *z/OS DFSMSHsm Implementation and Customization Guide*.

System action: The DFSMSHsm task waits for a reply. If the reply is MOUNT, the recall task requests that the tape volume be mounted. CAUTION: Do not reply MOUNT unless the processing unit specified in the message has gone down. If the reply is WAIT, the task continues to wait for the tape to become available, checking in no less than two-minute intervals for its availability. If the reply is CANCEL, the recall request fails because the volume is not available.

Operator response: If the processing unit that is indicated as having the volume in use has gone down, reply MOUNT to the message, which causes DFSMSHsm to free up the tape volume for the recall. If the volume really is still in use by another processing unit or another task on this processing unit, reply WAIT or CANCEL. If the tape volume cannot be found, reply CANCEL.

Source: DFSMSHsm

ARC0381A ALLOCATION REQUEST FAILED FOR *volser* FOR {MIGRATION | RECALL | BACKUP | RECOVER | CDSBACKUP | RECYCLE | DUMP | AUDIT | TAPECOPY | UNKNOWN} REPLY WAIT OR CANCEL

Explanation: DFSMSHsm attempted to allocate a tape volume, but dynamic allocation determined there are no tape units currently available for the volume, or the operator failed the allocation request. The operator is asked for direction.

System action: The DFSMSHsm task waits for a reply.

If the reply is WAIT, DFSMSHsm reissues the allocation request every ten seconds up to six times. If the unit is still not available after the six retries, then the message is issued again.

Note: DFSMSHsm repeats the allocation request, and the message continues to be issued until either the allocation request is satisfied, or the reply is CANCEL.

If the reply is CANCEL, the allocation fails immediately.

Operator response: If it is possible that a tape unit may become available within a reasonable time, reply WAIT. Otherwise reply CANCEL. The installation may give further direction to the operators, such as, always reply CANCEL if the function is recycle; and always reply WAIT if the function is recall.

Note: When you reply CANCEL to a DSBACKUP tape task, the number of available DSBACKUP tasks will be reduced by 1.

Source: DFSMSHsm

ARC0382I {CREATION | UPDATE | DELETION} OF RACF DISCRETE PROFILE FAILED FOR DATA SET *dsname1* (FROM *dsname2*), RC= *RACF return-code*

Explanation: During backup or recovery of the data set *dsname1*, DFSMSHsm has attempted to create a RACF discrete profile for the data set. The data set *dsname2* has been the model RACF profile for the creation of the new profile. The profile creation has failed. RACF has issued the *return-code* in the message. return codes from RACF are documented in *z/OS Security Server RACF Macros and Interfaces*, and contain a description of return codes from the RACDEF macro. If the return code is not found in the RACDEF macro, it is a special case and is the return code from the RACINIT macro.

If *dsname1* has the form:

backup-prefix.BACK.user1.user2.Xydd. Thhmmss,

a backup profile has been created during data set backup. If *dsname2* has that form, a backup profile has been used as a model for the recovered data set's profile.

If both *dsname1* and *dsname2* have this form, *dsname1* has been used as a model profile for transferring a backup profile during backup version deletion.

If neither *dsname1* nor *dsname2* has that form, a profile creation has been attempted for the data set specified with the NEWNAME parameter for the RECOVER or HRECOVER commands or a profile has been created after renaming the target data set to a temporary name. The model profile for *dsname2*'s profile has been that of the original data set or the renamed original data set.

If UPDATE appears in the message, an attempt has been made to update the data set's profile following data set recall or recovery. The profile should correspond with the volume serial number of the recall or recovery target volume. The RACF profile update has failed. The *return-code* in the message has been returned by RACF. If the *return-code* is 24, an abnormal end has occurred when the discrete profile has been updated, probably because the profile already contains the volume serial number being added.

If DELETION appears in the message, DFSMSHsm has attempted to delete a discrete RACF data set profile associated with the backup version of a RACF-indicated data set.

System action: DFSMSHsm processing continues.

Programmer response: For DELETION, the RACF security administrator should determine the cause of the failure. If the profile does not exist, no further action is necessary. If the profile does exist, the security administrator should manually delete the profile using the RACF TSO DELDSD command. For UPDATE, the RACF security administrator or system programmer should determine the cause of the failure and manually update the profile.

Source: DFSMSHsm

ARC0383I DATA SET *dsname* RECOVERED WITHOUT RACF DISCRETE PROFILE

Explanation: A RACF-indicated data set *dsname* was recovered, but its RACF discrete profile could not be created. The data set is marked as though a discrete profile exists. The original data set's profile could not be used as a model for creation of a new profile. Also, either no backup profile existed for use as a model or creation of a profile with a backup profile as a model failed. The creation of a minimal discrete profile also failed. Recovery of the data set succeeds. However, the data set may not be accessible without further action to create a RACF profile.

System action: DFSMSHsm processing continues.

Programmer response: If a RACF always-call environment is not in effect, use the RACF ADDSD *dsname* NOSET command to create a discrete profile for data sets.

In a RACF always-call environment, a generic profile may be created to allow data set access.

Source: DFSMSHsm

ARC0384I DATA SET *dsname* RECOVERED WITH MINIMAL RACF DISCRETE PROFILE

Explanation: A RACF-indicated data set *dsname* was recovered, but its original RACF discrete profile could not be re-created. The original data set's profile could not be used as a model for the new profile. Also, no backup profiles were available as models or creation of a profile with a backup profile as a model failed. A minimal RACF profile was created for the recovered data set. No access list was created with the discrete profile.

System action: DFSMSHsm processing continues.

Programmer response: Specify a new access list if desired, with the RACF PERMIT command.

Source: DFSMSHsm

ARC0385I FAILED TO SET RACF INDICATION ON DURING RECOVERY OF VSAM DATA SET *dsname*, CATALOG RETURN CODE = *crc*, CATALOG REASON CODE = *creas*

Explanation: A discrete RACF profile has existed for the data set *dsname* or one has been recovered. The RACF indicator on the cluster's catalog record has not been properly set on. Catalog management return codes *crc* and reason codes *creas* are documented in the description for message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*.

System action: DFSMSHsm processing continues.

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Programmer response: The security administrator or system programmer should determine why the catalog management request has failed, based on the return and reason codes. The discrete profile may have to be deleted and re-created with the DELDSD and ADDSD commands to RACF-indicate the VSAM cluster.

Source: DFSMSHsm

ARC0386I DISCRETE RACF PROFILE RECOVERED FOR DATA SET *dsname1*, MODEL= *dsname2*

Explanation: A RACF-indicated data set was recovered and a discrete RACF profile was created for the data set also. If *dsname2* is the original data set name, the discrete profile for the original data set was used as a model for the profile creation. If *dsname2* is the backup version name, the backup profile associated with the backup version was used as the model for the profile creation.

System action: DFSMSHsm processing continues.

Programmer response: You can specify a new access list with the RACF PERMIT command.

Source: DFSMSHsm

ARC0387A RECOVER OF DATA SET *dsname* TIMED OUT WAITING FOR TAPE VOLUME *volser* TO BECOME AVAILABLE. SHOULD THE DATA SET RECOVER REQUEST CONTINUE TO WAIT? REPLY Y OR N

Explanation: Recover of a data set has been waiting for a tape volume to become available. The operator is being asked for direction.

System action: The DFSMSHsm task waits for a reply. If the waiting task holds resources critical for DFSMSHsm processing, all of DFSMSHsm may eventually be waiting for the reply.

If the reply is Y, DFSMSHsm will reset the default wait time of 30 minutes for the data set.

If the reply is N, DFSMSHsm will fail the data set recover request with a return code of 84.

Operator response: If it is possible the tape volume *volser* will become available within a reasonable time, reply Y.

Source: DFSMSHsm

ARC0389E TSO WAIT TYPE RECALL REQUEST FOR A DATA SET HAS BEEN CHANGED TO A NOWAIT REQUEST. {RECALL(TAPE) | RECALL(TAPE(TSO))} IS HELD.

Explanation: TSO RECALL processing requested a data set from tape and tape recall is held. This message is sent to the operator and will remain on the operator's screen until deleted. After five minutes, if a similar recall request is issued, then another ARC0389E message is to the operator. TSO tape recall requests between the five-minute intervals, will not cause ARC0389E messages to be issued.

System action: DFSMSHsm processing continues.

Operator response: When the problem is corrected or the message is no longer needed, take the following action to delete the message:

- If the message identifier is not available, issue the DISPLAY R,I command to get the ID.
- To delete the message, issue the following command using the message identifier *id* obtained from the DISPLAY R,I command listed above:

CONTROL C,I,*id*

Programmer response: RECALL processing will be completed when the operator releases the tape recall function.

Source: DFSMSHsm

ARC0390I MIGRATED RACF-PROTECTED VSAM CLUSTER *dsname* MUST BE RECALLED PRIOR TO DELETION

Explanation: A delete operation was requested for a command-migrated VSAM cluster that was not eligible for volume level migration and had RACF protection on objects other than the base cluster. DFSMSHsm cannot delete the RACF profiles for the VSAM cluster *dsname*.

System action: The delete operation ends. DFSMSHsm processing continues.

Programmer response: Delete the VSAM cluster using the following steps:

- Issue a DFSMSHsm RECALL or HRECALL command.
- Issue an access method services command to delete the recalled VSAM cluster.

Source: DFSMSHsm

ARC0392I USER {userid/consoleid} NOT AUTHORIZED FOR {cmd | cmd/parm} COMMAND PARAMETER

Explanation: RACF determined that the user/console *userid/consoleid* operator is not authorized to use the command/parameter *cmd/parm* through the RACF facility class profile defined for the command/parameter *cmd/parm*. *userid* is the ID of the user who issued the command/parameter *cmd/parm*.

consoleid is the console ID of the operator who issued the command/parameter *cmd/parm*.

System action: The request failed. DFSMSHsm processing continues.

Operator response: To use the command/parameter, contact your security administrator for authorization to the required RACF profile (restricted or comprehensive). Reissue the command or parameter.

Programmer response: To use the command/parameter, contact your security administrator for authorization to the required RACF profile (restricted or comprehensive). Reissue the command or parameter.

Source: DFSMSHsm

ARC0396I CREATION OF THE USER ACEE FAILED FOR userid DURING command AUTHORIZATION, RACF RC= return-code, RACF REAS= reason-code.

Explanation: A USER ACEE is needed for the *command* authorization, but RACF has been unable to create the USER ACEE for *userid*.

userid is the user's ID who has issued the command.

command is the command that has been issued by the *userid*.

return-code is the return code from RACF.

reason-code is the reason code from RACF.

For return code and reason code values, see the *z/OS Security Server RACF Macros and Interfaces* .

System action: The *command* fails and DFSMSHsm processing continues.

Programmer response: The system programmer or storage administrator responsible for DFSMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFSMSHsm

ARC0397I ACCESS TO THE FILTER OUTPUT DATA SET dsname HAS BEEN DENIED TO USER userid, RETURN CODE = return-code

Explanation: An ABACKUP command has been issued with the FILTEROUTPUTDATASET or FODS (*dsname*) parameter. However, the user issuing the command does not have RACF authorization to update or allocate the data set specified in the command.

dsname is the name of the filter output data set

userid is the user ID issuing the command

The values for *return-code* are:

Retcode Meaning

8 User *userid* is not authorized to update the filter output data set. A data set with the name specified with the FODS parameter existed at the time the ABACKUP command was issued.

10 User *userid* is not authorized to allocate the filter output data set. A data set with the name specified with the FODS parameter did not exist at the time the ABACKUP command was issued.

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- 12 A data set with the name specified with the FODS parameter existed at the time the ABACKUP command was issued; this data set was also migrated (volser=MIGRAT). However, no migration copy of the data set existed.
- 14 A data set with the name specified with the FODS parameter existed at the time the ABACKUP command was issued; this data set was also migrated (volser=MIGRAT). However, no D record was found for the migrated data set.

System action: The command fails and DFSMSHsm processing continues.

Programmer response: Contact your security administrator for granting the authorization to update or allocate the filter output data set (return codes 8 and 10). Contact your system programmer regarding possible problems with the migrated, filter output data set (return codes 12 and 14).

Source: DFSMSHsm

ARC0400I VOLUME *volser* IS *percent%* FREE, *tracks* FREE TRACK(S), *cylinders* FREE CYLINDER(S), FRAG *fragx*

Explanation: This is the first of three messages DFSMSHsm writes when an LSPACE is done for volume *volser*. Messages ARC0401I and ARC0402I follow. Unallocated space on the volume is *percent* of all the allocatable space on the volume. The amount of unallocated space remaining is *tracks* and *cylinders*. The fragmentation index *fragx* calculated by DFSMSHsm for this volume is for information only. The storage administrator might want to reorganize volumes whose fragmentation index values are 0.6 or higher.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0401I LARGEST EXTENTS FOR *volser* ARE CYLINDERS *cylinders*, TRACKS *tracks*.

Explanation: This is the second of three messages DFSMSHsm writes when an LSPACE is done for a volume. Message ARC0400I precedes this message. Message ARC0402I follows. This message describes the space available for up to five of the largest extents on the volume. The number of full cylinders in each extent is specified as *cylinders*. The number of full tracks in each extent is specified as *tracks*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0402I VTOC FOR *volser* IS *tracks* TRACKS(*totdscbs* DSCBS), *free* FREE DSCBS(*percent%* OF TOTAL) *avlspace* AVAILABLE SPACE DSCB

Explanation: This is the last of three messages DFSMSHsm writes when an LSPACE is done for a volume. VTOC statistics are reported for the volume identified in message ARC0400I.

- *tracks* indicates the number of tracks in the VTOC of the volume.
- *totdscbs* indicates the number of data set control blocks (DSCBs) in the VTOC.
- *free* indicates the number of free DSCBs.
- *percent* indicates the percent of free DSCBs.
- *avlspace* indicates the number of available space DSCBs. If the volume has an indexed VTOC, *avlspace* represents the number of equivalent available space DSCBs.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0403I EAV *volser* TRACK-MANAGED SPACE: IS *percent%* FREE, *tracks* FREE TRACKS, *cylinders* FREE CYLINDERS, FRAG *fragx*, LARGEST EXTENT IS *cylinders* CYLINDERS, *tracks* TRACKS

Explanation: This is the additional message DFSMSHsm writes when an LSPACE is done for track-managed space for the Extended Addressable Volume (EAV) *volser*. Unallocated space is *percent* of all the allocatable track-managed space on the volume. The amount of unallocated space remaining is *tracks* and *cylinders*. The fragmentation index *fragx* calculated by DFSMSHsm for this volume is for information only. The storage administrator might want to reorganize volumes whose fragmentation index values are 0.6 or higher. This message describes the space available of the largest extents on the volume. The number of full cylinders in largest extent is specified as *cylinders*. The number of full additional tracks in largest extent is specified as *tracks*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0404I ERROR WHILE ACCESSING VOLUME'S VTOC FOR *volser*, RC= *return-code*, REAS= *reason-code*

Explanation: DFSMSHsm has been accessing the volume with volume serial number *volser* when it has detected an error in reading the indexed VTOC.

If both *return-code* and *reason-code* are equal to zero, DFSMSHsm has not been able to process the indexed VTOC for volume *volser*. The volume either has a disabled indexed VTOC or the volume has a nonindexed VTOC.

For nonzero code values, the return code and CVSTAT field returned to DFSMSHsm from the CVAFDSM macro are given in the *return-code* and *reason-code* fields. For an explanation of these fields, see documentation about the CVAFDSM macro. The CVAFDSM return codes are in *z/OS DFSMS Using Data Sets*. The CVSTAT return codes are in *z/OS DFSMSdfp Diagnosis*.

System action: DFSMSHsm processing continues.

Programmer response: If the *return-code* and *reason-code* are nonzero, correct the indexed VTOC using the documentation about the CVAFDSM macro, which are located in the *z/OS DFSMS Macro Instructions for Data Sets*.

If both *return-code* and *reason-code* are equal to zero and the volume has an indexed VTOC, see the documentation for previous I/O-error messages (IEC60nI) received for volume *volser* to see how the indexed VTOC can be reenabled.

If both *return-code* and *reason-code* are equal to zero and the volume has a nonindexed VTOC, determine why the available space DSCBs are not usable and make corrections if needed.

Source: DFSMSHsm

ARC0405I HOST *procid* UPDATING SPACE INFORMATION ON ALL VOLUMES

Explanation: The processing unit *procid* is space checking all volumes because it has not validated the space information in the volume records in the migration control data set (MCDS). Performance is slower during the space update. This condition can be caused by any of the following conditions:

- None of the processing units in a multiple processing unit environment is designated in the startup procedures as the primary processing unit.
- The designated primary processing unit is inactive.
- The multiple-host processor control record (MHCR) in the MCDS could not be read.
- Non-primary host *procid* has been directed (by a patched value in its MGCB data area) to wait more than five minutes after the hour before doing its space check.

System action: DFSMSHsm processing continues.

Programmer response: If no processing unit is designated as the primary processing unit, define one processing unit as the primary processing unit in the startup procedure. For information about DFSMSHsm startup procedures, see *z/OS DFSMSHsm Implementation and Customization Guide*. If the designated primary processing unit is inactive and will remain inactive for a long time, define another processing unit as the primary processing unit. If the MHCR in the MCDS could not be read and this condition persists, a permanent I/O error is occurring on the MCDS. If the patched value in the MGCB results in an unacceptable performance impact, patch that value to 5 or less.

Source: DFSMSHsm

ARC0406I SPACE PARAMETER ON QUERY COMMAND ONLY VALID WHEN ENTERED BY CONSOLE OPERATOR OR AUTHORIZED USER

Explanation: A QUERY command with the SPACE parameter was issued by a non-DFSMSHsm authorized user from a TSO terminal with the HSEND CMD command. The SPACE parameter of the QUERY command is only valid when entered by a system operator or a DFSMSHsm authorized user.

System action: Other parameters on the QUERY command are processed. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0407I QUERY SPACE FAILED, {(VOLUME *volser* NOT | NO PRIMARY OR MIGRATION LEVEL 1 VOLUMES) CURRENTLY MANAGED BY DFSMSHsm}

Explanation: A QUERY command with the SPACE parameter was entered. If specific volumes were specified on the command, this message is issued for each requested volume that is an SMS-managed volume, a non-SMS volume that is neither a primary nor migration level 1 volume currently under DFSMSHsm control, or a non-SMS primary or migration level 1 volume that is OFFLINE. (A primary or migration level 1 volume is currently under DFSMSHsm control if an ADDVOL command was entered for that volume during this startup of DFSMSHsm, and the volume was not removed from DFSMSHsm control by a subsequent DELVOL command.)

If SPACE was not specified with specific volumes, this message is issued if there are no non-SMS primary volumes under DFSMSHsm control and no migration level 1 volumes under DFSMSHsm control, or if the volumes under DFSMSHsm control are OFFLINE.

System action: If a set of volume serial numbers was specified on the QUERY command with the SPACE parameter, the available space is listed for each non-SMS-managed volume that is a primary or migration level 1 volume currently under DFSMSHsm control. Other parameters on the QUERY command are processed. DFSMSHsm processing continues.

Programmer response: If you want to query the available space on a non-SMS volume using the DFSMSHsm QUERY command with the SPACE parameter, the volume must be a primary or migration level 1 volume currently under DFSMSHsm control and must be ONLINE. You can place a non-SMS volume under DFSMSHsm control by entering an ADDVOL command for the volume. Under most conditions, an ADDVOL command for a primary or migration level 1 volume causes the available space on the volume to be listed.

If you want to query the available space on an SMS-managed volume, you must use the appropriate ISMF panel.

Source: DFSMSHsm

ARC0408I INPUT TAPE ALLOCATION= {WAIT | NOWAIT}, OUTPUT TAPE ALLOCATION= {WAIT | NOWAIT}, RECYCLE TAPE ALLOCATION= {WAIT | NOWAIT}, TAPEFORMAT= {SINGLEFILE, MAXSINGLEFILEBLOCKS=*blocks* | MULTIFILE}

Explanation: A DFSMSHsm QUERY command with the SETSYS parameter was issued. This message indicates how DFSMSHsm will allocate a tape unit during recovery and recall processing (INPUT TAPE ALLOCATION), backup and migration processing (OUTPUT TAPE ALLOCATION), and recycle processing (RECYCLE TAPE ALLOCATION). The message also indicates which format for the IBM 3480 Magnetic Tape Subsystem is started (TAPEFORMAT) and the maximum number of blocks that will be written to a single file format volume (MAXSINGLEFILEBLOCKS).

If INPUT TAPE ALLOCATION= WAIT, DFSMSHsm will turn on the S99WTUNT bit in the S99FLAG2 field passed to dynamic allocation when it is allocating a tape unit during recovery and recall processing. Because the S99WTUNT bit is on, dynamic allocation will wait for a tape unit to become available if one is not currently available. During the time dynamic allocation is waiting for a tape unit to become available, it holds an exclusive enqueue on the task input/output table (SYSZTIOT) resource. This outstanding enqueue can seriously affect the performance of DFSMSHsm and your computing system.

If INPUT TAPE ALLOCATION= NOWAIT, DFSMSHsm will not turn on the S99WTUNT bit in the S99FLAG2 field passed to dynamic allocation when it is allocating a tape unit during recovery and recall processing. Because the S99WTUNT bit is off, dynamic allocation will not wait for a tape unit to become available if all tape units are currently being used.

If OUTPUT TAPE ALLOCATION= WAIT, DFSMSHsm will turn on the S99WTUNT bit in the S99FLAG2 field passed to dynamic allocation when it is allocating a tape unit during backup, migration and dump processing.

If OUTPUT TAPE ALLOCATION= NOWAIT, DFSMSHsm will not turn on the S99WTUNT bit in the S99FLAG2 field passed to dynamic allocation when it is allocating a tape unit during backup, migration, and dump processing.

If RECYCLE TAPE ALLOCATION= WAIT, DFSMSHsm will turn on the S99WTUNT bit in the S99FLAG2 field passed to dynamic allocation when it is allocating a tape unit during recycle processing.

If RECYCLE TAPE ALLOCATION= NOWAIT, DFSMSHsm will not turn on the S99WTUNT bit in the S99FLAG2 field passed to dynamic allocation when it is allocating a tape unit during recycle processing.

If TAPEFORMAT= SINGLEFILE, 3480 migration and backup volumes will be written as a single file on the tape.

If TAPEFORMAT= MULTIFILE, 3480 migration and backup volumes will be written as multiple data sets for each volume.

The maximum number of 16K blocks that DFSMSHsm will write to a migration or backup 3480 volume in single file format is *blocks*.

If MAXSINGLEFILEBLOCKS=11,421 (the default value), a 3480 volume will have a very high probability of being able to be copied to a single 3480 volume.

If MAXSINGLEFILEBLOCKS=0, the full single file format 3480 volumes will be used.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0409I ERROR READING VTOC ON VOLUME *volser*

Explanation: DFSMSHsm encountered a read error on the VTOC of the volume *volser* specified in the message. In the case of an LSPACE, processing bypasses the volume.

System action: DFSMSHsm processing continues.

Programmer response: Take corrective action in the VTOC of the volume *volser*.

Source: DFSMSHsm

ARC0410I TAPEMIGRATION={DIRECT(TAPE(ANY) | *unitname*) NONE(ROUTETOTAPE(ANY) | *unitname*), MIGDENSITY=*density*, MIGUNIT=*unit*, ML2 RECYCLE PERCENTAGE=*percent* %, TAPEMAXRECALLTASK=*tasks*, ML2 PARTIALS NOT ASSOCIATED GOAL=(*num* | NOLIMIT), RECONNECT(NONE | ALL | ML2DIRECTEDONLY)}

Explanation: A DFSMSHsm QUERY command was issued with the SETSYS parameter. DFSMSHsm issues this message to describe its current operating environment.

If TAPEMIGRATION=DIRECT, DFSMSHsm migrates all migration data sets directly to tape migration level 2 volumes.

- If TAPE(ANY), DFSMSHsm selects any available tape during migration processing.
- If TAPE(*unitname*), DFSMSHsm selects available *unitname* tapes during migration processing.

If TAPEMIGRATION=ML2TAPE, DFSMSHsm migrates data sets from DASD migration level 1 volumes to tape migration level 2 volumes.

- If TAPE(ANY), DFSMSHsm selects any available tape during migration processing.
- If TAPE(*unitname*), DFSMSHsm selects available *unitname* tapes during migration processing.

If TAPEMIGRATION=NONE, a migration level 2 tape is selected when one of the following events takes place:

- The selection of tape migration level 2 by the ARCMDEXT exit, which is taken when performing migration on a level 0 volume.
- The migration of an SMS-managed data set belonging to a management class with the attribute of LEVEL-1-DAYS-NON-USAGE=0, which indicates that the data set is to be migrated directly to level 2 tape.

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If ROUTETOTAPE(ANY) is displayed, DFSMSHsm will select any available tape when directed to select a tape migration level 2 volume under the conditions described under "TAPEMIGRATION=NONE", above. If no tapes are available, DFSMSHsm will select a scratch tape with the unit name specified or defaulted from the MIGUNITNAME parameter of the SETSYS command.

If ROUTETOTAPE(unitname) is displayed, DFSMSHsm will select any available tape, with the specific unitname shown, when directed to select a tape migration level 2 volume under the conditions described under "TAPEMIGRATION=NONE", above.

If RECONNECT(NONE) is displayed, DFSMSHsm will not attempt to reconnect to the ML2 copy that the data set was most recently recalled from, but will, instead, migrate the data set in a normal manner. In addition, DFSMSHsm will not mark as reconnection candidates any data sets recalled while this setting is in effect.

If RECONNECT(ALL) is displayed, DFSMSHsm will attempt to reconnect to the ML2 copy that the data set was most recently recalled from, even if the target level for a normal migration would be ML1.

If RECONNECT(ML2DIRECTEDONLY) is displayed, DFSMSHsm will attempt to reconnect to the ML2 copy that the data set was most recently recalled from, but only if the data set is eligible for direct migration to ML2.

The current tape density for migration scratch tapes is *density*.

The current tape unit for migration scratch tapes is *unit*.

The migration recycle percentage is *percent*.

The maximum number of recall tasks that are allowed to be processing concurrently from tape volumes is *tasks*.

The number of partial (not full, not empty) ML2 tapes not associated as output with any migration or recycle task to be available after a generic recycling of ML2 tapes is *mmn*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0411I TAPESECURITY={RACF | RACFINCLUDE} {PASSWORD} {EXPIRATION | EXPIRATIONINCLUDE}, {DEFERMOUNT | NODEFERMOUNT}

Explanation: A QUERY command with the SETSYS parameter has been entered. DFSMSHsm issues this message to describe its current operating environment.

The current setting of the TAPESECURITY parameter is displayed along with the current setting of the DEFERMOUNT parameter. For additional information about this parameter, see *z/OS DFSMSHsm Storage Administration*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0412I RECYCLEOUTPUT BACKUP={unit | **NONE**}, MIGRATION={unit | **NONE**}, RECYCLETAKEAWAYRETRY=(YES MAXRETRYATTEMPTS(nn) DELAY(mmmm) | NO)

Explanation: A QUERY command was issued with the SETSYS parameter. DFSMSHsm issues this message to describe its current parameter settings.

BACKUP=*unit* specifies that during recycle processing of a tape backup volume, only tape SPILL backup volumes that can be mounted and written on the specified type of unit are used for output. In addition, the tape SPILL backup volume is allocated using the unit name specified with the BACKUP subparameter of the RECYCLEOUTPUT parameter on the SETSYS command, overriding the *unitname* specified on the ADDVOL command for the tape SPILL backup volume.

BACKUP=****NONE**** specifies there is no restriction on the type of tape spill backup volume that can be selected for output during the recycle processing of a tape backup volume.

MIGRATION=*unit* specifies that during recycle processing of a tape level 2 migration volume, only tape level 2 migration volumes that can be mounted and written on the specified type of unit are used for output. In addition, the tape level 2 migration volume is allocated using the unit name specified with the MIGRATION subparameter of the RECYCLEOUTPUT parameter on the SETSYS command, overriding the *unitname* specified on the ADDVOL command for the tape level 2 migration volume.

MIGRATION=****NONE**** specifies that there is no restriction on the type of tape level 2 migration volume that can be selected for output during the recycle processing of a tape level 2 migration volume.

RECYCLETAKEAWAYRETRY(YES) specifies that DFSMSHsm automatically generates a new Recycle command for the same original tape, when the original Recycle must terminate due to the takeaway process or when the input tape is in use by the other DFSMSHsm task. MAXRETRYATTEMPTS specifies the maximum number of recycle attempts. DELAY specifies the delay interval in seconds between recycle attempts.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0413I QUERY SPACE FOR VOLUME *volser* ALREADY ACTIVE - RETRY THIS VOLUME AGAIN

Explanation: A QUERY command with the SPACE parameter was issued for a volume *volser*. The indicated volume had another QUERY SPACE request outstanding. DFSMSHsm does not permit concurrent requests for this function on the same volume.

System action: Other volumes on the QUERY SPACE command are processed. DFSMSHsm processing continues.

Programmer response: Reissue the QUERY SPACE command for this volume.

Source: DFSMSHsm

ARC0414I SETSYS WITH ERASE-ON-SCRATCH REJECTED, ERASE-ON-SCRATCH SUPPORT NOT AVAILABLE

Explanation: A SETSYS command was specified with the ERASEONSCRATCH parameter. A level of DFP is installed on the system that does not support erase-on-scratch processing.

System action: The ERASEONSCRATCH parameter on the SETSYS command is rejected. DFSMSHsm processing continues.

Programmer response: When the appropriate level of DFP 2.1.0 and RACF 1.7 is installed for erase-on-scratch processing, reissue the command.

Source: DFSMSHsm

ARC0415I EXPIREBV={HELD | NOT HELD} AND {ACTIVE | INACTIVE}, LAST STORED BACKUP VERSION KEY=*bcdskey1*, LAST STORED ABARS VERSION KEY=*bcdskey2*, LAST PLANNED END KEY= *last-planned-end-key*

Explanation: A QUERY command has been issued with the ACTIVE parameter. This message gives the status of the EXPIREBV long-running command.

HELD and NOT HELD indicate whether the operator has issued a HOLD command to hold the function.

ACTIVE and INACTIVE indicate whether an EXPIREBV command is currently in progress.

The EXPIREBV command reads records from the BCDS in alphabetical order, looking for expired backup versions, or expired ABARS versions if ABARSVERSIONS is specified. The key of the record being read is periodically stored in the backup control record on this processing unit. The data set backup version key and the ABARS version key are each stored separately. The value of the stored key used when processing data set backup versions is indicated with *bcdskey1*. The value of the stored key used when processing ABARS versions is indicated with *bcdskey2*.

The planned ending key is saved when starting an EXPIREBV command. If the command processing ends prior to completion, a subsequent EXPIREBV command issued on this processing unit with the RESUME parameter, will, by

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default, start at the *bcdskey1* if ABARSVERSIONS is omitted, or will start at the *bcdskey2* if ABARSVERSIONS is specified.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0416I USER UNIT NAME TRANSLATED FROM ORIGINAL UNIT TO TRANSLATED UNIT

Explanation: The DFSMSHsm QUERY command was issued with the SETSYS parameter. This message gives one of the esoteric unit name translations that was specified on the most recent SETSYS USERUNITTABLE command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0417I TAPE INPUT PROMPT FOR BACKUPTAPES | DUMPTAPES | MIGRATION TAPES = Y|N

Explanation: The DFSMSHsm QUERY command was issued with a SETSYS parameter from the list in the message text. This message reports a DFSMSHsm setting, which is either the default or the setting previously specified by a SETSYS TAPEINPUTPROMPT parameter. The TAPEINPUTPROMPT parameter determines whether or not DFSMSHsm will issue action messages to prompt the operator to determine the availability of specified input tapes.

System action: DFSMSHsm processing continues.

Programmer response: None

Source: DFSMSHsm

ARC0418I TAPEUTILIZATION PERCENT=(*pct* | NOLIMIT), (UNIT=*unit* CAPACITYMODE=(EXTENDED | COMPATIBILITY | **NONE**)) | LIBRARYMIGRATION | LIBRARYBACKUP

Explanation: Here are the values that are specified by the SETSYS TAPEUTILIZATION command:

pct This is the amount of the tape volume that will be written until DFSMSHsm forces the end of volume.

NOLIMIT

DFSMSHsm will write to the tapes until the actual end of volume is reached.

UNIT This is the unit type that the settings pertain to.

CAPACITYMODE

This pertains exclusively to user-defined esoterics that contain only IBM 3590 tape drives that emulate 3490 and are capable of CAPACITYMODE switching.

EXTENDED

The tapes can be filled more fully, but with a loss of compatibility with emulated 3490 drives that are not capable of CAPACITYMODE switching.

COMPATIBILITY

The tapes will be filled only as far as emulated 3490 drives can fill them (without CAPACITYMODE switching support).

NONE

The drives in the esoteric do not support CAPACITYMODE switching.

LIBRARYMIGRATION

This value represents the percent utilized for migration tapes that are stored in a tape library.

LIBRARYBACKUP

This value represents the percent utilized for backup tapes that are stored in a tape library.

System action: DFSMSHsm processing continues.

Programmer response: Verify that these are the desired settings. If not, reissue the SETSYS TAPEUTILIZATION command with the proper parameters.

Source: DFSMSHsm

ARC0419I SELECTVOLUME={SPECIFIC | SCRATCH | SPECIFIC FOR *func[,func]*, SCRATCH FOR *func[,func]*}, TAPEDELETION={SCRATCHTAPE | HSM TAPE | SCRATCHTAPE FOR *func[,func]*, HSM TAPE FOR *func[,func]*}, PARTIALTAPE={MARKFULL | REUSE | MARKFULL FOR *func*, REUSE FOR *func*} DISASTERMODE={YES | NO}

Explanation: A QUERY command with the SETSYS parameter has been entered. DFSMSHsm issues this message to describe its current operating environment.

The current setting of the SELECTVOLUME option is displayed:

- If SELECTVOLUME={SPECIFIC | SCRATCH} is displayed, this implies a global specification that applies to backup, dump, and migration tape volume selection.
- If SELECTVOLUME=SPECIFIC FOR *func[,func]*, SCRATCH FOR *func[,func]* is displayed, the values for *func* are BACKUP, MIGRATION and DUMP. These values reflect the different functional specifications that have been requested for tape volume selection.

The current setting of the TAPEDELETION option is displayed:

- If TAPEDELETION={SCRATCHTAPE | HSM TAPE} is displayed, this implies a global specification that applies to backup, dump, and migration tape volume deletion.
- If TAPEDELETION=SCRATCHTAPE FOR *func[,func]*, HSM TAPE FOR *func[,func]* is displayed, the values for *func* are BACKUP, MIGRATION and DUMP. These values reflect the different functional specifications that have been requested for tape volume deletion.

The current setting of the PARTIALTAPE option is displayed:

- If PARTIALTAPE={MARKFULL | REUSE} is displayed, this implies a global specification that applies to backup and migration tape volumes.
- If PARTIALTAPE=MARKFULL FOR *func*, REUSE FOR *func* is displayed, the values for *func* are BACKUP and MIGRATION. These values reflect the different functional specifications that have been requested for marking single-file format tape volumes full.

When DISASTERMODE=YES, DFSMSHsm selects the disaster alternate volume, if it exists, for recall or recover.

For additional information about these three options, see the *z/OS DFSMSHsm Storage Administration*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0420I *volser1* DELETED, {ML2 | BACKUP} ALTERNATE=*volser2*

Explanation: A DEVOL command was entered for tape volume *volser1* or an internal DELVOL was processed. The delete was successful, but there is an alternate volume, *volser2* that exists for the deleted volume.

System action: DFSMSHsm processing continues.

Programmer response: Use this message (in the command activity log) to determine what alternate tape volumes can be purged and reused.

Source: DFSMSHsm

ARC0421I *type* VOLUME *volser* IS NOW MARKED FULL

Explanation: DFSMSHsm marked a tape volume full. The type reflects the type of volume processed. The type is set to either BACKUP or MIGRATION.

System action: The tape is marked full. DFSMSHsm processing continues. The message is routed to both the migration log and to the console to facilitate auto-operations usage.

Programmer response: None.

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Source: DFSMSHsm

ARC0422I TAPECOPY COMPLETED - RETURN CODE=*return-code*

Explanation: DFSMSHsm has completed processing of a TAPECOPY command. The values for *return-code* are:

Retcode Meaning

- 0 All functions requested completed without errors. This code is also issued if a TAPECOPY ALL, BACKUP, or MIGRATIONLEVEL2 command found no eligible volumes to process.
- 4 TAPECOPY did not successfully process the complete list of tape volumes. A subset of the tapes were copied.
- 8 TAPECOPY failed without completing any copies.
- 16 TAPECOPY abnormally ended.

System action: DFSMSHsm processing continues.

Programmer response: See the other messages issued during the tape copy process. No response is required for return code 0. For return code 4, the volume list (either the command or input data set) must be updated to remove all volumes that were successfully processed before reissuing the TAPECOPY command.

For all other codes, the command can be restarted. If operating from an explicit volume list, all volumes that were processed should be removed from the list before reissuing the TAPECOPY command.

See the messages accompanying this messages to determine the state of each volume that was to be processed.

Source: DFSMSHsm

ARC0423I VOLUME COPY COMPLETE - SOURCE = *volser1*, TARGET = *volser2*

Explanation: DFSMSHsm successfully performed the tape copy function for *volser1*. the source tape has been copied to the target tape and the target tape's volume serial has been recorded in the source volume's TTOC.

Programmer response: None.

Source: DFSMSHsm

ARC0424I *volser* NOT COPIED - REASON=*reason-code*

Explanation: DFSMSHsm failed to perform the tape copy function for volume *volser*. One of the following conditions exists:

- The EXPDT parameter specified in an INDATASET record is invalid.
- Neither a migration control data set volume record (MCV) nor a backup control data set backup volume record (MCT) is found for the volume.
- The volume is not a 3480 tape volume recorded in DFSMSHsm single-file mode.

The reason codes are:

- 1 A control data set (CDS) record (MCV or MCT) for the volume is missing. See the accompanying messages for the record type.
- 2 The volume is not a 3480 single-file tape volume and it cannot be copied, or the tape may be empty.
- 3 The EXPDT parameter in the input data set record for this volume is invalid. Possible reasons may be one of the following:
 - A character is nonnumeric
 - The day value is less than 1 or greater than 366
 - The day value 366 is specified, but the year is not a leap year
 - The date is after 2155
 - The date is in the past
 - The date is specified as *yyddd*, but the current date is after 1999.
- 4 The tape table of contents record (TTOC) is not found for the volume.

- 5 The TTOC record and tape media are inconsistent.
- 6 The alternate volume is identified as a disaster alternate volume.
- 7 The volume was not copied because it already has a valid alternate volume.

System action: The volume is bypassed. The tape copy process continues to check the volume list for valid entries. DFSMSShsm processing continues.

Programmer response: Perform the following actions based upon the reason code:

- 1 A CDS record (MCV or MCT) for the volume is missing. See the accompanying messages for the record type. If a TTOC exists for the volume, ADDVOL the tape, then rerun the tape copy process. If no TTOC exists, the tape cannot be copied.
- 2 The volume is not a 3480 single-file tape volume and it cannot be copied, or the tape volume may be empty.
- 3 The expiration date field in the INDATASET record for this volume is invalid. Correct the expiration date and rerun the tape copy process.
- 4 The volume cannot be copied because the TTOC record is missing.
- 5 The volume cannot be copied because the TTOC record and tape media contents are inconsistent on the tape volume. The tape volume cannot be copied at this time. Rerun the tape copy at a later time. The extended AUDIT MEDIACONTROLS command processing is used to resolve the missing TTOC data set entries for the tape volume *volser*, except when RECYCLE processing is forced. For information about extended AUDIT MEDIACONTROLS , RECYCLE FORCE, and the procedure for handling inconsistencies between tape media contents and OCDS TTOC records, see *z/OS DFSMSShsm Storage Administration* .
- 6 The volume cannot be copied while the alternate volume is marked as a disaster alternate volume.
- 7 None

Source: DFSMSShsm

ARC0425I COPY OF *volser* FAILED - REASON=*reason-code*

Explanation: The creation of the alternate tape copy failed. The reason code explains the error:

- 1 TTOC read error.
- 2 TTOC update error.
- 3 I/O error on input tape.
- 4 I/O error on output tape.
- 5 EOVS on output tape (tape too short).
- 6 Open error on input tape.
- 7 Open error on output tape.
- 8 Close error on input tape.
- 9 Close error on the output tape.
- 10 ARCCPCTS subtask abnormally ended (abend).
- 11 MCV update failed. The volume may be in use by another processing unit or another task on this processing unit.
- 12 BVR update failed.
- 13 MCT read failed.
- 14 TTOC read failed.
- 15 The MCV for the tape volume indicated the volume was in use.
- 16 MCT update failed.
- 17 MCT read failed.
- 20 CDS I/O error.

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- 21 An error occurred while adding RACF protection.
- 27 IDRC incompatibility between original unit and alternate unit.
- 28 The alternate unit requested for the output tape is incompatible with the tape to be copied. For example:
- The alternate unit cannot be 3490 when a 3480 or 3480X tape is being copied.
 - The alternate unit cannot be 3480 or 3480X when a 3490 tape is being copied.
 - The alternate unit cannot be 3590-1 when a 3480, 3480X, or 3490 tape is being copied.
 - The alternate unit cannot be 3480, 3480X, or 3490 tape when a 3590-1 is being copied.
- 29 During processing of the TAPECOPY command, a volume to be copied is of a different length than the volume to which it is to be copied or the input and output tape drives use a different recording technology. DFSMSHsm does not allow a TAPECOPY from an enhanced capacity tape cartridge to a standard capacity cartridge, nor does it allow a TAPECOPY from a standard capacity cartridge to an enhanced capacity tape cartridge.

If you do not have a tape library, and the tape operator mounted the wrong length tape because the tape operator was not informed of what capacity cartridge to mount, issue the command:

```
SETSYS TAPEOUTPUTPROMPT(TAPECOPY(YES))
```

and then reissue the TAPECOPY command. This causes DFSMSHsm to indicate to the tape operator which type of tape (standard or enhanced capacity) should be mounted on the particular device for each TAPECOPY command issued.

If the output tape drive recording technology differs from that of the input drive, output to a drive uses the same recording technology as the input tape drive.

- 30 If the source volume is not RACF protected, TAPECOPY does not output to a tape volume that has RACF protection that DFSMSHsm did not provide.
- 31 Error attempting to issue the TAPEOUTPUTPROMPT message ARC0332A.
- 32 Error attempting to determine if tape is standard capacity or enhanced capacity.
- 40 ML2 input volume was needed by RECALL or ABACKUP.
- 41 For DFSMSHsm MVS V1R5 and higher, the MCV or MCT record for the volume indicates that the data was written with CAPACITYMODE(EXTENDED). Either the input unit that was recorded in the CDS is not capable of CAPACITYMODE(EXTENDED) operation or the output unit does not operate in CAPACITYMODE(EXTENDED).
- For DFSMSHsm MVS V1R4, the input tape was in CAPACITYMODE(EXTENDED) and cannot be processed by this release.

All of the reason codes (except 3, 4, 5, 40, and 41) are accompanied by another DFSMSHsm message that provides details of the failure.

System action: The TAPECOPY process continues with the next tape. If two consecutive tapes end abnormally (not including RC40), the TAPECOPY process ends. DFSMSHsm processing continues.

Programmer response: Response is dependent upon the reason code. For all reason codes except 3, 4, 5, 9, and use the problem determination actions for the accompanying message. For *reason-code 28*, specify an alternate unit compatible with the tape to be copied.

For reason codes 3, 4, 5, 9, and 15 use the following actions:

- 3 Determine what the tape I/O error is by referencing the system LOGREC. If the error was a data check, use the FORCE parameter of the RECYCLE command for that volume.
- 4 Determine what the tape I/O error is by referencing the system LOGREC. Correct the problem causing the error and rerun the tape copy process.
- 5 If the SETSYS MAXSINGLEFILEBLOCKS parameter was changed, restore the DFSMSHsm-supplied maximum single-file default and recycle all 3480 single-file tape volumes containing more blocks than the DFSMSHsm default maximum block count. If the maximum block count was not changed, the output tape volume was defective (too short), and a different volume should be used.

- 9 An internal DFSMSShsm error occurred, as the result of two consecutive abends for the tape copy process. Search problem reporting databases for a fix for the problem. If no fix exists, save all associated output and contact the IBM Support Center.
- 11, 15 If this was a user-generated TAPECOPY, rerun it when the volume is not in use. If DFSMSShsm internally generated the TAPECOPY because of a duplex tape failure, secondary space management or auto backup will retry the TAPECOPY later.
- 41 For DFSMSShsm MVS V1R5 or higher, use the QUERY SETSYS command to determine the CAPACITYMODE status of the input and output units that are used by tapecopy. Establish consistency between the input tape and the CAPACITYMODE settings of the input and output units. A CAPACITYMODE(EXTENDED) tape must use a CAPACITYMODE switchable input unit and an output unit that is defined to use CAPACITYMODE(EXTENDED).
- For DFSMSShsm MVS V1R4, use DFSMSShsm V1R5 or higher for the operation.

Source: DFSMSShsm

ARC0426I TAPEREPL COMPLETED - RETURN CODE=*return-code*

Explanation: DFSMSShsm has completed processing of a TAPEREPL command. The possible values for *return-code* are:

- 0 All functions requested were completed without errors.
- 4 The tape replace process ended prematurely without completing the list of volumes to be processed. A subset of the CDS updates was performed.
- 6 The tape replace process running with DISASTERALTERNATEVOLUMES has ended prematurely.
- 8 The tape replace process failed without completing any functions.
- 16 The tape replace process abnormally ended.

System action: DFSMSShsm processing continues.

System programmer response: See the other messages issued during the tape replace process. No response is required for return code 0. For return code 4, the volume list (either the command or input data set) must be updated to remove the volumes that have been processed before reissuing the TAPEREPL command.

For all other codes, the command can be restarted. If operating from an explicit volume list, all volumes that were processed should be removed from the list before reissuing the TAPEREPL command. See the messages accompanying this message to determine the state of each volume that was to be processed.

Source: DFSMSShsm

ARC0427I *original-volser* REPLACED BY ALTERNATE *alternate-volser* - RC=*return-code*

Explanation: The original volume was deleted and the CDS records for valid data sets were updated replacing the original with the alternate volume.

- 0 All CDS records for valid data sets on the original volume were updated successfully.
- 2 Not all CDS records for valid data sets on the original volume were updated.

System action: DFSMSShsm processing continues.

Programmer response: If reason code is zero, no action taken. If reason code is two, message ARC0432I is issued to the user and the Command Activity Log for each valid data set not updated. See this message to determine what action is required.

Source: DFSMSShsm

ARC0428I *volser* NOT UPDATED - REASON=*reason-code*

Explanation: Errors occurred during processing of the volume listed. The reason codes are:

- 2 No alternate tape volume reference was found in the TTOC record for the volume listed as *volser*.
- 4 The MCV or MCT record for the alternate volume already exists.

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- 5 The base TTOC record for the alternate volume already exists.
- 20 CDS I/O error.
- 27 IDRC incompatibility between original unit and alternate unit.
- 28 The alternate unit requested is incompatible with the tape being replaced. For example:
- The alternate unit cannot be 3490 when a 3480 or 3480X tape is being replaced.
 - The alternate unit cannot be 3480 or 3480X when a 3490 tape is being replaced.
 - The alternate unit cannot be 3590-1 when a 3480, 3480X, or 3490 tape is being copied.
 - The alternate unit cannot be 3480, 3480X, or 3490 tape when a 3590-1 is being copied.
- 29 *volser* is currently in use by another task.

System action: For all return codes, the CDS records that reference the original volume are not replaced. DFSMSHsm processing continues.

Programmer response: See the messages accompanying this message for more information. For *reason-code* 28, specify an alternate unit that is compatible with the tape being replaced.

Verify that the volume serial is correct.

If the original volume MCV or MCT record is missing and a TTOC exists, ADDVOL the original volume.

If the alternate volumes MCV, MCT, or TTOC already exist and no data set records point to it, use the PURGE parameter of the DELVOL command to delete the alternate volume.

If the above actions do not correct the problem, then use the following actions for each reason code.

- 2 Supply alternate tape volume serial number.
- 4 This could result when rerunning the tape replace process and the TAPEREPL command did not complete normally. To correct this error, first determine whether the MCV/MCT should be replaced. If it should, delete the MCT/MCV record using FIXCDS and reissue the TAPEREPL command.
- 5 This could result when rerunning the tape replace process and the TAPEREPL command did not complete normally. To correct this error, first determine whether the TTOC should be replaced. If it should, delete the base TTOC record using FIXCDS and reissue the TAPEREPL command. Extension records that exist without the base record are automatically replaced.
- 29 Reissue the TAPEREPL command when *volser* is not in use.

Source: DFSMSHsm

ARC0429I ORIGINAL VOLUME *volser* NOT FOUND IN CONTROL DATA SET

Explanation: DFSMSHsm was processing a tape replace for volume *volser*. Another DFSMSHsm message will accompany this message indicating which CDS record is missing. If the volume is a backup or SPILL volume, either the TTOC or MCT record is missing or the BCDS is not available to DFSMSHsm. If the volume is a migration level 2 volume, the TTOC or MCV record is missing.

System action: The tape replace process bypasses the volume. DFSMSHsm processing continues.

Programmer response: Verify that the volume serial is correct. If it is, determine which record is missing. If the MCV or MCT record is missing, use the ADDVOL command to add the volume. If the TTOC is missing, the TAPEREPL command cannot be run against this volume.

Source: DFSMSHsm

ARC0430I {TAPECOPY | TAPEREPL} COMMAND FAILED : *reason:code*

Explanation: The TAPECOPY or TAPEREPL command has failed without performing all of the requested tape copies.

The reason codes are:

- 1 The EXPDT and RETPD subparameters are both specified. Only one can be specified at a time.
- 2 The expiration date is invalid. Possible reasons may be one of the following:

- The number of digits is not 5 or 7
 - The day value is less than 1 or greater than 366
 - The day value 366 is specified, but the year is not a leap year
 - The date is after 2155
 - The date is in the past
 - The date is specified as *yyddd*, but the current date is after 1999
- 4 RETPD exceeds the century because year 2000 support is not available in MVS or RETPD exceeds year 2155 (MVS limit).
- 6 The list of volumes specified with the ORIGINALVOLUMES and ALTERNATEVOLUMES parameters do not contain the same number of volumes.
- 7 I/O error has occurred on INDATASET.
- 8 No input volume list has been found.
- 9 INDATASET allocation has failed. Another DFSMSHsm message accompanies this reason code providing more information.
- 10 Multiple volume list sources are given.
- 11 ALTERNATEVOLUMES has been specified without ORIGINALVOLUMES.
- 12 All volumes in the list supplied with the command are invalid.
- 13 A HOLD command has been issued for the TAPECOPY or TAPEREP command while the command is in progress. Some volumes may not have been processed.
- 14 There has been more than one abnormal end (abend) for the ARCCPCTS subtask. This message indicates that either the DFSMSHsm virtual storage has been exceeded or there is an internal DFSMSHsm logic error. Some volumes may not have been processed. Another DFSMSHsm message accompanies this reason code providing more information.
- 15 The command contains a syntax error and could not be processed.
- 16 Input tape unit allocation has failed. Another DFSMSHsm message will accompany this reason code providing more information.
- 17 Output tape unit allocation has failed. Another DFSMSHsm message will accompany this reason code providing more information.
- 19 ARCCPCTS subtask attach has failed. This message indicates that either the DFSMSHsm virtual storage has been exceeded or there is an internal DFSMSHsm logic error. Another DFSMSHsm message accompanies this reason code providing more information. The abend and associated system control blocks are traced using the problem determination aid function.
- 20 An error has occurred positioning to the first volume record in the MCDS or BCDS.
- 21 An error has occurred reading a volume record from the MCDS or BCDS.
- 23 The ALTERNATEUNITNAME parameter has been specified, but the unit type has not been specified.
- 24 The ALTERNATEUNITNAME parameter has been specified, and the unit type is incorrect.
- 25 The unit type specified in the UUT does not match the specified ALTERNATEUNITNAME unit type.
- 26 The UUT has not been defined or cannot be accessed.
- 27 The hardware compaction of the original unit is not compatible with the ALTERNATEUNITNAME unit type specified.
- 29 More than the allowable number of alternate units has been specified.
- 30 An error has been encountered in determining if a storage class is assigned to the output tape copy data set name.
- 31 An error has been encountered in reading the tape library volume record for an OVOL or an AVOL.
- 32 The ALTERNATE3590UNITNAME parameter has been specified, but the unit type has not been specified.

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- 33 More than the allowable number of alternate units has been specified for the ALTERNATE3590UNITNAME parameter.
- 34 The unit type specified in the UUT does not match the specified ALTERNATE3590UNITNAME unit type.
- 35 The ALTERNATE3590UNITNAME parameter has been specified, but the unit type is incorrect.
- 36 The UUT has not been defined or cannot be accessed for the ALTERNATE3590UNITNAME parameter.

System action: The TAPECOPY or TAPERREPL command ends, except that TAPECOPY continues to process the next volume if the requested volume is unavailable (ARC0500I DARC=0220) and the input tape allocation has failed (ARC0430I RS=16). For all reason codes except 13, 14, 19, and 21, no tapes have been copied. Reason codes 13, 14, 19 and 21 can result in a subset of the requested copies being made.

System programmer response: For all but reason codes 14 and 19, correct the problem and reissue the TAPECOPY or TAPERREPL command to process the volumes.

For reason code 13, issue a RELEASE command and reissue a TAPECOPY or TAPERREPL command for the volumes not processed.

For reason codes 14 and 19, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

Source: DFSMSHsm

ARC0431I {ORIGINAL | PREVIOUS | SUCCESSOR} TTOC RECORD MISSING - *volser* KEY=*ttoc-record-key*

Explanation: A TTOC record for the volume listed as *volser* was not found with a valid MCV or MCT record in the CDS.

System action: When copying a tape, the tape copy process fails this volume and continues with the next volume in the list. The tape cannot be copied.

If an original volume TTOC record is missing when replacing a tape, the tape replace process bypasses the volume.

If the previous or successor TTOC record is missing, all data set updates have been completed.

If the previous volume TTOC is missing, all data on the tape being updated is accessible except the first user data file on the tape. In this case, there is no problem associated with this tape because the data set cannot be accessed from this volume without first mounting the previous volume.

If the successor volume TTOC record is missing, all but the last data file on the tape being updated is accessible.

For both the previous and successor TTOC records, the records referencing the invalid data set are not modified.

Programmer response: For original TTOC records, verify that the volume serial is correct.

For previous volumes, no corrective action is required for this tape. However, this condition indicates a problem with the previous tape that should be corrected by the storage administrator.

For successor volumes, if the last data set on the tape is a valid migration copy, use the HDELETE command to delete the data set and recover a copy from another source. If the last data set on the tape is a valid backup copy, use the HBDELETE command to delete it.

Source: DFSMSHsm

ARC0432I DATA SET NOT UPDATED - DSN=*dsname*, TTOCKEY=*ttoc record-key*, TTCENTRY INDEX=*index-number*, REASON=*reason-code*

Explanation: While processing a tape replace for a volume, An error associated with the data set listed occurred. The original volume was deleted and the data set physically resides on the alternate volume and is listed in the TTOC for the alternate volume; however, the data set records may still reference the original volume. These records must be updated prior to further processing of the alternate volume.

The reason codes are:

- 1 Error reading MCC/MCD/MCA record.
- 2 MCC/MCD update error.
- 4 Error reading MCB record.

- 5 MCB record update error.
- 7 Error reading MCP record.
- 9 MCP record update error.

The TTOC information is supplied only as an aid in correcting the problem.

System action: Tape replace continues with the next data set. DFSMSHsm continues processing.

Programmer response: See the action stated with each reason code. ARC0184I issued to the Command Activity Log, contains the record type and the reason why the READ or UPDATE failed. When the following actions include the FIXCDS PATCH command, the VERIFY parameter must be used to assure the ALTERNATE volume serial replaces only the original volume serial.

- 1 or 2** If the volume being updated is a MIGRATION Level 2 volume, the record type is MCA or MCD. Only the MCD needs updating. Display the MCD using the FIXCDS command. If MCDVSN or MCDAVSN(array index) equals the original volume serial, use the FIXCDS PATCH command with VERIFY to replace the original with the alternate volume serial.

If the volume being updated is a BACKUP volume, the record type is MCC. Display the MCC using the FIXCDS command. If MCCVSN or MCCAVSN(array index) equals the original volume serial, use the FIXCDS PATCH command with VERIFY to replace the original with the alternate volume serial. If the READ or UPDATE of the MCC failed, the MCB also needs to be checked. Like the MCC, display the MCB and if MCBVSN equals the original volume serial, PATCH to replace the original with the alternate volume serial.

- 4 or 5** Display the MCB record using the FIXCDS command. If MCBVSN equals the original volume serial, use the FIXCDS PATCH command with VERIFY to replace the original with the alternate volume serial.

If the ARC0184I message indicates the MCB record was not found (RC4), the data set may be deleted, but the MCC record still exists.

- 7 and 9** Display the MCP record using the FIXCDS command. If either MCPVTOCV(array index) or MCPNXTV(array index) equals the original volume serial, use the FIXCDS PATCH command with VERIFY to replace the original with the alternate volume serial.

Source: DFSMSHsm

ARC0433I *volser* - BVR ENTRY UPDATE ERROR - REASON=*reason-code*

Explanation: During tape replace processing, an error occurred while reading or updating the BVR.

System action: DFSMSHsm performs the following actions depending upon the reason code:

- 1 Original volume BVR update failed. This is an attention message only because the volume is marked as in-use in the TTOC and in the BVR. The in-use marking is deleted when processing completes.
- 2 The alternate volume BVR entry creation failed. No data sets are updated.

System programmer response: For reason code 1, no action is necessary. For reason code 2, use the accompanying messages to determine the cause of the BVR update or read. Correct the problem and reissue the TAPEREP command.

Source: DFSMSHsm

ARC0434E RECYCLE FAILED - DSN=*dsname* ON VOLUME=*volser* - DATA SET DELETED

Explanation: During processing of a RECYCLE command with the FORCE parameter, an error occurred while reading the input data set within the 3480 single-file tape listed as *volser*. The data set name listed as *dsname* is the data set name from the TTOC entry being processed.

If the volume being recycled is a backup volume, only the backup version with the error is lost.

If the volume being recycled is a migration volume, all references to the data set are removed, including the system catalog entry pointing to MIGRAT. The data set is deleted.

If MCBR UPDATE FAILED is displayed, a RECYCLE FORCE command was issued and DFSMSHsm encountered a volume that might contain one or more retained backup versions for which RETAIN DAYS was specified at the time

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of backup. Retained backup versions can only be processed on a z/OS V1R11 or later system.

System action: Recycle processing continues with the next data set. DFSMSHsm processing continues.

Programmer response: If the data set in error is the latest backup version of a data set, issue a BACKDS command to create a new backup version. If the data set in error is a migration copy, recover the data set from the latest backup version or dump copy.

If MCBR UPDATE FAILED is displayed, reissue the RECYCLE FORCE command on a z/OS V1R11 or later system.

Source: DFSMSHsm

ARC0435I PARTIALTAPE SPECIFIED WITHOUT "MARKFULL" OR "REUSE" - PARTIALTAPE STATUS NOT CHANGED

Explanation: A SETSYS command with the PARTIALTAPE parameter is entered, but the PARTIALTAPE parameter has no default sub-parameter. Either the MARKFULL or the REUSE sub-parameter must be specified when the PARTIALTAPE parameter is used.

System action: No change to the PARTIALTAPE state is made. DFSMSHsm processing continues.

Programmer response: Amend the appropriate subparameter to the PARTIALTAPE parameter and reissue the SETSYS command.

Source: DFSMSHsm

ARC0436I OLD ALTERNATE VOLUME=*volser1* FOR ORIGINAL VOLUME=*volser2*, REPLACED BY *volser3*

Explanation: When this message is issued:

- The existing alternate tape volume *volser1* has been replaced by the copy created by the TAPECOPY command (*volser3*).
- Message ARC0436I is issued.
- No record is kept of the old alternate volume.
- The ARCTVEXT tape volume exit is invoked if the alternate tape being replaced is created by DUPLEX processing. ARCTVEXT is not invoked if the alternate tape being replaced is created by TAPECOPY processing.
- If SETSYS PARTIALTAPE(MARKFULL) is specified, the original volume is marked full.

This message can be used to generate lists for offsite volume retrieval, since volume *volser1* is no longer used by DFSMSHsm.

System action: All DFSMSHsm references to the old alternate volume have been replaced by the new alternate volume.

Programmer response: None.

Source: DFSMSHsm

ARC0437I {TAPECOPY | TAPEREPL} {HELD | NOT HELD} AND {ACTIVE | INACTIVE}

Explanation: A Query command was issued with the active parameter. This message is displayed twice, once for the tape copy function and once for the tape replace function.

HELD and NOT HELD indicate whether the operator issued a HOLD command to hold the function.

ACTIVE and INACTIVE indicate whether the function is currently in progress.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0439I ORIGINAL VOLUME *volser1* REPLACED WITH *volser2*, NOT *volser3*

Explanation: A TAPEREPL command was issued with an original volume and alternate volume specified. The alternate volume shown as *volser2*, which was specified with the ALTERNATEVOLUMES parameter of the TAPEREPL command, replaced the original volume shown as *volser1*. The alternate volume specified was different from the alternate volume in the DFSMSHsm records (*volser3*), so *volser3* is removed, leaving no alternate volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0440I VOLUME *volser* CONTAINS AN INVALID CDD OR A TAPE POSITIONING ERROR HAS OCCURRED

Explanation: One of the following conditions occurred during RECYCLE:

- A 3480 extended point failed.
- The TTOC indicates that CDDIDs on this tape are valid and the CDDID field did not contain *CDDID**.
- The data set name found in the common data set descriptor (CDD) record does not match the name of the data set in DFSMSHsm's records.

If the extended point failed, message ARC0920I will be found in the RECYCLE log.

System action: If the RECYCLE FORCE parameter is in effect, the data set is deleted. If not, the CDS records associated with the data set are left intact.

Programmer response: For a non-VSAM data set, the CDD record is in the first block of data. For a VSAM data set, a CDD exists at the beginning of the first block of data for the base cluster and within the first block of data for each alternate index.

The most likely cause of a data set name or CDDID mismatch is changes having been made to the data files on the tape. An ARC0440I message is issued once for each occurrence of a nonrecoverable point error or data set name/CDDID mismatch.

A data set name mismatch may also occur in the following situation: A VSAM data set was migrated, then backed up (prior to installation of the fix for APAR OY15173), then deleted and re-created with a different base data component name. The appropriate action in this case is to issue a BDELETE command to delete backup versions of the data set with the old base data component name and then reissue the recycle request. This is not an error condition.

Source: DFSMSHsm

ARC0441I ALTERNATE VOLUME *altvol* REMOVED AS COPY OF VOLUME *volser*

Explanation: The alternate volume reference *altvol*, which was recorded in the TTOC record for the original volume *volser*, was removed because the original volume was marked as full, or additional data sets were added to the volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0442I TAPE OUTPUT PROMPT FOR TAPECOPY = *x*, DUPLEX BACKUP TAPES = *x*, ERRORALTERNATE=CONTINUE(TAPECOPY|RECYCLE), DUPLEX MIGRATION TAPES = *x*, ERRORALTERNATE= {CONTINUE(TAPECOPY|RECYCLE) | MARKFULL}

Explanation: The DFSMSHsm QUERY command has been issued with a SETSYS parameter from the list in the message text. This message reports a DFSMSHsm setting, which is either the default or the setting previously specified by a SETSYS TAPEOUTPUTPROMPT parameter, and the status of tape duplexing for backup and migration processing. The TAPEOUTPUTPROMPT parameter determines whether DFSMSHsm issues action messages to inform the operator if a standard cartridge tape or Enhanced Capacity/Extended Capacity cartridge tape is required for a 3490 TAPECOPY output allocation. The DUPLEX parameter determines the status of tape duplexing for backup and migration tapes. *x* is either Y or N.

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System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0443I <MIGRATION | BACKUP> VOLUME *volser1* WITH ALTERNATE *volser2* IS NOW MARKED FULL

Explanation: DFSMSHsm has marked a tape volume with an alternate full.

System action: The original volume is marked full, and the alternate is considered full.

Programmer response: None.

Source: DFSMSHsm

ARC0445I VOLUME *volser* CANNOT BE RECYCLED, REASON=*rc*, EXPLANATION: {TAPE HAS DISASTER ALTERNATE | TTOC RECORD IS INCOMPLETE | TAPE IS UNASSIGNED BACKUP | TAPE CONTAINS NO DATA | CANNOT FORCE MULTIPLE VOLUMES | VOLUME RECORD NOT FOUND | CONNECTED SET TOO LONG | SET HAS MIXED TYPES}

Explanation: A RECYCLE command was issued for a specific volume serial. The volume was determined to be ineligible for EXECUTE processing.

System action: The following explains the actions required to correct each situation by return code:

Retcode Meaning

- 04 TAPE HAS DISASTER ALTERNATE: You cannot recycle a tape whose TTOC record has been marked as 'no longer in existence'. Issue the TAPEREP command against this tape so that its alternate volume can be recycled in its place.
- 08 TTOC RECORD IS INCOMPLETE: DFSMSHsm was in the process of writing this tape when the system crashed, leaving the TTOC record incomplete, lacking vital data set information. Use the AUDIT MEDIACONTROLS command against the volume to rebuild the TTOC correctly.
- 12 TAPE IS UNASSIGNED BACKUP: The tape is a backup tape that is neither SPILL nor assigned to a given day in the Backup Cycle. If the tape contains valid backup versions, use the ADDVOL command to assign this tape to a specific day in the backup cycle.
- 16 TAPE CONTAINS NO DATA: According to the DFSMSHsm inventory, DFSMSHsm has not written migration or incremental backup data to this tape. The tape may contain data of another type and should not be processed by RECYCLE.
- 20 CANNOT FORCE MULTIPLE VOLUMES: The FORCE parameter is designed to reclaim undamaged data sets from a damaged or overwritten tape. However, you have specified a volume that has valid data spanning to other tapes. FORCE is only allowed for unconnected tapes. Issue the recycle command without the FORCE parameter to move valid data from all of the other tapes in the connected set, then use the FORCE command for the remaining damaged tape.
- 24 VOLUME RECORD NOT FOUND: A request to recycle a specific volume serial has failed. DFSMSHsm was unable to determine if the tape was a migration or backup tape because there was neither an MCV nor MCT record representing this volume. The tape is not known to DFSMSHsm. Verify that the volume serial was entered correctly. If a TTOC record exists for this tape, issue an AUDIT MEDIACONTROLS command to create the missing MCV or MCT volume record.
- 28 CONNECTED SET TOO LONG: DFSMSHsm V2.1 and higher will not recycle connected sets exceeding 254 volumes. Pre-V2.1 DFSMSHsm will not recycle connected sets exceeding 40 volumes. The volume specified belongs to a connected set which exceeds the limit.
- 32 SET HAS MIXED TYPES: DFSMSHsm will not recycle a connected set containing volumes of different types such as unassigned, spill, daily 01, daily 02, and so on.

Programmer response: None.

Source: DFSMSHsm

ARC0450I CDD UNEXPECTEDLY FOUND IN DATA SET *dsname*, VOLUME *volser*, BLOCKID=*bkid*

Explanation: Data set *dsname* was being recycled from volume *volser*. While copying the data set, a DFSMSHsm data set identifier was found within the migration copy or backup version where it was not expected. The migration copy or backup version may contain data that was not there when it was originally migrated or backed up. If the migration or backup tape is in single file format, *bkid* indicates the approximate block identifier at which the data set identifier was found. If asterisks appear, either the migration or backup tape is in multifile format or an error occurred when the NOTE macro was run to determine the current tape blockid. If an error occurred when the NOTE macro was run, message ARC0920I was written to the recycle log.

System action: DFSMSHsm processing continues. Recycle of the data set fails.

Programmer response: For a non-VSAM data set, the DFSMSHsm data set identifier, *CDD**, is contained only within the common data descriptor record (CDD) of the first block of data. For a VSAM data set, the DFSMSHsm data set identifier appears within the first block of data for the base cluster and within the first block of data for each alternate index.

If the data set legitimately contains the characters *CDD** at a position within the data block that corresponds to the position at which DFSMSHsm places its own data set identifier, the message may be disregarded. Otherwise, the data set should be examined to see if changes to the data have been made since the data set was originally migrated or backed up. If the changes take the form of additional data at the end of the data set, the data may be recoverable by using the RECALL or RECOVER or RECYCLE command with the FORCE parameter. In addition, the recycle log should be examined for other instances of this message or message ARC0440I, which may indicate that additional data sets from the source tape have been altered.

Source: DFSMSHsm

ARC0460I {PRIVATE | EXTENDED PRIVATE} AREA LIMIT= *limit*, UNALLOCATED= *unalloc*, LARGEST FREE AREAS= *first*, *second*

Explanation: A Query command was issued with the ACTIVE parameter. This message is displayed twice, once for private virtual storage below the 16MB line, and once for extended private above the 16MB line.

The region size provided to DFSMSHsm in Kbytes is *limit*. The total unallocated space is *unalloc*. The largest contiguous virtual storage areas that are available to DFSMSHsm are indicated by *first* and *second*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0461I ON LINE JOURNAL DATA SET IS IN ERROR, RETURN CODE =*returncode*

Explanation: An attempt was made to back up an online journal file. ARCBJRNL is not able to use this file to create a backup. The meanings for *returncode* are:

Return code

	Meaning
0	Journal is disabled. See previous messages to determine the reason. Commands related to the journal cannot be performed.
4	The Journal Control Record, ARCCR, was not found in the online Journal file.
8	The Journal Control Record, ARCCR, was the only record found in the online Journal file. No data records were found.
12	Journal OBTAIN macro failed. It is likely that an I/O error occurred on the journal data set VTOC entry.
16	Journal lock request failed.
20	Journal control record and data set type are inconsistent. The journal might be corrupted.
28	Journal I/O error.
40	OPEN error.
64	DFSMSHsm startup procedure contains a DD DUMMY card for the journal data set.

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68 An RDJFCB macro failed for the journal data set. The DD card for the journal data set might be missing from the DFSMSHsm startup procedure.

72 OBTAIN error. Possibly an I/O error has occurred on the journal data set VTOC entry.

80 Journal control record and data set type are inconsistent. The journal might be corrupted.

System action: The batch job ends. The journal backup file is not created.

Operator response: None.

Source: DFSMSHsm

ARC0462I INVALID PARAMETER PASSED TO PGM ARCIMPRT

Explanation: An attempt was made to recover a backup, migration, or offline control data set. The parameter passed to program ARCIMPRT, which specifies which control data set to recover, was *not* one of the following:

- BCDS or BACKUPCONTROLDATASET
- MCDS or MIGRATIONCONTROLDATASET
- OCDS or OFFLINECONTROLDATASET

System action: The batch job ends. The control data set is not created.

Programmer response: Pass the correct parameter to program ARCIMPRT in the processing step of utility ARCIMPRT and rerun utility ARCIMPRT to recover the correct control data set.

An example of how to pass the parameter to ARCIMPRT to recover a MIGRATION control data set is:

```
//STEPxx EXEC PGM = ARCIMPRT,PARM = 'MCDS'
```

Source: DFSMSHsm

ARC0463I INVALID BACKUP JOURNAL FILE

Explanation: An attempt was made to use a backed up journal file to recover a control data set file. This particular journal file does not have sequence numbers on it. Therefore, it is not eligible to be used as input to ARCIMPRT.

System action: The batch job ends. The control data set is not recovered.

Programmer response: With DFSMSHsm in stopped mode, use utility ARCBJRNL to backup the on-line journal. Then rerun utility ARCIMPRT.

Source: DFSMSHsm

ARC0464I nnnnnnn JOURNAL RECORDS WRITTEN TO BACKUP JOURNAL DATA SET

Explanation: Program ARCBJRNL successfully processed *nnnnnnn* records found in the on-line DFSMSHsm journal data set. These records were successfully written to the backed up journal data set.

System action: None.

Programmer response: None.

Source: DFSMSHsm

ARC0465I INVALID VALUE SPECIFIED FOR {ALTERDS|SETSYS} VERSIONS PARAMETER - VERSIONS IS SET TO {maximum-allowable-number-of-backup-versions}

Explanation: The value specified in the VERSIONS parameter was larger than the number of backup versions allowed for the current DFSMSHsm BCDS maximum record length.

The following values are the valid maximum allowable number of backup versions for different BCDS record lengths:

- Record length of 2040 to 6543 — 29 maximum versions
- Record length of 6544 or more — 100 maximum versions

If the request was SETSYS VERSIONS(limit), the maximum number of backup versions DFSMSHsm keeps for a non-SMS-managed data set is set to the maximum allowable based on the DFSMSHsm BCDS maximum record

length. If the request was ALTERDS dsname(s) VERSIONS(limit), the maximum number of backup versions DFSMSHsm keeps for the specified non-SMS-managed data set(s) is set to the maximum allowable based on the DFSMSHsm BCDS maximum record length.

System action: The maximum number of backup versions DFSMSHsm keeps for a non-SMS-managed data set is set to the maximum allowable based on the DFSMSHsm BCDS maximum record length. DFSMSHsm processing continues.

Programmer response: If the maximum number of backup versions indicated in this message is not satisfactory, reissue the command with a VERSIONS value within the current DFSMSHsm BCDS maximum record length. If a larger maximum number of backup versions is desired, increase the BCDS maximum record length as described in the *z/OS DFSMSHsm Implementation and Customization Guide*.

Source: DFSMSHsm

ARC0466I INCONSISTENCIES IN THE MULTICLUSTER CDS KEY BOUNDARIES

Explanation: ARCIMPRT detected that the key boundaries of the multicluster CDS being recovered have changed since the last CDS version backup. Recovering a single cluster of a multicluster CDS will result in data loss.

System action: ARCIMPRT processing ends.

Programmer response: To recover the multicluster CDS without incurring data loss, all clusters of the multicluster CDS whose boundaries have changed must be recovered. Multicluster CDS key boundaries must be returned to the values that existed at the time of the CDS version backup. Execute ARCIMPRT for each cluster of the multicluster CDS, and then specify the FORCE parameter, which forces ARCIMPRT to perform the recovery. For information about the correct procedures for changing the key boundaries of a multicluster CDS, see *z/OS DFSMSHsm Storage Administration*.

ARC0467I CLUSTER *m* OF *n* WAS RECOVERED FOR MULTICLUSTER {MCDS | BCDS}

Explanation: ARCIMPRT was executed for a single cluster of a multicluster CDS. *m* represents which cluster has been recovered. *n* signifies how many clusters that the CDS is divided into.

System action: ARCIMPRT processing ends.

Programmer response: None.

ARC0468I EXTENDEDITOC = {Y | N}

Explanation: A QUERY SETSYS command was issued and the setting of the EXTENDEDITOC parameter of the SETSYS command is returned in this message. The following are the possible settings of the EXTENDEDITOC parameter:

EXTENDEDITOC=Y

EXTENDEDITOC Y - Indicates that the installation specified SETSYS EXTENDEDITOC(Y) and that the OCDS has been defined with a record size of 6144 bytes and can contain up to 106 data set entries. In this case, DFSMSHsm can write up to 1,060,000 data sets per volume. Any ITOC record written for new DFSMSHsm tape volume allocations while this value is in effect will contain 106 entries. Any tape volumes that were originally written or allocated when this value was not in effect are limited to 33 data set entries.

EXTENDEDITOC=N

EXTENDEDITOC N - Indicates that the installation specified SETSYS EXTENDEDITOC(N). In this case, DFSMSHsm can write up to 330,000 data sets per volume. Any ITOC record written for new DFSMSHsm tape volume allocations while this value is in effect will contain 33 entries. Any tape volumes that were originally written or allocated when EXTENDEDITOC(Y) was in effect will still allow up to 106 data set entries.

System action: DFSMSHsm processing continues.

Operator response: None.

Source: DFSMSHsm

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ARC0469I OCDS RECORDSIZE is less than 6144 bytes

Explanation: The SETSYS command was entered with EXTENDEDTTOC(Y), however, the OCDS was defined with a record size of less than 6144 bytes and thus, the TTOC record cannot support 106 data set entries.

System action: The EXTENDEDTTOC value is forced to "N" to limit the TTOC to 33 data set entries per record. DFSMSHsm processing continues.

Operator response: None.

Source: DFSMSHsm

ARC0500I CANNOT ALLOCATE VOLUME *volser*, DARC=*reason-code*, EXTENDED REASON CODE=*extreas*, INFO CODE=*infocode*

Explanation: While DFSMSHsm has been processing a request for a volume mount with volume serial number *volser*, dynamic allocation has encountered an error. The reason code from the dynamic allocation routine is *reason-code*, the extended reason code from the dynamic allocation routine is *extreas*, and the information code from dynamic allocation is *infocode*. *reason-code* and *infocode* are printed in hexadecimal format. *extreas* is printed in decimal format. For information about dynamic allocation reason codes, see the *z/OS MVS Programming: Authorized Assembler Services Guide*.

If two ARC0500 messages have been issued together, and the second message contains the characters ***** for *extreas* and *infocode*, the DARC in that message represents an internal return code. See the first message for information.

If *volser* contains '*****', the allocation was for multiple volumes.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of *reason-code*, *extreas*, and *infocode*, and then retry the request. If the error occurs again with the same volume and return code, notify the storage administrator to take corrective action.

Source: DFSMSHsm

ARC0501I CANNOT PROCESS VOLUME *volser*, I/O ERROR ON VTOC

Explanation: An attempt was made to process data sets on a volume with volume serial number *volser*. An I/O error occurred during the reading of the VTOC of the volume.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the I/O encountered and retry the request.

Source: DFSMSHsm

ARC0502I *installation-wide-exit-name* USER CODED EXIT ABEND, ABEND CODE=*abend-code*, EXIT MARKED INOPERATIVE

Explanation: During processing of the specified installation-wide exit *installation-wide exit name*, an abnormal end (abend) has occurred with the abend code *abend-code*. The ESTAE routine in the module that calls the installation-wide exit has detected the failure. DFSMSHsm marks the exit inoperative.

System action: DFSMSHsm processing continues without using the exit.

Programmer response: Correct the problem in the installation-wide exit and reload the exit. If you need a dump to debug the installation-wide exit, see the abend parameter in the section "Using Keywords to Identify the Problem" in *z/OS DFSMSHsm Diagnosis*.

Source: DFSMSHsm

ARC0503E ALLOCATION ERROR, {VOLUME=*volser* | DATA SET=*dsname* | DD DUMMY}, RC=*return-code*, REASON=*reason-code*, INFO CODE=*infocode*, EXTENDED REASON CODE=*extreas*

Explanation: DFSMSHsm attempted to allocate a data set or volume dynamically and the allocation failed. Dynamic allocation codes are:

- *return-code* is the dynamic allocation return code.

- *reason-code* is the dynamic allocation reason code.
- *infocode* is the dynamic allocation information reason code.
- *extreas* is the dynamic allocation extended reason code.

Return codes and reason codes from the dynamic allocation routine are printed in hexadecimal format. The extended reason code is printed in decimal format. For information about dynamic allocation return codes, reason codes, and information codes, see *z/OS MVS Programming: Authorized Assembler Services Guide*.

If *volser* contains '*****', the allocation was for multiple volumes.

System action: DFSMSHsm processing continues. The function requiring the data set or volume allocated ends.

Programmer response: Determine the cause of the error based on the meaning of the return code, reason code, and information code. Correct the error and retry the request.

Source: DFSMSHsm

ARC0504I INSTALLATION-WIDE EXIT ARCRPEXT ABENDED, ABEND CODE=*abend-code*, ON *type* COMMAND FOR *object-type name*.

Explanation: Installation exit ARCRPEXT is invoked to establish the priority for a *type* command, where *type* can be either RECALL, DELETE, or RECOVER.

If *type* is either RECALL or DELETE, then *object-type* is DATASET, followed by the name of the data set recalled or deleted.

If *type* is RECOVER, then *object-type* is either:

DATASET, followed by the name of the data set to be recovered; or

VOLUME, followed by the volume serial of the volume to be recovered or restored.

System action: If *type* is either RECALL or DELETE, then DFSMSHsm no longer invokes the exit for either recall or delete commands. Starting with the command on which the exit abended, all of either WAIT-type RECALL or WAIT-type DELETE commands are queued in strictly first-in-first-out (FIFO) sequence, each with a queuing priority of 50.

If *type* is RECOVER, then DFSMSHsm no longer invokes the exit for recover commands. Starting with the command on which the exit abended, all WAIT-type RECOVER commands are queued in strictly first-in-first-out (FIFO) sequence, each with a queuing priority of 50.

System programmer response: Correct the problem in the installation exit, and then replace ARCRPEXT.

Source: DFSMSHsm

ARC0505D {PRIMARY SPACE MANAGEMENT | SECONDARY SPACE MANAGEMENT | INTERVAL MIGRATION | AUTOMATIC BACKUP | AUTOMATIC DUMP} ABOUT TO START, REPLY 'Y' TO START OR 'N' TO SKIP IT

Explanation: This is a message from DFSMSHsm to the operator, prompting for permission to allow the DFSMSHsm automatic primary space management, automatic secondary space management, interval migration, automatic backup, or automatic dump function to start.

System action: The issuing task waits for a valid reply from the operator. If the operator reply is Y, the function starts. If the operator reply is N, DFSMSHsm does not perform the function until it is time for the next automatic occurrence of the function, or the system programmer initiates an action that causes DFSMSHsm to prompt the operator again for permission to allow the automatic primary space management, automatic secondary space management, interval migration, automatic backup, or automatic dump function to start.

Operator response: Reply Y to start the automatic function or N to prevent the automatic function from starting. If the reply is after the latest start time of the day on which the ARC0505D message was issued, and the new day is not a cycle day, as set by the DEFINE command, reply N. A reply of Y overrides the latest time specified in the SETSYS (PSMSTART and SSMSTART) command.

Source: DFSMSHsm

ARC0506I FAILURE TO ALLOCATE SYSOUT TYPE DATA SET, RC=*return-code*, REAS=*reason-code*, EXTENDED REASON CODE=*extreas*

Explanation: DFSMSHsm has attempted to allocate a SYSOUT data set and has received a nonzero return code *return-code* from dynamic allocation. If an error occurs while mounting the volume or the data set is in use, the return code is set to 16. If no space is available, the return code is set to 20. The S99ERROR field of dynamic allocation is given as the reason code *reason-code* and is printed in hexadecimal format. The S99ERSN field of dynamic allocation is given as the extended reason code and is printed in decimal format. For all dynamic allocation error and information codes, see the *z/OS MVS Programming: Authorized Assembler Services Guide*.

System action: DFSMSHsm continues to run, but all records written to this data set are lost.

Programmer response: Determine the cause of the error based on the meaning of the return code and reason code. Correct the error and retry the failing function.

Source: DFSMSHsm

ARC0507I ERROR DEALLOCATING TAPE MIGRATION VOLUME *volser*

Explanation: An error was encountered while trying to deallocate a tape migration volume *volser* during migration processing.

System action: Any processing that requires the volume in error fails. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the deallocation error encountered and retry the request.

Source: DFSMSHsm

ARC0508I LEVEL 2 VOLUME *volser* DISASSOCIATED FROM KEYRANGE LOWKEY *lowkey*, HIGHKEY *highkey*

Explanation: A data set is migrating to a DASD migration level 2 volume *volser*. This can occur as a result of level migration to level 2 DASD, migration of a volume to level 2 DASD, or migration of an individual data set to level 2 DASD. The allocation failed for the DASD migration level 2 volume that was associated to the key range *lowkey* to *highkey* to which the data set name belongs. See the corresponding ARC0500I or ARC0503E message (from the command log) for the specific reason that the allocation failed. The DASD migration level 2 volume is no longer associated to the key range.

System action: For the following types of allocation failures, DFSMSHsm attempts to associate and allocate another available DASD migration level 2 migration volume to the key range.

1. The necessary system resources are not available.
2. The volume is in use by the system.

If the association and allocation of the new DASD migration level 2 volume is successful, DFSMSHsm attempts to migrate the data set. If the association and allocation of the new DASD migration level 2 volume is unsuccessful, the migration of the data set fails.

For any other type of allocation failure, the migration of the data set fails. See the related ARC0734I or ARC1001I message. These messages refer to message ARC1205I.

Programmer response: When the cause of the allocation failure is detected and corrected, issue the DELVOL *volser* MIGRATION(UNASSIGN) command to mark the DASD migration level 2 volume available for association to a key range. This allows the volume whose allocation failed to be selected for association to a key range when some key range needs a new DASD migration level 2 volume. To reassociate the volume whose allocation failed to the same key range, issue the DEFINE MIGRATIONLEVEL2 (KEY(k1 k2...) VOLUMES (*volser2...*) command to redefine the key ranges and volumes associated to the key ranges. The position of the volume serial number *volser* of the volume whose allocation failed depends on the key range to which you want the volume associated.

Note: This DEFINE command is just an example; make sure that the proper keys and volumes for your system are listed in the command.

Source: DFSMSHsm

ARC0509E DFSMSHSM JOURNAL DATA SET IS ALLOCATED WITH A *attribute*ATTRIBUTE. THIS IS NOT ALLOWED. DFSMSHSM IS SHUTTING DOWN.

Explanation: DFSMSHsm has detected an error with the journal allocation parameters. The message indicates the problem with the journal allocation. DFSMSHsm is shutting down. The possible values for *attribute-name* are:

- STRIPED
- NONCONTIGUOUS
- SECONDARY SPACE
- FORMAT 8 DSCB

System action: DFSMSHsm shuts down.

Operator response: None.

Source: DFSMSHsm

ARC0510I DFSMSHSM CONTROLLED VOLUME *volser* NOT *fcn*, A READ OR WRITE ERROR OCCURRED ON THE MCV RECORD, CODE=*return-code*

Explanation: The DFSMSHsm-controlled volume *volser* is to be processed by the function *fcn*. In reading or writing the MCV record for the multiple processing unit enqueue and space management attributes support, an error occurred. See message ARC0184I for details.

The values for *return-code* are:

Retcode Meaning

- 4 A command function was issued for the volume.
- 8 The volume was processed by the automatic function.

System action: The function ends. DFSMSHsm processing continues.

Programmer response: Issue an ADDVOL command to create the MCV record for the volume and retry the function.

Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0511I ERROR UPDATING {A | D | O} RECORD FOR DATA SET *datasetname*. DATA SET CANNOT BE RECALLED BY {THE OBJECT NAME *objectname* | ANY NAME EXCEPT THE BASE CLUSTER NAME}

Explanation: After a data set *datasetname* was migrated, DFSMSHsm failed to write the MCA record, the MCD record, or the MCO record in the migration control data set.

- If the error occurred during the write of the MCA record, the data set cannot be recalled by the object name listed or if all MCA writes failed, the data set can only be recalled by the base cluster name.
- If the error occurred during the write of the MCD record, a FIXCDS command must be issued and the data set can only be recalled by the base cluster name.
- If the error occurred during the write of the MCO record, the data set can only be recalled by the base cluster name.

After the data set is recalled, all of its object names *objectname* will be restored properly in the catalog.

System action: The operation continues. DFSMSHsm processing continues.

Programmer response: Use any other valid object name of the VSAM data set to recall it.

Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0512I UNABLE TO CATALOG {VSAM OBJECT *objectname* | ALL VSAM OBJECTS}. DATA SET *dsname* CANNOT BE RECALLED BY {THE ABOVE OBJECT NAME | ANY OF ITS OBJECT NAMES}

Explanation: During the migration operation, DFSMSHsm failed to catalog the specified VSAM object or path with the volume serial number of MIGRAT. The data set *dsname* cannot be automatically recalled by this object name or any name specified in a related message ARC0511I. After the data set is recalled, all of its object or path names will be restored properly in the catalog.

System action: The operation continues. DFSMSHsm processing continues.

Programmer response: Use any other names that have been cataloged successfully to recall the data set (no message is issued for these). If DFSMSHsm was not able to catalog any object, use a RECALL or HRECALL command and specify the base cluster name to recall the data set.

Source: DFSMSHsm

ARC0513I FAILED TO UNCATALOG [NON] SMS ENTRY, ENTRY NAME = *entname*, CATALOG RC = *return-code*

Explanation: While DFSMSHsm has been processing a request to delete a migrated data set, an attempt to delete the entry name *entname* has failed. If the message indicates NON SMS, then the data set is not SMS managed and the CAMLST UNCAT macro has been used to uncatalog the entry. In this case, the return code is from the CAMLST macro. See *z/OS DFSMS Using Data Sets*. for a description of the return codes from the CAMLST macro.

If the message indicates SMS, then the data set is SMS managed and SVC 26 has been used to uncatalog the entry. In this case, the *return-code* is the return code from the module ARCZSDEL, with the values and meanings as follows:

Retcode Meaning

- 8 A catalog management error has occurred and a corresponding ARC0950I message has been issued to the command activity log with the catalog management return and reason codes.
- 52 A GETMAIN error has occurred.

System action: The entry name remains cataloged. However, the delete operation is considered successful and DFSMSHsm deletes the migration copy. DFSMSHsm processing continues.

Programmer response: For each of the error conditions listed above, there is a corresponding message that contains more information about the failure. These corresponding messages are written to the command activity log.

Source: DFSMSHsm

ARC0514I ERROR UPDATING MCD RECORD FOR DATA SET *dsname* AFTER DATA SET WAS MIGRATED TO VOLUME(S) *volser, volser*

Explanation: After DFSMSHsm migrated a data set *dsname*, it failed to write the migration control data set data set record (MCD) in the migration control data set. To recall the data set, issue a FIXCDS command and enter the *volser* of the volumes to which the data set migrated the MCD record. The volumes to which the data set migrated appear in multiple occurrences of this message, with a maximum of 15 volume serial numbers per message and a maximum of 254 volume serial numbers for the data set.

After DFSMSHsm migrated data set *dsname*, it failed to write the migration control data set data set record (MCD) in the migration control data set. To recall the data set, issue a FIXCDS command and enter the *volser* of the volumes to which the data set migrated the MCD record. The volumes to which the data set migrated appear in multiple occurrences of this message, with a maximum of 15 volume serial numbers per message and a maximum of 25

System action: The operation continues. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0515I {COMMAND | AUTO} LEVEL-1-TO LEVEL-2 MIGRATION NOT PERFORMED, {COMMAND | AUTO} LEVEL-1-TO-LEVEL-2 MIGRATION IS RUNNING

Explanation: A command level migration is requested while level 1 to level 2 migration of the automatic secondary space management function is running, or level 1 to level 2 migration of the automatic secondary space management function is requested while a command level migration is running. If this happens, DFSMSHsm will not process the second request since there is no need to run level 1 to level 2 migration at the same time.

System action: The second request fails. The first request proceeds.

Programmer response: None

Source: DFSMSHsm

ARC0516I EDGTVEXT INTERFACE IS NOW DISABLED, REASON=*reason-code*.

Explanation: Due to an error (defined by *reason-code*), DFSMSHsm will not invoke the EDGTVEXT interface until a RELEASE RMM command has been entered. The reason codes have the following meanings:

- 8 DFSMSHsm tried to load EDGTVEXT, but the load failed.
- 900 DFSMSHsm invoked EDGTVEXT, but an ABEND occurred.

System action: None.

Programmer response: To reactivate DFSMSHsm invocation of EDGTVEXT, issue the RELEASE RMM command.

Source: DFSMSHsm

ARC0517I SECONDARY SPACE MANAGEMENT {STARTING | RESTARTING}

Explanation: DFSMSHsm has begun automatic secondary space management functions.

System action: Automatic secondary space management proceeds.

Programmer response: None

Source: DFSMSHsm

ARC0518I SECONDARY SPACE MANAGEMENT {ENDED SUCCESSFULLY | COMPLETED, ENDING TIME REACHED | ENDED PRIOR TO COMPLETION, {DFSMSHSM SHUTDOWN | AUTO SPACE MANAGEMENT HELD | DFSMSHSM IN EMERGENCY MODE | RESOURCES NOT AVAILABLE | MORE THAN 10 BAD MCDS RECORDS WERE ENCOUNTERED | TASK ABENDED | AN UNEXPECTED MCDS ERROR OCCURRED}}

Explanation: DFSMSHsm has completed automatic secondary space management successfully, automatic secondary space management has been completed because the ending time has been reached, or automatic secondary space management has been ended before completion for one of the following reasons:

- A STOP command is issued to shut down DFSMSHsm.
- A HOLD command with the AUTOMIGRATION or MIGRATION parameter is issued to suspend automatic secondary space management processing.
- A SETSYS command with the EMERGENCY parameter is issued to place DFSMSHsm in emergency mode.
- Resources are not available to allow automatic secondary space management to start. Message ARC0535I is issued to the operator's console and the migration activity log, indicating the resource that DFSMSHsm found is unavailable.
- Secondary space management ends prematurely because too many bad or unexpected migration control data set (MCDS) records are encountered. See the preceding 11 ARC0564I messages for the hex keys of the problem messages.
- One or more than one task of multitask SSM abnormally ended (abended) with the completion code other than 80A, 878, and 33E.
- An unexpected input/output error occurred while reading the MCDS.

System action: If the HOLD command is issued with the AUTOMIGRATION or MIGRATION parameter, the automatic secondary space management operation is stopped after the current data set is processed and no new

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automatic secondary space management starts until the AUTOMIGRATION or MIGRATION processing is released.

When the automatic secondary space management ending time is reached, DFSMSHsm stops the automatic secondary space management functions and considers the functions are complete. The functions starts again today only if a new start time is redefined to be after the last ending time.

If the STOP command or SETSYS command with the EMERGENCY parameter is issued, the automatic secondary space management operations ends at the completion of the current data set.

When one or more tasks of multitask SSM abnormally ends, either or both the migration cleanup function or level 1 migration function of the automatic secondary space management ends abnormally. Message ARC0003I, which describes the type of abend, was issued to the command activity log.

When an unexpected input/output error has occurred while reading the MCDS, the single task automatic secondary space management ends prior to completion. The multitasking automatic secondary space management operations are stopped after the current data set(s) is(are) processed. Message(s) ARC0187I is (are) issued which describe(s) the type of unexpected error.

DFSMSHsm processing continues.

Programmer response: If automatic secondary space management ends prior to completion because resources are not available, see message ARC0535I, which is issued to the operator console and to the migration activity log. This message indicates which resource DFSMSHsm finds unavailable and the appropriate programmer response to the problem.

If too many unexpected MCDS records are encountered, use the hex keys reported in the ARC0564I messages to find and correct or delete those MCDS entries.

If the task abended, see the ARC0003I message issued to the command activity log with a task name of ARCMSSCH and/or ARCMSSMh where *h* is a hexadecimal digit from 1 to F.

Automatic secondary space management can be restarted at the point of interruption by issuing one of the following commands:

- Restart (START) DFSMSHsm when shutdown is completed.
- RELEASE AUTOMIGRATION when automatic space management is held.
- RELEASE MIGRATION when migration is held.
- SETSYS NOEMERGENCY when DFSMSHsm is in emergency mode.
- SETSYS SECONDARYSPMGMTSTART when the current time is within the specified automatic secondary space management start window.

For automatic secondary space management to resumed at the point of interruption, the command must take effect before 24-hours have passed because the time automatic space management is first started and the current time must still be within the start window for automatic secondary space management.

If you want automatic secondary space management to begin after midnight, the value of the latest start time can be smaller than the planned start time. For example, you can specify 2330 for *hlmm1* and 0100 for *hlmm2* the same day as the command that caused automatic secondary space management to end, and the current time must still be within the start window for automatic secondary space management.

When automatic secondary space management ends because the ending time is reached, it cannot be resumed because the current time is no longer within the start window.

If an unexpected input/output error has occurred while reading the MCDS, refer to the ARC0187I message issued.

Source: DFSMSHsm

ARC0519I DADSM PARTREL FUNCTION RELEASED *tracks* TRACKS ON VOLUME *volser*

Explanation: DFSMSHsm has invoked the DADSM PARTREL function for eligible SMS-managed data sets during the space management processing of volume *volser*. The number of tracks released by PARTREL is *tracks*.

To determine the criteria that is used to invoke the DADSM PARTREL function for a data set, see the z/OS *DFSMSHsm Storage Administration*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0520I PRIMARY SPACE MANAGEMENT (STARTING | RESTARTING)

Explanation: DFSMSHsm has begun automatic primary space management.

System action: Automatic primary space management proceeds.

Programmer response: None.

Source: DFSMSHsm

ARC0521I PRIMARY SPACE MANAGEMENT (ENDED SUCCESSFULLY | COMPLETED, ENDING TIME REACHED | ENDED PRIOR TO COMPLETION, {DFSMSHSM SHUTDOWN | AUTO SPACE MGMT HELD | | DFSMSHSM IN EMERGENCY MODE | RESOURCES NOT AVAILABLE})

Explanation: DFSMSHsm completed automatic primary space management successfully, or automatic primary space management completed because of ending time reached, or automatic primary space management ended before completion for one of the following reasons:

- A STOP command was issued to shut down DFSMSHsm.
- A HOLD command with the AUTOMIGRATION or MIGRATION parameter was issued to suspend automatic primary space management processing.
- A SETSYS command with the EMERGENCY parameter was issued to place DFSMSHsm in emergency mode.
- Resources were not available to allow automatic primary space management to continue or to migrate all eligible data sets. Message ARC0560E or ARC0559I was issued to the operator's console and to the migration activity log indicating the unavailable resource.

System action: If the HOLD command was issued with the AUTOMIGRATION or MIGRATION parameter, no new space management operations are started. For volume space management operations that are in progress, the ENDOFDATASET or ENDOFVOLUME parameter that was specified with the HOLD command determines where the processing stops. If ENDOFDATASET was specified, all volume migration operations end at the completion of the current data set. If ENDOFVOLUME was specified, DFSMSHsm completes any volume migration operations that are in progress.

When the automatic primary space management ending time is reached, DFSMSHsm completes any volume migration operations that are in progress, but no new volume space management operations are started. DFSMSHsm starts the function again today only if a new start time is redefined as after the last ending time.

If the STOP command or SETSYS command with the EMERGENCY parameter was issued, all volume migration operations end at the completion of the current data set, and no new volume migration operations are started.

DFSMSHsm processing continues.

Programmer response: If primary space management ends prior to completion because resources are not available, see message ARC0560E or ARC0559I, which are issued to the operator's console and the migration activity log. This message indicates which resource DFSMSHsm found unavailable and the appropriate programmer response to the problem.

Automatic primary space management can be restarted at the point of interruption by issuing one of the following commands:

- Restart (START) DFSMSHsm when shutdown is completed.
- RELEASE AUTOMIGRATION when auto space management is held.
- RELEASE MIGRATION when migration is held.
- SETSYS NOEMERGENCY when DFSMSHsm is in emergency mode.
- SETSYS PRIMARYSPMGMTSTART when the current time is within the specified automatic primary space management start window.

For automatic primary space management to resume at the point of interruption, the command must take effect before 24-hours pass. This ensures that the current time and the time automatic primary space management is first started are still within the start window for automatic primary space management.

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The suggested way to extend the start window and thereby cause the continuation of PSM is to respecify the automatic primary space management start time as having the same planned start time that already exists, but with a quiesce time later than the current time.

If the PSMSTART is set to (2300 0100) and the current time is 0210, enter SETSYS PSMSTART (2300 0400) and the PSM continues from where it left off and runs to completion, or until 0400 which ever comes first.

When automatic primary space management ends because the ending time is reached, it cannot resume because the current time is no longer within the start window.

Source: DFSMSHsm

ARC0522I SPACE MANAGEMENT STARTING ON VOLUME *volser* [(SMS) | (SMSI) | (NONSMS)] AT *time* ON *date*, SYSTEM *sysid*

Explanation: DFSMSHsm space management processing is starting for the online volume *volser*. If (SMS) appears, the volume being processed is SMS managed. If (SMSI) appears, the volume being processed is SMS managed and associated with a storage group having AM=I. If (NONSMS) appears, the volume is a non-SMS-managed primary volume being processed for migration. If nothing appears following *volser*, the volume is either a DFSMSHsm-owned volume or a primary volume being processed for DBA/DBU.

The starting time for space management of data sets on that volume is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The date of space management is *date*, expressed as *yy/mm/dd* (year, month, day). The SMF system identifier for the system on which the space management is performed is *sysid*. Descriptions of individual data sets processed follow in associated ARC0734I messages.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0523I SPACE MANAGEMENT ENDED ON VOLUME *volser*, *number* DATA SET(S) MIGRATED/ DELETED, *tracks* TRACK(S) FREED, MINAGE *age*, TIME *time*

Explanation: DFSMSHsm space management processing completed successfully for the volume with the volume serial number *volser*.

The term *number* refers to one of the following:

- The number of data sets migrated, deleted, and expired during the migration function.
- The number of data sets deleted during the data set deletion or retirement functions.

The term *tracks* indicates one of the following:

- The number of tracks freed by migration, deletion, and expiration processing on non-SMS-managed volumes.
- The number of tracks freed by migration and the DADSM PARTREL function on SMS-managed volumes.

The minimum age of data sets processed is *age*, expressed in days.

The completion time of the operation is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds).

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0524I *dsname* SCRATCHED

Explanation: The AUDIT command was issued with the VOLUMES parameter. While performing the audit operation, DFSMSHsm scratched and uncataloged the temporary data set *dsname*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0525I *dsname* SCRATCH FAILED ON VOLUME=*volser*, RC=*return-code*

Explanation: A DFSMSHsm AUDIT command has been issued to audit one or more non-SMS primary, migration, or backup volumes. While performing the audit, DFSMSHsm has found a temporary data set, *dsname*, that is not needed and has attempted to scratch it. *volser* is the volume serial number of the volume specified in the scratch attempt. The CAMLST SCRATCH macro returned has *return-code* in register 15. For the meaning of the return code, see *z/OS DFSMS Using Data Sets*.

Retcode Meaning

- 4 No volumes containing any part of the data set have been mounted, nor is a UCB address contained in register 0.
- 8 An unusual condition has been encountered on one or more volumes.

System action: The data set is not scratched. DFSMSHsm processing continues.

Programmer response: Run the AUDIT command with the DATASET NAMES parameter to determine whether to scratch the data set. If the data set is to be scratched and is currently migrated, issue the DELETE or HDELETE command for the data set *dsname*.

Source: DFSMSHsm

ARC0526I MIGRATION CLEANUP STARTING AT *time* ON *date*, SYSTEM *sysid*, AT {BEGINNING RECORD | *cdskey*} RECORD

Explanation: Migration cleanup is starting on *sysid* at the time *time* expressed as *hh:mm:ss* (hours, minutes, seconds), and date *date* expressed as *yy/mm/dd* (year, month, day), beginning at the control data set (CDS) record key *cdskey* or at the beginning of the migration control data set data set record (MCD). The System Management Facility (SMF) system identifier of the system on which the migration is processed is *sysid*.

System action: Migration cleanup continues.

Programmer response: None.

Source: DFSMSHsm

ARC0527I MIGRATION CLEANUP ENDED AT *time*, *num* MCDS RECORDS DELETED

Explanation: DFSMSHsm migration cleanup has ended. The number of MCDS records that was deleted is *num*. The storage administrator can use the number of records deleted to help indicate when the MCDS should be reorganized. The completion time of the operation is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds).

System action: None.

Programmer response: None.

Source: DFSMSHsm

ARC0528I *dsname* SCRATCH FAILED ON VOLUME=*volser*, RC=*return-code* SCRATCH STATUS CODE=*dadrc*

Explanation: An attempt has been made by DFSMSHsm to scratch *dsname* from volume *volser*. The CAMLST SCRATCH macro has returned *return-code* in register 15. The SCRATCH STATUS CODE is *dadrc*. For the meaning of *return-code* see, Table 14 on page 564. For the meaning of *dadrc* see, Table 15 on page 564. See *z/OS DFSMS Using Data Sets* for more information.

System action: DFSMSHsm processing continues.

Programmer response: If the data set is a backup version, all associated control data set records will show that the data set is scratched even though the actual scratch has failed. DFSMSHsm will not try to scratch this data set again. The data set can be scratched if desired. If the data set is a migration copy of a data set, DFSMSHsm will attempt to scratch the data set during migration cleanup.

Source: DFSMSHsm

ARC0529I **MIGRATION CLEANUP PARAMETERS FOR {D | S} RECORDS, KEEP FOR *x* DAYS, OLDEST KEEPDATE=*yyddd*, RECONNECT DAYS=*z***

Explanation: Migration cleanup is deleting obsolete records from the migration control data set (MCDS). D means migration data set records are being processed; S means daily and volume statistic records are being processed.

Meanings for variables when D records are being processed are:

Variable

Meaning

- x* The number of days nonreconnectable data sets are kept since last recalled.
- yyddd* The records older than day (*ddd*) of year (*yy*) for non-reconnectable data sets will be deleted.
- z* The number of days (*z*) records for reconnectable data sets will be kept beyond the data set's predicted remigration date.

Meanings for variables when S records are being processed are:

Variable

Meaning

- x* The number of days (*x*) since their creation that records will be kept.
- yyddd* The records older than day (*ddd*) of year (*yy*) for nonreconnectable data sets will be deleted.
- z* Not applicable.

System action: DFSMSHsm processing continues.

Programmer response: If the given parameters are not wanted, change them using the SETSYS MIGRATIONCLEANUPDAYS command. The change will take effect next time that migration cleanup is performed.

Source: DFSMSHsm

ARC0530I **LEVEL 1 MIGRATION STARTING AT *time* ON *date* SYSTEM *sysid*, AT {THE BEGINNING OF THE MCD | *cdskey*}RECORD**

Explanation: Migration is processing data sets on migration level 1 volumes. The migration start time is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The date of migration is *date*, expressed as *yy/mm/dd* (year, month, day). The SMF system identifier of the system on which the migration is processed is *sysid*. The CDS record at which processing will begin is *cdskey*, or at the BEGINNING OF THE MCD. Descriptions of individual data sets processed follow in associated ARC0734I messages.

System action: Migration continues.

Programmer response: None.

Source: DFSMSHsm

ARC0531I **LEVEL 1 MIGRATION ENDING, *num* DATA SETS MIGRATED, *x* TRACKS FREED, MINAGE *y*, TIME *time***

Explanation: Migration of data sets from level 1 to level 2 has ended. The number of data sets that have been migrated is *num*. The number of tracks that have been made available on level 1 volumes because of the migration is *x*. The minimum age in days of data sets that have been migrated is *y*. The time of day the level 1 migration has ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds).

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0532I MIGRATION OF {ALL LEVEL 1 | VOLUME (*volser*)} TERMINATED DUE TO ERROR READING OR WRITING THE LEVEL 2 CONTROL RECORD

Explanation: DFSMSHsm was migrating all eligible migration level 1 copies to level 2 or all eligible migration copies on the migration volume *volser* to level 2. The migration volume *volser* can be a migration level 1 volume or a DASD migration level 2 volume. An error occurred in reading the level 2 control record for multiple processing units.

System action: The migration processing of all level 1 or of the migration volume ends. DFSMSHsm processing continues.

System programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Programmer response: Notify the storage administrator or system programmer. After the problem is resolved, the migration of all level 1 to level 2, or the migration of the eligible migration copies on a specific migration volume to level 2, can be done by issuing a command.

Source: DFSMSHsm

ARC0534I MIGRATION HELD, {NO MIGRATION LEVEL 1 VOLUME AVAILABLE | NO MIGRATION LEVEL 1 VOLUME AND NO TAPE MIGRATION VOLUME AVAILABLE | NO TAPE MIGRATION VOLUME AVAILABLE}, {ABEND IN INSTALLATION-WIDE EXIT | ESTAE SET UP FOR DATA MOVEMENT FAILED}

Explanation: If an abend in an installation-wide exit occurred or if the ESTAE setup failed, space management was held. During migration processing, DFSMSHsm detected that the required target migration volumes were not available for migration to continue to run. The required target migration volume types are listed below:

- Migration level 1 DASD and migration level 2 tapes, if either of the following is true:
 - The storage management subsystem (SMS) is installed.
 - The data set migration exit (ARCMDEXT) is active in the system.
- Migration level 1 DASD, if all of the following are true:
 - SMS is not installed on the system.
 - The data set migration exit (ARCMDEXT) is not active in the system.
 - The DFSMSHsm tape migration environment is not direct-to-tape.
- Migration level 1 DASD, if all of the following are true:
 - SMS is installed on the system.
 - The SMS management class definitions do not direct any SMS-managed data set to level 2 tape.
 - The data set migration exit (ARCMDEXT) is not active in the system.
 - The DFSMSHsm tape migration environment is not direct-to-tape.
- Migration level 2 tape, if all of the following are true:
 - SMS is not installed on the system.
 - The DFSMSHsm tape migration environment is direct-to-tape.

System action: The migration was held; DFSMSHsm processing continues.

Programmer response: If an abend in an installation exit occurred, see message ARC0004I to identify the exit and abend code. Bring this abend to the attention of a Storage Administrator. See message ARC0560E that was issued to the operator's console and the migration activity log. This message was issued for each migration target that DFSMSHsm determined was unavailable. Also, message ARC0560E contains the appropriate programmer response for the error condition encountered. After the failure has been corrected, issue the RELEASE MIGRATION command and retry the request. If the ESTAE setup for data movement failed, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

Source: DFSMSHsm

ARC0535I SPACE MANAGEMENT OF {*volser* | ALL LEVEL 1 MIGRATION VOLUMES} TERMINATED, {NO TAPE MIGRATION VOLUME AVAILABLE | NO DASD LEVEL 2 MIGRATION VOLUME AVAILABLE | NO LEVEL 1 MIGRATION VOLUME AND NO DASD LEVEL 2 MIGRATION VOLUME AVAILABLE | NO LEVEL 1 MIGRATION VOLUME AND NO TAPE MIGRATION VOLUME AVAILABLE | MIGRATION HELD | AUTO MIGRATION HELD | SPACE MANAGEMENT HELD | EXCESSIVE I/O ERRORS | TAPE MIGRATION VOLUME IN USE | GETMAIN ERROR | ABEND IN INSTALLATION-WIDE EXIT | ESTAE SET UP FOR DATA MOVEMENT FAILED | DFSMSHSM SHUTDOWN | DFSMSHSM EMERGENCY MODE | I/O ERROR ON TTOC | MIGRATION QUEUE LIMIT REACHED | ON-DEMAND MIGRATION ENDED EARLY, INTERVAL MIGRATION WILL START | ON-DEMAND MIGRATION ENDED EARLY, PRIMARY SPACE MANAGEMENT WILL START}

Explanation: DFSMSHsm attempted to migrate the volume with the volume serial number *volser* or migrate all level 1 migration volumes, but encountered one of the following errors:

- The source migration level 2 tape volume was in use by another task.
- There was no target tape migration level 2 available.
- There was no DASD migration level 2 volume available.
- There was no DASD migration level 1 volume available and no DASD migration level 2 volume available.
- There was no DASD migration level 1 volume available and no tape migration level 2 volume available.
- Migration or automigration was held.
- DFSMSHsm was put in emergency mode.
- DFSMSHsm was being shutdown.
- For the volume that is being space managed, there have been ten I/O errors trying to read or write records in the migration control data set (MCDS) or the offline control data set (OCDS). See previous ARC0184I messages for the specifics of the I/O errors. Errors reading the MCDS management control record (MCR) are not counted in this total. See message ARC0539I or ARC0307I for more details.
- In an attempt to GETMAIN storage for the buffers needed for data movement, an error occurred. If a GETMAIN error occurs, migration will be held. See the preceding ARC0305I or ARC0307I message for the specific failing code.
- The internal migration queue (MQ) limit is reached during space management for the current volume. The space management for the volume will be stopped. Nevertheless, the MDQEs, queued on MQ, will be processed. DFSMSHsm will continue to space manage other volumes.
- There was an abnormal end (abend) in either the tape migration data set installation-wide exit or the second level migration data set installation-wide exit. Migration has been held.
- The ESTAE environment could not be set up for the process of moving data during a DFSMSHsm migration operation.
- On-demand migration ended early because interval migration (IM) started.
- On-demand migration ended early because primary space management (PSM) started.

System action: The migration of the volume ends. DFSMSHsm processing continues.

If there was an abend in the migrate data set installation-wide exit, migration has been held. DFSMSHsm processing continues without the migration function.

Programmer response:

- The message insert TAPE MIGRATION VOLUME IN USE is associated with either a MIGRATE VOLUME(*volser* DELETEBYAGE(*days*)) command or a MIGRATE VOLUME (*volser* DELETEIFBACKEDUP(*days*)) command, and an ARC0560E message has not been issued. When the indicated volume is no longer in use, reissue the volume migration command.
- See message ARC0560E that was issued to the operator's console and the migration activity log. This message was issued for each migration target that DFSMSHsm determined was unavailable. Also, message ARC0560E contains the appropriate programmer response for the error condition encountered.
- Release migration, if it was held. Retry the volume migration when the correction has been made.
- Issue SETSYS NOEMERGENCY, if DFSMSHsm was put in EMERGENCY mode. Retry the volume migration when the correction has been made.
- Determine the cause of the I/O errors and take corrective action on the control data set.
- Stop DFSMSHsm and restart DFSMSHsm with additional storage requested.

- No actions are required for MIGRATION QUEUE LIMIT REACHED. The remainder of the volume space management will be made during the next PSM or IM. If you need the volume space management to be performed earlier, issue the F DFHSM,MIGRATE VOLUME(volser) command. You can determine the internal MQ limit using the F DFHSM,DISPLAY .MGCB.+100 command.

If you wish to update this value, see the topic on "Modifying the migration queue limit value" section in the Tuning DFSMSHsm chapter of *z/OS DFSMSHsm Implementation and Customization Guide*.

- Find the cause of the abend in the installation-wide exit. When the cause is determined, fix and relink the exit module. Use the EXITON parameter of the SETSYS command to reload the exit. To start the migration function, issue the RELEASE command with the MIGRATION parameter.
- Determine why the ESTAE could not be set up and take corrective action.
- No actions are required for ON-DEMAND MIGRATION ENDED EARLY, INTERVAL MIGRATION WILL START. The remainder of the volume space management will be made during the next on-demand migration or during the primary space management run.
- No actions are required for ON-DEMAND MIGRATION ENDED EARLY, PRIMARY SPACE MANAGEMENT WILL START. The remainder of the volume space management will be made while primary space management runs.

Retry the migration when the correction has been made.

Source: DFSMSHsm

ARC0538I ERROR MARKING VOLUME *volser* RECORD INELIGIBLE FOR DELVOL WHILE MIGRATING *dsname*

Explanation: The migration to tape of the VSAM data set with the name *dsname* was successful, but there was an error in creating an entry in the TTOC for this migration. An attempt was made to mark the MCV record of the tape volume ineligible for deletion and this attempt failed. This tape must be marked ineligible for deletion because there is no TTOC entry for the migration copy of the data set. Recycle processing cannot move this migration copy to another tape. When recycle processing empties the tape except for this last VSAM data set, the TTOC indicates there is no more valid data on the tape. However, the unrecorded migration copy is still there. If an attempt is made to delete the volume with the DELVOL command and the volume is not marked ineligible for the DELVOL command, the only copy of a user's data set will be lost.

System action: The data set remains migrated; DFSMSHsm processing continues.

Programmer response: Issue a FIXCDS command to set the flag MCVFNDLV on. This marks the MCV record of the volume *volser* ineligible for deletion and protects the VSAM data set that is not listed in the TTOC. This VSAM data set *dsname* should be recalled and a FIXCDS command should be issued to set the flag MCVFNDLV off. Now that the TTOC is in sync with the actual valid data on the tape, it is safe to allow normal processing on the tape volume.

Source: DFSMSHsm

ARC0539I EXCESSIVE I/O ERRORS CHECKING IF RECALL NEEDS A {MIGRATION TAPE | SMALL DATA SET PACKING DATA SET} - MIGRATION HELD

Explanation: When DFSMSHsm is in a tape migration environment, the management control record (MCR) is checked after the migration of each data set has completed to see if a recall task needs a tape that is allocated to a migration task. DFSMSHsm is in a tape migration environment if you specified SETSYS TAPEMIGRATION (DIRECT) or SETSYS TAPEMIGRATION (ML2TAPE).

When DFSMSHsm is migrating to or from an SDSF, the associated volume record (MCV) is checked repeatedly to see if an input function task needs an SDSF that is allocated to a migration task.

When DFSMSHsm is in a multiple processing unit environment, the DASD copy of the MCR or MCV must be checked. Each time there is an error in the read of the MCR or MCV record, an ARC0184I message is issued. If 5 read errors have occurred in reading the MCR, DFSMSHsm places a hold on the migration function so no more data sets can be migrated either by automatic space management or by command. If more than 5 read errors have occurred in reading the MCV record during one volume migration task, DFSMSHsm places a hold on the migration function so no more data sets can be migrated either by automatic space management or by command.

System action: Migration is held. DFSMSHsm processing continues without the migration function.

Programmer response: To determine the cause of the errors in reading the MCR or MCV record, see the return code

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value from the ARC184I message. For *return-code* values, see Table 9 on page 559.

Once the problem has been fixed, issue the RELEASE MIGRATION command so migration of data sets can resume.

Source: DFSMSHsm

ARC0540I MIGRATE REJECTED - INVALID USE OF CONVERT PARAMETER, {*volser1* IS AN HSM OWNED VOLUME | SPACE MANAGEMENT ATTRIBUTE NOT MIGRATE FOR *volser1* | MIGRATIONLEVEL2 NOT VALID WITH CONVERT | *volser2* NON-MANAGED VOLUME AND UNITTYPE NOT SPECIFIED | CONVERT UNIT DIFFERENT THAN DFSMSHSM VOLUME RECORD | CONVERT PARAMETER NOT ALLOWED IN DIRECT TO TAPE ENVIRONMENT}

Explanation: A MIGRATE command was issued with the CONVERT parameter. One of the following problems was encountered causing the command to be rejected:

- *volser1* IS A DFSMSHsm OWNED VOLUME.

The VOLUME parameter was specified with the volume identification number of *volser1*. However, if the CONVERT parameter is specified, the volume *volser1* must be a level 0 volume.

- SPACE MANAGEMENT ATTRIBUTE NOT MIGRATE FOR *volser1*.

The volume being migrated was added using the ADDVOL command with the space management attribute of DELETEBYAGE or DELETEIFBACKEDUP, or the DELETEBYAGE or the DELETEIFBACKEDUP parameter was specified with the VOLUME parameter along with the CONVERT parameter on the MIGRATE command. Only the space management attribute of MIGRATE is supported when issuing the MIGRATE command with the CONVERT parameter. Specify MIGRATE VOLUME(*volser* MIGRATE(*days*)) CONVERT if migration of the volume is required.

- MIGRATIONLEVEL2 NOT VALID WITH CONVERT

The MIGRATIONLEVEL2 parameter was specified along with the CONVERT parameter on the MIGRATE command. When processing the CONVERT parameter, the migration of data to level 2 volumes is not allowed.

- *volser2* NON-MANAGED VOLUME AND UNITTYPE NOT SPECIFIED.

The CONVERT parameter was specified with the volume identification number of *volser2* and the unit type of the *volser2* was not specified. You must specify the unit type when the volume *volser2* to which the data sets are to be recalled is not managed by DFSMSHsm. Either specify the unit type of the target volume or issue the ADDVOL command to make it a DFSMSHsm-managed volume before you reissue this command.

- CONVERT UNIT DIFFERENT THAN DFSMSHsm VOLUME RECORD.

The CONVERT parameter was specified with the volume identification number *volser2* and the volume unit type *unittype*. A migration control data set volume record (MCV) exists for *volser2*, but the unit type in the MCV for the volume is different from the unit type specified with the CONVERT parameter. Respecify the MIGRATE command with the CONVERT parameter and specify only the *volser2* subparameter of the CONVERT parameter.

- CONVERT PARAMETER NOT ALLOWED IN DIRECT TO TAPE ENVIRONMENT

The CONVERT parameter was specified and the SETSYS TAPEMIGRATION parameter is set to DIRECT, which is not supported. Either issue a MIGRATE command for the data set without CONVERT, followed by a RECALL command, or change the TAPEMIGRATION value to something other than DIRECT.

System action: The MIGRATE command request is rejected.

Programmer response: Reissue the MIGRATE command with the appropriate parameters.

Source: DFSMSHsm

ARC0541I UNABLE TO PROCESS SMALL DATA SET PACKING DATA SET ON VOLUME *volser*, RETURN CODE=*return-code*, REASON CODE= *reason-code*, VSAM FEEDBACK CODE= *feedbackcode*}

Explanation: An error has occurred in accessing a small data set packing (SDSP) data set on the indicated volume *volser*.

The values for *return-code* are:

Retcode Meaning

8 An error has occurred in allocating the SDSP data set. The values for *reason-code* are:

- 4 Dynamic allocation indicates the SDSP data set on volume *volser* is in use. See the preceding ARC0503E message for the return code and the reason code from dynamic allocation.

- 6 SDSP data set serialization checking indicates the SDSP on volume *volser* is in use by another DFSMSHsm function.
- 7 SDSP is marked as needed by RECALL or ABARS processing.
- 8 Operator cancels mount. See the preceding ARC0503E message for the return code and the reason code from dynamic allocation.
- 9 Control data set read error has occurred. See the preceding ARC0184I message.
- 10 Control data set update error has occurred. See the preceding ARC0187I message.
- 12 No units are available. See the preceding ARC0503E message for the return code and the reason code from dynamic allocation.
- 16 Other dynamic allocation error. See the preceding ARC0503E message for the return code and the reason code from dynamic allocation.
- 19 An error has occurred in allocating the SDSP data set. The values for *reason-code* are:
 - 11 The SDSP data set on volume *volser* is in use by another job or user.
 - 20 Cancelled by installation validation routine.
 - 24 An undetermined error has occurred while trying to allocate the SDSP data set.
- 12 An error has occurred while trying to deallocate and unserialize an SDSP data set. In this case, the SDSP may no longer be available to other tasks for migration and recall. This can be corrected by either stopping and restarting DFSMSHsm or by issuing a LIST HOST(id) RESET command. Additional information about the error will be contained in the DFSMSHsm PDA trace. If a deallocation error occurred, a SNAP dump was generated to aid in problem determination. The values for *reason-code* are:
 - 4 An error has occurred in trying to dynamically deallocate the SDSP data set. DFSMSHsm has removed the serialization for the data set in the MCV record.
 - 8 The data set that was attempting to be unallocated did not have an entry on the small data set allocation (VSA) queue. DFSMSHsm has not removed the serialization for the data set in the MCV record.
 - 12 The read of the MCV record failed. DFSMSHsm has not removed the serialization for the data set in the MCV record.
 - 16 The update of the MCV record failed. DFSMSHsm has not removed the serialization for the data set in the MCV record.
- 28 Catalog error. Reason code is the catalog return code.
- 32 VSAM macro error. Reason code is 1 if the VSAM RPL is active on another processing unit; otherwise, the reason code is the VSAM return code. When reason code is the VSAM return code, the VSAM RPL feedback code *feedbackcode* appears in the hexadecimal format. For meaning of VSAM return codes and VSAM feedback codes, see *z/OS DFSMS Using Data Sets*.
- 35 An error has occurred in opening the SDSP data set. An OPEN error message with component identifier IEC normally precedes this message if this is a true OPEN error. The values for *reason-code* are:
 - 4 GENCB has failed on opening an SDSP data set on volume *volser*.
 - 8 Failure has occurred on OPEN macro.
 - 11 The SDSP data set on volume *volser* is in use by another job or user.
 - 12 GENCB has failed on creating an RPL for VERIFY.
 - 16 VERIFY has failed.
 - 60 Failure has occurred in establishing ESTAE environment.
- 36 VSAM macro error has occurred in building an RPL for reading the SDSP data set. Reason code is the VSAM return code. For meaning of VSAM return codes and VSAM feedback codes, see *z/OS DFSMS Macro Instructions for Data Sets*.

System action: The SDSP is not processed by DFSMSHsm. Other DFSMSHsm processing continues.

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Programmer response: For reason codes 4 and 6 under return code 8, reissue the command when the SDSF data set is not in use. For the other reason codes, perform problem determination and reissue the command.

Source: DFSMSHsm

ARC0542I SMALL DATA SET PACKING DATA SET *dsname* IS FULL

Explanation: During the migration of a data set to small data set packing (SDSP) data set *dsname*, an attempt to write the migration copy to the SDSF data set failed due to a lack of space for the records.

System action: The migrating data set fails. The volume to which the migration was attempted no longer is selected when attempting to migrate to an SDSF data set. This message is reported to both the migration activity log and to the console to facilitate auto-operations usage. The message is issued by each host system attempting to migrate data to the SDSF, and results in an out-of-space failure.

Programmer response: Reorganize the SDSF data set using the IDCAMS REPRO or EXPORT/IMPORT command. The volume is a candidate for migration to an SDSF the next time the volume is added with the ADDVOL command and the SDSF parameter. You might do this by entering an ADDVOL command as soon as the data set is reorganized, or the next startup of DFSMSHsm probably contains one. Alternatively, a reorganization of the SDSF can be auto-operations triggered upon issuance of this message to the console.

Source: DFSMSHsm

ARC0543I VOLUME *volser* NOT PROCESSED BECAUSE OF ERROR READING MCV RECORD

Explanation: While DFSMSHsm was attempting to read an MCV record for the specific volume *volser*, an I/O error occurred. Message ARC184I also precedes this message, giving the specific information about the error.

System action: The command ends. DFSMSHsm processing continues.

System programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Programmer response: Notify the storage administrator or system programmer to correct the problem and reissue the command.

Source: DFSMSHsm

ARC0544I OBTAIN FAILED FOR {DSN=*dsname* | CCHHR=*cchhr*} ON VOLUME = *volser*, RC = *return-code*

Explanation: An attempt has been made to read a data set control block (DSCB) from the volume table of contents (VTOC) on the volume *volser*, either by the data set name *dsname* or by the absolute track address of the DSCB *cchhr*. The CAMLST OBTAIN macro returned *return-code* in register 15. The DSCB has not been obtained. For the meaning of *return-code*, see message ARC1307I and z/OS DFSMSdfp *Advanced Services* for more information.

System action: DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of the return code and retry the request.

Source: DFSMSHsm

ARC0545I SCRATCH RELATED FUNCTION FAILED FOR *dsname* ON VOLUME=*volser*, RC=*return-code*, REAS=*reason-code*

Explanation: An attempt has been made to scratch *dsname* from the volume. An error has been encountered.

The values for *return-code* and *reason-code* are:

Retcode Meaning

- | | |
|----|--|
| 4 | The <i>dsname</i> has been scratched, but the volume <i>volser</i> deallocation failed. |
| 63 | Volume deallocation has failed. |
| 6 | Volume in use. |
| 8 | The <i>dsname</i> has not been scratched. The MVT entry could not be found or built for the volume <i>volser</i> . |
| 4 | Invalid input device type. |

- 22 I/O error in reading MCV or MCT record.
- 20 Device type has not been provided.
- 12 The volume *volser* or data set *dsname* allocation has failed; the *dsname* has not been scratched.
- 76 The data set allocation has failed.
- nn* Use the dynamic allocation (DYNALLOC macro) return codes or error codes. See *z/OS MVS Programming: Authorized Assembler Services Guide*.
- 20 The SCRATCH macro has failed and the volume *volser* deallocation has also failed.
- 63 Volume deallocation has failed. See *z/OS MVS Programming: Assembler Services Reference ABE-HSP*.

System action: DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of the return code and reason code and retry the request.

Source: DFSMSHsm

ARC0546I ERROR DURING DELETION OF DATA SET RECORDS FOR *dsname* FROM SDSP DATA SET ON VOLUME=*volser*, RC=*return-code*, REAS=*reason-code*

Explanation: An attempt was made to delete the data set records for *dsname* from the small data set packing data set on the migration level 1 volume *volser*. An error was encountered.

Values for *return-code* and *reason-code* are:

Retcode Meaning

- 4 The MVT entry could not be found or built for the volume; the data set records are not deleted:
 - 8 There is a volume type conflict.
 - 12 There is an I/O error when reading the MCV record.
 - 16 No MCV record is found.
- 8 The allocation for the SDSP data set on the volume *volser* failed. The *dsname* data set records are not deleted:
 - 4 Allocation failure — data set in use.
 - 6 SDSP serialization check indicated SDSP was in use.
 - 7 The SDSP is marked as needed by recall.
 - 8 Operator cancelled mount.
 - 9 Error reading DFSMSHsm MCV record during SDSP serialization checking.
 - 10 Error updating DFSMSHsm MCV record during serialization of SDSP.
 - 12 No units are available.
 - 16 There is other dynamic allocation error.
 - 20 Cancelled by installation validation routine.
 - 24 There is an invalid parameter list.
- 12 The open for the SDSP data set on the volume *volser* failed. The *dsname* data set records are not deleted:
 - 4 The GENCB macro failed attempting to create an ACB for the open.
 - 8 The open failed.
 - 12 The GENCB macro failed attempting to create an RPL for the VERIFY macro.
 - 16 The VERIFY macro failed.
 - 20 There was a failure establishing the ESTAE environment.
- 16 The deletion of the *dsname* data set records from the SDSP data set failed:

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4 The data set records are in use.

8 The GENCB macro failed.

System action: DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of the return code and reason code, then retry the request.

Source: DFSMSHsm

ARC0547I FAILURE INDICATING DATA SET *dsname* CAUSED TAPE MIGRATION VOLUME *volser* TO BE INELIGIBLE FOR DELVOL

Explanation: In the process of migrating VSAM data set *dsname* to tape migration volume *volser*, there was a failure to add the data set entry to the TTOC record, which caused an attempt to set an indicator in the data set record that this data set caused the tape migration volume to be ineligible for DELVOL processing. There was a failure reading or writing the data set record (MCD) and the indicator has not been set on. See the associated ARC0184I message for the exact cause of the error.

Programmer response: Issue a FIXCDS command to set the flag MCDFNOD on. This allows recall processing to reset the flag MCVFNDLV in the volume record to indicate that the volume is no longer ineligible for DELVOL processing after this data set is successfully recalled.

Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0548I MIGRATION OF A TAPE VOLUME IS NOT SUPPORTED

Explanation: A MIGRATE command was entered to migrate a volume, but the volume serial number entered represents a tape migration level 2 volume. DFSMSHsm does not support migration from a tape migration level 2 volume to another tape migration level 2 volume.

System action: The migration of the volume ends. DFSMSHsm processing continues.

Programmer response: Check the volume serial number given in the preceding ARC1001I message, reenter the command with the correct volume serial number. If the attempt to migrate the tape volume is to reclaim the tape volume, use the RECYCLE command to move the valid data to another tape migration level 2 volume.

Source: DFSMSHsm

ARC0550I *count* DATA SETS ON VOLUME *volser*, WERE NOT PROCESSED BY FREEVOL

Explanation: At the end of processing a FREEVOL AGE(0) command, this message alerts system personnel that data might still remain on volume *volser*. The data remaining on the volume may include four categories of data not moved when FREEVOL AGE(0) is specified. The four categories of data are:

- BACKDS backup versions
- Migrated data sets associated with a management class defined for AUTOBACKUP and are not yet processed for backup versions
- Data sets that may have been recalled, deleted, or moved to ML2 tape, during the FREEVOL processing of this volume
- Fast Replication catalog information data sets, identified by the second qualifier of HSMCIDS, cannot be moved by a pre-V1R11 DFSMSHsm.

count does not include the VTOC, the VTOC index data set, or SYS1.catalog entry. *count* includes the volume SDSP data set, if found, and may include data sets that have been recalled, deleted, or moved on to ML2 tape while this FREEVOL command was processing. Message ARC0550I is followed by message ARC0523I.

Note: DATA SETS refers to individual DSCBs found on the volume. VSAM data sets may have multiple DSCBs.

System action: DFSMSHsm processing continues.

Programmer response: Before removing the volume from the system, look at the data sets remaining on the volume to determine if any of them must be kept.

When the remaining data on the volume contain only BACKDS backup versions, run AUTOBACKUP on the DFSMSHsm primary host to remove them from the volume.

When the remaining data on the volume contain migrated data sets for which the backup requirements are not yet satisfied:

1. Run AUTOBACKUP on the DFSMSHsm primary host— to cause a backup version to be created of migrated data sets for which backup versions are yet needed. This process also removes any BACKDS backup versions from the volume.
2. Then reissue the FREEVOL AGE(0) command—to remove the migrated data sets (those just backed up) from the volume.

When the remaining data sets on the volume are DFSMSHsm Fast Replication catalog information data sets, reissue the FREEVOL AGE(0) command on a z/OS V1R11 or later DFSMSHsm to move the data sets. Loss of these data sets restricts the recovery of data sets from associated copy pools.

When the remaining data sets on the volume have retained backup copies, reissue the FREEVOL command on a z/OS V1R11 or later system.

System personnel must deal individually with any remaining data sets that must be kept.

Source: DFSMSHsm

ARC0551I CAUTION: THERE MAY BE DATA SETS REMAINING ON VOLUME *volser*

Explanation: At the end of processing a FREEVOL AGE(0) command, when the target level is level 2 DASD and there are multiple key ranges defined, this message appears to alert system personnel that data may still remain on the volume. When multiple key ranges are being used, the process is MCDS driven. Since the VTOC is not read, user data sets and backup copies are not encountered. This message will be followed by completion message ARC0523I.

System action: DFSMSHsm processing continues.

Programmer response: Before removing the volume from the system, look at the data sets remaining on the volume to determine if any of them must be kept. LIST VTOC can be used to determine which data sets remain on the volume. The DFSMSHsm LIST command can be used to determine which user data set images are in an SDSP if one exists on the volume. If any backup VTOC copy data sets are on a volume, issue a FREEVOL AGE(0) command with a target level of either level 1 DASD or level 2 tape. This will force the VTOC to process. All user data sets and backup copies will be counted and VTOC backup copies will be moved to other level 1 volumes. Any backup copies of user data sets will be moved the next time daily backup is run. System personnel must deal individually with any remaining user data sets on the volume that must be kept.

Source: DFSMSHsm

ARC0552I MIGRATION CLEANUP NOT PERFORMED ON THIS PROCESSING UNIT, IT IS CURRENTLY BEING PERFORMED ON ANOTHER PROCESSING UNIT

Explanation: Migration cleanup of automatic secondary space management functions is requested on this processing unit while another migration cleanup of automatic secondary space management is running on another processing unit. If this happens, DFSMSHsm will not process the migration cleanup on this processing unit since an unexpected result may occur while running two migration cleanups against the same MCDS at the same time.

System action: The second migration cleanup is skipped. The first migration cleanup proceeds.

Programmer response: Do not start a second automatic secondary space management function on any processing unit if automatic secondary space management is currently running.

Source: DFSMSHsm

ARC0553I ERROR {CREATING | UPDATING} MC1 RECORD

Explanation: While creating or updating an MC1 record, an error occurred. See message ARC0184I for more details.

System action: The MC1 record is not created or updated. DFSMSHsm processing continues.

Programmer response: If the error occurred while creating an MC1 record and the record is not the first one on the chain, the last MC1 record may have an incorrect continuation indicator. Use the FIXCDS command to look for the

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last MC1 record and turn off the MC1FCONT flag, if found on, to indicate that it is the last MC1 record. (The key of the first MC1 record is L1VOL-00, the key of the second MC1 record is L1VOL-01, up to the first 100 MC1 records. For the remaining MC1 records, the key is L1VOL=0100, L1VOL=0101 and so on..)

Take corrective action based on the meaning of the return code in message ARC0184I. If the error occurred while ADDVOLing ML1 volumes, additional action may be needed since the volume entry for one or more of the volumes may be missing from the MC1 record. Use the FIXCDS command described above to look at the MC1 records and re-ADDVOL any volumes that may be missing. Contact IBM Support if assistance is needed.

Source: DFSMSHsm

ARC0554I OPEN OF VTOC FOR VOLUME *volser* FAILED

Explanation: An attempt was made to open the VTOC, either to select eligible data sets to process or to update a date value in the data set VTOC entry for a selected data set. The open failed.

System action: Volume migration for the volume *volser* ends. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the open error encountered and retry the request. If the problem persists with this volume, it could be an indication of hardware or media problems.

Source: DFSMSHsm

ARC0555I CLOSE OF VTOC FOR VOLUME *volser* FAILED

Explanation: An attempt was made to close the VTOC at the end of processing eligible data sets or updating a data set VTOC entry for a particular data set. The attempt failed. The failure was trapped by an ESTAE routine in the module issuing the close request. The volume *volser* migration continues.

System action: DFSMSHsm processing continues.

Programmer response: Take corrective action based on the close error encountered.

Source: DFSMSHsm

ARC0556I {PRIMARY SPACE MANAGEMENT | SECONDARY SPACE MANAGEMENT} FAILED TO RESTART BECAUSE THE CURRENT TIME IS OUTSIDE THE SPACE MANAGEMENT START WINDOW

Explanation: DFSMSHsm has determined that the automatic primary or automatic secondary space management did not run to completion on the current day. However, during its restart processing, it determined that the current time is outside the currently specified window for starting this processing.

System action: The indicated space management is not restarted at this time. DFSMSHsm processing continues.

Programmer response: If you want the indicated space management to restart on the current day, change the ending time by issuing the SETSYS command.

Source: DFSMSHsm

ARC0557I VTOC PROCESSING FOR VOLUME *volser* TERMINATED, UNABLE TO READ JFCB. RETURN CODE=*return-code*

Explanation: An error has occurred in reading the JFCB. The read has failed. DFSMSHsm is unable to read the VTOC of the source volume unless it successfully reads the JFCB.

The RDJFCB macro returned *return-code* in register 15. For the meaning of *return-code*, see *z/OS DFSMS Using Data Sets*.

System action: Processing of the command ends. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of the return code and retry the request.

Source: DFSMSHsm

ARC0558I MIGRATE COMMAND IS NOT ALLOWED FOR SPECIFIC ML1 OR ML2 VOLUMES - USE FREEVOL COMMAND

Explanation: A MIGRATE command was issued to migrate a specific volume. DFSMSHsm determined that the volume was added with the ADDVOL command as a migration level 1 or migration level 2 DASD volume. The FREEVOL command is the proper vehicle for migrating data from such a volume.

System action: The MIGRATE command request is rejected.

Programmer response: If the volume serial number was coded correctly on the command, issue the FREEVOL command for the volume. Otherwise, correct the volume serial number and retry the MIGRATE command.

Source: DFSMSHsm

ARC0559I SPACE MANAGEMENT OF {volser | ALL LEVEL 1 MIGRATION VOLUME} WILL NOT TARGET {MIGRATION LEVEL 1 | MIGRATION LEVEL 2 DASD | MIGRATION LEVEL 2 TAPE} UNTIL THE REQUESTED VOLUME TYPE IS MADE AVAILABLE

Explanation: While DFSMSHsm was migrating volume *volser*, a data set was encountered that was directed to the unavailable volume type.

If the volume type was unavailable for all space management tasks, message ARC0560E is issued to the operator's console and to the migration activity log giving additional information.

System action: The processing volume does not migrate data sets to the unavailable volume type, but continues migrating data sets which are targeted for an available volume type. DFSMSHsm processing continues.

Programmer response: Arrange to have the volume type available when this volume is processed in order for all eligible data sets to migrate.

Source: DFSMSHsm

ARC0560E MIGRATION LIMITED: {NO LEVEL 1 MIGRATION SPACE AVAILABLE | NO LEVEL 1 MIGRATION VOLUME AVAILABLE | NO DASD LEVEL 2 MIGRATION VOLUME AVAILABLE | NO TAPE MIGRATION VOLUME AVAILABLE OR TAPE ALLOCATION ERROR | EXCESSIVE I/O ERRORS | ABEND IN TAPE INSTALLATION-WIDE EXIT}

Explanation: During a volume migration (from a DFSMSHsm-managed volume or from a migration volume), level 1 to level 2 migration, or data set migration, DFSMSHsm failed to migrate a data set. The migration failed because of a lack of available space in the hierarchy or because some condition occurred making it impossible (or inadvisable) to continue migrating to a certain level in the hierarchy. Migration to migration level 1 may be inhibited if there is no space remaining in the VTOC or VTOC index on the volumes that are defined.

The EXCESSIVE I/O ERRORS and ABEND IN TAPE INSTALLATION-WIDE EXIT conditions occurred while trying to migrate a data set to tape.

EXCESSIVE I/O ERRORS means either

- Five I/O errors occurred while reading the management control record (MCR).
- Ten I/O errors occurred while accessing records other than the MCR in either the migration control data set (MCDS) or offline control data set (OCDS), or both.

A tape migration volume is considered not available if one of the following conditions is true:

- An attempt was made to migrate a data set to a tape migration level 2 volume, and either the operator responded to the mount request with a NO, or the timer to mount a tape expired. A new tape volume was selected and again the operator could not mount the tape.
- There have been ten I/O errors trying to read or write records in MCDS or the OCDS. See previous ARC0184I messages for the specifics of the I/O errors. Errors reading the MCDS MCR are not counted in this total.
- When DFSMSHsm is in a tape migration environment (SETSYS TAPEMIGRATION(DIRECT)) or (SETSYS TAPEMIGRATION(ML2TAPE)), MCR is checked after the migration of each data set is complete to see if a recall task needs a tape that is allocated to a migration task. When DFSMSHsm is in a multiprocessing unit environment, the DASD copy of the MCR needs to be checked. There have been five errors in the read of the MCR record. An ARC0184I message is issued each time the read failed.
- The tape data set installation-wide exit (ARCTDEXT) abnormally ended (abended).

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No migration level 1 volume is considered available if one of the following conditions is true:

- No migration level 1 volume has been ADDVOLed to DFSMSHsm.
- The space between the full volume and the high threshold of the selected migration volume is too small for a small data set, but not for a small data set packing data set. The migration failed because sufficient space was not available on the migration volumes. The failure occurred on two consecutive attempts, and the migration (level 1) volumes were space checked between attempts.

System action: The particular migration request failed. DFSMSHsm issues either an ARC12*nnx* message (for data set command migration) or an associated ARC0734I message (for volume migration), giving specific reasons for the failure.

DFSMSHsm continues migrating data for those cases where other target levels can still be used.

If the NO TAPE MIGRATION VOLUME AVAILABLE, EXCESSIVE I/O ERRORS, or ABEND IN TAPE INSTALLATION-WIDE EXIT condition occurred, DFSMSHsm stops trying to migrate to tape.

Until a RELEASE MIGRATION or RELEASE AUTOMIGRATION or RELEASE ALL command is issued, DFSMSHsm will not attempt to migrate any data set that would require using the indicated hierarchy level as a target.

Note: If DFSMSHsm was migrating a volume (as the result of a MIGRATE command, FREEVOL command, interval migration or automatic primary space management), or was processing the automatic secondary space management when the condition occurred, some of the data sets on the volume may still migrate successfully.

Operator response: When the original problem is corrected (or if migration can continue without exit ARCTDEXT being active):

- Delete the ARC0560E message from the console.
 - If the message identifier is not available, issue the DISPLAY R,I command to get the ID.
 - To delete the message, issue the following command using the message identifier *id* obtained from the above DISPLAY R,I command.
CONTROL C,I,*id*
- Issue the RELEASE MIGRATION command to allow DFSMSHsm to attempt using the indicated level and device category.

Note: There may be more than one such message on the console if a problem with one hierarchy level was not resolved before DFSMSHsm encountered a problem with another level in the hierarchy.

Programmer response:

- For NO LEVEL 1 MIGRATION SPACE AVAILABLE, if there is free space on ML2, then FREEVOL some ML1 volume(s) to level 2, to clear some space on level 1. Otherwise, have at least one level 1 volume ADDVOLed. Reorganize the index, if it is full, and reissue the ADDVOL command to add the migration level 1 volume.
- For NO LEVEL 1 MIGRATION VOLUME AVAILABLE, have at least one level 1 volume ADDVOLed.
- For NO DASD LEVEL 2 MIGRATION VOLUME AVAILABLE, have at least one level 2 volume ADDVOLed.
- For NO TAPE MIGRATION VOLUME AVAILABLE OR TAPE ALLOCATION ERROR, determine why no tape is made available to DFSMSHsm and have at least one tape available, or fix the allocation problem.
- For EXCESSIVE I/O ERRORS, analyze the most recent ARC0184I error messages against the MCDS and OCDS to determine the specific problem needing correction.
- For ABEND IN TAPE INSTALLATION-WIDE EXIT, issue the SETSYS EXITOFF command to inactivate the migration-tape data set installation-wide exit (ARCTDEXT).

If migration can proceed without ARCTDEXT being active, migration can be released before the exit is corrected.

The ARCTDEXT module should be examined to determine the reason for the abend; when corrected, the exit can be relinked and the SETSYS EXITON command used to reactivate the exit.

When the original problem has been corrected, issue the RELEASE MIGRATION command to allow DFSMSHsm to attempt using the indicated level and device category.

If an ADDVOL command is issued for the unavailable volume type while a volume migration is in progress, data sets will be directed to the volume just added without requiring a RELEASE MIGRATION command.

Source: DFSMSHsm

ARC0561I PRIMARY-DAYS-NON-USAGE VALUE *value* SPECIFIED FOR MANAGEMENT CLASS *mgtclassname* CONFLICTS WITH DFSMSHSM INTEGRITY AGE *value*

Explanation: DFSMSHsm detected that the PRIMARY-DAYS-NON-USAGE VALUE *value*, specified for the named SMS Management Class was less than the DFSMSHsm integrity age *value*. Data sets associated with the management class *mgtclassname* will not be eligible for migration until the integrity age is met. This message is issued during automatic primary space management only.

System action: Volume migration processing continues. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator, who should perform one of the following:

- Change the PRIMARY-DAYS-NON-USAGE attribute value to a value equal to or greater than the DFSMSHsm integrity age.
- Change the DFSMSHsm integrity age to be less than or equal to the PRIMARY-DAYS-NON-USAGE attribute value. SETSYS DFHSM DATASET SERIALIZATION or SETSYS USER DATASET SERIALIZATION controls the DFSMSHsm integrity age.

Source: DFSMSHsm

ARC0562I SPACE MANAGEMENT PROCESSING SKIPPED *number* DATA SETS BECAUSE THE SMALL DATA SET PACKING DATA SET ON VOLUME *volser* WAS IN USE

Explanation: Level 1 to Level 2 migration, migration cleanup, or FREEVOL command processing could not gain exclusive control of the SDSP.

System action: Migration of the number of data sets mentioned is skipped.

Programmer response: Run the automatic secondary space management, command level-1-to-level-2 migration, or FREEVOL command processing functions again at a time when the SDSP will not be used by other DFSMSHsm functions.

Source: DFSMSHsm

ARC0563I MIGRATION OF *number* DATA SET(S) SKIPPED BECAUSE ALL TARGET SMALL DATA SET PACKING DATA SET(S) WERE IN USE

Explanation: When DFSMSHsm was migrating a data set to an SDSP, it could not gain exclusive control of any SDSP.

System action: Migration of the number of data sets mentioned is skipped.

Programmer response: Run the migration function again at a time when not all SDSP data sets are being used by other DFSMSHsm functions.

Source: DFSMSHsm

ARC0564I UNEXPECTED MCDS RECORD ENCOUNTERED, RECORD KEY = *X(hexrecordkey)*, MCHTYPE = *X(hextype)*. *nn* UNEXPECTED RECORDS HAVE BEEN ENCOUNTERED. PROCESSING WILL {CONTINUE | TERMINATE}.

Explanation: During command level migration or secondary space management, an unexpected or unknown MCDS entry has been encountered.

System action: Secondary space management or level migration continues until 11 bad records have been encountered, at which point processing ends. During secondary space management, the number of bad records is reset to zero between each phase. That is, bad records encountered during migration cleanup are not added to those that have been encountered during level 1 to level 2 migration.

Programmer response: Notify the storage administrator. The storage administrator can find the bad records based on their hex keys and can either correct or delete the bad records.

Source: DFSMSHsm

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ARC0565I SMPM CFQUERY FUNCTION FAILED FOR VSAM DATA SET *dsname*, RC=*return-code*, REASON=*reason-code*

Explanation: DFSMSHsm invoked the CFQUERY function to test the VSAM SMS data set for retained locks and RLS inconsistency. The CFQUERY function returned the listed failing return and reason codes.

System action: The migration operation ends. DFSMSHsm processing continues.

Programmer response: See the *z/OS DFSMSdfp Diagnosis* for an explanation of the listed return and reason codes.

Source: DFSMSHsm

ARC0566I COMMAND DATA SET MIGRATION TO MIGRATION LEVEL 2 TAPE IS INHIBITED

Explanation: During command data set migration to ML 2 tape, a tape migration volume could not be mounted because either a tape or a device was not available.

System action: The migration request failed. DFSMSHsm issued an ARC12nnx message giving specific reasons for the failure. All additional command data set migrations to ML 2 tape will be inhibited. A WAIT-type command will be failed with ARC1205I. A NO-WAIT-type command will be requeued to be processed when the ML 2 target is available and a RELEASE MIGRATION command has been issued.

Until a RELEASE MIGRATION command is issued, DFSMSHsm will not attempt to process any command data set migrations that require ML 2 tape.

Programmer response: When a ML 2 target is available for command data set migration, issue the RELEASE MIGRATION command.

Source: DFSMSHsm

ARC0567I MAXIMUM NUMBER OF ENTRIES IN MC1 EXCEEDED

Explanation: The structural limitation of volume entries was exceeded while creating or updating an MC1 record

System action: The MC1 record is not created or updated. Freespace information for one or more Migration Level 1 volumes may not be updated. DFSMSHsm processing continues.

Programmer response: Ensure ADDVOL statements for ML1 volumes do not exceed the total number of unique ML1 volumes allowed across all HSM's in an HSMplex.

Source: DFSMSHsm

| **ARC0568I** MAXIMUM NUMBER OF QUERY OUTPUT LINES EXCEEDED

| **Explanation:** The maximum number of ARC0167I messages was exceeded.

| **System action:** QUERY REQUEST|USER request output is terminated. DFSMSHsm processing continues.

| **Programmer response:** Issue the QUERY REQUEST|USER request from the system console.

| **Source:** DFSMSHsm

ARC0570I {PRIMARY SPACE MANAGEMENT | INTERVAL MIGRATION | ON-DEMAND MIGRATION | COMMAND MIGRATION | AUTOMATIC BACKUP | COMMAND BACKUP | AUTOMATIC DUMP | COMMAND DUMP | RESTORE | RECOVERY | FRBACKUP | FRRECOV} FOR {ALL SMS MANAGED | *volser* | *volser*,SGROUP=*sg* | ALL COPY POOL | COPY POOL=*cpname* | SGROUP,SGROUP=*sg*} VOLUME(S) TERMINATED, RC=*return-code*, REASON=*reason-code*

Explanation: DFSMSHsm was in the process of one of the following:

- Automatic migration, automatic backup, or automatic dump of all volumes.
- Automatic migration, automatic backup, or automatic dump of an individual volume.
- Command migration, command backup, command dump, command restore, or command recovery of a specific volume.
- FRBACKUP or FRRECOVER processing

An error occurred causing the function to end. The values of *return-code* and *reason-code* indicate what type of error occurred.

Generally, this message is issued for SMS volumes being processed. It can, however, be issued for NONSMS volumes if the error received prevents DFSMSHsm from knowing if the volume is SMS- or NONSMS-managed.

During migration processing, DFSMSHsm performs space checks on SMS-managed volumes if SMS is active, regardless of which SETSYS parameters were specified. This message is issued if any errors were found during the space checks.

Retcode Meaning

- 1 SMS is not installed in the system. DFSMSHsm attempted to process an SMS-managed volume.
- 2 An error occurred in getting an SMS lock token, which is used for future access to the same SMS configuration. SMS failed to get the lock token. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes. Also applies to storage group requests.
- 3 A list of data sets from an SMS-managed volume could not be retrieved. DFSMSHsm volume processes, which require the list, failed.
The IGDCSP00 module could not be loaded when the LOAD macro was issued to bring the module into DFSMSHsm's virtual storage.
- 4 SMS was not active in the system when DFSMSHsm attempted to process SMS-managed volumes. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes. Also applies to storage group and copy pool requests.
- 5 An error occurred while reading the volume VTOC entry for the volume being processed.
DFSMSHsm read the volume VTOC entry to determine if the volume being processed is an SMS-managed volume. The read failed.
- 6 An error occurred while retrieving an SMS volume definition. DFSMSHsm invoked SMS to retrieve an SMS volume definition. SMS failed to retrieve it.
- 7 An error occurred while retrieving a storage group definition for an SMS volume. DFSMSHsm invoked SMS to retrieve a storage group definition for the volume. SMS failed to retrieve it.
- 8 An error occurred while retrieving storage group definitions in the system in which DFSMSHsm is running. DFSMSHsm invoked SMS to retrieve a list of all storage group definitions to select SMS-managed volumes for automatic processing or storage group requirements. SMS failed to retrieve the list. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes. Also applies to storage group requests.
- 9 The volume being processed is in SMS initial status. DFSMSHsm cannot process a volume in SMS initial status.
- 10 DFSMSHsm cannot determine if the volume being processed is an SMS-managed volume. The mounted volume table (MVT) and the volume VTOC entry do not agree.
DFSMSHsm determined an SMS-managed volume was converted to a non-SMS-managed volume, or a non-SMS-managed volume was converted to an SMS-managed volume between the automatic processes or during the volume process.
- 11 DFSMSHsm cannot determine if the volume being processed is an SMS-managed volume. The SMS volume definition and the volume VTOC entry do not agree.
- 12 An error occurred while retrieving a list of all SMS-managed volumes. DFSMSHsm invoked SMS to retrieve a list of all SMS-managed volumes associated with the eligible storage groups for DFSMSHsm automatic processing. SMS failed to retrieve the list. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes. Also applies to storage group requests.
- 13 The device type of the volume that was retrieved from the SMS storage group definition is not supported by DFSMSHsm.
- 14 An error occurred while returning an extract list entry. DFSMSHsm invoked VTOC catalog entry services to retrieve a list of data sets from an SMS-managed volume. VTOC catalog entry failed to retrieve the list.
The *reason-code* is the return code from VTOC catalog entry.

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- 15 An error occurred in reading or writing a migration control data set volume record (MCV).
During volume processing, DFSMSHsm read an MCV record for the volume being processed. The read failed, and an ARC0184I message was issued to indicate the error. If no MCV record existed for the volume, DFSMSHsm attempted to create an MCV for the volume. The creation failed and an ARC0184I message is issued to indicate the error.
- 16 No eligible SMS-managed volumes could be internally ADDVOLed.
At the start of the DFSMSHsm automatic function, DFSMSHsm invoked SMS to retrieve a list of all SMS-managed volumes associated with the specified storage group for DFSMSHsm automatic processing. From the list that was returned, DFSMSHsm selected volumes that meet certain conditions, created MVT entries, and added the MVT entries to the DFSMSHsm SMS MVT chain. DFSMSHsm detected no eligible SMS-managed volumes that could be added to the SMS MVT chain. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes.
- 17 There are no storage groups defined that are eligible for processing.
At the start of the DFSMSHsm automatic function, DFSMSHsm attempted to retrieve a list of storage group definitions for processing during the automatic function. DFSMSHsm determined there are no eligible storage groups for processing. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes.
This return code does not provide meaningful information in a non-SMS environment and can be filtered using the PATCH command.
To *enable* filtering of this return code issue:
PATCH .MCVT.+297 BITS(...1...)
To *disable* filtering of this return code issue:
PATCH .MCVT.+297 BITS(...0...)
Note: This return code is not filtered when using the LIST command.
- 18 There are no SMS volumes eligible for processing.
At the start of the DFSMSHsm automatic function, DFSMSHsm attempted to retrieve a list of SMS-managed volumes for processing during the automatic function. DFSMSHsm determined there are no eligible SMS-managed volumes for processing. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes. Also applies to storage group requests.
- 19 The volume being processed is not mounted.
DFSMSHsm attempted to locate the unit control block (UCB) for the volume being processed and finds the volume is not mounted.
- 20 An error occurred while processing extract list entries. DFSMSHsm successfully invoked VTOC catalog entry services to retrieve a list of data sets from an SMS-managed volume. DFSMSHsm detected a discrepancy in the extract list while processing the extract list entries.
- 21 Storage group not found.
- 22 No volumes were in the requested storage group.
- 23 No volumes were eligible for storage group processing.
- 24 An error occurred while retrieving the base configuration. DFSMSHsm invoked SMS to retrieve the base configuration. SMS failed to retrieve it.
- 25 There is a space management request on an SMS-managed volume with DBA or DBU specified, or a nonzero value of *days* on MIGRATE (*days*) or DAYS (*days*) is specified on a MIGRATE command.
- 26 There is a space management request on an SMS-managed volume without the *days* stipulated on MIGRATE (*days*) and DAYS (*days*).
- 27 There is a space management request on an SMS-managed volume that does not have low and high thresholds defined and has the following MIGRATE command specified:
- MIGRATE VOLUME(*volser*)

- 28 No requested storage groups were eligible for storage group processing.
- 29 The volume is not eligible for processing.
- 30 The version of DFSMSDss installed on the system is not at a sufficient level to support SMS-managed volumes. The function terminates for all SMS-managed volumes. The Auto function may continue for the NONSMS volumes.
- 31 The volume for restoring is an SMS-managed volume, but the most recent dump copy or the specified dump copy was made when the volume was a non-SMS-managed volume.
- 32 The volume for restoring is a non-SMS-managed volume, but the most recent dump copy or the specified dump copy was made when the volume was an SMS-managed volume.
- 33 The storage group was not eligible for processing.
- 34 Copy pool not found.
- 35 An error occurred while retrieving a copy pool definition from SMS.
- 36 There are no copy pools defined.

At the start of the DFSMSHsm automatic function, DFSMSHsm attempted to retrieve a list of copy pool definitions for processing during the automatic function. DFSMSHsm determined that there are no copy pools defined. The auto function may continue for other SMS-managed or non-SMS-managed volumes.

This return code does not provide meaningful information in a non-SMS environment and can be filtered using the PATCH command.

To *enable* filtering of this return code issue:

```
PATCH .MCVT.+297 BITS(. . . . 1 . .)
```

To *disable* filtering of this return code issue:

```
PATCH .MCVT.+297 BITS(. . . . 0 . .)
```

Note: This return code is not filtered when using the LIST command.

- 37 An error occurred while retrieving copy pool definitions in the system in which DFSMSHsm is running. DFSMSHsm invoked SMS to retrieve a list of all copy pool definitions to select copy pool volumes for automatic processing. SMS failed to retrieve the list. The function terminates for all copy pool volumes. The Auto function may continue for other SMS-managed volumes or non-SMS-managed volumes.
- 38 If you are running FRBACKUP, it is likely that DFSMSHsm has encountered a non-SMS-managed volume in a Copypool Backup Storage Group.
- 52 A GETMAIN error occurred.
- DFSMSHsm failed to get the virtual storage needed to create a mounted volume table (MVT) entry for an SMS-managed volume. The SMS-managed volume is internally ADDVOLED to DFSMSHsm for automatic processing. The function terminates for all SMS-managed volumes. The Auto function may continue for the non-SMS-managed volumes.

System action: The indicated function ends. DFSMSHsm processing continues.

Programmer response: Perform the action that corresponds to the return code you received.

Retcode Action

2, 6, 7,

8, 12, 24, 35, 37

See the preceding ARC0935I message in the command activity log for the specific failing code from the subsystem interface (SSI) of SMS.

Return Code 2 is issued when SMS is installed but not started in the IEFSSNxx member. An SMS lock token error occurs if DFSMSHsm attempts to issue an SMS service when the IGDSSIIN program is not specified to start SMS.

3 See the preceding ARC0014I message in the command activity log for the specific reason for the failure.

5 The *reason-code* for this error is the return code from the CAMLST OBTAIN macro. An error from the

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OBTAIN macro can also indicate a possible problem with the volume serial number. Ensure that the volume serial number was correctly identified. See *z/OS DFSMS Using Data Sets* for further information about the CAMLIST OBTAIN macro.

- 10 Delete the mounted volume table (MVT) entry and the migration control data set volume record (MCV) by issuing a DFSMShsm DELVOL command. Then, issue a volume command against the DELVOLed volume.
- 11 Determine why the SMS volume definition and the volume VTOC entry do not agree. Correct the inconsistency and issue a volume command against the volume.
- 14 See the preceding ARC0936I message in the command activity log for the specific failing code from SMS VTOC catalog entry service.
- 15 See the preceding ARC0184I message in the appropriate activity log for the specific I/O failing code.
- 16 See the preceding ARC0940I message in the appropriate activity log for the specific failing code.
- 17 It might be valid that no defined storage groups are eligible for processing. To determine storage group eligibility, validate your storage group definitions; for example, host affinity.
- 20 Follow the procedures in Table I, items 13 and 29; Table III, items 2, 6, 10, and 13.
- 21 Correct the storage group name if needed, and issue the command for this storage group.
- 22 It may be valid that no volumes exist in this storage group. Check your storage group definition to validate this situation.
- 23, 29 It may be valid that no volume is eligible for processing in this storage group.
- 25, 26 Reissue the command with one of the following valid MIGRATE commands for an SMS-managed volume:
 - MIGRATE VOLUME(volser)
 - MIGRATE VOLUME(volser MIGRATE(0)) [CONVERT]
 - MIGRATE VOLUME(volser) DAYS(0) [CONVERT]
 - MIGRATE VOLUME(volser MIGRATE) DAYS(0) [CONVERT]
- 27 Update the associated storage group to indicate valid high and low thresholds and resubmit the command.
- 28 It may be valid that no volume is eligible for processing.
- 30 Perform one of the following:
 - Install a version of DFSMSdss that supports SMS-managed volumes.
 - Convert the volume to a non-SMS-managed volume and rerun the function.
- 31, 32 Perform one of the following:
 - Reissue the RECOVER command with the correct DATE, DUMPGENERATION, DUMPVOLUME, or DUMPCLASS with the FROMDUMP keyword to obtain a dump copy consistent with the status (SMS or non-SMS) of the volume.
 - Convert the volume for consistency with the desired dump copy, and reissue the /0792ER command.
- 33 It may be valid that these copy pool backup storage groups are not eligible for processing. Check your storage group definition to validate this.
- 34 Correct the copy pool name, if needed, and issue the command for this copy pool.
- 36 It may be valid that no defined copy pools are eligible for processing. To determine copy pool eligibility, validate your copy pool definitions.
- 38 Remove the failing volume from the Copypool Backup Storage Group. Ensure the Copypool Backup Storage Group contains an adequate number of eligible SMS volumes to successfully FRBACKUP the copypool.
- 52 See the preceding ARC0305I message for the specific failing code.

Source: DFSMShsm

ARC0571I NO SMS MANAGED MIGRATED DATA SETS WILL BE PROCESSED, SMS IS NOT ACTIVE IN THE SYSTEM

Explanation: DFSMSHsm was in the process of automatic migration or command migration of all level 1 migration volumes or command FREEVOL of a specific migration volume. SMS is not active in the system, so DFSMSHsm cannot process any SMS-managed migrated data sets.

System action: No SMS-managed migrated data sets are processed. DFSMSHsm processing continues.

Programmer response: Bring up SMS and rerun the function.

Source: DFSMSHsm

| **ARC0580I {INTERVAL | ON-DEMAND | STORAGE GROUP *sgrp* } MIGRATION {STARTING | RESTARTING} AT *hh:mm:ss* ON *yyyy/mm/dd***

| **Explanation:** DFSMSHsm begins interval migration, on-demand migration, or storage group migration.

| **System action:** Interval migration, on-demand migration, or storage group migration proceeds. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

| **ARC0581I {INTERVAL | ON-DEMAND | STORAGE GROUP *sgrp* } MIGRATION {ENDED SUCCESSFULLY | ENDED PREMATURELY, {DFSMSHSM SHUTDOWN | SPACE MGMT HELD | DFSMSHSM IN EMERGENCY MODE | RESOURCES NOT AVAILABLE | PSM WILL START | IM WILL START}} AT *hh:mm:ss* ON *yyyy/mm/dd***

| **Explanation:** DFSMSHsm successfully completed interval migration (IM), on-demand migration, or storage group migration, or else interval migration, on-demand migration, or storage group migration ended before completion for one of the following reasons:

- A STOP command was issued to shut down DFSMSHsm.
- A HOLD command with the AUTOMIGRATION or MIGRATION parameter was issued to suspend interval migration, on-demand migration, or storage group migration processing.
- A SETSYS command with the EMERGENCY parameter was issued to place DFSMSHsm in emergency mode.
- Resources were not available to allow interval migration or on-demand migration to continue. Message ARC0560E is issued to the operator's console and the migration activity log, indicating the resource DFSMSHsm found unavailable.
- Primary space management (PSM) was requested during on-demand migration processing.
- Interval migration was requested during on-demand migration processing.

System action: The system action differs depending on the reason:

- If the HOLD command was issued with the AUTOMIGRATION or MIGRATION parameter, no new space management operations are started. For volume space management operations in progress, the ENDOFDATASET or ENDOFVOLUME parameter specified with the HOLD command determines where the processing stops.
- If ENDOFDATASET was specified, volume migration operations end at the completion of the current data set.
- If ENDOFVOLUME was specified, DFSMSHsm completes any volume migration operations in progress.
- If the STOP command or SETSYS command with the EMERGENCY parameter was issued, or the condition of RESOURCES NOT AVAILABLE occurs, all volume migration operations end at the completion of the current data set, and no new volume migration operations are started.
- If primary space management was requested, on-demand migration ends prematurely.
- If interval migration was requested, on-demand migration ends prematurely.

DFSMSHsm processing continues.

Programmer response: If interval migration or on-demand migration ends prematurely because resources are not available, see message ARC0560E, which is issued to the operator's console and the migration activity log. Message ARC0560E indicates which resource is unavailable, and the appropriate response to the problem.

Source: DFSMSHsm

ARC0584I ERROR WHEN {READING | WRITING | ERASING} A SMALL DATA SET PACKING DATA SET RECORD, DATA SET NAME = *dsname*, RECORD SEQUENCE = *recno*, VOLUME = *volser*, RC=*return-code*

Explanation: An attempt to read, write, or erase a small data set packing (SDSP) data set record for *dsname* has resulted in an unexpected nonzero return code *return-code*. The record key is the *dsname* concatenated with the *recno*. A data set name that is less than 44-characters is expanded to 44-characters with blanks and the record sequence is added to form a 45-character key.

The SDSP data set name that the error has occurred in is uid.SMALLDS.Vvolser. The uid is the authorized user ID for the DFSMSHsm-started procedure. SMALLDS and V are constants. The SDSP resides on the volume *volser*.

The return code is the 3-byte RPL feedback code returned in the VSAM RPL in field RPLFDBK. For *return-code* values, see *z/OS DFSMS Macro Instructions for Data Sets*. Both the return code and record sequence number are reported in hexadecimal format. A return code of X'080074' can be caused by an uninitialized SDSP. See *z/OS DFSMSHsm Implementation and Customization Guide* for information about creating and initializing an SDSP.

System action: DFSMSHsm processing continues.

Programmer response: Notify the system programmer.

Source: DFSMSHsm

ARC0595E BACKUP HELD, {GETMAIN | ATTACH} ERROR

Explanation: BACKUP encountered a GETMAIN or ATTACH error.

System action: The function is held.

Operator response: Notify the storage administrator or system programmer. Release BACKUP when the problem is resolved.

Source: DFSMSHsm

ARC0601E LOAD OF THE {ENF15 | ENF64 | ENF72} EXIT FAILED, ABEND CODE = *code*

Explanation: When DFSMSHsm attempted to load an exit to listen for an ENF, the load failed with abend code displayed.

- If the exit is ENF15, then DFSMSHsm cannot detect changes to the SMS configuration.
- If the exit is ENF64, then DFSMSHsm cannot detect dynamic changes to volume sizes.
- If the exit is ENF72, then DFSMSHsm cannot detect over threshold events for SMS-managed volumes and cannot start on-demand migration.

System action: DFSMSHsm processing continues.

Programmer response: Determine the cause of the load failure based on the explanation of the abend code. If the exit is ENF72, then enable interval migration until the cause of the failure is resolved. Correct the cause of the failure and start DFSMSHsm again.

For more information about abend codes, see *z/OS MVS System Codes*.

Source: DFSMSHsm

ARC0602I THE CAPACITY OF VOLUME *volser* WAS SUCCESSFULLY CHANGED FROM *mm* CYLINDERS TO *nn* CYLINDERS.

Explanation: DFSMSHsm was notified that the capacity for volume *volser* changed from *mm* cylinders to *nn* cylinders. DFSMSHsm will use the new capacity value for all future processing.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0603I DFSMSHSM WAS UNABLE TO UPDATE THE CAPACITY OF VOLUME *volser*, RC = *retcode*

Explanation: DFSMSHsm failed to update its inventory with the new capacity for volume *volser*. The values for *retcode* are:

Retcode Meaning

8 A CDS I/O error occurred.

20 Internal error occurred.

System action: DFSMSHsm processing continues.

Programmer response:

Retcode Response

8 See the corresponding ARC0184I message for additional information.

20 DFSMSHsm can only process 170 concurrent DASD dynamic volume changes. Restrict your process for changing the capacity of volumes to 170 concurrently. DFSMSHsm uses the previous capacity for the volume until DFSMSHsm is restarted.

Source: DFSMSHsm

ARC0604I DFSMSHSM CANNOT PROCESS {SMS CONFIGURATION CHANGES | DASD DYNAMIC VOLUME CAPACITY CHANGES | EXCEEDED THRESHOLD EVENTS}, RC=*retcode*

Explanation: DFSMSHsm encountered an error that prevents it from processing one of the following:

- SMS configuration changes
- Dynamic volume capacity changes to DASD volumes
- Exceeded threshold events.

Until DFSMSHsm is restarted, DFSMSHsm will use its current SMS configuration or its current volume capacity information for all volumes. The values for *retcode* are:

Retcode Meaning

8 The internal task for processing dynamic volume changes is inactive.

16 Internal error occurred.

52 GETMAIN or FREEMAIN error.

System action: DFSMSHsm processing continues.

Programmer response: If DFSMSHsm cannot process the exceeded threshold events, then enable interval migration until problem is resolved.

Retcode Response

8 The internal task for processing dynamic volume changes was stopped because of a previous error or because of a patch to disable the task. If the task was disabled through PATCH .MCVT.+ 296 BITS(...1....), remove this patch from SYS1.PARMLIB and restart DFSMSHsm.

16 A severe error occurred. Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center with the related error messages. After resolving the problem, restart DFSMSHsm.

52 Determine the cause of the storage related problem. DFSMSHsm uses the previous capacity for the volume until DFSMSHsm is restarted.

Source: DFSMSHsm

ARC0605I CAPACITY OF FAST REPLICATION {TARGET VOLUME *tgt_volser* FOR SOURCE VOLUME *src_volser* | SOURCE VOLUME *src_volser2*} DEFINED IN THE FOLLOWING COPY POOLS HAS CHANGED *cpname*...

Explanation: DFSMSHsm was notified that the capacity for the listed fast replication target volume *tgt_volser* or source volume *src_volser2* has changed. If the volume is a fast replication source volume, the message lists the copy

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pool information to which the volume's storage group is defined. If the volume is a fast replication target volume, the message lists the copy pool information for the associated fast replication source volume. Asterisks ***** in *src_volser* indicates that the volume serial number is unavailable. When the copy pool names cannot be determined, ***** is listed.

System action: DFSMSHsm processing continues.

Programmer response: Ensure that the capacity of the associated fast replication source or target volume is also changed or another compatible volume is available. Use the LIST COPYPOOL(*cpname*) command to obtain the current fast replication backup version and volume pairing information.

Source: DFSMSHsm

ARC0612I VOLUME MOUNT ISSUED FOR RECALL OR RECOVER OF *dsname*

Explanation: A request was received to recall or recover the data set named *dsname*. The source volume that contains the data set to be recalled or recovered must be mounted to process a recall or recovery operation.

System action: The command waits until the volume is mounted before processing continues.

Programmer response: This message is to inform you that a mount request was issued for the required offline volume. There is a delay until the volume is mounted. The length of time required to get a volume mounted varies from installation to installation. If the recall or recovery action seems to be taking too long for your installation, check with the system operator to make sure the volume is to be mounted.

Source: DFSMSHsm

ARC0619W RESTORE OF VOLUME *volser* HAS DETECTED THAT THE RESTORED VOLUME IS DEFINED TO DFSMS AS PART OF COPY POOL(S) <*cpname,...*>

Explanation: DFSMSHsm has completed a full volume restore of volume *volser*. DFSMSHsm has detected that this volume is defined to DFSMS as part of copy pool *cpname*. A more recent dump version may be available.

System action: DFSMSHsm processing continues.

Programmer response: Fast Replication backup versions should be reviewed immediately to confirm that an existing Fast Replication version is not more desirable. This can be accomplished using the LIST COPYPOOL(*cpname*) command.

ARC0620I AUTOMATIC DUMP {STARTING | RESTARTING}

Explanation: DFSMSHsm has begun automatic dump processing. If the message indicates STARTING, the automatic dump process is starting from the beginning. If the message indicates RESTARTING, the process is restarting because it did not complete the last time it was started. The following circumstances could prevent the process from successfully completing:

- MVS system failure.
- DFSMSHsm abnormal end.
- DFSMSHsm was shut down.
- DFSMSHsm was placed in emergency mode.
- Dump or automatic dump was held.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0621I AUTOMATIC DUMP ENDING

Explanation: DFSMSHsm has completed the automatic dump process.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0622I FULL VOLUME {DUMP | RESTORE} STARTING ON VOLUME *volser* [(SMS) | (NONSMS)] AT *time* ON *date* SYSTEM *sysid*, TASK ID=*taskid* [,TO DUMP CLASS(ES)= *class* [,*class,class,class,class*]]

Explanation: The DFSMSHsm full volume dump or restore operation is starting for volume *volser*. If the function is dump, either (SMS) or (NONSMS) appears, indicating the current status of the volume.

- *class* indicates the classes being dumped to.
- *time* indicates the start time, expressed as *hh:mm:ss* (hours, minutes and seconds).
- *date* indicates the current date, expressed as *yy/mm/dd* (year, month and day).
- *sysid* indicates the SMF identifier of the system on which the dump is being processed is
- *taskid* indicates the EBCDIC name of the DFSMSHsm task that is processing the request. The *taskid* is used in all ARC0640I messages that are associated with the volume being processed.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0623I FULL VOLUME {DUMP | RESTORE} OF VOLUME *volser* ENDING AT *time* [, DCLASS=*class*, DGEN=*generation*, DATE=*date*], PROCESSING {SUCCESSFUL | ERRORS OCCURRED | FAILED}

Explanation: The DFSMSHsm full volume dump or restore operation for volume *volser* has completed. The time of day the operation completes is *time* expressed as *hh:mm:ss* (hours, minutes and seconds).

For volume dump, if processing is indicated as:

- SUCCESSFUL, then all requested dump copies were successfully made.
- ERRORS OCCURRED, then at least one but not all of the requested dump copies were successfully made.
- FAILED, then none of the requested dump copies could be made. In this case, see the dump activity log for detailed messages on errors encountered during dump processing.

For volume restore, processing is indicated either as SUCCESSFUL or FAILED.

- *class* indicates the dump class in which the dump copy was produced for volume restore operations that complete successfully.
- *generation* indicates the relative dump generation.
- *date* indicates the date the dump occurred. This part of the message will not appear if the restore failed.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: If the operation was not successful, look for related error messages in the dump or command activity log pertaining to the same volume.

Source: DFSMSHsm

ARC0624I {DUMP | RECOVER | RESTORE | FASTREPLICATION} OF VOLUME *volser* TERMINATED PRIOR TO COMPLETION, {DFSMSHSM SHUTDOWN | DFSMSHSM IN EMERGENCY MODE | BACKUP DISABLED | DUMP HELD | AUTODUMP HELD | UNABLE TO MOUNT A TAPE | DFSMSHSM SHUTDOWN REQUESTED WHILE WAITING FOR A TAPE MOUNT | OUTPUT VOLUME LIMIT EXCEEDED | RECOVERY HELD | DFSMSdss FAILING RC=*return-code*}

Explanation: The DFSMSHsm full volume dump, restore, fast replication, or the incremental volume recovery operation for volume *volser* has ended before it has completed processing. During the operation, one of the following conditions has occurred:

- A STOP command has been issued to shut down DFSMSHsm.
- A SETSYS command with the EMERGENCY parameter has been issued to place DFSMSHsm in emergency mode.
- A SETSYS command with the NOBACKUP parameter has been issued to disable DFSMSHsm backup, dump, recovery, and restore functions.
- A HOLD command with the applicable DUMP or RECOVER parameter has been issued to suspend the function.
- A tape volume is required and the operator responded that the tape volume is not available for mounting.
- A STOP command has been issued while DFSMSHsm has been waiting for a required tape volume to be mounted.

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- The number of tapes required for the full volume dump has exceeded the DFSMSHsm 40-volume limit.
- The DFSMSDss function has completed with a return code greater than 4, indicating a failure. The value of *return-code* is the DFSMSDss final function return code as documented in *z/OS MVS System Messages, Vol 1 (ABA-AOM)*.

System action: The indicated operation ends. If SHUTDOWN is indicated, DFSMSHsm processing ends. Otherwise, DFSMSHsm processing continues. If the output volume limit has been exceeded, the dump volumes that have been used will have their contents internally invalidated.

Programmer response: If the output volume limit has been exceeded, then use higher capacity tapes and reissue the command. For all other situations, no response is required. If the DFSMSDss function fails, see *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for information about the DFSMSDss failure and appropriate action. The request can be reissued to DFSMSHsm after corrective action is taken.

Source: DFSMSHsm

ARC0625I AUTOMATIC DUMP TERMINATED PRIOR TO COMPLETION, {DFSMSHSM SHUTDOWN |
DFSMSHSM IN EMERGENCY MODE | BACKUP DISABLED | DUMP HELD | AUTODUMP
HELD | QUIESCE TIME REACHED | AUTODUMP ALREADY RUNNING IN THE COMMON
DUMP QUEUE}

Explanation: The DFSMSHsm automatic dump function was being performed. It ended before it completed because one of the following occurred:

- A STOP command was issued to shut down DFSMSHsm.
- A SETSYS command with the EMERGENCY parameter was issued to place DFSMSHsm in emergency mode.
- A SETSYS command with the NOBACKUP parameter was issued to disable the backup, dump, recovery, and restore functions.
- A HOLD command with the DUMP, DUMP(AUTO), or ALL parameter was issued to suspend the dump function.
- The quiesce time is the time after which no more dumps of volumes are to be started.
- The host attempted to run AUTODUMP in the common dump queue, but auto dump was already found to be running the dump group.

System action:

- If a STOP command was issued, DFSMSHsm immediately ends all active volume dumps, invalidates any partial dump copies, and ends.
- If a SETSYS command with the EMERGENCY or NOBACKUP parameter was issued, DFSMSHsm immediately ends all active volume dumps, invalidates any partial dump copies, and ends.
- If a HOLD command was issued with the DUMP or DUMP(AUTO) parameter, and without the ENDOFDATASET parameter, DFSMSHsm completes any volume dumps that were in progress and ends.
- If a HOLD command was issued with the DUMP or DUMP(AUTO) parameter, and with the ENDOFDATASET parameter, DFSMSHsm immediately ends all active volume dumps, invalidates any partial dump copies, and ends. When the automatic dump quiesce time is reached, DFSMSHsm completes any volume dump operations that were in progress, but will not dump any additional volumes.
- If the host attempted to run AUTODUMP in the common dump queue, but auto dump was already found to be running the dump group, auto dump on this host will not run.

If SHUTDOWN is indicated, DFSMSHsm processing ends. Otherwise, DFSMSHsm processing continues.

Programmer response: If automatic dump was in progress, it can be resumed at the point of interruption by issuing one of the following:

- START DFSMSHsm (DFSMSHsm is the DFSMSHsm cataloged procedure)
- SETSYS NOEMERGENCY
- RELEASE DUMP | RELEASE DUMP(AUTO)
- SETSYS BACKUP

For the automatic dump to be resumed at the point of interruption, the command must take effect the same day as the command that caused automatic dump to end and the current time must still be within the start window for automatic backup.

For automatic dump to begin after midnight, the value of the latest start time can be smaller than the planned start time. For example, specify 2330 for *hhmm1* and 0100 for *hhmm2* on the same day as the command that caused automatic dump to end. The current time must still be within the start window for automatic dump.

When the automatic dump ends because the quiesce time is reached, it cannot be resumed because the current time is no longer within the start window.

Source: DFSMSHsm

ARC0626I {DUMP | RESTORE} OF VOLUME *volser* TERMINATED, ERROR {READING | WRITING} A DFSMSHSM CONTROL DATA SET RECORD

Explanation: The DFSMSHsm full volume dump or restore function was being performed for volume serial *volser*. An error of the indicated type was encountered trying to retrieve or record information about the dump or restore operation. See an accompanying ARC0184I message for the type and key of the record being processed.

System action: The indicated process ends for the volume. DFSMSHsm processing continues.

Programmer response: Identify any possible errors in the control data sets. If corrective action is taken, retry the operation.

Source: DFSMSHsm

ARC0627I SYSTEM TIMER INOPERATIVE, AUTOMATIC DUMP FUNCTION IS INOPERATIVE

Explanation: The DFSMSHsm dump control task issued the STIMER macro in an effort to schedule the start of automatic dump. An error occurred indicating the system timer function was inoperative.

System action: DFSMSHsm continues to process command requests for full volume dumps, but will not begin the automatic dump process.

Operator response: If the RELEASE command, with the DUMP or ALL parameter is issued between the earliest and latest automatic dump start times, automatic dump will begin.

Programmer response: Determine if the error is caused by a hardware or software malfunction.

Source: DFSMSHsm

ARC0628I AUTOMATIC EXPIRATION OF DUMP VOLUMES STARTING

Explanation: DFSMSHsm has just begun the process of identifying dump volumes that have expired contents and are eligible for automatic reuse. This occurs as the first step of automatic dump in the primary processing unit or as the first step of the primary processing unit level functions associated with automatic dump on an N day in the dump cycle.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0629I AUTOMATIC EXPIRATION OF DUMP VOLUMES ENDING

Explanation: DFSMSHsm has ended the process of identifying dump volumes eligible for automatic reuse. (This message does not indicate that the process completed successfully, only that it has ended). It will end early if:

- Backup or automatic backup is held at the end of the data set.
- Dump or automatic dump is held at the end of the data set.
- Emergency mode is entered.
- Backup is disabled.
- Shutdown is requested.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0630I CREATION OF DUMP VOLUME SELECTION TABLE STARTING

Explanation: DFSMSHsm has begun to create an internal table of available dump volumes. This is called the dump volume selection table (DVST). The conditions under which DFSMSHsm creates the tables are:

- At DFSMSHsm startup during the initialization of the dump control task
- When the activity against dump volumes is high enough to warrant a refresh of the contents of the DVST

Note: The last condition occurs only when the SELECTVOLUME(SPECIFIC) parameter was specified on the SETSYS command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0631I CREATION OF DUMP VOLUME SELECTION TABLE ENDING

Explanation: DFSMSHsm has completed the creation of the dump volume selection table (DVST).

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0632I CREATION OF DUMP VOLUME SELECTION TABLE FAILED, RC=*retcode*

Explanation: While trying to create a table of available dump volumes, an error occurred. The conditions under which DFSMSHsm creates the table are:

- At DFSMSHsm start up during initialization of the dump control task
- When the activity against dump volumes is high enough to warrant a refresh of the contents of the DVST

Note: The last condition occurs only when the SELECTVOLUME(SPECIFIC) parameter was specified on the SETSYS command.

The values for *retcode* are:

Retcode Meaning

- | | |
|----|--|
| 8 | While trying to access the control data set for dump volume information, more than five I/O errors occurred. See the accompanying ARC0184I or ARC0187I message. |
| 10 | While trying to access the DVL records in the control data set, a positioning error occurred. See an accompanying ARC0187I message. |
| 52 | The GETMAIN macro returned a nonzero return code when DFSMSHsm attempted to get more virtual storage for the dump volume selection table. It is possible that too many volume backup, volume dump, or volume space management tasks were running concurrently. It may be necessary to reduce the number of concurrent tasks by using the SETSYS command with the MAXBACKUPTASKS, MAXDUMPTASKS, MAXMIGRATIONTASKS, or MAXINTERVALTASKS parameters. Retry the volume functions that ended with this error. |

System action: This dump volume selection fails to find a specific volume, which causes the selection of a scratch tape volume. The next specific selection attempt tries to build the table again.

Programmer response:

- For return code 8, take the action indicated in message ARC0184I.
- For return code 10, take the action indicated in message ARC0187I.
- For return code 52, it is possible that too many volume backup tasks, space management tasks, or volume dump tasks, were running concurrently. It may be necessary to reduce the number of concurrent tasks by using the SETSYS command with the MAXBACKUPTASKS, MAXMIGRATIONTASKS, MAXINTERVALTASKS, or MAXDUMPTASKS parameters. Retry the volume functions that ended with this error.

Source: DFSMSHsm

ARC0633I DUMP AND RESTORE DISABLED, INSUFFICIENT LEVEL OF DFSMSDSS INSTALLED

Explanation: During DFSMSShsm initialization, the dump control task checks the level of DFSMSdss installed in the system. It is found to be insufficient to support the indicated functions. DFDSS 2.2.0 or a subsequent release is required.

System action: No dump or restore operation is done. DFSMSShsm processing continues.

Programmer response: Verify that DFDSS 2.2.0 or a subsequent release is installed. DFSMSdss must be available for DFSMSShsm to load by residing in an execution library accessible by LNKLST xx in SYS1.PARMLIB. The xx is a specified number, usually 00, however, it can be altered during an IPL.

Source: DFSMSShsm

ARC0634I AUTOMATIC DUMP FAILED TO RESTART BECAUSE THE CURRENT TIME IS OUTSIDE THE AUTOMATIC DUMP START WINDOW

Explanation: DFSMSShsm has determined that the automatic dump function did not run to completion on the current day. However, during its restart processing, DFSMSShsm has determined that the only reason automatic dump did not restart is because the current time is outside the currently specified window for starting this processing.

System action: Automatic dump is not restarted. DFSMSShsm processing continues.

Programmer response: If you want automatic dump to restart on the current day, change the latest start time by issuing the SETSYS command with the AUTODUMPSTART parameter.

Source: DFSMSShsm

ARC0635I DUMP OF {VOLUME *volser* | SGROUP *sg* | COPY POOL *cpname*} NOT PERFORMED, REASON=*reascode*

Explanation: An error was encountered while DFSMSShsm was beginning a full volume dump of volume *volser* or of the volumes in storage group *sg* or copy pool *cpname*. The error caused the operation to end. The values for *reascode* are:

Reascode**Meaning**

- | | |
|----|--|
| 4 | A volume dump or storage group dump or copy pool dump failed because none of the dump classes are valid. This can happen in one of the following three instances; <ul style="list-style-type: none"> • A BACKVOL command was issued without specifying any dump classes and the volume has not been associated with any dump classes through an ADDVOL command or through a storage group definition. • A FRBACKUP command was issued without specifying any dump classes and the copy pool has not been associated with any dump classes via the copy pool definition. • The volume, storage group, or copy pool was previously associated with dump classes which have been disabled or removed since the association was made. |
| 8 | The dump process for the volume ended because all attempts to allocate tapes for output for target dump classes failed. Message ARC0500I might precede this message for each allocation failure. |
| 12 | The dump process for the volume was ended because an error occurred in allocating the source volume. |
| 16 | Before writing a dump copy to a dump volume for a dump class with stacking, DFSMSShsm encountered an error while trying to read or update the JFCB intended to represent the dump copy opened by DFSMSdss. |
| 20 | A volume or storage group dump failed because the dump classes to be used for this dump generation do not contain the same encryption or HWCOMPRESS settings. |
| 24 | A volume failed because the maximum BCDS record size is too small. |

System action: Dump operations end for the volume, storage group, or copy pool. DFSMSShsm processing continues.

Programmer response:

- For reason code 4, look for any preceding ARC0650I messages which will indicate the one or more invalid dump class name.

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- For reason codes 8 and 12, see the preceding ARC0500I messages and follow its problem determination responses. Note that ARC0500I is also issued to the command activity log.
- For reason code 16, if *volser* was not subsequently dumped successfully during automatic dump, issue the BACKVOL command with the DUMP parameter for the source volume.
- For reason code 20, modify the dump class definitions so that the encryption/HWCOMPRESS settings are identical for this volume or storage group, or remove the conflicting dump classes and create the dumps separately.
- For reason code 24, change the maximum stack value for this dump to a number less than or equal to 97, or update the maximum BCDS record size to 2093.

Source: DFSMSHsm

ARC0636I ERROR WRITING DUMP COPY OF VOLUME *volser1*, DUMPCLASS= *class*, OUTPUT VOLUME=*volser2*, COPY WILL BE INVALIDATED

Explanation: While writing a dump copy of volume *volser1* to dump class *class*, DFSMSDss encountered a permanent I/O error. The dump tape volume where the error occurred is *volser2*. The dump copy is invalidated, and the volumes will be internally deleted by the DELVOL command. For the completely filled volumes, if TAPEDELETION for dump is SCRATCHTAPE, the volumes are returned to the scratch pool. If TAPEDELETION for dump is HSM TAPE, the DELVOL processing is equivalent to the REASSIGN parameter of the DELVOL command. For the volume that was being written on when the error was encountered (*volser2*), the volume has its contents invalidated and is marked unavailable for selection. This message is issued for each dump copy that has a permanent I/O error.

System action: If this was the last or only dump class receiving output for this dump, the dump function ends. If at least one valid dump copy still remains, the dump function continues until completion or until no more good copies exist. DFSMSHsm processing continues.

Programmer response: If a dump copy is required in this dump class, retry the operation after corrective action has been taken.

Source: DFSMSHsm

ARC0637I DUMP COPY OF VOLUME *volser* COMPLETE, DCLASS= *class*, EXPDT={*expdt* | NOLIMIT}, [DISPOSITION= '*disposition*']

Explanation: The DFSMSHsm dump function just completed for volume *volser*. The target dump class was *class*. If a retention period other than NOLIMIT was specified, the expiration date is given as *expdt*. If a retention period of NOLIMIT was given, NOLIMIT appears as the expiration date. If disposition information was defined for the dump class, it is given as *disposition*. This message is written to the dump activity log for each dump copy successfully created for a source volume. This message will also be issued to the system console if the disposition exists.

System action: DFSMSHsm processing continues.

Operator response: Take the steps required to satisfy the intended distribution for the volumes.

Programmer response: None.

Source: DFSMSHsm

ARC0638I MAXDUMPTASKS=*dtasks*, ADSTART=(*time1d time2d time3d*), DUMPIO=(*n,m*), VOLUMEDUMP(CC=(STANDARD | PREFERRED | REQUIRED | VIRTUALREQUIRED | VIRTUALPREFERRED | CACHEREQUIRED | CACHEPREFERRED)), MAXDUMPRECOVERTASKS=*rdtasks*

Explanation: A QUERY command was issued with the SETSYS or BACKUP parameter.

The maximum number of full volume dump tasks allowed for concurrent processing is *dtasks*. The earliest time automatic dump can start is *time1d*, expressed as *hh:mm* (hours, minutes). The latest time automatic dump is allowed to start is *time2d*, expressed as *hh:mm* (hours, minutes). The time after which no more full volume dumps are started is *time3d*, expressed as *hh:mm* (hours, minutes). The DFSMSDss input/output optimization options for full volume dump, *n*, and for the DFSMSDss datamover function, *m*, are given for DUMPIO.

These values of *n* and *m* are the same as specified for the DFSMSDss OPTIMIZE keyword:

Value **Meaning**

- 1 DFSMSDss reads one track at a time.
- 2 DFSMSDss reads two tracks at a time.
- 3 DFSMSDss reads five tracks at a time.
- 4 DFSMSDss reads one cylinder at a time.

VOLUMEDUMP(CC=) indicates the concurrent copy technique that is specified for dump volumes.

STANDARD indicates that concurrent copy is not used to back up the volume. Normal backup processing is used.

PREFERRED indicates that either virtual or cache based concurrent copy is preferred for processing dump volumes. If a concurrent copy session cannot be established, then normal processing is used.

REQUIRED indicates that either virtual or cache based concurrent copy is required for processing dump volumes. If a concurrent copy session cannot be established, then processing fails.

VIRTUALREQUIRED indicates that virtual concurrent copy is required to process dump volumes. If a virtual concurrent copy session cannot be established, then processing fails.

VIRTUALPREFERRED indicates that virtual concurrent copy is preferred for processing dump volumes. If a virtual concurrent copy session cannot be established, then normal processing is used.

CACHEREQUIRED indicates that cache based concurrent copy is required to process dump volumes. If a cache based concurrent copy session cannot be established, then processing fails.

CACHEPREFERRED indicates that cache based concurrent copy is preferred for processing dump volumes. If a cache based concurrent copy session cannot be established, then normal processing is used.

MAXDUMPRECOVERTASKS indicates that the maximum number of full volume recovery from dump tasks allowed for concurrent processing is *rdtasks*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0639I DUMP VTOC COPY {SCRATCHED | NOT SCRATCHED}, DATA SET NAME=*dsname*

Explanation: Either DFSMSHsm deleted the last valid dump copy of a dump generation, or the maximum number of dump VTOC copy data sets to keep has been exceeded for the source volume. The associated dump VTOC copy data set is no longer needed. DFSMSHsm attempted to scratch the data set. The message indicates whether the operation was successful or unsuccessful. If it was not successful, message ARC0528I precedes this message giving the failing return code for the SCRATCH macro.

System action: DFSMSHsm processing continues. The dump VTOC copy data set remains logically deleted regardless of the results of the scratch attempt. DFSMSHsm will not attempt to access the data set again.

Programmer response: If the scratch failed, see the accompanying ARC0528I message, issued to the command activity log for additional information. You may try to scratch the data set using some other method.

Source: DFSMSHsm

ARC0640I <*taskid*><MSGTEXT>

Explanation: DFSMSHsm has been performing a full volume dump, a full volume restore, a data set restore or a volume-level fast replication operation. DFSMSDss has been invoked to perform the function. During the process, DFSMSDss has issued a message related to the function, and DFSMSHsm has intercepted the message for retransmission to the DFSMSHsm user or to one of the activity logs. During a full volume dump, the *taskid* value is the name ARCDVxxx, where xxx is the identifier of the dump task processing the request. The identifier should be associated with message ARC0622I to track the volume that is being processed. During a full volume restore, the name ARCGRVOL is used for *taskid*. During physical data set restore, the name ARCGDSN is used for *taskid*. During

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a volume-level fast replication function, the name ARCFRTM is used for *taskid*. Inserted as *msgtext* is the DFSMSdss SYSPRINT record. DFSMSdss messages have a prefix of ADR.

System action: DFSMSShsm processing continues.

Programmer response: See *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for a description of the DFSMSdss messages.

Source: DFSMSShsm

ARC0641I VOL DUMP= *n vols1*, VOL DUMP FAIL= *fails3*, VOL RESTORE= *n vols2*, VOL RESTORE FAIL= *fails4*, DS RESTORE= *n datasets3*, DS RESTORE FAIL= *fails5*

Explanation: The QUERY command was issued with the STATISTICS parameter. This message contains dump and restore statistics for the current day.

- *n vols1* indicates the number of volumes successfully dumped.
- *fails3* indicates the number of volumes whose dumps failed.
- *n vols2* indicates the number of volumes successfully restored.
- *fails4* indicates the number of volumes whose restores failed.
- *n datasets3* indicates the number of data sets successfully restored.
- *fails5* indicates the number of data sets whose restores failed.

System action: DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSShsm

ARC0642I DUMP= {NOT HELD | HELD AT END OF VOLUME | HELD}, AUTODUMP= {NOT HELD | HELD AT END OF VOLUME | HELD}, VOLUME DUMP= {ACTIVE | INACTIVE}, VOLUME RESTORE= {ACTIVE | INACTIVE}, DATA SET RESTORE={ACTIVE | INACTIVE}

Explanation: The QUERY command was issued with the ACTIVE parameter. This message indicates whether all dumping or autodump is held, and whether volume dump, volume restore, or data set restore is currently in progress. See the preceding message ARC0163I to see if the backup or recovery functions are held.

System action: DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSShsm

ARC0643I {ADDVOL | BACKVOL | FRBACKUP} COMMAND REJECTED, {DUMP CLASS *class* NOT DEFINED | NO DUMP CLASS ENABLED | CONFLICTING DUMP CLASS SETTINGS}

Explanation: An ADDVOL, BACKVOL, or FRBACKUP command has been issued specifying a dump class *class* that is not defined to DFSMSShsm.

During ADDVOL processing for a primary volume, if the AUTODUMP (*class,...*) subparameter is not specified, the MCV record is checked for dump classes specified on a previous ADDVOL command. Similarly, during ADDVOL processing for a dump volume, if the DUMPCLASS(*class*) subparameter is not specified, the DVL record is checked for a dump class specified on a previous ADDVOL command. If a dump class specified on a previous ADDVOL command no longer has a BCDS record describing it, this message is issued and the ADDVOL command fails.

During BACKVOL, either specified dump class *class* is not defined, all the specified dump classes are disabled, or the dump classes specified on the command contain conflicting encryption/HWCOMPRESS settings.

During FRBACKUP, required dump class *class* is not defined.

System action: The command fails. DFSMSShsm processing continues.

Programmer response: If the dump classes contain conflicting settings, modify the dump class definitions so that the encryption/HWCOMPRESS settings are identical for the volume or storage group, or remove the conflicting dump classes and create the dumps separately. If the command failed for a reason other than the conflicting dump class settings, reissue the command with the proper dump class name or names. Any preceding ARC0650I message for the same volume indicates the invalid dump class names.

Source: DFSMSHsm

ARC0644I WARNING: DUMP FAILED AFTER DUMP COPY SUCCESSFULLY CREATED

Explanation: This message is issued when an ending error is encountered by DFSMSHsm during the ending process of a dump operation. DFSMSdss successfully completed the dump operation. DFSMSHsm then encountered an error in recording the dump information in the backup control data set. DFSMSHsm does not have a complete record of the successful dump copy(s). The output tapes containing the dumped data are usable and could be used as the source of a restore operation by submitting a restore request directly to DFSMSdss. DFSMSHsm is not able to perform the restore because of the failure encountered in recording the dump information.

System action: The command issued fails. DFSMSHsm processing continues.

Programmer response: If you want to have DFSMSHsm perform the operation again, issue a BACKVOL command with the DUMP parameter for the source volume just dumped. Do this after corrective action has been taken for the BCDS. See the accompanying ARC0184 message and take corrective action based on that message. Otherwise, the tape volume serial numbers that contain the just-produced dump copy can be manually inventoried until they are reused.

Source: DFSMSHsm

ARC0645I SYNADAF-diagnostic

Explanation: An I/O error has been encountered while DFSMSHsm has been reading or writing a data set. The SYNADAF macro is issued to analyze the error. The diagnostic message returned from the SYNADAF macro is the message text. See *z/OS DFSMS Macro Instructions for Data Sets* for a description of the message format.

System action: The read or write fails. DFSMSHsm processing continues.

Programmer response: Determine the cause of the problem and retry the operation after corrective action is taken.

Source: DFSMSHsm

ARC0646I DUMP REQUEST QUEUED UNTIL AUTODUMP COMPLETES

Explanation: A BACKVOL command with the DUMP parameter was issued while automatic dump was in progress. The automatic dump function runs to completion or until ended early.

System action: The command waits. DFSMSHsm processing continues.

Programmer response: If the command is no longer wanted, cancel the request with the HCANCEL or CANCEL command. Otherwise, no response is required.

Source: DFSMSHsm

ARC0647I BACKUP AND DUMP HELD AT END OF VOLUME, NO MIGRATION LEVEL 1 SPACE FOR VTOC COPIES

Explanation: During a volume backup, volume dump, or FREEVOL, either an out-of-space condition was encountered on a migration level 1 volume when the VTOC copy data set was allocated or written, or no migration level 1 volumes was added to this processing unit. Because DFSMSHsm attempts to select the migration level 1 volume with the most free space, DFSMSHsm assumes that none of the migration level 1 volumes have enough space. No further volume backup or volume dumps are processed until action is taken to correct this problem. For volume dump and volume backup, this message is preceded by message ARC0704E or ARC0705I, indicating which volume was being dumped or backed up when this error was encountered.

System action: The command or automatic function ends. DFSMSHsm processing continues.

Programmer response: Migration level 1 space is required. Do one of the following to free space on a migration level 1 volume:

- Issue an ADDVOL command to add another migration level 1 volume to DFSMSHsm
- Issue a MIGRATE command to migrate level 1 data sets to level 2
- Wait until automatic secondary space management runs level migration

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After this, release backup and dump with the RELEASE command. Automatic backup or automatic dump restarts if they ended early because of this condition and if the current time is still within their start windows. A command to back up all primary volumes also restarts if it ended early for this reason.

Source: DFSMSHsm

ARC0648I AUTOMATIC DELETION OF EXCESS DUMP VTOC COPIES STARTING

Explanation: DFSMSHsm has just begun the process of deleting dump VTOC copy data sets that are in excess of the value defined for the primary processing unit; this value was defined by the VTOCCOPIES subparameter of the DEFINE DUMPCLASS command. This occurs as the last step of automatic dump in the primary processing unit, or as the second step of the primary processing unit level functions associated with automatic dump on an N day in the dump cycle.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0649I AUTOMATIC DELETION OF EXCESS DUMP VTOC COPIES ENDING

Explanation: DFSMSHsm has just completed the process of deleting dump VTOC copy data sets that are in excess of the value defined for the primary processing unit; this value was defined by the VTOCCOPIES subparameter of the DEFINE DUMPCLASS command. This message does not indicate that the process completed successfully, only that it ended. It will end early if:

- Backup or automatic backup is held at the end of the data set
- Emergency mode is entered
- Backup is disabled
- Shutdown is requested

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0650I DUMP OF {VOLUME *volser* | SGROUP *sg* | COPY POOL *cpname*} WILL NOT TARGET DUMP CLASS *class*, {CLASS DISABLED | DUPLICATE CLASS | CLASS NOT DEFINED | TAPE ALLOCATION FAILURE | RESET SPECIFIED | FREQUENCY NOT MET | BACKUP NOT COMPLETE}

Explanation: DFSMSHsm began a full volume dump of volume *volser* or of the volumes in storage group *sg* or copy pool *cpname*, either during the automatic dump function or for a BACKVOL or FRBACKUP command. (If *sg* is "***", the message applies to all storage groups specified on a BACKVOL command.) For CLASS DISABLED or CLASS NOT DEFINED, the dump class *class* is now disabled or does not have a BCDS record. A DEFINE command was issued with the DUMPCLASS and DISABLE parameters or the DCL record was deleted with the FIXCDS command. For TAPE ALLOCATION FAILURE, a tape unit could not be allocated for the dump copy intended for dump class *class*. For DUPLICATE CLASS, a dump class was specified more than once. For RESET SPECIFIED, the reset option is requested for dump class *class*. RESET is an invalid option for dump classes assigned to copy pool volumes because the change indicator cannot be reset. For FREQUENCY NOT MET, the frequency or day setting specified in the required dump class is not met. For BACKUP NOT COMPLETE, a complete backup copy does not exist for generation 0 of copy pool *cpname*, so the dump cannot be performed to dump class *class*.

System action: The dump continues as long as the volume or storage group is assigned at least one other dump class that is an eligible target for this dump and has a tape unit successfully allocated for it. DFSMSHsm processing continues.

For copy pool dump, if FREQUENCY NOT MET or BACKUP NOT COMPLETE, auto dump of copy pool *cpname* will continue for eligible dump classes. Otherwise, the operation ends for copy pool dump if a required dump class is not an eligible target for this dump. DFSMSHsm processing continues.

Programmer response: For CLASS DISABLED or CLASS NOT DEFINED, make sure this dump class does not appear on any subsequent ADDVOL commands if the volume is a non-SMS primary or migration level 1 volume;

this may require that the ARCCMDxx member of SYS1.PARMLIB to be edited to change this. Make sure this dump class does not appear in any storage group definitions if the volume is SMS managed; this may require a change to the storage group definition to be made using ISMF.

For TAPE ALLOCATION FAILURE, see the preceding ARC0500I message that gives the failure reason and problem determination. If message ARC0635I follows this message with return code 8, then the dump operation ended because no other dump copies were processed successfully or this was the only dump copy to be created. If a dump to this dump class is required for the volume or storage group, reissue a BACKVOL command after defining or enabling the dump class, as needed.

For copy pool dump, remove the dump class from either the copy pool definition or the FRBACKUP command or both, or replace it with another dump class not defined with RESET or, if you specify RESET, change the dump class definition so that RESET is not specified. If necessary, reissue the FRBACKUP command.

Source: DFSMSHsm

ARC0651I SMS MANAGED VOLUMES CANNOT BE DUMPED OR RESTORED, INSUFFICIENT LEVEL OF DFSMSDSS INSTALLED

Explanation: DFSMSHsm has detected that the version of DFSMSdss that has been installed on this system does not support SMS-managed data. DFDSS 2.4.0 or a subsequent release is required to support dump and restore on SMS-managed volumes. Non-SMS-managed volumes can be dumped and restored under control of DFSMSHsm. SMS-managed volumes will not be dumped under control of DFSMSHsm. DFSMSHsm will disallow restore requests of SMS-managed volumes.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0652I ERROR UPDATING DCR RECORD DURING AUTOMATIC EXPIRATION OF DUMP VOLUMES

Explanation: A positioning or read error occurred while DFSMSHsm was attempting to update the DCR record for each processing unit during automatic expiration of dump volumes. As a result, the dump volume selection table (DVST) may not be promptly rebuilt in all processing units. This means that the list of available dump volumes may not immediately include the volumes just made available during automatic expiration processing.

The DVST will be rebuilt at DFSMSHsm start up during initialization of the dump control task, or when the activity against dump volumes is high enough that a refresh of the contents of the DVST occurs.

See the accompanying message ARC0187I in the DFSMSHsm dump activity log for information about the BCDS record which caused the error.

System action: DFSMSHsm processing continues.

Programmer response: See the accompanying message ARC0187I in the DFSMSHsm dump activity log for information about the BCDS record which caused the error. Correct the error.

Source: DFSMSHsm

ARC0653I *tracks* TRACK READ ERRORS OCCURRED DURING DUMP OF VOLUME *volser*

Explanation: During a full volume dump operation, DFSMSdss encountered TRACKS errors reading tracks from the input volume *volser*. These tracks were not copied to the dump output.

System action: The dump operation continues unless the number of track read errors exceeds the DFSMSdss limit of 100.

Programmer response: Correct the errors on the volume and monitor the next full volume dump operation.

Source: DFSMSHsm

ARC0654I STACK *nnn* FOR DUMP CLASS *name* WENT TO *mmm* DUMP VOLUMES, ENDING ON *dmpvol*

Explanation: Dump class *name* has a STACK value of *nnn*. When DFSMSHsm started a dump task to stack volume dumps to that dump class, the particular set of dump copies (see message ARC0637I for each copy) resulted in spanning to *mmm* dump volumes (the last one being *dmpvol*) of the dump class.

System action: DFSMSHsm continues.

Programmer response: To reduce the chance of this reoccurring, reduce the STACK value for the dump class before you run automatic dump again.

Source: DFSMSHsm

ARC0655I TASK ID *id* COULD NOT STACK DUMP OF VOLUME *volser*

Explanation: DFSMSHsm dump task *id* was unable to stack a dump of source volume *volser* (usually after two attempts, separated by time) on a dump volume with other dumps, because another DFSMSHsm function was processing *volser* at the time.

The return and reason codes have the following values:

Table 1. ARC0655I Return and Reason codes

Retcode	Reascode	Meaning
2	0	Unable to find or build an MVT.
4	0	Unable to enqueue resource ARCPVOL/ <i>volser</i> .
6	4	The requested record is in use by another host. Message ARC0371I states the record type, key, and the host ID that uses the record.
	8	Unable to read record.
	12	Unable to read record.
	16	The minimum time has not elapsed between two consecutive autodumps for the volume.
10	0	The requested SDSP is in use.
14	0	SMS environment error. Message ARC0570I gives details.

System action: During autodump—depending on the value of MAXDUMPTASKS and the time needed for the other DFSMSHsm function to complete—DFSMSHsm may have succeeded in stacking a dump of *volser* during some later dump task, or it may have had to dump the volume to a dump tape by itself.

During command dump, *volser* is not dumped.

Programmer response: For autodump, if message ARC0623I does not appear for *volser*, issue a BACKVOL VOLUMES(*volser*) DUMP command to get a (nonstacked) dump of *volser*.

For command dumps, reissue the BACKVOL VOLUMES(*volser*) DUMP command when DFSMSHsm auto functions are not executing.

For autodump, Retcode 6 with Reascode 16, minimum time has not elapsed. The minimum time defaults to 14 hours and is stored in a patchable field in the MCVT. You can find examples of patches that can be issued to run autodump multiple times a day in *z/OS DFSMSHsm Implementation and Customization Guide*, Chapter 16, Tuning DFSMSHsm.

Source: DFSMSHsm

ARC0656I AUTODUMP DUMPING AT LEAST ONE VOLUME IN NON-STACKING MODE

Explanation: Autodump attempted multiple times to stack full-volume dumps of all the source volumes eligible for stacking. The dump for at least one eligible volume could not be stacked, and autodump is attempting one last time to dump those nonstacked volumes (one dump per dump volume).

Conditions that can cause this message are: multiple instances of message ARC0623I with FAILED for a source volume, or message ARC0655I for a source volume.

System action: DFSMSHsm autodump continues in nonstacking mode.

Programmer response: If desired, this message can be used in an auto-operation to hold an autodump.

Source: DFSMSHsm

ARC0657I THRESHOLD OF DUMP ERRORS REACHED. DUMP, AUTODUMP AND FRBACKUP DUMP HELD AT END OF VOLUME

Explanation: The daily number of dump errors has been reached. In order to minimize the number of tapes used, DUMP, AUTODUMP and FRBACKUP DUMP are HELD at end of volume. The default number of daily dump errors is set to 50 but may be patched. See *z/OS DFSMSHsm Implementation and Customization Guide* to determine how to patch this value.

The daily dump error count will be reset to 0 on the next day, if DUMP is released, or if HSM is restarted.

System action: DFSMSHsm dump processing is held.

Programmer response: Determine the reason for the dump errors by reviewing error messages issued for each failed dump attempt. If the root cause of the error has been resolved and dump should be resumed, issue RELEASE DUMP. Waiting dump requests will be retried while failed dump requests must be re-issued.

Source: DFSMSHsm

ARC0680I EXPIRE {BACKUP | ABARS} VERSIONS STARTING AT *time* ON *date*, SYSTEM *sysid* [, WITH THE DEBUG OPTION IN EFFECT]

Explanation: DFSMSHsm has received an EXPIREBV command and has started to process it.

- BACKUP indicates the EXPIREBV command is processing backup versions.
- ABARS indicates that ABARS versions are being processed.
- *time* and *date* indicates the time and date the processing has started.
- *sysid* indicates the SMF identifier of the system on which the function is being processed.

If the message indicates that the DEBUG option is in effect, a previous SETSYS command has been processed that put DFSMSHsm into DEBUG mode.

System action: The command continues processing; and if the DEBUG option is in effect, no backup versions will actually be expired. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0681I EXPIRE {BACKUP | ABARS} VERSIONS ENDING AT *time* ON *date*, NUMBER OF VERSIONS EXPIRED= *count*, LAST BCDS KEY PROCESSED= *bcds-key*, PLANNED ENDING KEY WAS= *planned-ending-bcds-key*

Explanation: DFSMSHsm has completed the processing of an EXPIREBV command.

- BACKUP indicates the EXPIREBV command has processed backup versions.
- ABARS indicates that ABARS versions have been processed.
- *time* and *date* indicates that time and date processing have been completed.
- *count* indicates the total number of backup or ABARS versions that have been expired by this process.
- *bcds-key* indicates the key of the last record that has been processed.

If the command has been processed to normal completion, the last key processed represents one of the following:

- The key of the last record in the BCDS if an ending key has not been specified on the command
- The key of the last record with a key alphabetically less than or equal to the ending key that has been specified on the command

If the command ends prior to normal completion, *bcds-key* is the key of the last backup or ABARS record processed. The RESUME keyword can be used to continue processing from the *bcds-key*. Separate ending keys are maintained for MCB and ABR records.

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If the command ends at the planned ending key, specified by *planned-ending-bcds-key*, and if the next EXPIREBV command in this processing unit is issued with the RESUME option, processing will start at the beginning of the BCDS.

System action: Processing of the EXPIREBV command ends. DFSMSHsm processing continues.

Programmer response: If the command ends early, see the ARC682I message for the reason for the early end; then issue another EXPIREBV command with the RESUME option to complete the processing intended by the previous command.

Source: DFSMSHsm

ARC0682I EXPIRE {BACKUP | ABARS} VERSIONS TERMINATED PRIOR TO COMPLETION, {DFSMSHSM SHUTDOWN | DFSMSHSM IN EMERGENCY MODE | BACKUP DISABLED | EXPIREBV HELD | TASK ABENDED | MANAGEMENT CLASS NOT FOUND FOR ASSOCIATED AGGREGATE GROUP | TOO MANY BCDS I/O ERRORS}

Explanation: Processing of the EXPIREBV command ended before its normal completion because one of the following occurred:

- A STOP command was issued to shut down DFSMSHsm.
- A SETSYS command with the EMERGENCY parameter was issued to place DFSMSHsm in emergency mode.
- A SETSYS command with the NOBACKUP parameter was issued to disable the backup functions.
- A HOLD command with the EXPIREBV keyword was issued to suspend the expire backup versions function.
- The EXPIREBV task abnormally ended (abended). Message ARC0003I, which describes the type of abend, was issued to the command activity log.
- The EXPIREBV command was issued with the *aname* parameter but the management class for that aggregate was not found.
- DFSMSHsm detected too many retryable errors while trying to read all of the MCB and ABR records in the BCDS. The error limit is normally 5 per every 500 records processed.

BACKUP indicates the EXPIREBV command was processing backup versions. ABARS indicates that ABARS versions were being processed.

System action: Processing of the EXPIREBV command ends immediately. If SHUTDOWN is indicated, DFSMSHsm processing ends. Otherwise, DFSMSHsm processing continues.

Programmer response: For expire backup versions to be resumed at the point of interruption, another EXPIREBV command must be issued with the RESUME keyword and the same parameters which were used in the initial command. If you do not wish to resume the expire backup versions function at the point of interruption, omit the RESUME keyword on the next EXPIREBV command, and optionally use the STARTKEY parameter to indicate a starting point.

If the task abnormally ended, see the ARC0003I message issued to the command activity log with a task name of ARCCPEBV.

If excessive I/O errors occurred reading the BCDS, see the ARC0187I message(s) that precedes this message. The I/O error limit can be modified with the PATCH command. The value is contained in the MCVT in the field named MCVTRERL. The ARC0187I message contains a return code that indicates what type of error occurred.

Source: DFSMSHsm

ARC0683I SMS MANAGED DATA SETS WILL NOT BE PROCESSED FOR EXPIRE BACKUP VERSIONS, REASON= *reascode*

Explanation: While processing an EXPIREBV command, DFSMSHsm encountered a condition that prevented the backup versions of SMS-managed data sets from being processed. The condition is described by *reascode*, which has the following possible values:

Reascode

Meaning

- | | |
|----|-----------------------|
| 01 | SMS is not installed. |
| 02 | SMS is not active. |

- 03 An error occurred attempting to retrieve a list of all management class definitions. Either DFSMSHsm encountered an error attempting to invoke the Construct Access Services facility of SMS, or SMS encountered an error. For SMS errors, Message ARC0935I is issued to the command activity log with the actual failure reason.

System action: Processing of the EXPIREBV command continues. DFSMSHsm processing continues.

Programmer response: If SMS is not installed, DFSMSHsm cannot process SMS-managed data sets until SMS is installed and the system is restarted.

If SMS is inactive, reissue the command after SMS becomes active again.

If the *retcode* 3 error condition has a corresponding message that contains more information about the failure, consult the corresponding message. The corresponding message is written in the command activity log. See the programmer response sections of the appropriate related message for more details.

Source: DFSMSHsm

ARC0684I A NON-RETRYABLE ERROR OCCURRED ACCESSING THE BCDS DURING EXPIRE {BACKUP | ABARS} VERSIONS

Explanation: DFSMSHsm was processing an EXPIREBV command when a severe error occurred while attempting to position to or read the next BCDS record. Message ARC0187I was issued prior to this message, and contains a return code indicating what type of error occurred. BACKUP indicates the EXPIREBV command was processing backup versions. ABARS indicates that ABARS versions were being processed.

System action: Processing of the EXPIREBV command ends. DFSMSHsm processing continues.

Programmer response: See the preceding ARC0187I message, its return code, and its programmer response.

Source: DFSMSHsm

ARC0685I EXPIREBV COMMAND NOT PROCESSED — {SMS DATA SETS CANNOT BE PROCESSED AND NO NONSMSVERSIONS PARAMETERS WERE SPECIFIED | BACKUP IS NOT ENABLED | BCDS IS NOT DEFINED | STARTING KEY IS HIGHER IN COLLATING SEQUENCE THAN ENDING KEY | ABARSVERSIONS PARAMETER SPECIFIED WITH NONSMSVERSIONS PARAMETER | ABARSVERSIONS AGNAME PARAMETER SPECIFIED WITH STARTKEY, ENDKEY, OR RESUME PARAMETER | RETAINVERSIONS PARAMETER SPECIFIED WITHOUT ABARSVERSIONS(AGNAME) | NONSMSVERSIONS PARAMETER SPECIFIED WITHOUT ANY SUBPARAMETERS | 'DISPLAY' OR 'EXECUTE' OPTION NOT SPECIFIED | EXECUTING IN ANOTHER HOST}

Explanation: An EXPIREBV command has been issued. DFSMSHsm has determined that the command could not be processed for one of the following reasons:

- SMS is either inactive, or not installed, or a severe error has occurred while attempting to retrieve information from SMS.
Message ARC0683I has been issued prior to this message and indicates why SMS-managed data sets cannot be processed. The EXPIREBV command does not include any parameters for processing non-SMS-managed data sets.
- The backup functions have not been enabled because no BCDS is defined or a severe error occurred trying to access the BCDS during DFSMSHsm startup.
- The BCDS is not defined. The ABARSVERSIONS parameter requires a BCDS.
- Either the STARTKEY parameter has been provided or the RESUME parameter has been specified (a nonblank key has been saved in the backup control record from the previous execution), and you specified the ENDKEY parameter on the EXPIREBV command. The starting key specified with STARTKEY or the saved key is greater in collating sequence than the ending key. The collating sequence is based on the EBCDIC character set.
- You have specified the ABARSVERSIONS keyword with the NONSMSVERSIONS keyword on the EXPIREBV command. These are mutually exclusive parameters.
- You have specified the ABARSVERSIONS(AGNAME(*agname*)) keyword with STARTKEY, ENDKEY, or RESUME keywords on the EXPIREBV command. ABARSVERSIONS(AGNAME(*agname*)) implies a starting and ending point for ABR records in the BCDS.
- You have specified the RETAINVERSIONS keyword on the EXPIREBV command but have failed to supply the subparameter.

ARC0686I • ARC0699I

- You have specified the NONSMSVERSIONS keyword on the EXPIREBV command, but have failed to supply one of its subparameters. At least one subparameter is required when NONSMSVERSIONS is specified.
- You have failed to provide either the DISPLAY or the EXECUTE keyword on the EXPIREBV command. One or the other is required.
- The EXPIREBV command has already been started in another DFSMSHsm host.

System action: Processing of the EXPIREBV command ends. DFSMS/MVS processing continues.

Programmer response: If message ARC0683I has also been issued, see this message and its programmer response for more information.

If the command parameters are in error or are incomplete, correct the syntax and reissue the command.

If the backup functions are not enabled, DFSMSHsm must be stopped. The BCDS must be defined (if not already), and any problems with the BCDS must be corrected. Restart DFSMSHsm before reissuing the command.

Source: DFSMSHsm

ARC0686I MANAGEMENT CLASS *mgtclassname*, ONCE ASSOCIATED WITH [DELETED] DATA SET *dsname*, IS NOT AVAILABLE.

Explanation: While DFSMSHsm was processing SMS-managed data set *dsname* with the EXPIREBV command, it detected that the active SMS configuration did not contain management class *mgtclassname*.

- If the message contains DELETED, data set *dsname* is not currently cataloged; management class *mgtclassname* was associated with the data set when the data set was last backed up.
- If the message does not contain DELETED, data set *dsname* is currently cataloged and associated with management class *mgtclassname*.

System action: In either case, DFSMSHsm cannot determine how to expire the cataloged backup version(s) that may exist for the data set; no such versions are expired.

The EXPIREBV command continues with any backup versions identified as uncataloged.

Programmer response: After the EXPIREBV command completes, determine the contents of the active configuration. If there are many such messages, it may be that the wrong configuration was activated.

If data set *dsname* is DELETED, it may be that *mgtclassname* was deleted from the SMS configuration after *dsname* was backed up, then deleted. The management class can be redefined, at least temporarily, to delete the backup versions using the EXPIREBV command; or you can use the BDELETE command to delete specific versions.

Source: DFSMSHsm

ARC0687I {num} DATA SETS WERE SKIPPED DURING EXPIREBV PROCESSING

Explanation: While processing an EXPIREBV command, DFSMSHsm encountered one or more backup versions for which RETAINDDAYS was specified at the time of backup. Backup versions with RETAINDDAYS specified can only be expired on a z/OS V1R11 or later system. Num data sets were not processed because of this condition.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the EXPIREBV command on a z/OS V1R11 or later system.

Source: DFSMSHsm

ARC0699I AUTOMATIC BACKUP ENDING EXCEPT FOR POSSIBLE RETRIES OF IN USE DATA SETS

Explanation: The DFSMSHsm automatic backup function is completed. However, some data sets may have been in use when automatic backup attempted to process them. Those data sets may not yet be complete and will be retried by data set backup.

System action: DFSMSHsm processing continues. Message ARC0721I will be issued when all active data sets have been retried.

Programmer response: For automation purposes, see ARC0699I or ARC0721I, or both, as appropriate. Message ARC0699I is issued when all volumes have been processed by automatic backup. Message ARC0721I is issued after message ARC0699I and when all data sets that were attempted by automatic backup have been completed.

ARC0700I {BACKUP OF VOLUME *volser* | BACKUP OF MIGRATED DATA SETS | MOVEMENT OF BACKUP VERSIONS} SUSPENDED, TASK WAITING FOR AN AVAILABLE {DASD | TAPE} {DAILY | SPILL} BACKUP VOLUME

Explanation: A DFSMSHsm task attempted to select a backup volume for use during the suggested operation. However, the type of backup volume *volser* needed was not currently available and another DFSMSHsm task is currently using the type of backup volume needed. The task waits for the required type of backup volume to become available. When the required type of backup volume becomes available, the task continues the operation being performed. In a multiple processing unit environment, the task checks every 5-minutes to see if the required type of backup volume has become available. If no backup volume of the required type has become available by the end of the 5-minute interval, the task issues this message again and continues to wait for an available backup volume. The problem is that more DFSMSHsm tasks are processing that require a backup volume than there are backup volumes available.

System action: The operation being performed is suspended until the required type of backup volume becomes available. When the required type of backup volume comes available, the operation continues.

Programmer response: Notify the storage administrator who can use the ADDVOL command to add more backup volumes to DFSMSHsm.

Source: DFSMSHsm

ARC0701I {BACKUP | SPILL | CLEANUP | FREEVOL} OF VOLUME (*volser*) TERMINATED, ERROR {OPENING | READING | CLOSING} VTOC

Explanation: An error occurred while DFSMSHsm was opening, reading, or closing the VTOC.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator for assistance. Retry the backup operation after corrective action has been taken.

Source: DFSMSHsm

ARC0702I {BACKUP | SPILL} OF VOLUME *volser* TERMINATED, NO {DAILY | SPILL} BACKUP VOLUME AVAILABLE

Explanation: DFSMSHsm was performing BACKUP or SPILL processing on the volume with volume serial number *volser*. DFSMSHsm was attempting to select a daily backup or SPILL backup volume to continue with the BACKUP or SPILL processing, but no volume of the appropriate type was available.

System action: BACKUP or SPILL processing ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator, who can assign additional daily backup or SPILL backup volumes. Retry the backup operation when additional daily backup or SPILL backup volumes have been assigned.

Source: DFSMSHsm

ARC0703I {BACKUP | SPILL} OF VOLUME *volser* TERMINATED, ERROR {ALLOCATING | DEALLOCATING} {DAILY | SPILL} BACKUP VOLUME

Explanation: While performing BACKUP or SPILL processing, DFSMSHsm attempted to allocate another daily backup or SPILL backup volume to continue the BACKUP or SPILL processing or to deallocate the daily backup or SPILL backup volume it was currently using in a BACKUP or SPILL function. An error occurred in the allocation or deallocation process and the daily backup or SPILL backup volume was not allocated or deallocated. The volume being backed up or SPILLED has the volume serial number *volser*. The daily backup or SPILL backup volume for which the allocation has failed is identified in message ARC0500I.

System action: BACKUP or SPILL processing ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator to determine the exact cause of the error.

Source: DFSMSHsm

ARC0704E {BACKUP | DUMP | RECOVER} OF VOLUME *volser1* TERMINATED, ERROR {ALLOCATING | OPENING | CLOSING | READING | WRITING} VTOC COPY DATA SET [ON VOLUME *volser2*]

Explanation: While performing a backup, dump, or recover operation on a volume with volume serial number *volser1*, DFSMSHsm attempted to perform the identified operation on a copy of the VTOC of the volume being processed. This copy of the VTOC resides on a backup or migration level 1 volume for backups or recovers, or on a migration level 1 volume for dump. The copy would be used to control a volume recovery or restore if necessary. In an attempt to perform the suggested operation on the VTOC copy data set, an error occurred.

If the error was ALLOCATING VTOC COPY DATA SET the volume serial number where the allocation of the VTOC copy data set failed is identified by *volser2*.

If FAST REPLICATION DUMP processing was interrupted previously for this volume, the VTOC copy might have been partially allocated.

Note: If SMS is attempting to manage the allocation of the HSM.VTOC.* data set, check ACS routines to be sure that the HSM.VTOC.* data sets are not SMS managed.

System action: The volume operation ends. DFSMSHsm processing continues.

Programmer response: If FAST REPLICATION DUMP processing was interrupted previously for this volume and now fails because it cannot allocate the VTOC copy data set, the existing VTOC will need to be deleted prior to the retry of the DUMP function. *Volser2* is the name of the *volser* where the VTOC resides. The specific VTOC copy data set can be identified by 'DFHSM.DUMPVTOC.timestamp.Vvolser1.Ddate'. Issue a LIST COPYPOOL(*cpname*) for copy pool version date and time stamps.

Source: DFSMSHsm

ARC0705I {BACKUP | DUMP} OF VOLUME *volser* TERMINATED, NO MIGRATION LEVEL 1 VOLUME FOR VTOC COPY DATA SET

Explanation: While beginning a volume backup or full volume dump operation on volume *volser*, DFSMSHsm attempted to select a migration level 1 volume to put the VTOC copy data set on. No migration level 1 volume was available.

System action: The indicated operation ends. DFSMSHsm processing continues.

Programmer response: Determine why the ADDVOL command was not specified for the migration level 1 volume or why the backup or dump operation was accidentally requested. If the ADDVOL command was not specified for at least one migration level 1 volume, issue the ADDVOL command for each migration level 1 volume. Otherwise, ensure that volume backup and volume dump are not requested. Use the LIST command to see if any migration level 1 volumes have been ADDVOLed. Use the QUERY command to determine how the backup or dump functions are set up.

Note: The LIST command can also be used to see if volumes are in DRAIN status. Volume in DRAIN status are not selectable.

Source: DFSMSHsm

ARC0706I BACKUP OF VOLUME *volser* TERMINATED, NO {DASD | TAPE} DAILY BACKUP VOLUME AVAILABLE

Explanation: DFSMSHsm was attempting to back up the volume with volume serial number *volser*. The BACKUPDEVICECATEGORY parameter was specified on the ADDVOL or BACKVOL command. However, the appropriate type of daily backup volume was not available.

System action: The volume backup operation ends. DFSMSHsm processing continues.

Programmer response: Assign additional daily backup volumes of the appropriate type. Retry the backup operation when the additional daily backup volumes have been assigned.

Source: DFSMSHsm

ARC0707I CANNOT BACK UP GDG DATA IN VSAM CATALOG *dsname*, REASON=*reascode*

Explanation: A generation data group (GDG) cannot be backed up because an error occurred. DFSMSHsm ended the backup of the GDG entries in *dsname*.

The values for *reascode* are:

Reascode

Meaning

- | | |
|----|--|
| 4 | DFSMSHsm attempted to obtain and read the data set VTOC entry for indexed sequential data set organization and data set extension VTOC entry of a copy data set. The read failed or the VCAT copy data set could not be allocated. |
| 8 | The backup volume is a single-file 3480 tape volume (or the equivalent). DFSMSHsm tried to open the data set, but failed. |
| 12 | The backup volume is a tape volume. An error occurred on the write of the tape labels. |
| 16 | The backup volume is a tape volume. DFSMSHsm tried to write to the tape, but the write failed. |
| 20 | The backup volume is a tape volume. To allocate the tape data set, the JFCB must be read. The read failed, and the copy data set could not be allocated. |
| 24 | The backup volume is a tape volume. After writing the copy data set to tape, DFSMSHsm tried to update the tape table of contents record for the volume. The update failed, making the data already written on the tape useless. |
| 28 | The backup volume is a tape volume. At end-of-volume processing, DFSMSHsm tried to internally add a new tape volume to the system. The addition failed. |
| 32 | A GETMAIN error occurred. |
| 35 | The VCAT copy data set is on a multifile tape volume or on a DASD volume. DFSMSHsm tried to open the data set but failed. |
| 36 | An ESTAE set up error occurred. |
| 37 | There is no more space on the DASD backup volume. |

System action: DFSMSHsm processing continues.

Programmer response: If the reason code is 4, make additional data sets available as copy data sets. For all other reason codes, notify the storage administrator who can make additional data sets available.

Source: DFSMSHsm

ARC0708I {BACKUP | SPILL | CLEANUP | RECOVER | DUMP | RESTORE | FRBACKUP | FRRECOV} OF VOLUME *volser* TERMINATED, GETMAIN/FREEMAIN ERROR

Explanation: DFSMSHsm was attempting to perform a backup, SPILL, cleanup, recover, full volume dump, or full volume restore for the volume *volser*. An error occurred in an attempt to get or free an area of virtual storage. A nonzero return code was returned by the GETMAIN or FREEMAIN macro.

DFSMSHsm was attempting to perform a backup, SPILL, cleanup, recover, full volume dump, full volume restore, fast replication backup, or fast replication recover for the volume *volser*. An error occurred in an attempt to get or free an area of virtual storage. A nonzero return code was returned by the GETMAIN or FREEMAIN macro.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: If many volume backup tasks, volume dump tasks, or both were running concurrently, it might be necessary to reduce the number of concurrent tasks by using the SETSYS command with the MAXBACKUPTASKS or MAXDUMPTASKS parameters. Retry the volume functions that ended with this error.

Source: DFSMSHsm

ARC0709I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | DATA SET BACKUP} TERMINATED, NO DAILY BACKUP VOLUME AVAILABLE

Explanation: DFSMSHsm was attempting to move the backup versions off the migration level 1 volumes, back up any eligible data sets that might have migrated, or create new backup versions from a data set backup command. The operation could not be continued because no daily backup volume is available to move the backup versions to or to place any newly created backup versions on.

System action: The backup operation ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator, who can assign additional daily backup volumes.

Programmer response: None.

Source: DFSMSHsm

ARC0710I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | DATA SET BACKUP} TERMINATED, ERROR {ALLOCATING | DEALLOCATING} DAILY BACKUP VOLUME

Explanation: DFSMSHsm was attempting to move the backup versions off the migration level 1 volumes, back up any eligible data sets that might have migrated, or create new backup versions from a data set backup command. During the backup operation, DFSMSHsm attempted to allocate a daily backup volume to continue the backup operation or to deallocate the daily backup volume that was currently being used for the backup operation. An error occurred in the allocation or deallocation process, and the daily backup volume was not allocated or deallocated properly. The daily backup volume for which the allocation has failed is identified in message ARC0500I.

System action: The backup operation ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator, who can determine the cause of the allocation or deallocation failure and assign more daily backup volumes if necessary.

Programmer response: None.

Source: DFSMSHsm

ARC0711I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | DATA SET BACKUP} TERMINATED, ERROR READING OR WRITING BACKUP CYCLE VOLUME RECORD

Explanation: DFSMSHsm was attempting to move the backup versions off the migration level 1 volumes, back up any eligible data sets that might have migrated, or create new backup versions from a data set backup command. During the backup operation, DFSMSHsm attempted to read or write the control data set backup cycle volume record identified in message ARC0184I. An error occurred during the I/O operation.

System action: The backup operation ends. DFSMSHsm processing continues.

Operator response: Notify the system programmer.

Programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0712I {BACKUP | SPILL | CLEANUP} OF VOLUME *volser* TERMINATED, BACKUP CYCLE VOLUME RECORD IN USE BY ANOTHER HOST

Explanation: DFSMSHsm was attempting to back up, SPILL, or clean up the volume *volser*. During BACKUP, SPILL, or CLEANUP processing, DFSMSHsm attempted to use a backup cycle volume record (BVR). Each time the record was read, it could not be used because another processing unit was using it. DFSMSHsm tried to obtain the record with no success.

System action: BACKUP, SPILL, or CLEANUP processing ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator, who can determine why another processing unit was using the record. Retry the backup operation after corrective action has been taken.

Programmer response: None.

Source: DFSMSHsm

ARC0713I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | DATA SET BACKUP} TERMINATED, BACKUP CYCLE VOLUME RECORD IN USE BY ANOTHER HOST

Explanation: DFSMSHsm was attempting to move the backup versions off the migration level 1 volumes, back up any eligible data sets that might have migrated, or create new backup versions from a data set backup command. During the backup operation, DFSMSHsm attempted to use a backup control data set backup cycle volume record. Each time the record was read, it could not be used because another processing unit was using it. DFSMSHsm repeatedly attempted to obtain the record with no success.

System action: The backup operation ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator, who can determine why another processing unit is using the record. Retry the backup operation at a later time.

Programmer response: None.

Source: DFSMSHsm

ARC0714I {BACKUP | SPILL | CLEANUP | FREEVOL } OF VOLUME *volser* TERMINATED, DFSMSHSM {SHUTDOWN | IN EMERGENCY MODE | BACKUP HELD | AUTOBACKUP HELD | BACKUP DISABLED}

Explanation: DFSMSHsm was attempting to process the volume with the volume serial number *volser*. During the backup, SPILL, freevol, or cleanup operation, one of the following conditions occurred:

- A STOP command was issued to shut down DFSMSHsm.
- A SETSYS command with the EMERGENCY parameter was issued to put DFSMSHsm in emergency mode.
- A HOLD command with a BACKUP or BACKUP(AUTO) parameter was issued to suspend backup or auto backup processing.
- A SETSYS command with the NOBACKUP parameter was issued to disable the backup function.

System action: BACKUP, SPILL, or CLEANUP processing ends. If SHUTDOWN is indicated, DFSMSHsm processing will end. Otherwise, DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0715I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS} TERMINATED, {DFSMSHSM SHUTDOWN | DFSMSHSM IN EMERGENCY MODE | BACKUP HELD | BACKUP DISABLED | FREEVOL ML1BACKUPVERSIONS NOT ALLOWED WHILE VOLUME BACKUP ACTIVE}

Explanation: DFSMSHsm was moving the backup versions off the migration level 1 volumes or was backing up any eligible data sets that might have migrated. During the backup operation, one of the following conditions occurred:

- A STOP command was issued to shut down DFSMSHsm.
- A SETSYS command with the EMERGENCY parameter was issued to place DFSMSHsm in emergency mode.
- A HOLD command with the BACKUP parameter was issued to suspend backup processing.
- A SETSYS command with the NOBACKUP parameter was issued to disable the backup function.
- Volume backup tasks are running and FREEVOL ML1BACKUPVERSIONS is not allowed to run concurrently.

System action: The backup operation ends. If SHUTDOWN is suggested, DFSMSHsm processing will end. Otherwise, DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0716I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | DATA SET BACKUP} TERMINATED, GETMAIN/FREEMAIN ERROR

Explanation: DFSMSHsm was attempting to move the backup versions off the migration level 1 volume, back up any eligible data sets that might have migrated, or create new backup versions from a data set backup command.

ARC0717I

During the operation, DFSMSHsm attempted to obtain or free an area of virtual storage. A nonzero return code was received from the GETMAIN/FREEMAIN macro.

System action: The backup operation ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator, who can attempt to determine the cause of the error using the snap dump taken at the time of the error.

Programmer response: None.

Source: DFSMSHsm

ARC0717I {AUTOMATIC | COMMAND} BACKUP TERMINATED PRIOR TO COMPLETION, {DFSMSHSM SHUTDOWN | DFSMSHSM IN EMERGENCY MODE | BACKUP HELD | AUTOBACKUP HELD | QUIESCE TIME REACHED | BACKUP DISABLED}

Explanation: DFSMSHsm was performing a multiple-volume backup operation. Either automatic backup was in progress or a BACKVOL command with the PRIMARY parameter was being processed. During the backup operation, one of the following occurred:

- A STOP command was issued to shut down DFSMSHsm.
- A SETSYS command with the EMERGENCY parameter was issued to put DFSMSHsm in emergency mode.
- A HOLD command with a BACKUP or BACKUP(AUTO) parameter was issued to suspend backup or auto backup processing.
- The automatic backup quiesce time is reached.
- A SETSYS command with the NOBACKUP parameter was issued to disable the backup function.

System action: If the HOLD command with the BACKUP parameter was issued, DFSMSHsm will complete any volume backup operations that were in progress and no new volume backup operations are started.

If the SETSYS command with the NOBACKUP parameter was issued, any volume backup operations that were in progress do **not** complete and no new volume backup operations are started.

When the automatic backup quiesce time is reached, DFSMSHsm will complete any volume backup operations that were in progress. No new volume backup operations are started.

If the STOP command or SETSYS command with the EMERGENCY parameter was issued, all volume backup operations end at the completion of the current data set, and no new volume backup operations are started. DFSMSHsm processing continues.

Operator response: If automatic backup was in progress, it can be resumed at the point of interruption by issuing one of the following corresponding system programmer or operator commands:

- START DFSMSHsm (DFSMSHsm is the DFSMSHsm cataloged procedure)
- SETSYS NOEMERGENCY
- RELEASE BACKUP or RELEASE BACKUP(AUTO)
- SETSYS BACKUP

For automatic backup to be resumed at the point of interruption, the command must take effect the same day as the command that caused automatic backup to end, and the current time must still be within the start window for automatic backup.

For automatic backup to begin after midnight, the value of the latest start time can be smaller than the planned start time. For example, specify 2330 for *hhmm1* and 0100 for *hhmm2* on the same day as the command that caused automatic backup to end. The current time must still be within the start window for automatic backup.

When automatic backup ends because the quiesce time is reached, it cannot be resumed because the current time is no longer within the start window.

If a BACKVOL command with the PRIMARY parameter was in progress, it can be resumed at the point of interruption only if the HOLD command with the BACKUP parameter or SETSYS command with the NOBACKUP parameter caused it to end. The BACKVOL command with the PRIMARY parameter can be resumed by issuing the

corresponding RELEASE command with the BACKUP parameter or the SETSYS command with the BACKUP parameter, provided the command is issued during the same startup of DFSMSHsm as the command that caused the multiple-volume backup command to end.

Programmer response: None.

Source: DFSMSHsm

ARC0718I MOVEMENT OF BACKUP VERSIONS STARTING AT *time* ON *date* SYSTEM *sysid*

Explanation: DFSMSHsm movement of backup versions off the migration level 1 volumes has started. When a BACKDS or HBACKDS command is issued, the backup version is temporarily placed on the migration level 1 volume with the most available space. DFSMSHsm is now starting to move these backup versions to the daily backup volume. The start time is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The current date is *date*, expressed as *yy/mm/dd* (year, month, day). The SMF system identifier of the system on which the backup version movement is proceeding is *sysid*. Descriptions of individual data sets processed follow in the associated ARC0734I message.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0719I MOVEMENT OF BACKUP VERSIONS ENDING AT *time*, *nbv* BACKUP VERSIONS MOVED

Explanation: The DFSMSHsm movement of backup versions off the level 1 migration volumes has ended. The time of day the backup operation ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The number of backup versions that was moved is *nbv*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0720I AUTOMATIC BACKUP {STARTING | RESTARTING}

Explanation: DFSMSHsm has begun automatic backup. If the message text shows STARTING, automatic backup is starting from the beginning. If the message text shows RESTARTING, automatic backup is restarting because it did not successfully complete processing the last time it started. The following circumstances could prevent automatic backup from successfully completing:

- MVS system failure.
- DFSMSHsm abnormal end.
- DFSMSHsm was shut down.
- DFSMSHsm was placed in emergency mode.
- Backup was held.
- Backup was disabled.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0721I AUTOMATIC BACKUP ENDING

Explanation: DFSMSHsm has completed automatic backup.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0722I BACKUP STARTING ON VOLUME *volser* {(SMS) | (NONSMS)} AT *time* ON *date* SYSTEM *sysid*

Explanation: BACKUP command processing is starting for volume *volser*. The current status of the volume is indicated by either (SMS) or (NONSMS). The start time *time* is expressed as *hh:mm:ss* (hours, minutes, seconds). The date of backup *date* is expressed as *yy/mm/dd* (year, month, day). The SMF system identifier of the system on which the backup is processed is *sysid*. Descriptions of individual data sets processed follow in ARC0734I messages.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0723I BACKUP ENDING ON VOLUME *volser* AT *time*, *nds* DATA SETS BACKED UP

Explanation: A DFSMSHsm backup operation on the volume *volser* completed. The time of day the backup operation ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The number of data sets backed up is *nds*. Count *nds* includes data sets with backups scheduled for retry because data set was in use at the time its backup was initially attempted. Such a retry may not be complete at the time this message is issued, and in fact may fail.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0724I {SPILL | CLEANUP | FREEVOL} STARTING ON BACKUP VOLUME *volser* AT *time* ON *date*,
SYSTEM *sysid*

Explanation: SPILL, FREEVOL or CLEANUP processing has started on the backup volume *volser*. The starting *time* is expressed as *hh:mm:ss* (hours, minutes, seconds). The current *date*, is expressed as *yy/mm/dd* (year, month, day). The SMF system identifier of the system on which the backup operation is processing is *sysid*. This message will be followed by one or more ARC0734I messages which give additional detail concerning each data set that has been processed.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0725I BACKUP SPILL IS USING VOLUME *volser*

Explanation: DFSMSHsm is performing the SPILL operation on a backup volume. The volume with the volume serial number *volser* is being used as a SPILL volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0726I {CLEANUP | SPILL | FREEVOL} ENDING ON BACKUP VOLUME *volser* AT *time*, *nds1* DATA SETS
SCRATCHED {*nds2* DATA SETS SPILLED}

Explanation: SPILL, FREEVOL, or CLEANUP processing on the backup volume with the volume serial number *volser* has completed. The time the operation ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The number of data sets scratched during the SPILL or cleanup operation is *nds1*. The number of data sets SPILLED is *nds2*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0727I VOLUME *volser1* OWNED BY VSAM CATALOG *catname* ON VOLUME *volser2*

Explanation: The backup operation is processing. The volume serial number of the volume to be backed up is *volser1*. The volume is owned by the VSAM catalog *catname*, or by the master catalog. If the master catalog owns the volume *catname* is **MASTER CATALOG**. The volume serial number of the volume on which the catalog resides is *volser2*, or for master catalog, is SYSRES, indicating a system volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0728I VTOC FOR VOLUME *volser1* COPIED TO DATA SET *dsname* ON VOLUME *volser2*

Explanation: Part of DFSMSHsm incremental volume backup or full volume dump is to copy the VTOC of the volume being processed to a data set on a DFSMSHsm owned volume. The volume serial number of the volume being processed is *volser1*. The data set name of the VTOC copy is *dsname*. The DFSMSHsm volume containing the VTOC copy data set has a volume serial number of *volser2*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0729I ENTRIES FROM VSAM CATALOG *catname* COPIED TO DATA SET *dsn* ON VOLUME *volser2*

Explanation: DFSMSHsm completed the part of the backup operation that copies VSAM catalog generation data group entries. Entries from the catalog *catname* that owns the original volume were written into data set *dsname* on the new volume having the volume serial number *volser2*. If there is no owning VSAM catalog other than the system catalog, *catname* is shown as **MASTER.CATALOG**.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0730I {BACKUP | SPILL | CLEANUP} OF VOLUME *volser* TERMINATED, ERROR READING OR WRITING BCDS RECORD

Explanation: DFSMSHsm was attempting to back up, spill, or clean up the volume with the volume serial number *volser*. During the operation, DFSMSHsm attempted to read or write a backup control data set (BCDS) record necessary to continue the operation. An error occurred during the I/O operation. The type of record and the key of the record is given in the message ARC0184I.

System action: The volume backup, spill, or cleanup operation ends. DFSMSHsm processing continues.

Operator response: Notify the system programmer, who can determine the cause of the error. Retry the backup operation after corrective action has been taken.

Programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0731I {MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS | DATA SET BACKUP} TERMINATED, ERROR READING OR WRITING CDS RECORD

Explanation: DFSMSHsm was attempting to move the backup versions off the migration level 1 volumes, back up any eligible data sets that may have migrated, or create new backup versions from a data set backup command. During the backup operation, DFSMSHsm attempted to read or write a control data set (CDS) record necessary to continue the backup operation. An error occurred during the I/O operation. The type of record and the key of the record is given in the message ARC0184I.

System action: The operation ends. DFSMSHsm processing continues.

Operator response: Notify the system programmer.

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Programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0732I WARNING: OWNING VSAM CATALOG NOT FOUND FOR VOLUME *volser*, VSAM DATA SETS NOT CATALOGED IN AN ICF CATALOG WILL NOT BE BACKED UP

Explanation: DFSMSHsm attempted to back up a VSAM-owned volume with the volume serial number *volser*. The volume VTOC entry for the volume suggests that the volume is owned by a VSAM catalog, but DFSMSHsm did not find an entry for this volume in the VSAM catalog.

System action: The non-VSAM data sets on the volume continue to be backed up, but no attempt is made to back up any VSAM data sets on the volume that are not cataloged in the integrated catalog facility (ICF) catalog. DFSMSHsm processing continues.

Programmer response: Determine why the volume VTOC entry and the VSAM catalog are giving conflicting information.

Source: DFSMSHsm

ARC0733I {BACKUP | SPILL | CLEANUP} OF VOLUME *volser* TERMINATED, ERROR READING OR WRITING BACKUP CYCLE VOLUME RECORD

Explanation: DFSMSHsm was attempting to back up, SPILL, or clean up the volume with volume serial number *volser*. During an operation, DFSMSHsm attempted to read or write a backup cycle volume record identified in message ARC0184I. An error occurred during the I/O operation.

System action: The backup, SPILL, or cleanup operation ends. DFSMSHsm processing continues.

Programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Retry the operation after corrective action has been taken. This problem might have occurred because a DEFINE command with the BACKUP parameter was never issued.

Source: DFSMSHsm

ARC0734I ACTION=*action* FRVOL=*volser1* TOVOL=*volser2* | TRACKS=*tracks* | RC=*retcode*, REASON=*reascode*, AGE=*days*, DSN=*dsname*

Explanation: This message is issued for each data set processed during level- or volume-oriented processing or for each backup version processed as a result of the EXPIREBV command. A message precedes the first ARC0734I message to show which function is in progress. The term *action* describes the processing done to the data set identified by *dsname*. The possible actions are:

- BACK-UP — Create a backup version of a data set.
- BK-SCHD — DFSMSHsm, during volume or automatic backup, found a data set in use and scheduled a retry of the backup.
- CLASS-TR — Class transition of data set.
- DEL-AGE — Data set deletion or data set retirement. If *volser1* is a migration volume, the data set deletion or retirement is scheduled and the actual action may or may not succeed.
- DELETED — Delete a control data set record for a data set that is scratched.
- EXBACKV — DFSMSHsm attempted to expire the backup version specified by the DFSMSHsm generated backup version *dsname* as a result of the EXPIREBV command.
- EXPIRED — The data set *dsname* on volume *volser1* is expired and is scheduled for deletion. The *dsname* delete may fail. The possible reasons why DFSMSHsm considers a data set expired are:
 - The expiration date in the data set VTOC entry indicated the data set expired, and SETSYS EXPIREDEDDATASETS(SCRATCH) is in effect. This applies to SMS and non-SMS-managed data sets. For an SMS-managed data set that did not have an explicit expiration date in the data set VTOC entry, the management class associated with this data set indicates it should be expired. The management class attributes that are checked are:
 - ROLLED-OFF-GDS-ACTION=EXPIRE
 - EXPIRE-AFTER-DAYS-NON-USAGE

- EXPIRE-AFTER-DATE/DAYS

- MIGRATE — Migrate or convert a data set. If a data set is being converted, this message applies only to the migration process. If the migration is successful, DFSMSHsm tries to recall the data set.
- MIG-RCN — Migrate a data set by reconnecting to the ML2 copy. This ML2 copy represents the migration copy from which the data set was most recently recalled.
- MOVCIDS — Move a catalog information data set to a migration level 1 volume during the processing of a FREEVOL command.
- MOVE BV — Move a backup version from a migration level 1 volume to a backup volume or from a daily backup volume (DASD) to a SPILL backup volume.
- MOVE VT — Move a VTOC copy data set to a migration level 1 volume during the processing of a FREEVOL command.
- PARTREL — Invoke the DADSM PARTREL function to release the unused space of a sequential or partitioned SMS-managed data set.
- RCVSCHED — A recover is scheduled for this data set.
- RECOVER — Recover a backup version of a data set.
- RECYCLE — Move a backup version from a tape backup volume to a tape SPILL backup volume or from a tape migration level 2 volume to another tape migration level 2 volume.
- REDUCED — Migrate a data set to reduce the extents on recall. This message applies only to the migration process. A management work element (MWE) is created and placed on the recall queue.
- SCRATCH — Scratch a list, utility, and temporary data set from a user volume or scratch a DFSMSHsm-owned data set from a DFSMSHsm-owned volume.
- SPCMGMT — This action code is used when DFSMSHsm is processing a data set for space management and a more specific action, such as MIGRATE or EXPIRED is not known.

The meanings of variables when *action* is BACK-UP are:

Variable**Meaning**

- volser1* The serial number of the volume being backed up.
- volser2* The serial number of the volume on which the backup version is created. This field is blank if the volume was not selected.
- tracks* The size of the data set in tracks. This field contains *** if the size is not known. For sequential data sets, this is the used size. For partitioned data sets, this is the highest used size. For direct access, undefined, or SYSCTLG data sets, this field contains the number of tracks originally allocated.
- retcode* If the last two digits of *retcode* are nonzero, see message ARC13nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 9nn, an abnormal end (abend) occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9nn (where *nn* is greater than 0), see message ARC13nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
- reascode* If *reascode* is nonzero, see message ARC13nnI where *nn* is the last two digits of *retcode*.
- days* The number of days since the last backup of this data set, or *** (not applicable).

The meanings of variables when *action* is CLASS-TR are:

Variable**Meaning**

- volser1* The serial number of the volume on which class transition processing is active.
- volser2* The serial number of the volume to which the data set moved. If the class transition fails, this field contains ***.
- tracks* The allocated size of the data set in tracks. This field contains *** if the size of the data set is not known.
- retcode*

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- If the last two digits of *retcode* are nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.
- If *retcode* is 9*nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *nn* is greater than 0, see message ARC12*nn*I where *nn* matches the last two digits of the *retcode*.

reascode If *reascode* is nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

days The number of days since the data set was last referenced.

The meanings of variables when *action* is BK-SCHD are:

Variable

Meaning

volser1 The serial number of the volume being backed up.

volser2 *** (not applicable).

tracks The size of the data set in tracks.

retcode 0

reascode 0

days *** (not applicable).

The meanings of variables when *action* is DEL-AGE are:

Variable

Meaning

volser1 The serial number of the volume being processed by data set deletion.

volser2 *** (not applicable).

tracks The size of the data set in tracks. This field contains *** if the size is not known.

retcode If the last two digits of *retcode* are nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 9*nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9*nn* (where *nn* is greater than 0), see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.

reascode If *reascode* is nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

days The number of days since the last reference to this data set.

The meanings of variables when *action* is DELETED are:

Variable

Meaning

volser1 *** (not applicable).

volser2 This field is blank.

tracks *** (not applicable).

retcode If the last two digits of *retcode* are nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 9*nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9*nn* (where *nn* is greater than 0), see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.

reascode If *reascode* is nonzero, see the return code in message ARC12*nn*I where *nn* is the last two digits of *retcode*.

days The number of days since the last backup of the data set or *** (not applicable).

The meanings of variables when *action* is EXBACKV are:

Variable

Meaning

- volser1* *** (not applicable).
- volser2* *** (not applicable).
- tracks* *** (not applicable).
- retcode* See Table 10 on page 559 for return code values.
- reascode* 0
- days* The number of days since the backup version was created.
- dsname* If *retcode* is 28, then *dsname* identifies the data set that was backed up, not a specific version.

The meanings of variables when *action* is EXPIRED are:

Variable

Meaning

- volser1* Serial number of the volume on which the data set resides.
- volser2* *** (not applicable).
- tracks* Allocated size of the data set in tracks. This field contains *** if the size is not known.
- retcode* If the last two digits of *retcode* are nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 9nn, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9nn (where *nn* is greater than 0), see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
- reascode* If *reascode* is nonzero, see the return code in message ARC12nnI where *nn* is the last two digits of *retcode*.
- days* The number of days since the last reference to this data set.

The meanings of variables when *action* is MIGRATE are:

Variable

Meaning

- volser1* The serial number of the volume on which migrate processing is active.
- volser2* The serial number of the volume to which the data set migrated. If no migration volumes were available, this field contains ***.
- tracks* The allocated size of the data set in tracks. This field contains *** if the size of the data set is not known.
- retcode* If the last two digits of *retcode* are nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 9nn, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9nn (where *nn* is greater than 0), see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
- reascode* If *reascode* is nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
- days* The number of days since the data set was last referenced.

The meanings of variables when *action* is MIG-RCN are:

Variable

Meaning

- volser1* Serial number of the volume on which migrate processing is active.
- volser2* The serial number of the migration level 2 tape on which the migration copy being reconnected to resides.

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tracks The allocated size of the data set in tracks.

retcode If *retcode* is nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 9*nn*, an abnormal end (abend) occurred after the return code was set to *nn*. See message ARC0003I for more information about the abend. If *retcode* is 9*nn* (where *nn* is greater than 0), see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

reascode If *reascode* is nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

days The number of days since the last data set was referenced.

The meanings of variables when *action* is MOVCIDS are:

Variable

Meaning

volser1 The serial number of the volume from which the catalog information data set is being moved.

volser2 The serial number of the volume to which the catalog information data set is being moved. This field might contain *** if the move was terminated before the selection of the target volume.

tracks The size of the data set in tracks. This field contains *** if the size of the data set is not known.

retcode If the last two digits of *retcode* are nonzero, see message I for further information on the return code and reason code pair.

If *retcode* is 9*nn*, an ABEND occurred after the return code was set to *nn*. There might be an associated ARC0003I message with more information about the abend. If *retcode* is 9*nn* (where *nn* is greater than 0), see message ARC12*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 400-499, see the explanation of message ARC9998I for problem determination.

reascode If *reascode* is nonzero, see message ARC1812I for more information about the return code and reason code pair.

days The number of days is 0 because movement of catalog information data sets occur only when AGE(0) is specified.

name The name of the catalog information data set being processed.

The meanings of variables when *action* is MOVE BV are:

Variable

Meaning

volser1 The serial number of the volume from which backup versions are being moved.

volser2 The serial number of the backup volume to which the data set is going to move. If no backup volumes were available, this field contains ***.

tracks The size of the data set in tracks. This field contains *** if the size of the data set is not known.

retcode If the last two digits of *retcode* are nonzero, see message ARC13*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 9*nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9*nn* (where *nn* is greater than 0), see message ARC13*nn*I where *nn* is the last two digits of *retcode*.

If *retcode* is 400-499, see the explanation of message ARC9998I for problem determination.

reascode If *reascode* is nonzero, see message ARC13*nn*I where *nn* is the last two digits of *retcode*.

days The number of days since the backup version was created.

The meanings of variables when *action* is MOVE VT are:

Variable

Meaning

volser1 The serial number of the volume from which the VTOC copy data set is being moved.

volser2 *** (not applicable).

- tracks* The size of the data set in tracks. This field contains *** if the size of the data set is not known.
- retcode* If the last two digits of *retcode* are nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 9nn, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9nn (where *nn* is greater than 0), see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
- reascode* If *reascode* is nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
- days* The number of days is 0 since movement of VTOC copies occur only when AGE(0) is specified.
- name* The name of the VTOC copy data set being processed.

The meanings of variables when *action* is PARTREL are:

Variable

Meaning

- volser1* The serial number of the volume on which space management processing is active.
- volser2* *** (not applicable).
- tracks* The number of tracks released by the DADSM PARTREL function.
- retcode* If *retcode* is nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 9nn, an abend occurred after the return code was set to *nn*. See message ARC0003I for more information about the abend. If *retcode* is 9nn (where *nn* is greater than 0), see message ARC12nnI where *nn* is the last two digits of *retcode*.
- reascode* If *reascode* is nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.
- days* *** (not applicable).

The meanings of variables when *action* is RECOVER or RCVSCHED are:

Variable

Meaning

- volser1* The serial number of the volume on which the backup version resides. For scheduled requests (RCVSCHED), this might be *** to indicate the tape volume is not yet determined.
- volser2* The serial number of the volume being targeted.
- tracks* The size of the data set in tracks. For a scheduled request (RCVSCHED), this field is *** to indicate that the size is not yet known.
- retcode* If the last two digits of *retcode* are nonzero, see message ARC11nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 9nn, an abnormal end occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abnormal end. If *retcode* is 9nn (where *nn* is greater than 0), see message ARC11nnI where *nn* is the last two digits of *retcode*.
 If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
- reascode* If *reascode* is nonzero, see message ARC11nnI where *nn* is the last two digits of *retcode*.
- days* *** (not applicable).

The meanings of variables when *action* is RECYCLE are:

Variable

Meaning

- volser1* The serial number of the volume being recycled.
- volser2* The field (for backup) which contains the serial number of the target volume for the backup version, the VTOC copy data set, or the VCAT copy data set being moved. For migration, this field contains the target tape migration level 2 volume.

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blocks The size of the data set in 16K blocks. This field contains *** if the size is not known.

retcode

- If *retcode* is *9nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is *9nn* (where *nn* is greater than 0), see Table 11 on page 560.
- If *retcode* is 16, see Table 12 on page 562.
- If *retcode* is 36, see Table 13 on page 564. If *retcode* is 100 or greater, see message ARC1900I.
- If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
-

For other return codes, see Table 11 on page 560.

reascode If *reascode* is 36, see Table 13 on page 564.

days The age of the backup version. This field contains *** if the age is not known.

The meanings of variables when *action* is REDUCED are:

Note: The following information is the result of the migration process.

Variable

Meaning

volser1 The serial number of the volume on which data sets are being reduced.

volser2 *** (not applicable).

tracks The size of the data set in tracks.

retcode If *retcode* is zero, the data set successfully migrated, but still needs recalling to accomplish extent reduction. If the last two digits of *retcode* are nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.

If *retcode* is *9nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is *9nn* (where *nn* is greater than 0), see message ARC12nnI where *nn* is the last two digits of *retcode*.

If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.

reascode If *reascode* is nonzero, see message ARC12nnI where *nn* is the last two digits of *retcode*.

days The number of days since the last reference to this data set.

The meanings of variables when *action* is SCRATCH are:

Variable

Meaning

volser1 The serial number of the volume on which the data set resides.

volser2 *** (not applicable).

tracks The size of the data set in tracks. This field contains *** if the size is not known.

retcode See Table 16 on page 565. If *retcode* is 100 or greater, see message ARC1900I.

If *retcode* is *9nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is *9nn* (where *nn* is greater than 0), see Table 14 on page 564.

If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.

reascode 0 or DADSM scratch status code. See Table 15 on page 564.

days The number of days since the last backup of the data set for BACK-UP. The number of days since the data set was last referenced for MIGRATION.

The meanings of variables when *action* is SPCMGMT are:

Variable

Meaning

- volser1* The serial number of the volume on which space management processing is active.
- volser2* *** (not applicable).
- tracks* The size of the data set in tracks. This field contains *** if the size of the data set is not known.
- retcode* If the last two digits of *retcode* are nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.
 If *retcode* is 9*nn*, an abend occurred after the return code was set to *nn*. There may be an associated ARC0003I message with more information about the abend. If *retcode* is 9*nn* (where *nn* is greater than zero), see message ARC12*nn*I where *nn* is the last two digits of *retcode*.
 If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.
- reascode* If *reascode* is nonzero, see message ARC12*nn*I where *nn* is the last two digits of *retcode*.
- days* The number of days since the data set was last referenced. This field contains *** if the age since last reference is unknown.

System action: DFSMSHsm processing continues.

If the action is EXBACKV, see the system action for specific return codes in Table 10 on page 559.

If the action is RECYCLE, see the system action for specific return codes in Table 11 on page 560.

Programmer response: Take the appropriate action as given in the meaning of the variables *retcode* and *reascode* for the specific action.

If *retcode* is 18, indicating an output I/O error, and the error is on tape, you can analyze the error in the following ways:

- Message IEA000I reports the I/O error and the failing tape volume.
- The operating system issues an END OF VOLUME action for some I/O errors, as follows:
 - Messages IEC502E and IEC501A show the new tape.
 - DFSMSHsm fails the data movement request, ends the volume allocation, and begins the data movement on a new set of tapes. The last tape in the previous set does not contain any valid data.
 - You can make the last tape in the previous set available by issuing the DELVOL command with the PURGE parameter, followed by the ADDVOL command.

Source: DFSMSHsm

ARC0735I BACKUP OF MIGRATED DATA SETS STARTING AT *time* ON *date* SYSTEM *sysid*

Explanation: BACKUP processing of any eligible data sets that have migrated has been started. The start time is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The current date is *date*, expressed as *yy/mm/dd* (year, month, day). The SMF system identifier of the system on which BACKUP processing is proceeding is *sysid*. Descriptions of individual data sets processed follow in the ARC0734I messages.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0736I BACKUP OF MIGRATED DATA SETS ENDING AT *time*, *nds* DATA SETS BACKED UP

Explanation: BACKUP processing of any eligible data sets that have migrated has been ended. The time of day the BACKUP processing has ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The number of migrated data sets that was backed up is *nds*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0737I L RECORD (CREATE | UPDATE) FAILED FOR MIGRATED DATA SET *dsname*, DATA SET WILL NOT BE BACKED UP

Explanation: When migrating data set *dsname*, the update or creation of the L record for the data set failed. The migration continues, but the data set will not be backed up because the L record is the driving record for the backup of data sets that have migrated before they have been backed up.

System action: DFSMSHsm processing continues.

Programmer response: If a backup version for the data set is desired, the data set can be recalled, backed up, and then migrated. Alternately, a BACKDS command can be issued for the migrated data set.

Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC0738I FAILURE IN {BACKUP | DUMP | RECOVER} CONTROL TASK, BACKUP DISABLED, RC=*retcode*

Explanation: DFSMSHsm attempted to start the indicated control task. An error occurred that caused the task to end and disable backup. Disabling backup also disables dump, restore, and recover. The value of *retcode* shows what type of error occurred.

Retcode Meaning

12 Failed to attach a permanent subtask. This is only issued for the dump task.

52 GETMAIN for the associated function task control blocks failed.

System action: The indicated control task ends. The functions associated with that control task will not be available until DFSMSHsm is shut down and restarted. If the backup control task is ended, no data set or volume backups will occur. If the dump control task is ended, no volume dumps will occur. If the recover control task ends, no data set recoveries or restores, or volume recoveries or restores will occur. Backup is disabled. The remainder of DFSMSHsm processing continues.

Programmer response: If backup, dump, or recover tasks are desired, stop DFSMSHsm and analyze the error conditions. After corrective action has been taken or it is determined the error will not recur, restart DFSMSHsm. For any of the return codes, it is possible to leave DFSMSHsm running. For a GETMAIN failure, it is highly unlikely DFSMSHsm will be able to perform other functions. It may be necessary to increase the size of the region where DFSMSHsm runs.

Source: DFSMSHsm

ARC0739I [BACKUP | SPILL | CLEANUP | FREEVOL | RECOVER] OF VOLUME *volser* TERMINATED, ERROR READING JOB FILE CONTROL BLOCK

Explanation: DFSMSHsm was performing the indicated function on the volume *volser*. DFSMSHsm attempted to read the job file control block (JFCB) to open the VTOC or to allocate a data set on a tape volume.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Retry the volume function for the indicated volume after corrective action has been taken.

Source: DFSMSHsm

ARC0740I CDS BACKUP STARTING AT *time* ON *date*, SYSTEM *sysid*, TO {TAPE | DASD} IN {PARALLEL | NOPARALLEL} MODE, DATAMOVER = {HSM | DSS}

Explanation: The DFSMSHsm function to back up the DFSMSHsm control data sets is about to begin. This function has been invoked either within the DFSMSHsm automatic backup function or explicitly through the BACKVOL command with the CONTROLDATASETS parameter. The time of day the control data set backup function has started *time* is expressed as *hh:mm:ss* (hours, minutes, seconds). The current *date* is expressed as the *yy/mm/dd* (year, month, day). The *sysid* identifies the SMF system identifier for the system on which the control data set backup function is being performed.

TAPE indicates that the backup device is tape.

DASD indicates that the backup device is DASD.

PARALLEL indicates that the CDS and journal data sets are to be backed up in parallel. If the backup device is DASD, PARALLEL is always indicated.

NOPARALLEL indicates the CDS and journal data sets are not to be backed up in parallel.

The DATAMOVER indicates if DFSMSHsm or DFSMSdss is being used for this backup.

System action: DFSMSHsm continues to process.

Programmer response: None.

Source: DFSMSHsm

ARC0741I (CDS BACKUP | NULL JOURNAL) ENDING AT *time* ON *date*, STATUS=*status*

Explanation: The DFSMSHsm function to back up the DFSMSHsm control data sets or the NULLJOURNALONLY function, has been completed. The *status* shows the completion status of the function and shows SUCCESSFUL, UNSUCCESSFUL, TESTMODE or SHUTDOWN.

SUCCESSFUL shows that the DFSMSHsm control data sets have been successfully backed up.

UNSUCCESSFUL suggests that DFSMSHsm control data sets or journal has not been successfully backed up. If message ARC0747E precedes this message, and message ARC0743I has been issued for each data set to be backed up, the backups are successful but the backup data sets have not been successfully renamed, or a locate error has occurred. If a locate error has occurred and the ARCTVEXT installation-wide exit is active, it will not be invoked.

TESTMODE suggests that the control data set backup function has been invoked in test mode. No backups are performed.

SHUTDOWN suggests that the STOP command has been issued before or during the control data set backup function. If NOPARALLEL has been in effect, the backup function ends after the current backup completes or before any other backup is started. If PARALLEL has been in effect, none of the backups are allowed to start and, therefore, the backups are not performed. If PARALLEL has been in effect and the backup of the control data sets has already started, the backups of the control data sets and journal run to completion.

The time of day the control data set backup function ended *time* is expressed as *hh:mm:ss* (hours, minutes, seconds). The current *date* is expressed as *yy/mm/dd* (year, month, day).

System action: DFSMSHsm ends the control data set backup function and continues to process other DFSMSHsm functions.

Programmer response: None.

Source: DFSMSHsm

ARC0742I BACKUP FOR *dsid* STARTING AT *time* ON *date*, BACKUP COPY TECHNIQUE is {UNDEFINED | STANDARD | REQUIRED | PREFERRED | VIRTUALREQUIRED | VIRTUALPREFERRED | CACHEREQUIRED | CACHEPREFERRED}.

Explanation: During the DFSMSHsm control data set backup function, the attempt to back up the data set identified by *dsid* is about to begin.

- *dsid* specifies either MCDS, BCDS, or OCDS.
- MCDS indicates the attempt to back up the DFSMSHsm migration control data set is about to begin.
- BCDS indicates the attempt to back up the DFSMSHsm backup control data set is about to begin.
- OCDS indicates the attempt to back up the DFSMSHsm offline control data set is about to begin.

The *time* of day the backup started is expressed as *hh:mm:ss* (hours, minutes, seconds). The current *date* is expressed as *yy/mm/dd* (year, month, day).

The BACKUP COPY TECHNIQUE is an SMS management class attribute that specifies whether the concurrent copy function should be used when backing up the data set. The BACKUP COPY TECHNIQUE can be specified as:

- STANDARD indicates that concurrent copy should not used to back up the data set. Normal backup processing is used.
- REQUIRED indicates that either virtual or cache based concurrent copy is required to backup the data set. If a concurrent copy session cannot be established, then the data set does not get backed up.

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- PREFERRED indicates that either virtual or cache based concurrent copy is preferred for backing up the data set. If a concurrent copy session cannot be established, then normal backup processing is used.
- VIRTUALREQUIRED indicates that virtual concurrent copy is required to back up the data set. If a virtual concurrent copy session cannot be established, the data set does not get backed up.
- VIRTUALPREFERRED indicates that virtual concurrent copy is preferred for backing up the data set. If a virtual concurrent copy session cannot be established, then normal backup processing is used.
- CACHEREQUIRED indicates that cache based concurrent copy is required to back up the data set. If a cache based concurrent copy session cannot be established, then the data set does not get backed up.
- CACHEPREFERRED indicates that cache based concurrent copy is preferred for backing up the data set. If a cache based concurrent copy session cannot be established, then normal backup processing is used.

UNDEFINED means the CDS is not SMS managed, or the DATAMOVER is specified as DFSMSHsm.

System action: DFSMSHsm continues to process.

Programmer response: None.

Source: DFSMSHsm

ARC0743I *dsid* SUCCESSFULLY BACKED UP TO *dsname*, ON VOLUME(S) *volser*, TIME=*time*, DATE=*date*

Explanation: During the DFSMSHsm control data set backup function, the data set identified by *dsid* has been successfully backed up to the data set named *dsname* that is located on the volume identified by *volser*. If the data set resides on more than one volume, *volser* specifies the list of volumes on which the data set resides.

- *dsid* specifies either MCDS, BCDS, OCDS, or JRNL.
- MCDS suggests that the DFSMSHsm migration control data set was successfully backed up.
- BCDS suggests that the DFSMSHsm backup control data set was successfully backed up.
- OCDS suggests that the DFSMSHsm offline control data set was successfully backed up.
- JRNL suggests that the DFSMSHsm journal data set was successfully backed up.

The *time* of day the backup ended is expressed as *hh:mm:ss* (hours, minutes, seconds). The current *date* is expressed as *yy/mm/dd* (year, month, day).

An attempt is made to rename the data set (if renaming is required) after all control data sets have been backed up. The message ARC0748I is issued later indicating the final qualifier used in renaming the data sets.

System action: DFSMSHsm continues to process.

Programmer response: None.

Source: DFSMSHsm

ARC0744E *dsid* COULD NOT BE BACKED UP, RC=*retcode*, REAS=*reascode* MIGRATION, BACKUP, FRBACKUP, DUMP, AND RECYCLE HELD

Explanation: During the DFSMSHsm control data set backup function, the data set identified by *dsid* was not successfully backed up.

- *dsid* specifies either MCDS, BCDS, OCDS, or JRNL.
- MCDS indicates the DFSMSHsm migration control data set was not successfully backed up.
- BCDS indicates the DFSMSHsm backup control data set was not successfully backed up.
- OCDS indicates the DFSMSHsm offline control data set was not successfully backed up.
- JRNL indicates the DFSMSHsm journal data set was not successfully backed up.

retcode shows why the particular data set was not backed up. The values for *retcode* are:

Retcode Meaning

- 4 An error was encountered in processing the RDJFCB macro for the control data set referred to by *dsid*. *reascode* identifies the return code from the RDJFCB macro.

- 8 An error was encountered in processing the RDJFCB macro for the backup data set of the data set indicated by *dsid*. *reascode* identifies the return code from the RDJFCB macro.
- 10 The preallocated DASD CDS backup data set versions have an invalid BLKSIZE. The BLKSIZE is less than 7892 bytes.
- 12 The data movement function could not be successfully completed. *reascode* describes the return code from the IDCAMS EXPORT or DFSMSdss function.
- 13 A system abnormal end (abend) occurred during IDCAMS or DFSMSdss processing. *reascode* is the hexadecimal abend code.
- 14 The module performing the IDCAMS EXPORT or DSS dump abended and the program control block exists. This is probably a program error. *reascode* is the 3-digit hexadecimal abend code.
- 15 The module performing the IDCAMS EXPORT or DSS dump abended and the program control block does not exist. This is probably a program error. The *reascode* is zero.
- 16 An error was encountered allocating the data set suggested by *dsid*. *reascode* identifies the error returned by the allocation routine.
- 17 The module performing the IDCAMS EXPORT or DSS dump abended during return processing. This is probably a program error. The *reascode* is the 3-digit hexadecimal abend code.
- 18 The IDCAMS EXPORT operation failed attempting to write a record. *reascode* is the return code from the IDCAMS EXPORT function.
- 20 An error was encountered allocating the backup data set for the data set suggested by *dsid*. *reascode* identifies the error returned by the allocation routine.
- 24 An error was encountered allocating a scratch tape by backing up the specified data set *dsid*. *reascode* identifies the error returned by the tape allocation routine.
- 28 In backing up the DFSMSHsm journal data set, the GET macro encountered an I/O error. *reascode* identifies the first byte returned in general register 1 on entry to the SYNAD routine.
- 32 In backing up the DFSMSHsm journal data set, the PUT macro encountered an I/O error. *reascode* identifies the first byte returned in general register 1 on entry to the SYNAD routine.
- 34 An error occurred trying to open the output data set while getting the device entry.
- 36 An error was encountered in locating the backup data set indicated by *dsid*. *reascode* describes the return code from the locate request. If ARC0745E was previously issued, the value the MHCR record had for the last backup version may be different than the version numbers that were cataloged. See the ARC0745E message for the steps necessary to correct the problem.
- 38 An error occurred trying to open the output data set while reading the DSCB.
- 40 An error was encountered in opening the DFSMSHsm journal data set. This is probably a program error. The *reascode* is set to zero.
- 41 The OPEN of the journal data set abended during the point, read, and check sequence. This is probably a program error. *reascode* is the 3-digit hexadecimal abend code.
- 42 The OPEN of the journal data set abended attempting to write EOF. This is probably a program error. *reascode* is the 3-digit hexadecimal abend code.
- 44 An error was encountered in opening the backup data set for the journal data set. This is probably a program error. The *reascode* = 0.
- 46 The CLOSE of the journal data set abended. This is probably a program error. *reascode* is the 3-digit hexadecimal abend code.
- 47 The CLOSE of the backup journal data set abended. This is probably a program error. *reascode* is the 3-digit hexadecimal abend code.
- 48 In processing the journal backup data set, the end of the output volume was reached, or an abend occurred. The *reascode* indicates a 3-digit hexadecimal abend code.
- 52 A GETMAIN error was encountered. *reascode* = the return code from the GETMAIN macro.

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- 54 The MHCR is not available to the CDS backup function. The backup ends. Message ARC0740I contains default values for device and mode.
- 56 The QMNGRIO macro encountered a read error in attempting to access a read JFCB. The *reascode* is the return code from the QMNGRIO macro.
- 58 An error occurred setting up an ESTAE environment.
- 60 The QMNGRIO macro encountered a write error in attempting to update a real JFCB. The *reascode* is the return code from the QMNGRIO macro.
- 64 The STOP command was issued while the control data set backup function was in process. If DFSMSHsm was not in the process of backing up a control data set or a journal data set, DFSMSHsm saves all previous backups, but does not start another one.
- If NOPARALLEL was in effect and DFSMSHsm was in the process of backing up a control data set or a journal data set, DFSMSHsm completes that backup, but does not start another one. If PARALLEL was in effect and DFSMSHsm was in the process of backing up a control data set or the journal data set, DFSMSHsm completes backing up all of the control data sets and the journal data set.
- 68 An error was found in the data while DFSMSHsm was placing an end-of-file marker in the journal data set during backup. *reascode* describes the reason the data is in error.
- 0004 indicates no control record is found in the journal data set.
 - 0008 indicates only the control record is found in the journal data set.
- In either of the case, the journal data set is not backed up.
- 70 While DFSMSHsm was attaching a subtask, an error was encountered. *reascode* identifies the return code from MVS. See message ARC0090I for further explanation of the error.
- 72 An error occurred when DFSMSHsm attempted to open the output data set for CDS backup. An OPEN error message with component identifier IEC precedes this message. *reascode* is the 3-digit hexadecimal abend code.
- 74 An error occurred when DFSMSHsm attempted to close the output data set for the CDS backup.
- 80 An abend occurred during the CDS Version Backup Services module. This is probably a program error. The *reascode* is the 3-digit hexadecimal abend code.
- 82 The preallocated output data set was in extended format.
- 84 The CDS backup data set has a format-8 DSCB.
- 88 An error was encountered attempting to serialize the control data sets during non-intrusive journal backup.
- 92 Non-intrusive journal backup ended unexpectedly.

If the *retcode* is 400–499, see message ARC9998I for the explanation and problem determination.

System action: The DFSMSHsm functions of migration, backup, fast replication backup, dump, and recycle are held. Any backups of other control data sets already started, are completed. If the journal backup fails, journaling is inhibited. DFSMSHsm processing continues.

Operator response: Notify your system programmer that the specified DFSMSHsm data set is not successfully backed up. If the online journal data set is backed up successfully, it is nulled. If the online journal data set is not backed up successfully, it is not nulled. Not nulling the online journal data set could be a potential problem because the data set could soon become full.

When the problem is corrected and you can allow DFSMSHsm to continue, issue the RELEASE command to allow held functions to resume processing.

Programmer response: If the journal backup fails, journaling is inhibited until you either restart DFSMSHsm or issue the BACKVOL CDS NULLJOURNALONLY command. Make every attempt to save the contents of the current journal before nulling it or allocating a new one. Do not release any DFSMSHsm function until journaling is reestablished.

After the error is corrected, you must use the BACKVOL CDS command to create a backup up copy of the control data sets and the journal data set.

If the error occurred during AUTOBACKUP, restarting AUTOBACKUP within the backup window does not cause the

control data sets to be backed up. You must use the BACKVOL CDS command to create a backup copy of the control data sets and the journal data set.

The following list shows the return codes issued for this message and the appropriate actions to be taken for each:

Retcode Meaning

- 4 See the return codes issued by the RDJFCB macro in *z/OS DFSMS Using Data Sets* and take appropriate action.
- 8 Process a system dump before stopping DFSMSHsm and then contact the IBM Support Center.
- 10 Make the BLKSIZE in the range of 7892 to 32760 and retry the backup, or use DFSMSHsm as the datamover.
- 12, 13,
and 18 Error messages from the IDCAMS or DFSMSdss function describe the specific error. See the IDC or ADR messages and take appropriate action.
- Return code 12 was found to occur during CDS backup activity when the system ACS routines direct tape output to DASD rather than tape. If temporary data sets are directed to DASD, see the *z/OS DFSMSHsm Implementation and Customization Guide* in "Directing DFSMSHsm Temporary Tape Data Sets to Tape." in the section titled, "Specifying Commands that Define Your DFSMSHsm Environment."
- 14, 15,
and 17 Process a system dump before stopping DFSMSHsm and then contact the IBM Support Center.
- 16, 20,
and 24 See message ARC0500I or ARC0503E issued before this message was issued. The appropriate message indicates the dynamic allocation return and reason codes.
- 28, 32 See the return codes issued by the GET and PUT macros in *z/OS DFSMS Macro Instructions for Data Sets* and take appropriate action.
- 34 Inform your system programmer or examine the reason code.
- 36 See the error codes issued by the catalog management function in *z/OS DFSMS Managing Catalogs*, and take appropriate action.
- 38 Inform your system programmer or examine the reason code.
- 40, 41,
42, 44,
and 46 Process a system dump before stopping DFSMSHsm and then contact the IBM Support Center.
- 47, 48 Make the journal backup data set larger and retry the backup.
- 52, 54,
56, 58,
and 60 Inform your system programmer or examine the reason code.
- 64 No action required.
- 68 If *reascode* is 0004, the control record in the journal data set is destroyed. Restart DFSMSHsm so the control record is re-created in the journal data set.
- If *reascode* is 0008, no other records are found in the journal data set other than the control record. Backing up of the journal data set is not performed unless the JOURNAL parameter of the SETSYS command is specified and DFSMSHsm makes entries in the data set.
- If the backup of the control data sets defined to DFSMSHsm is successful, the backup copies are valid and the backup data set names are renamed. When the *reascode* is 0008, and when the newly backed up copies of the control data sets are imported, the journal backup does not need to be used, because the backup copies contain the latest changes.
- 70 See message ARC0090I for the programmer response and problem determination.
- 72 Take the action indicated by the OPEN error message with component identifier IEC. Retry the backup.

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- 74 Take the action indicated by the CLOSE error message. Retry the backup.
- 80 Process a system dump before stopping DFSMSHsm and then contact the IBM Support Center.
- 82 Ensure that the preallocated DASD output data sets are in standard format and release AUTOBACKUP.
- 88, 92 Collect DFSMSHsm PDA trace and job log data during the timeframe of the error. Search problem reporting databases for a corrective action. If no corrective action is found, contact the IBM Support Center.

Note: To determine the full name of the data set referred to by *dsid*, see the DFSMSHsm startup procedure. To determine the full name of the backup data sets related to the data set referred to by *dsid*, see the DFSMSHsm message ARC0748I that follows this message. Append the final qualifier specified in the message to the data set name specified on the SETSYS parameters for CDSVERSIONBACKUP.

Source: DFSMSHsm

ARC0745E UNABLE TO READ MHCR DURING CDS BACKUP

Explanation: The DFSMSHsm control data set backup function is being performed using the CDSVERSIONBACKUP parameter of the SETSYS command. The subparameters specified on this command, along with the latest version number, are stored in the DFSMSHsm multiple-host processor control record (MHCR). An attempt has been made to read the MHCR, but the record cannot be read.

System action: The control data set backup function continues. The subparameters used are those that were in effect the last time CDS Backup executed when the MHCR could be read successfully. At the completion of this backup, the MHCR Record is not updated with the latest final qualifier.

Operator response: Notify your system programmer that the DFSMSHsm MHCR Record could not be accessed. ACTION is required. Perform the required steps listed in **Application Programmer Response**.

Programmer response: If you need assistance to identify why the MHCR could not be read, save the PDA trace leading up to and including the ARC0745E, and contact HSM Support.

Action is required because the MHCR Record residing in the Migration Control Data Set could not be updated with the latest final qualifier after CDS BACKUP. The latest final qualifier in the MHCR does not match latest cataloged versions. The following steps are required to correct the MHCR and to allow CDS Backup and QUERY CDSV to access the MHCR.

1. To determine the final qualifier of the latest backup copies that are cataloged, you may use the IDCAMS LISTCAT command:

```
LISTCAT LEVEL(uid)
```

```
For example: listc le(dfhsm.*.backup)
```

```
Example output:
```

```
NONVSAM ----- DFHSM.BCDS.BACKUP.V0000999
NONVSAM ----- DFHSM.JRNL.BACKUP.V0000999
NONVSAM ----- DFHSM.MCDS.BACKUP.V0000999
NONVSAM ----- DFHSM.OCDS.BACKUP.V0000999
```

If you do not know the initial qualifiers for your backup copies, issue the QUERY CDSV Command.

2. Use the FIXCDS patch command to correct the version number in the MHCR record to reflect the latest version in the catalog. For example:

```
FIXCDS S MHCR PATCH(x'B1' 0000999)
```

```
The patch command will show:
```

```
DATA BEFORE PATCH
+00B1 F0F0F0F0 F9F9F840
      *0000998
DATA AFTER PATCH
+00B1 F0F0F0F0 F9F9F940
      *0000999
```

If the MHCR Record is not found, DFSMSHsm must be restarted and the FIXCDS PATCH reissued.

3. Use the PATCH command to reset MCVTMRFF. This flag must be set to OFF to allow CDS Backup and QUERY CDSV to access the MHCR. For example:

```
PATCH .MCVT.+A bits(.....0)
```

```
DATA BEFORE PATCH
07F0302A 11000001
DATA AFTER PATCH
07F0302A 11000000
```

The ARC0745E message can be deleted from the console.

To confirm that the latest version number in the MHCR is the same as the latest cataloged version number, use the FIXCDS Command to display the version number in the MHCR:

```
fixcds s mhcr display length(x'b8')
```

The translated portion to the right shows the version number.

Source: DFSMSHsm

ARC0746I {{BACKUP | SPILL} OF VOLUME *volser* | MOVEMENT OF BACKUP VERSIONS | BACKUP OF MIGRATED DATA SETS} TERMINATED, UNABLE {TO MOUNT INITIAL TAPE | TO FULFILL END-OF-VOLUME TAPE MOUNT REQUEST}, RC= *retcode*, REAS= *reascode*

Explanation: This message is issued when a tape volume mount fails for either an initial volume mount request or an end-of-volume (EOV) mount request. The message is issued under the following conditions:

An initial tape mount for BACKUP or SPILL processing was requested. Two attempts to mount the tape failed.

Retcode Reascode
Meaning

95 4 The operator was unable to mount the tape, the tape mount timer expired, or the *volser* was rejected by IKJPARS.

A tape mount was requested for BACKUP or SPILL processing at EOV mount time. Two attempts to mount the tape failed.

Retcode Reascode
Meaning

95 8 The operator was unable to mount the tape, or the tape mount timer expired.

The volume serial number of the volume in the backup or spill request is *volser*.

System action: BACKUP or SPILL processing ends. DFSMSHsm processing continues.

Programmer response: Determine why the operator failed to mount the tape volumes and try BACKUP or SPILL processing again if the problem is resolved.

Source: DFSMSHsm

ARC0747E UNABLE TO {RENAME | CATALOG | UNCATALOG | LOCATE} DATA SET *dsname* DURING CDS BACKUP, RC=*retcode*

Explanation: Either an error or an abnormal end (abend) occurred while renaming, cataloging, uncataloging, or locating the data set *dsname* during backup of the DFSMSHsm control data sets. The specified function could not be performed.

A *retcode* of FF indicates that an abend occurred.

If the *retcode* is not FF, the *retcode* indicates the return code from the RENAME, CATALOG, UNCAT, or LOCATE CAMLST macro, or the catalog return code from the SVC 26 ALTER NEWNAME request if the data set is an SMS-managed data set.

System action: If an abend did not occur, DFSMSHsm attempts to rename, catalog, or uncatalog those data sets where renaming, cataloging, or uncataloging has not been attempted. DFSMSHsm continues processing.

Programmer response: If RENAME failed, message ARC0748I is issued following this message indicating the final qualifier to be used in renaming the specified backup data set. The specified data set *dsname* must be renamed using

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this final qualifier before the next control data set backup function can be used.

If CATALOG failed, the specified data set must be cataloged before the next control data set backup function can be used.

If UNCATALOG failed, the specified data set should be uncataloged, especially if the data set resides on tape, so the tape management function can reuse the tape.

If LOCATE failed and the ARCTVEXT installation-wide exit is active, it will not be invoked.

Source: DFSMSHsm

ARC0748I LAST SUCCESSFUL CDS BACKUP - SET QUALIFIER IS 'xxxxxxxx'

Explanation: This message shows the last backup data set qualifier for the last control data set (CDS) backup, where at least the journal has been successfully backed up. If any CDS or journal data set is not successfully backed up, the system issues message ARC0744E for each data set that fails.

If it becomes necessary to recover a CDS, this qualifier is needed to determine which CDS recovery steps are to be used (the steps vary, depending on the data mover used). Determine the data mover used by displaying the backup data set names of the CDSs to be recovered. If 'M' is V, then DFSMSHsm is the data mover. If 'M' is D, then DFSMSdss is the data mover. If 'M' is X, then that specific backup has failed. Do not use that backup copy for the recovery. For more data mover information see *z/OS DFSMSHsm Storage Administration*.

In the message text:

xxxxxxxx

The last backup data set qualifier for the last CDS backup, where at least the journal has been successfully backed up. *x* is one of the following:

- V indicates that DFSMSHsm is the data mover
- D, indicates that DFSMSdss is the data mover used for the last backup.

System action: The CDS backup function ends. DFSMSHsm continues processing.

Programmer response: None.

Source: DFSMSHsm

ARC0749I CANNOT APPLY INCREMENTAL RECOVER TO VOLUME *volser*, REASON= *reascode*

Explanation: The RECOVER command was issued with the FROMDUMP and APPLYINCREMENTAL parameters. The volume requested to be restored has a valid dump copy, but DFSMSHsm determined the application of incremental recoveries cannot be performed. Therefore, only the restore from the dump copy is performed.

The *reascode* value gives the reason the incremental recoveries could not be done. Valid values for *reascode* are:

Reascode

Meaning

- | | |
|----|--|
| 4 | A read error occurred reading a control data set record describing the source backup or dump information, or the record was not found. See message ARC0184I for the type and key of the record, and the type of error. |
| 6 | An error occurred in reading the JFCB while processing the backup VTOC copy data set. |
| 8 | A volume allocation error occurred. |
| 10 | Recovery of a more recent backup version of an OS CVOL failed. This recovery is attempted first. Since further processing may depend on the contents of this catalog, the process ends. |
| 12 | An error occurred in allocating the backup or dump VTOC copy data set. |
| 14 | An error occurred in reading the backup or dump VTOC copy data set. |
| 15 | Obtain of the format-1/format-8 DSCB of the VTOC copy data set failed. |
| 16 | An error occurred in opening the backup or dump VTOC copy data set. |
| 18 | The VTOC copy data set has a format-8 DSCB. |

- 20 The required backup or dump tape volumes are not available.
- 22 The volume does not have both backup and dump VTOC copy data sets to use to build a list of candidate data sets for recovery.
- 24 An invalid or unsupported device type was found for the source backup, dump volume, or the migration level 1 volume where the VTOC copy data set resides, in its control data set record.
- 25 APPLYINCREMENTAL processing is not allowed because the volume contained a VSAM catalog the last time DFSMSHsm dumped or backed up the volume.
- 26 APPLYINCREMENTAL processing is not allowed for DFSMSHsm owned volumes because these volumes are not supported for the volume backup function.
- 27 APPLYINCREMENTAL processing is not allowed because the correct level of the Data Facility Product (DFP) is not installed on the system. The correct level of the DFP required to support this function is Release 2 Version 3 or subsequent releases, unless otherwise noted.
- 28 The MCV record that describes the volume on where the dump VTOC copy resides indicates that the volume is not a migration level 1 volume.
- 30 SMS has not been active in the system when DFSMSHsm has attempted to process SMS-managed volumes.
- 32 DFSMSHsm cannot determine if the volume being processed is an SMS-managed volume. The SMS volume definition and the volume VTOC entry do not agree.
- 34 An error has occurred while retrieving an SMS volume definition. DFSMSHsm has invoked SMS to retrieve an SMS volume definition. SMS has failed to retrieve it.
- 52 A GETMAIN error occurred in getting storage for the recovery queue elements.
- 60 An error occurred in establishing an ESTAE environment.
- 66 An internal error occurred in sorting the queue of recovery queue elements (RQEs). The queue was broken.

System action: The restore process is performed. The incremental volume recovery is not performed. DFSMSHsm processing continues.

Programmer response: If the volume contains an owning VSAM catalog, ensure that the catalog has been recovered with the latest backup copy and is in a usable state. DFSMSHsm does not back up and recover VSAM catalogs. If the volume has been processed by volume backup, a volume recovery can be requested when the state of the catalog has been verified.

If the recovery of a catalog failed, determine if the catalog is usable and recent enough. If it is not, issue the RECOVER command for the catalog. If the catalog is usable or a later RECOVER command for the catalog succeeded, issue the RECOVER command for the volume again without the FROMDUMP and APPLYINCREMENTAL parameters and specify the date the volume was restored.

Use V1R12 or higher to recover volume if VTOC copy data set has a format-8 DSCB.

Source: DFSMSHsm

ARC0750I BACKUP FOR *dsid* STARTING AT *time* ON *date*, BACKUP TECHNIQUE IS {NON-INTRUSIVE | QUIESCED({*note* | *other*})}

Explanation: Backup of the data set identified by *dsid* is about to begin during DFSMSHsm control data set backup processing.

- dsid** specifies the data set to be backed up. "JRNL" is specified for the journal data set.
- time** specifies the time of day the backup started expressed as hh:mm:ss (hours, minutes, seconds).
- date** specifies the date the backup started expressed as yy/mm/dd (year, month, day).
- note** specifies the first non-intrusive journal backup requirement that was not met. Values for *note* are:
- a** indicates that SETSYS CDSVERSIONBACKUP(DATAMOVER(DSS)) is not specified.
 - b** indicates that SETSYS JOURNAL(RECOVERY) is not specified.
 - c** indicates that non-intrusive backup was attempted during a previous journal backup and the journal

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backup failed. Quiesced journal backup will be attempted. After a successful quiesced journal backup, the journal will become eligible for non-intrusive backup again.

- d indicates that one or more CDS clusters are not SMS-managed or that the management class for one or more of the CDS clusters is not configured to use concurrent copy.

other specifies any special condition (other than those indicated by *note*) preventing the use of non-intrusive journal backup.

System action: DFSMShsm continues processing.

Programmer response: If the quiesced journal backup method is intended, no action is required. If the non-intrusive journal backup method is intended, but was not used, then:

- Resolve the condition indicated by *note* or *other*. In addition, verify all other requirements to use non-intrusive journal backup are satisfied:
 - SETSYS JOURNAL(RECOVERY) must be specified.
 - The control data sets must be backed up using concurrent copy.

To enable concurrent copy for CDS backup:

- SETSYS CDSVERSIONBACKUP(DATAMOVER(DSS)) must be specified.
 - Each CDS must be SMS-managed.
 - The management class for each CDS must be configured to use a concurrent copy backup copy technique. The standard (S) backup copy technique cannot be used.
- If note value *c* was issued, non-intrusive journal backup will be attempted again after a successful quiesced journal backup.

For more information about non-intrusive journal backup and configuring the use of concurrent copy, see *z/OS DFSMShsm Storage Administration*.

Source: DFSMShsm

ARC0751I CANNOT RECOVER VOLUME *volser*, VTOC COPY CANNOT BE PROCESSED, REAS=*reascode*

Explanation: An attempt was made to recover a volume, but there is not a usable VTOC copy data set from which to perform the recovery. The processing unit processing the volume recovery is running a release of DFSMShsm, formally named DFHSM, that is not capable of accessing the VTOC copy data set created in a format of a later release. The values for *reascode* are:

Reascode

Meaning

- 4 The VTOC copy data set is written on a 3480 backup volume by DFHSM 2.2.0 or a following release in single-file format. Releases before 2.2.0 cannot access single-file format data sets.
- 8 The VTOC copy data set is written on a migration level 1 volume by DFHSM 2.3.0 or a following release in a format and location that cannot be read by prior releases.

System action: The recovery of the volume fails. DFSMShsm processing continues.

Programmer response: Enter the RECOVER command on a processing unit that has the proper level of DFSMShsm installed and running.

Source: DFSMShsm

ARC0752I CANNOT {RECOVER | RESTORE} VOLUME *volser*, {BACKUP | DUMP} NOT AVAILABLE, REASON=*reascode*

Explanation: DFSMShsm attempted to read the backup control data set entry for the volume being recovered or restored. The volume serial number being processed is *volser*. An error occurred in accessing records for the volume's backup or dump information.

The values for *reascode* are:

Reascode

Meaning

- 2 The device type of the original volume from which the dump copy was made, is not of a similar device type as the target volume of the restore.
- 4 A read error occurred in reading the control data set record describing the source backup or dump information. See message ARC0184I preceding this message for the type and key of the record.
- 10 The DUMPVOLUME parameter was specified for a volume restore, and the specified dump volume does not contain valid data.
- 14 Obtain of the format-1/format-8 DSCB of the VTOC copy data set failed.
- 16 The VTOC copy data set has a format-8 DSCB.
- 18 The volume does not have a valid backup VTOC copy data set for a recovery and has not been processed by the DFSMSHsm volume backup function. See message ARC0184I preceding this message for the type and key of the record.
- 22 The volume has not been processed by the DFSMSHsm full volume dump function for volume restore.
- 24 An invalid or unsupported device type was found for the source backup, dump volume, or the migration level 1 volume where the VTOC copy data set resides, in its control data set record.
- 32 DUMPCLASS and DUMPVOLUME parameters were not specified and no dump copy was found that had a retention date other than NOLIMIT.
- 36 The DUMPCLASS parameter was specified for a full volume restore, and a dump copy was not found in the specified dump class.
- 40 The DUMPGENERATION parameter was specified for a full volume restore, and the specified generation was not found.
- 44 The DATE parameter was specified for a full volume restore, and no eligible dump copy was found that met the specified date criterion.
- 48 The volume to be restored is not the same as the source volume recorded in the dump volume (DVL) record.
- 50 The DUMPVOLUME parameter was specified, but the dump generation (DGN) record does not indicate that the specified dump volume contains part of a valid dump copy for the volume to be restored.
- 54 The DUMPVOLUME parameter was specified. The DGN record was found that lists the specified dump volume. This dump generation is not listed as a valid dump generation in the MCP record for the volume to be restored.
- 60 An error occurred in establishing an ESTAE environment.
- 64 The dump copy needed for restoring is contained in file two or higher on a dump volume. DFSMSHsm encountered an error while trying to read or update the JFCB intended to represent the dump copy when opened by DFSMSdss.
- 66 An internal error occurred in sorting the queue of recovery queue elements (RQEs). The queue was broken.

System action: The RECOVER command ends. DFSMSHsm continues.

Programmer response: Ensure the volume to be recovered has been incrementally backed up or that the volume to be restored has been dumped. If it has, check if any failures have been associated with the backup or dump. If the volume has not been processed by backup or dump, ensure that volumes are available to DFSMSHsm to perform these functions. If a dump generation or date was requested, ensure a volume backup or volume dump was performed that meets the date criterion. If an unsupported device type was found, correct it and reissue the command. If a dump class was specified in error, reissue the command with a valid dump class. For reason code 64, reissue the RECOVER command. Use V1R12 or higher to recover volume if VTOC copy data set has a format-8 DSCB.

Source: DFSMSHsm

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ARC0753I CANNOT RESTORE VOLUME *volser1*, ERROR ALLOCATING DUMP VOLUME *volser2*

Explanation: During the restore operation, DFSMSHsm could not allocate the dump volumes necessary to restore the volume *volser1*. The volume serial number of the first dump volume required is *volser2*.

System action: The restore operation ends. DFSMSHsm processing continues.

Programmer response: Ensure the dump volumes are available to DFSMSHsm.

Source: DFSMSHsm

ARC0754I CANNOT RECOVER VOLUME *volser*, ERROR RECOVERING CATALOG(S)

Explanation: DFSMSHsm was processing a volume RECOVER command. Recovery of one or more catalogs on the volume failed. If the volume contained any integrated catalog facility (ICF) catalogs or an OS CVOL catalog that had backup versions that met the date requirements, these are recovered first. Because further processing can depend on the contents of one or more of these catalogs, the process ends. ICF catalogs will not be recovered if the catalog already exists on the volume. If the volume already contains the ICF catalog, this message does not indicate a failure; any other condition indicates a failure. See an associated ARC0734I message for the catalogs that had the failure.

System action: The recovery ends. DFSMSHsm processing continues.

Programmer response: See an associated ARC0734I message for any catalogs that had failures and proceed with the problem determination for the return codes and reason codes contained in that message. Take corrective action as appropriate. Then enter a RECOVER command for the volume again.

Source: DFSMSHsm

ARC0756I CANNOT RECOVER GDG DATA FOR VOLUME *volser*, REAS= *reascode*

Explanation: While DFSMSHsm was recovering a volume, an attempt was made to recover generation data group (GDG) information in a VSAM catalog. The data set containing the VSAM catalog data could not be allocated. The volume serial number of the volume being recovered is *volser*.

The values for *reascode* are:

Reascode

Meaning

- | | |
|----|---|
| 4 | Allocation of the volume failed. |
| 6 | No VCAT copy data set exists. |
| 8 | An open error occurred. |
| 10 | The required backup volumes are not available. |
| 12 | A read error occurred. |
| 16 | A GETMAIN failure occurred. |
| 20 | An MCT read failure occurred. |
| 25 | An invalid unit type from MCT (X) record. |
| 26 | Unsupported device type. |
| 28 | DFSMSHsm has written on this tape volume in single-file format. |
| 31 | For DFSMSHsm V1R5 or higher, the CDS records for the volume indicate that the data was written in CAPACITYMODE(EXTENDED), but the input unit that was recorded in the CDS is not capable of CAPACITYMODE(EXTENDED) operation.
For DFSMSHsm V1R4, this release does not support CAPACITYMODE(EXTENDED). |
| 54 | Installation-wide exit abnormally ended. |
| 60 | Setup of an ESTAE around the open failed. |
| 68 | The POINT macro failed while opening a single-file format tape data set. |

System action: The recovery of the GDG base entries ends. DFSMSHsm processing continues.

Programmer response: Inspect the return code and the reason code from the previous DFSMSHsm messages. Make the necessary corrections and retry the recovery operation.

For reason code 31 in DFSMSHsm V1R5 or higher, use the QUERY SETSYS command (see message ARC0418I on page “ARC0418I” on page 146) to check the CAPACITYMODE setting of the input unit. The unit should show CAPACITYMODE(COMPATIBILITY) or CAPACITYMODE(EXTENDED).

For reason code 31 in DFSMSHsm V1R4, use DFSMSHsm V1R5 or higher for the operation.

Source: DFSMSHsm

ARC0757I [BACKUP | MIGRATION] OF A DATA SET OF *tracks-used* TRACKS TO ML1 VOLUME *volser* FAILED FOR INADEQUATE SPACE

Explanation: A data set migration/backup was requested and available space on the volume (including ML1 overflow volumes, if they exist) was inadequate. Sufficient space was not available on *volser*; the ML1 was volume selected.

None of the ADDVOLed volumes have sufficient free space.

System action: DFSMSHsm fails the request with ARC0734I and ARC1237I or ARC1337I. DFSMSHsm processing continues.

Programmer response: Consider freeing space at level 1 by issuing the FREEVOL ML1BACKUPVERSIONS command to move backup versions to daily backup volumes. Consider ADDVOLing a new ML1 volume with the OVERFLOW or NOOVERFLOW attribute. After either action, reissue the request.

Source: DFSMSHsm

ARC0758I VSAM BACKUP FAILED FOR VOLUME=*volser*, RC=*retcode*, REASON=*reascode*

Explanation: Volume backup was processing the volume *volser*, but failed with a catalog error. The reason code is the same as that given for the VSAM catalog LISTCAT.

The values for *retcode* are:

Retcode Meaning

- 4 A VSAM LISTCAT error (*reascode*) was encountered while LISTCAT was building a list of all VSAM data sets not cataloged in the ICF catalog on the volume. The VSAM data sets listed before the error are backed up. Notify the storage administrator to correct the catalog.
- 8 VSAM data sets not cataloged in the ICF catalog on this VSAM-owned volume were not backed up. See the following reason codes for the possible causes:
 - 0 The objects on the volume are VSAM data sets that are never eligible for backup (for example, VSAM data sets with the page-space attribute).
 - 2 No non-ICF VSAM objects are on the volume.
 - >2 *reascode* is a OS/VS2 catalog management reason code encountered while building a list of objects on the volume for all VSAM data sets not cataloged in the ICF catalog.
- 16 For VSAM data sets, an error occurred while building the ARCSDATA control block, or a catalog LISTCAT request failed for other than a CATALOG NOT FOUND condition. Further processing of VSAM data sets on this volume is not possible.

For VSAM data sets not cataloged in an ICF catalog, an error occurred while DFSMSHsm was processing. No additional VSAM data sets not cataloged in an ICF catalog can be processed from this volume.

System action: Volume backup continues. DFSMSHsm processing continues.

Programmer response: If *reascode* is nonzero, see the OS/VS2 catalog management reason code given in the associated ARC0734I message.

Source: DFSMSHsm

ARC0759I REQUIRED TAPE VOLUMES NOT AVAILABLE. {RECOVER | RESTORE} IS NOT POSSIBLE.

Explanation: More than one tape volume was needed to recover or restore a volume, but the operator was unable to locate all the required volumes. This message is preceded by message ARC0313A, indicating the necessary tape volumes. For a volume recover, the VTOC copy data set and the VCAT copy data set reside on the required volumes. For a restore operation, the dump copy resides on the required volumes.

System action: The recover or restore operation ends. DFSMSHsm processing continues.

Programmer response: If the required tapes will be available later, reissue the RECOVER command when the tapes become available.

Source: DFSMSHsm

ARC0760I TAPE VOLUME *volser* WILL BE NEEDED FOR RECOVERY

Explanation: A volume is being recovered. The tape volume *volser* listed in the message contains one or more of the data sets being recovered to the volume. This message is issued for each tape volume needed for the volume recovery.

System action: DFSMSHsm processing continues.

Operator response: Find the tape listed in the message and ensure that it will be available when it is requested to be mounted.

Source: DFSMSHsm

ARC0761I FIRST COPY OF VTOC AND GDG BASE ENTRIES NOT AVAILABLE. SECOND COPY WILL BE USED, REASON=*reascode*

Explanation: A volume is being recovered. Because of an error that occurred while processing the most recent VTOC copy data set listed in the MCP for the volume being recovered, the alternate VTOC copy data set listed in the MCP will be used. The second set of generation data group base entries listed in the MCP will also be used.

The values for *reascode* are:

Reascode

Meaning

- 4 A read error occurred in reading the control data set record describing the source backup information. See message ARC0184I preceding this message for the type and key of the record.
- 6 An error occurred in reading the JFCB while processing the backup VTOC copy data set.
- 8 A volume allocation failure occurred.
- 12 A data set allocation failure occurred.
- 14 A read error occurred in reading a backup VTOC copy data set.
- 15 The Obtain of a format-1/format-8 DSCB failed.
- 16 An OPEN error occurred.
- 18 The VTOC copy data set has a format-8 DSCB.
- 20 The required tapes are unavailable.
- 24 An invalid unit type is in the MCT record.

System action: DFSMSHsm processing continues.

Programmer response: The volume will be recovered using the next latest version of the VTOC copy data set. If there are some data sets that are not recovered because of using a down-level copy, those data sets can be recovered individually by using a RECOVER command for a data set.

When *reascode* is 14, the volume is recovered using the next latest version of the VTOC copy data set. If some data sets are not recovered because a down-level copy is used, use the RECOVER command to recover each data set.

Use V1R12 or higher to recover volume if VTOC copy data set has a format-8 DSCB.

Source: DFSMSHsm

ARC0763I GDG BASE *gdgname* CATALOGED

Explanation: DFSMSHsm has successfully cataloged the generation data group base entries for data set *gdgname*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0764I GDG BASE *gdgname* CATALOG FAILED, RC=*retcode*

Explanation: While attempting to recover generation data group (GDG) data for a VSAM catalog, DFSMSHsm has received a return code of *retcode* from the LOCATE routine. The catalog locate has failed for the GDG base *gdgname*.

The values for *retcode* are documented in *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009I.

System action: Processing continues for the next GDG.

Programmer response: Inspect the LOCATE return code and take appropriate corrective action. Assistance of the system programmer might be necessary.

Source: DFSMSHsm

ARC0765I VOLUME=*volser* NOT CONTROLLED BY CATALOG=*catdsn* FOR RECOVER OF DSN=*dsname*, REAS=*reascode*

Explanation: A RECOVER or HRECOVER command was issued for a VSAM data set *dsname*, and the TOVOLUME parameter specified a volume *volser* that was not controlled by the same catalog *catdsn* that controlled the volume from which the backup was made.

The values for *reascode* are:

Reascode

Meaning

- 0 The TOVOL and DATASETNAME parameters do not match.
- 4 There was a LOCATE error in trying to check for mismatch.

System action: Processing of this data set ends. DFSMSHsm processing continues.

Programmer response: Specify a volume that is controlled by the catalog that controlled the volume from which the backup was made, or remove the TOVOLUME parameter to cause recovery to the volume from which the backup was made. Reissue the command.

Source: DFSMSHsm

ARC0766I RECOVER NAMES FOR CLUSTER=*clname*, DATANAM=*dataname* [,INDEXNAM=*indexname*]

Explanation: A VSAM data set having a new cluster name of *clname* was recovered. The generated names for the data components and optional index components are *dataname* and *indexname*, respectively. If the data set has a relative record or entry sequence organization, no index name is given.

System action: The RECOVER command processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0767I INCOMPLETE {RECOVERY | RECALL} FOR DATA SET=*dsname*, SUCCESSFUL {RECOVERY | RECALL} FOR BASE CLUSTER

Explanation: An error occurred during recovery or recall of an alternate index (AIX) cluster of a VSAM data set *dsname*. This message gives the name of the base cluster that was successfully recovered or recalled before the error occurred. Message ARC0768I can follow this message one or more times listing each AIX that was successfully

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processed. Message ARC1001I follows this message and explains the reason for the error.

If the VSAM data set was backed up with the NEWNAME SPHERE(NO) option, this message was not issued as a result of an error. In this case, the message was issued to indicate that the AIX/PATHs must be rebuilt since only the base cluster was available to be recovered.

System action: Recovery or recall of this data set ends. DFSMSHsm processing continues.

Programmer response: Some AIX clusters were not recovered or recalled for this data set. If a recall failed, the AIX clusters that were not recalled must be rebuilt. If a recovery failed, the AIX clusters that were not recovered can be rebuilt, or the entire data set can be recovered again, possibly from a different backup version. If a NEWNAME SPHERE(NO) backup version was recovered, AIXs and PATHs that existed at the time of backup must be rebuilt.

Source: DFSMSHsm

ARC0768I SUCCESSFUL {RECOVERY | RECALL} FOR ALTERNATE INDEX=*altindxname*

Explanation: This message follows ARC0767I and lists the name *altindxname* of an AIX that was successfully recalled or recovered. The base cluster is listed in ARC0767I.

System action: Recovery or recall of this data set ends. DFSMSHsm processing continues.

Programmer response: Some alternate index clusters were not recovered or recalled for this data set. If a recall failed, the alternate index clusters that were not recalled must be rebuilt. If a recovery failed, the alternate index clusters that were not recovered can be rebuilt, or the entire data set can be recovered again, possibly from a different backup version.

Source: DFSMSHsm

ARC0769I IMPORT WITH EXISTING FREESPACE FAILED ON {RECALL | RECOVER} FOR DATA SET *dsname*, {RECALL | RECOVER} WILL BE RETRIED WITHOUT FREESPACE

Explanation: IDCAMS IMPORT command processing fails for this data set with message IDC3351I RC28. There is not enough space in the primary allocation to include the requested FREESPACE, and no secondary allocation is allowed or the maximum extents are exceeded.

System action: Recall or recovery of this data set can be retried without the FREESPACE specification. DFSMSHsm processing continues.

Programmer response: If the retry is successful, determine the data set's present allocation. If the allocation needs to be larger, take the appropriate action. If the retry without FREESPACE specified fails with message IDC3351I RC28, make another attempt after increasing the secondary space quantity. Message ARC0786I is issued if the second retry is attempted.

Source: DFSMSHsm

ARC0770I SMS GDS *gdsname* {RECALLED | RECOVERED} AS {ACTIVE | ROLLED-OFF | DEFERRED} GDS

Explanation: A generation data group member (GDS) was recalled or recovered as an SMS data set. The GDS status after the recall or recovery is either ACTIVE, ROLLED-OFF, or DEFERRED.

An SMS GDS in the DEFERRED status may be made an active member of the generation data group using the IDCAMS ALTER ROLLIN command.

This message is not issued if the GDS being recalled or recovered is in active status, and is being recalled or recovered to active status.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0771I RECOVER WITH FROMDUMP SPECIFIED BUT {NO ELIGIBLE DUMP COPY EXISTS | THE SOURCE AND TARGET DEVICE TYPES ARE NOT SIMILAR}, {A BACKUP VERSION HAS BEEN RECOVERED}

Explanation: The RECOVER command was issued requesting that a dump copy be restored for a data set. However, an incremental backup version was recovered for the data set instead of a dump copy. The message indicates which of the following conditions was encountered:

- No eligible dump copy was found for the restore to be done.
- The volume that was dumped is not of a similar device type to the target volume.

A more recent backup version has been recataloged and recovered for a VSAM data set.

System action: The restore request is for a VSAM data set that did not exist when the process began, or for an existing non-SMS-managed VSAM data set that is on a different volume (with the TOVOLUME parameter) than the data set is currently on. DFSMSHsm found a valid backup version and recovered it first to create the data set's catalog records properly before the restore operation. This operation was successful, but a restore of a dump copy was not permitted for the reason indicated in the message. DFSMSHsm processing continues.

Programmer response: Verify that an eligible dump copy exists for the data set in question. Reissue the RECOVER command specifying the dump copy with the FROMDUMP and DUMPVOLUME parameters. The LIST command can be used to determine what the dump copies are for a given source volume. It can also be used to determine the contents of the VTOC at the time of the dump, if the dump VTOC copy data set exists.

Source: DFSMSHsm

ARC0772I RECOVERY STARTING ON VOLUME *volser* AT *time* ON *date* SYSTEM *sysid*

Explanation: DFSMSHsm recovery function is starting for the volume with volume serial number *volser*. The starting time for recovery of data sets on that volume is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The date of recovery is *date*, expressed as *yy/mm/dd* (year, month, day). The SMF system identifier for the system on which the recovery is performed is *sysid*. Descriptions of individual data sets processed are contained in associated ARC0734I messages.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0773I RECOVERY ENDED ON VOLUME *volser* TIME *time*

Explanation: DFSMSHsm volume recovery is complete. The volume serial number of the volume recovered is *volser*. The time of day the recovery operation ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds).

System action: DFSMSHsm processing continues.

Operator response: This message indicates completion of the recovery operation only and not success or failure. All scheduled recovery requests from incremental backup completed. Examine all associated output to determine success or failure.

Source: DFSMSHsm

ARC0774I VSAM DATA SET *{dsname}* RESTORED BUT CATALOG MAY NOT CONTAIN ACCURATE INFORMATION, REASON=*reascode*

Explanation: The RECOVER or HRECOVER command was issued for a VSAM data set. DFSMSHsm found that a dump copy was the most recent copy for the criteria. DFSMSHsm invoked DFSMSdss to restore the data set. This was successful. The catalog may not reflect the correct information about the data set. The *reascode* gives an indication of the conditions and the necessary action to take to correct the situation.

Reascode

Meaning

- | | |
|---|--|
| 4 | The command was issued for a VSAM data set that was no longer cataloged when the command was issued. If a backup version exists for the data set, DFSMSHsm IMPORTS it to reconstruct the catalog records |
|---|--|

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properly. If either the IMPORT fails or a backup version does not exist, DFSMSHsm invokes DFSMSdss to do a restore of the data set. This is successful, but the data set may not be cataloged.

- 8 The TOVOLUME parameter was used on the RECOVER or HRECOVER command and the specified volume was different than the volume where the VSAM non-SMS-managed data set currently exists. If a backup version exists for the data set, DFSMSHsm IMPORTS it to reconstruct the catalog records properly. Either the IMPORT fails or a backup version does not exist. DFSMSHsm then invokes DFSMSdss to do a restore of the data set. This is successful. The data set and the catalog entries are restored to the target volume. The catalog records still refer to the original volume, rather than the target volume of the restore.
- 12 A DFSMSHsm authorized user explicitly requested that a dump copy be used to restore a multivolume VSAM data set not currently cataloged or is currently cataloged as non-SMS and on a volume(s) other than the TOVOLUME specified. DFSMSHsm does not IMPORT the backup version to reconstruct the catalog records even if a backup version exists, since the volume sequence number may not be the same as the original number when the dump was taken. This could cause restore to fail.

System action: DFSMSHsm processing continues.

Programmer response: Use the IDCAMS DIAGNOSE command for the data set name and include the entry to determine what information the catalog and catalog entry contain for the data set. It may be necessary to use the IDCAMS DEFINE RECATALOG command to specify the proper data set information.

Source: DFSMSHsm

ARC0775I {ALTER OF DATA SET *dsname* | LISTCAT OF ENTRY *entry* | DELETE VVR FOR DATA SET *dsname* | CATALOG OF DATA SET *dsname* | RECATALOG OF DATA SET *dsname*} FAILED, CATALOG RETURN CODE=*crc*, CATALOG REASON CODE=*creas*

Explanation: DFSMSHsm has issued SVC 26 to request a catalog management function. The request has ended with a nonzero return code. The initial phrase of the message indicates what type of request has been made. The catalog management return and reason codes are given by *crc* and *creas*.

During CATALOG and RECATALOG of DFSMSHsm's VTOC COPY data sets, identified by 'VTOC' as the 2nd level qualifier of the data set name, CRC is documented in *z/OS DFSMSdfp Storage Administration* under Return Codes from Catalog, and CREAS is the return code under message IDC3009I.

The catalog management return and reason codes are documented in the description for message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*.

System action: DFSMSHsm processing continues.

Programmer response:

- If an alter error has occurred, the name must be changed with the IDCAMS ALTER command.
- If a LISTCAT has failed, determine the necessary corrective action from the response for the catalog return and reason codes.
- If a delete of a VSAM volume record (VVR) has failed, an integrated catalog facility VSAM data set component resides on the volume and the IDCAMS DELETE command must be used to delete it.
- If a RECATALOG has failed, the data set has been uncataloged by DFSMSHsm. Determine the necessary corrective action from the response for the catalog return and reason codes and recatalog the uncataloged data set.

Source: DFSMSHsm

ARC0776I THE DATA SET {*dsn*} WAS RECOVERED BUT DFSMSDSS ENCOUNTERED A MINOR ERROR WHILE PERFORMING DATA MOVEMENT.

Explanation: The RECOVER or HRECOVER command was issued and DFSMSHsm was using DFSMSdss data movement to recover the data set; however, DFSMSdss encountered a minor error and issued a return code 4.

System action: The recovery of the data set is reported as successful. DFSMSHsm processing continues.

Programmer response: See DFSMSdss messages, contained in the DFSMSHsm log, to determine the error encountered while recovering the data set.

Source: DFSMSHsm

ARC0778I DATA SET *dsname* WAS RECOVERED FROM A BACKUP MADE AT *time* ON *date* [WITHOUT SERIALIZATION]

Explanation: *dsname* was recovered from a backup made at the specified time and date. If WITHOUT SERIALIZATION appears, data in the recovered data set may not be consistent or complete, since the backup used by the RECOVER or HRECOVER command was made by DFSMSHsm while the data set may have been in use. That is, DFSMSHsm did not serialize on the data set before making the backup version, either because it was directed not to serialize, or because one or two serialization attempts failed.

System action: DFSMSHsm processing continues.

Programmer response: If WITHOUT SERIALIZATION appears and you detect significant inconsistent or incomplete data, you might be able to recover your data from another backup version, (if one exists).

Source: DFSMSHsm

ARC0779I RESIDUAL DATA ENCOUNTERED DURING RECALL | RECOVER OF BDAM DATA SET *dsname*

Explanation: During the recall or recovery of a data set, an end of file (EOF) was encountered but data exists beyond the EOF. The data existing beyond the EOF (called residual data) is not recalled or recovered. This can happen if a BDAM data set was not initialized before backup or migration and a DAOPTION of RELBLK was specified. If the residual data is to be recovered, see the programmer response later in this section.

System action: The recall or recovery operation continues. Only the data before the EOF is recalled or recovered.

Programmer response: If the residual data is needed, recover the data set specifying either DAOPTION(SAMETRK) or DAOPTION(RELTRK).

Source: DFSMSHsm

ARC0780I RENAME OF DATA SET TO [TEMPORARY] *dsn2* FROM [TEMPORARY] *dsn1* FAILED, RETURN CODE=*rc*, REASON CODE=*reas*

Explanation: When an existing SMS-managed data set is recovered, it is renamed to a temporary name before being deleted. This allows the data set to be renamed back to its original name if the recovery is unsuccessful.

When FROMDUMP is specified with NEWNAME and if the NEWNAME data set exists, the NEWNAME data set is temporarily renamed until the restore is complete and then it is deleted.

If TEMPORARY appears after TO, the data set to be recovered or replaced could not be renamed. If TEMPORARY appears after FROM, the data set to be recovered or replaced could not be renamed back to its original name after the recovery fails.

The return and reason codes are the DFP catalog management return and reason codes. See the description of message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)* for detailed information about the renaming return and reason codes.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0781I RESTORE FAILED FOR DATA SET *dsname* BUT A BACKUP VERSION HAS BEEN RECOVERED.

Explanation: A restore operation failed for a data set. The data set was recovered prior to the restore in order to re-build its catalog entry. The recovered data set remains on the target volume even though the restore failed. Return code 66 will be returned because the restore failed.

System action: DFSMSHsm processing continues.

Programmer response: The recovered data set may be used. If the version that was dumped is required, determine why the restore is unsuccessful from the ARC1166I message explanation.

Source: DFSMSHsm

ARC0782I • ARC0783I

ARC0782I DATA SET {*dsname*} HAS A MORE RECENT DUMP COPY BUT A BACKUP VERSION (WILL BE RECOVERED | HAS BEEN RECOVERED | HAS BEEN USED BUT THE RECOVERY FAILED), REASON=*reascode*

Explanation: The HRECOVER command or the RECOVER command without the FROMDUMP parameter was issued to recover a data set. A dump copy more recent than the incremental backup version was found, but the incremental backup version was used to recover the data set. The *reascode* gives an indication of the reasons why the BACKUP version was used.

Reascode

Meaning

- 1 The version of DFSMSdss which supports physical data set restore is not installed, or is not active in the system.
- 2 The version of DFSMSdss installed in the system is not a sufficient level to restore an SMS-managed data set.
- 3 The version of DFSMSdss installed in the system is not a sufficient level to restore a PDSE data set. PDSEs processing as data sets must be done using logical processing.
- 4 A multivolume extended format data set is being recovered.
- 5 The target data set is SMS managed but the target volume selected by DFSMSShsm is non-SMS managed. If a physical dump copy is desired, specify a target SMS volume either by cataloging the target data set on an SMS-managed volume or by using the TOVOLUME parameter on the RECOVER command.

The following information indicates the processing DFSMSShsm performs:

- DFSMSShsm uses a backup version to recover the data set.
- In the case of recovering a VSAM data set which was not cataloged or was cataloged on a volume other than the TOVOLUME specified at the beginning of the recovery:
 - DFSMSShsm recovered a backup version to construct or reconstruct the catalog record before discovering a dump copy was more recent, and the correct version of DFSMSdss is not installed or not active.

If the recovery of the backup version is successful, then message ARC1000I is issued. If the recovery fails, then message ARC1001I is issued with the return code and reason code as to why it failed.

System action: No restore operation against a data set is done. DFSMSShsm processing continues.

Programmer response: If the reason code is 4 and the more recent physical full volume dump copy is desired, reissue the RECOVER command with the FROMDUMP(DUMPVOLUME) parameter for each extended format. To find out the DUMPVOLUME which contains the physical full volume dump copy of the data set, issue a LIST command with the PVOL BCDS ALLDUMPS parameter to retrieve the information about dump copies and dump volumes of the primary volume. Then issue LIST commands with DVOL DUMPCONTENTS to retrieve the information about the dump copies of the data set. If the data set no longer exists before the restore, the data set must be cataloged by the user after all extended formats are restored. Neither DFSMSdss nor DFSMSShsm catalogs the multivolume extended format data set during physical dump copy restore processing.

Source: DFSMSShsm

ARC0783I DATA SET *dsn1* RENAMED TO *dsn2* IN PREPARATION FOR RECOVERY

Explanation: Data set *dsn1* is temporarily renamed to *dsn2*. When the recovery is successful, the renamed data set is deleted. This allows the data set to be renamed back to its original name if the recovery is unsuccessful. This message is for informational purposes only.

System action: DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSShsm

ARC0784I {EXTENDED ATTRIBUTES | LAST SUCCESSFUL CLASS TRANSITION DATE} FOR DATA SET *dsname* {WERE | WAS} NOT RETAINED DURING THE RECALL | RECOVER | ARECOVER | CLASS TRANSITION}

Explanation: The data set was recalled, recovered, Arecovered or transitioned successfully. However, JOBNAME, STEPNAME, creation time attributes and/or vendor attributes from the Format 9 DSCB of the recalled or recovered data set were not retained, because the volume on which it was placed did not support Format 8/ Format 9 DSCBs. For a class transition, the Last Successful Class Transition Date of the data set was not retained, because Class Transition mode is disabled or the data set was recalled from a migration copy, but the Class Transition rules are not followed for the recall of this data set.

System action: The recall, recovery, aggregate recovery, or class transition continues.

Programmer response: None.

Source: DFSMShsm

ARC0785E CATALOG OF DATA SET *dsname* ON VOLUME MIGRAT FAILED, CATALOG RETURN CODE = *catrc*, CATALOG REASON CODE = *catreas*

Explanation: RECALL processing of a VSAM data set failed. The data set was uncataloged by DFSMShsm before the RECALL was attempted. DFSMShsm was trying to recatalog the cluster name or one of the cluster's object or path names as being on the volume MIGRAT but the recatalog fails.

System action: RECALL processing ends. DFSMShsm processing continues.

Programmer response: It is necessary to find out which objects need to be recataloged. To find this information, do the following:

1. Use the FIXCDS command to display the MCD record for the migrated VSAM data set.
2. Using the field MCDMCANM in the MCD record as the key, use the FIXCDS command to display the MCO record for the data set (if an MCO record exists).
3. Using the object names that exist in the MCO record, or just using the base cluster name if an MCO record does not exist, use the TSO LISTCAT command to list the catalog entry for the object name(s).
4. For any entry name that does not have a non-VSAM catalog entry with a volume serial number of MIGRAT, use the AMS DEFINE non-VSAM command to create a catalog entry for the object with a volume serial number of MIGRAT.
5. RECALL processing of the data set should be attempted using any of the object names that are now cataloged properly.

Source: DFSMShsm

ARC0786I IMPORT FAILED TWICE FOR IDC3351I RC28 ON {RECALL | RECOVER} FOR DATA SET *dsname*, {RECALL | RECOVER} WILL BE RETRIED AFTER INCREASING THE PRIMARY OR SECONDARY SPACE QUANTITY.

Explanation: IDCAMS IMPORT command processing of this data set fails twice with message IDC3351I RC28. After the first failure, message ARC0769I is issued and IMPORT processing is retried without the FREESPACE parameter. Message ARC0786I is received if the retry without FREESPACE specified fails with message IDC3351I RC28. The second failure indicates that maximum extents are exceeded during IMPORT processing. If the data set has secondary allocation, the redrive indicated by ARC0786I will increase the secondary allocation amount. If the data set has zero secondary allocation, then the IMPORT is redriven with a larger primary allocation amount.

System action: Retry RECALL or RECOVERY processing of this data set after increasing the space allocation (primary or secondary). If the retry is successful, determine the current allocation of the data set. If the allocation needs to be changed, take the appropriate action. For DB2-type VSAM data sets, some action may be required for full usability. Verify if VSAM data sets created by other products require changes. If the retry fails after message ARC0786I instructions are completed, see message ARC1155I.

Source: DFSMShsm

ARC0787I *mmm* DATA SET RECOVER REQUESTS SCHEDULED FOR VOLUME *volser*

Explanation: For volume recovery requests, all data sets requiring recovery were identified and scheduled. For volume restore with APPLYINCREMENTAL processing, the restore from dump was completed and all data sets requiring recovery from incremental backups were identified and scheduled. The volume serial number of the volume recovered is *volser*. If the DASD volume was in DISALL status, it may now be enabled.

System action: DFSMSHsm processing continues.

Operator response: This message indicates that requests only were scheduled and not success or failure. When all scheduled requests complete, message ARC0773I is issued.

Source: DFSMSHsm

ARC0788I BACKUP OF VOLUME *volser* TERMINATED, ERROR OPENING BACKUP TAPE DATA SET

Explanation: DFSMSHsm attempted to process the volume with volume serial number *volser*. An attempt to open the backup tape data set failed.

System action: The backup operation ends. DFSMSHsm processing continues.

Operator response: Notify the storage administrator, who can determine the cause of the failure and schedule a BACKVOL request, if necessary.

Programmer response: None.

Source: DFSMSHsm

ARC0789I *func* ENDED ON STORAGE GROUP *sg*, TIME *hh:mm:ss*

Explanation: DFSMSHsm storage group *sg func*. This message indicates only completion of the *func* and not success or failure. All scheduled *func* requests were attempted. Examine all associated output to determine success or failure.

System action: DFSMSHsm processing continues.

Operator response: None.

Programmer response: None.

Source: DFSMSHsm

ARC0790E TAPES ARE NOT AVAILABLE FOR USERID *userid funct* REQUEST. DSN=*dsname*, VOLSER(S)=*xx*, *xx*, ...

Explanation: DFSMSHsm receives a cancel request from the OAM CBRUXVNL exit or message ARC0962A. For message ARC0962A, the operator is given the opportunity to cancel because the tape needed for the function does not have the same tape library status or storage group. The message ARC0790E is written only to the system console.

- USERID is the user ID of the command requester.
- FUNCT is the function DFSMSHsm is performing.
- DSN is the data set processed for a data set command. DSN is the tape data set name for the RECOVER VOLUME FROMDUMP function. DSN can be set to *** for volume functions other than RECOVER VOLUME FROMDUMP.
- VOLUME is the list of the tape volumes needed to satisfy the function command. The list may include up to a maximum of twelve volumes.

This message is received for any instance of DYNAMIC ALLOCATION return code of '9704'x.

System action: All DFSMSHsm processing outside of this task continues. If a data set function is processing, it fails. If a volume function is processing, it continues with the next eligible volume.

Programmer response: If message ARC0926A is received or the failure is from the OAM CBRUXVNL exit during allocation processing, all of these tapes have to be placed in the same tape library and storage group or all of these tapes have to be removed from the library. If the DARC='9704'x is received and the CBRUXVNL exit does not cancel the request, follow the procedures for DARC='9704'x allocation error.

Source: DFSMSHsm

ARC0791I ALL *nn* VOLUME *func* REQUESTS SCHEDULED FOR STORAGE GROUP *sg*, TIME *hh:mm:ss*

Explanation: For *func* requests for storage group *sg*, all volumes eligible for *func* were identified and scheduled. *nn* is the number of scheduled volumes, and *hh:mm:ss* is the time that all MWEs are scheduled.

If *nn* is 0, no volume in the storage group was eligible.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0792I BACKVOL CDS COMMAND FAILED DUE TO INCOMPATIBLE PARAMETERS

Explanation: When DFSMSHsm control data sets are accessed in record level sharing mode, DFSMSdss must be the specified datamover and the PARALLEL parameter must be specified if the backup is directed to tape. One or both of conditions were not met.

System action: BACKVOL CDS command processing ends. DFSMSHsm processing continues.

Programmer response: If DFSMSHsm has been specified as the datamover, then reenter the command with DATAMOVER(DSS). If the backup is being directed to tape, then specify BACKUPDEVICECATEGORY(TAPE(PARALLEL)). Use the parameters of the SETSYS CDSVERSIONBACKUP command to make the CDS version backup environment compatible with record level sharing mode processing.

ARC0793I CDS VERSION BACKUP ENVIRONMENT OVERRIDDEN

Explanation: Automatic CDS version backup was started while the control data sets were accessed in record level sharing mode. In record level sharing mode, DFSMSdss must always be the specified data mover, and PARALLEL must be specified if the backup is directed to tape. One of both of these conditions was not met but was overridden with the necessary value.

System action: CDS version backup processing continues, using DFSMSdss as the datamover and the PARALLEL parameter. DFSMSHsm continues processing.

Programmer response: Use the optional parameters of the SETSYS CDSVERSIONBACKUP command to make the CDS version backup environment compatible with record level sharing mode processing. To make DFSMSdss the datamover, specify SETSYS CDSVERSIONBACKUP(DATAMOVER(DSS)). If the backup is to be directed to tape, specify SETSYS CDSVERSIONBACKUP (BACKUPDEVICECATEGORY (TAPE(PARALLEL))). If both of these changes are needed, specify both of the optional parameters in the same SETSYS CDSVERSIONBACKUP command.

ARC0794I INCONSISTENT PARAMETERS SPECIFIED ON THE BACKVOL CDS COMMAND.

Explanation: The BACKVOL CDS command has been specified with DATAMOVER(DSS) without the BACKUPDEVICECATEGORY parameter and the DFSMSHsm CDS version backup environment indicates TAPE(NOPARALLEL). If DATAMOVER(DSS) is specified, CDS version backup must run in PARALLEL.

System action: DFSMSHsm continues to process; the BACKVOL CDS command processing ends.

Programmer response: Reenter the BACKVOL CDS command with BACKUPDEVICECATEGORY(DASD) or BACKUPDEVICECATEGORY(TAPE(PARALLEL)) parameter. The SETSYS command can also be use to change the CDS version backup environment.

Source: DFSMSHsm

ARC0795I CHANGING ENVIRONMENT TO BE CONSISTENT WITH DATAMOVER(DSS).

Explanation: The SETSYS CDS command was specified with DATAMOVER(DSS) without the BACKUPDEVICECATEGORY parameter and the DFSMSHsm CDS version backup environment indicates TAPE(NOPARALLEL). If DATAMOVER(DSS) is specified CDS version backup must run in PARALLEL.

System action: DFSMSHsm continues to process; the DFSMSHsm environment is changed to TAPE(PARALLEL).

Programmer response: Informational only.

Source: DFSMSHsm

ARC0796I • ARC0801I

ARC0796I JOURNALING MUST BE DISABLED, COMMAND IGNORED.

Explanation: The BACKVOL CDS(NULLJOURNALONLY) command was entered, but the journal is currently active. The NULLJOURNALONLY parameter of the BACKVOL command can only be issued if journaling is disabled.

System action: DFSMSHsm continues processing.

Programmer response: Informational only.

Source: DFSMSHsm

ARC0797I {NO | MORE THAN 15 | MORE THAN 30 | MORE THAN 80} {STORAGE GROUPS | VOLUMES} WERE LISTED IN THE {BACKVOL | MIGRATE} COMMAND

Explanation: A MIGRATE command is issued with the optional SMS parameters. More than 15 storage groups are listed in the STORAGEGROUP parameter. Only the first 15 storage groups will be processed.

A BACKVOL command is issued for volumes. More than 80 volumes are listed in the command. If more than 80 are listed, only the first 80 volumes are processed.

System action: DFSMSHsm continues processing.

Programmer response: Correct the BACKVOL or MIGRATE command for storage groups to specify at least one, but no more than 15 or 30 storage groups. Correct the BACKVOL command for VOLUMES to specify no more than 80 volumes.

Source: DFSMSHsm

ARC0798E TAPE(S) CONTAINING NEEDED DATA NOT AVAILABLE.

Explanation: The tape volumes needed for the DFSMSHsm function cannot be allocated.

System action: All DFSMSHsm processing outside of this task continues. If the function is processing at a data set level, then that data set fails and processing continues with the next data set. If a volume function is processing, it continues with the next eligible volume or volume set.

Programmer response: Contact your operator to determine the availability of tape volumes needed. Operations should check the ARC0790E message issued to the console for a list of volumes needed.

Source: DFSMSHsm

ARC0799I CDS BACKUP ENDING BECAUSE QUEUED JOURNAL ENTRIES DID NOT FINISH

Explanation: The CDS BACKUP function must wait for all queued journal entries to finish before it can start. If this does not occur within a time limit, the CDS BACKUP fails.

System action: DFSMSHsm processing continues.

Programmer response: Run CDS BACKUP again. If the SETSYS JOURNAL option is SPEED, consider changing it to RECOVERY. This will minimize queued journal entries. If the option is already RECOVERY and you decide to contact IBM service, save the SNAP dump for analysis.

Source: DFSMSHsm

ARC0801I DFSMSHSM AUDIT STARTING

Explanation: DFSMSHsm AUDIT command processing is in process.

System action: AUDIT processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0802I DFSMSHSM AUDIT ENDING

Explanation: DFSMSHsm AUDIT command processing has ended.

System action: Normal DFSMSHsm activities resume without any intervention.

Programmer response: None.

Source: DFSMSHsm

ARC0803A WARNING: AUDIT OF CATALOG MAY DEGRADE PERFORMANCE, REPLY 'Y' TO START AUDIT OR 'N' TO CANCEL AUDIT COMMAND

Explanation: DFSMSHsm received a request to audit a user or master catalog with the FIX parameter. This type of audit request causes an exclusive enqueue on the migration, backup, and offline control data sets. In a multiple processing unit environment, a hardware RESERVE is issued for the resource, which stops all other DFSMSHsm processing during the audit.

System action: DFSMSHsm processing continues. The audit request is not processed unless the operator responds with Y.

Operator response: Reply Y to continue audit processing or N to cancel audit processing.

Programmer response: None.

Source: DFSMSHsm

ARC0804I AUDIT OF CATALOG CANCELLED BY OPERATOR

Explanation: A request to DFSMSHsm to audit a user or master catalog was cancelled. The operator response to message ARC0803A was not Y.

System action: Other DFSMSHsm processing continues.

Programmer response: Reissue the AUDIT command at a time when DFSMSHsm activity is minimal.

Source: DFSMSHsm

ARC0805I I/O ERROR OCCURRED DURING READING OF VTOC ON VOLUME *volser*

Explanation: During processing of the AUDIT command, DFSMSHsm successfully opened the volume table of contents (VTOC) on a volume for a read operation. However, a permanent I/O error occurred during the reading of the VTOC. The volume serial number of the volume is *volser*.

System action: The AUDIT command ends. Other DFSMSHsm processing continues.

Operator response: Respond to the associated I/O error message. Retry the AUDIT command when the problem has been fixed.

Programmer response: None.

Source: DFSMSHsm

ARC0806I OPEN OF VTOC FOR VOLUME *volser* FAILED

Explanation: While performing an audit request on a primary, backup, or migration volume, DFSMSHsm could not read the volume table of contents (VTOC) for the volume. There was an open failure. The volume serial number of the volume is *volser*.

System action: The audit request for the volume ends. Other DFSMSHsm processing continues.

Operator response: Respond to any associated I/O error message and reissue the audit request. If the error persists, there is probably an I/O error, or data on the VTOC has been damaged. Notify the storage administrator for assistance.

Programmer response: None.

Source: DFSMSHsm

ARC0807I INSUFFICIENT SPACE FOR READING VTOC OF VOLUME *volser*

Explanation: DFSMSHsm received a request to audit a volume (or list of volumes) or to migrate a volume. The space necessary for the read of the VTOC of the volume with the volume serial number *volser* could not be obtained with the GETBUF macro.

System action: The audit or migration request ends. Other DFSMSHsm processing continues.

Programmer response: Reissue the AUDIT command for the volume identified by *volser*. For migration of a volume, issue a MIGRATE command with the VOLUME parameter for the volume identified by *volser* in the message.

If the problem persists, increase the region size for DFSMSHsm.

Source: DFSMSHsm

ARC0808I UNABLE TO AUDIT VOLUME *volser*

Explanation: DFSMSHsm received a request to audit the volume with volume serial number *volser*. AUDIT processing not be performed because of one of the following conditions:

- The volume was not mounted.
- The volume is not known to DFSMSHsm. The volume may be either SMS-managed or non-SMS-managed, but there is no ADDVOL for the volume.
- The volume has not been assigned by DFSMSHsm as a daily backup or SPILL backup.

System action: The audit command ends. DFSMSHsm processing continues.

Operator response: Mount the necessary volume if requested to do so.

Programmer response: If the volume is non-SMS-managed, make sure the volume is known to DFSMSHsm. If the volume is SMS-managed, use the IDCAMS DIAGNOSE command to check the volume for inconsistencies.

Source: DFSMSHsm

ARC0809I BVR *brkey* **IS IN USE BY ANOTHER HOST. AUDIT PROCESSING CONTINUES**

Explanation: An AUDIT command of some or all backup volumes is being processed. The processing unit identifier in the backup cycle volume record (BVR) is not zero, meaning the BVR *brkey* is enqueued by another processing unit. This might result from the processing unit failing before being able to release the enqueue on the record, or another DFSMSHsm function, such as backup, is running. AUDIT processing continues.

System action: DFSMSHsm processing continues.

Programmer response: If the processing unit failed before being able to release the enqueue, the processing unit identifier will be set to zero the next time DFSMSHsm is started up in that processing unit, or a LIST HOST command with the RESET parameter can be issued to remove the processing unit ID from the record. If backup is running, the results of the AUDIT processing may be invalid.

Source: DFSMSHsm

ARC0810I AUDIT DSN/LEVEL REJECTED - NO DSNAME OR LEVEL QUALIFIER

Explanation: An AUDIT command was issued with the DATASET NAMES or LEVELS parameter. The data set name or qualifier was not specified.

System action: DFSMSHsm processing continues by processing the next parameter for this AUDIT command.

Programmer response: Supply the data set name or qualifier and reissue the command.

Source: DFSMSHsm

ARC0811I LIST BACKUPCONTENTS FOR INCREMENTAL VTOC COPY DATA SET ON A BACKUP VOLUME CANNOT BE DONE

Explanation: The LIST command was issued with the primary volume (PVOL) and BACKUPCONTENTS parameters. The specified volume has not been incrementally backed up by DFHSM 2.3.0 and does not have an incremental VTOC copy data set available on a migration level 1 volume. (Before DFHSM 2.3.0, VTOC copy data sets

were kept on backup volumes.) Listing the VTOC copy data set is only supported when it is created on a migration level 1 volume by DFHSM 2.3.0 or a subsequent release. This message can also be issued if the volume has been dumped, but never backed up. DFHSM is the former product name of DFSMSHsm.

System action: The LIST command ends. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0812I LIST DUMPCONTENTS IGNORED, NO OR INVALID SOURCE VOLUME SPECIFIED

Explanation: The LIST DUMPVOLUME command was issued for all dump volumes or for a specific dump volume. The DUMPCONTENTS parameter was specified. One or more of the listed dump volumes has two or more valid stacked dump copies. Either the DUMPCONTENTS parameter specified no source volume serial number, there is no dump copy of the specified volume serial number on the listed dump volume or volumes, or a VTOC copy of the specified volume was not created at the time of the dump due to the VTOCCOPIES parameter in the associated DUMPCLASS.

System action: DFSMSHsm lists the dump copies on the dump volumes without listing the contents of any dump copy.

Programmer response: From the listing of the dump volumes, determine the source volume for which the dump contents are wanted. Reissue the LIST command with the correct volume serial number specified for the DUMPCONTENTS parameter, if necessary.

Source: DFSMSHsm

ARC0813I INCOMPLETE AUDIT OF {CATALOG *catalogname* | {MIGRATION | BACKUP} CDS | VOLUME *volser* | {PRIMARY AND MIGRATION | ML2} VOLUMES | {BACKUP | SPILL | UNASSIGNED} VOLUMES | DAY *dayid* | TAPE *volser* | DATASET *dsname* | COPYPOOL *cpname*}, RC=*retcode*, REAS=*reascode*

Explanation: An AUDIT command has been issued to audit the item specified in the message. During AUDIT processing, an error has occurred.

The values for *retcode* are:

Retcode Meaning

- 0 Normal completion; list ready for processing.
- 2 An error has occurred while trying to read a record from a control data set. See the *reascode* for the cause of the read failure.
- 4 A partial audit has been completed because of a LOCATE failure. See *reascode* for the cause of the LOCATE failure.
- 6 Control data set positioning has failed. See *reascode* for the cause of the positioning failure.
- 10 Only copy pool backups records created or processed in z/OS release V1R8 and later can be audited. This copy pool backup was created prior to z/OS V1R8.

When the *retcode* is 4, the *reascode* is the failing return code from the LOCATE request. The return codes listed below have the following actions:

For *retcode* 2 or 6, the values for *reascode* are:

Reascode

Meaning

- 0 An AUDIT command has been issued for a specific volume. No volume record is found for the volume.
- 4 Key is not found. If the audit requested is for a backup day, this reason code could indicate that the key specified is greater than the defined backup cycle.
- 8 Control interval in use.
- 12 Work area is not large enough.

ARC0814I

- 16 A physical error has occurred.
- 20 A logical error has occurred.
- 22 OCDS has not been defined.
- 24 BCDS has not been defined.

System action: DFSMSHsm processing continues.

Programmer response: For return code 4, see *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009I.

For return code 10, the pre-V1R8 copy pool records are eligible to be audited after the copy pool has had the **FRBACKUP** function executed against it in a z/OS V1R8 or later environment.

Source: DFSMSHsm

ARC0814I LIST {USER | TTOC | DATA SETS | VOLUME | BACKUPVOLUME | PRIMARYVOLUME | DUMP VOLUMES | DUMP CLASSES | AGGREGATE | COPYPOOL} PROCESSING TERMINATING EARLY, RC=*retcode*

Explanation: A LIST or HLIST command ended before normal completion of the requested function. The LIST command was issued with one of the following parameters: USER, TTOC (tape table of contents), DATASETNAME (migrated data sets or backed up data sets), VOLUME (migration and primary volumes), BACKUPVOLUME, PRIMARYVOLUME, DUMPVOLUME, DUMPCLASS, AGGREGATE, or COPYPOOL. The reason for an early end is explained as determined by the *retcode*.

The values for *retcode* are:

Retcode Meaning

- 1 An I/O error occurred in scanning DFSMSHsm control data set records.
- 2 The LIST command was held, DFSMSHsm was being shut down, or a TSO attention interrupt was issued from the terminal from which the command was issued.
- 3 A GETMAIN error occurred. For a list of the backup contents of a VTOC copy data set, storage is needed to hold all the records from this data set.
- 4 An error occurred in allocating a VTOC copy data set for BACKUPCONTENTS request processing.
- 5 An error occurred in opening a VTOC copy data set for BACKUPCONTENTS request processing.
- 6 An error occurred in reading a VTOC copy data set for BACKUPCONTENTS request processing.
- 7 An error occurred in reading a DGN record to determine the dump volume serial numbers associated with the dump.
- 8 DFSMSHsm was unable to list the data sets having the TSO user's identification as the high-level qualifier. As an example, this may be caused by specifying NOPREFIX in the user's TSO profile.
- 9 An error occurred in processing your request. See previously issued ARC0184I messages and *retcode* for further explanation of the errors.
- 12 An error occurred in retrieving the library name for a tape volume. Check the command activity log for messages.
- 13 Inconsistent parameters were used in the LIST command; for example, requesting a list of BCDS entries for a primary volume and specifying a migration volume for the volser (LIST PVOL (migration volser) BCDS).
- 15 A LIST DSN or LIST LEVEL(qualifier) command terminated. The optional parameter SUMMARY was specified with BACKUPCONTROLDATASET, BACKUP, BCDS, or BOTH. The optional parameter SUMMARY only applies to information from the MCDS.
- 16 Obtain of a format-1/format-8 DSCB of the VTOC copy data set failed.
- 17 VTOC copy data set has a format-8 DSCB.
- 18 LIST COPYPOOL DATASETS was requested to write output to the terminal. The TERMINAL parameter is not supported for the DATASETS keyword.
- 19 Copy pool records indicate that catalog information was not captured for this backup version.

- 20 Copy pool records indicate that catalog information was captured for this backup version, but the Fast Replication Catalog Information Data Set was not found.
- 21 The version for the specified GENERATION or TOKEN could not be found.
- 22 A LIST DSN or HLIST DSN command was issued without specifying a data set name and SUMMARY parameter. This can result in an extremely large amount of output and is prohibited.
- 24 An internal error occurred; LIST could not continue.

System action: LIST command processing ends. DFSMSHsm processing continues.

Programmer response: If an I/O error occurred, see the preceding ARC0187I message or the ARC0184I message for the appropriate response. If a GETMAIN failure occurred, try the command again.

If the VTOC copy data set could not be accessed, or an error occurred in accessing a DGN record, resubmit the command after corrective action has been taken or the error has been identified as nonrecurring.

If the reason-code is 15 and you want SUMMARY information from the MCDS, issue the command without BACKUPCONTROLDATASET, BACKUP, BCDS, or BOTH. The default is information from the MCDS.

The Application programmer responses for *retcode* are:

- 18 Direct the output to a data set or system output class.
- 19 If you believe that catalog information was captured for this backup version, run AUDIT DIRECTORYCONTROLS.
- 20 Run AUDIT DIRECTORYCONTROLS.
- 21 Verify that the specified GENERATION or TOKEN was correct.
- 22 Specify data set name or level name or SUMMARY parameter.
- 24 Search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

Use V1R12 or higher to recover if VTOC copy data set has a format-8 DSCB.

Source: DFSMSHsm

ARC0815I HOSTID=*procid* FOUND IN DFSMSHSM CONTROL DATA SET RECORD, TYPE=*rtype*, KEY=*rkey*

Explanation: A LIST command was issued with the HOST parameter to list DFSMSHsm control data set records that are serialized with *procid*. A control data set *rtype* record with key *rkey* was found to be serialized by *procid*. This message is issued for each serialized record found.

System action: LIST processing continues. DFSMSHsm processing continues.

Programmer response: If the processing unit is not operational and you want to remove the processing unit ID from the DFSMSHsm records, issue the LIST HOST (*hostid*) RESET command.

Source: DFSMSHsm

ARC0816I NO DFSMSHSM CONTROL DATA SET RECORDS FOUND CONTAINING HOSTID=*procid*

Explanation: A LIST command was issued with the HOST parameter to list control data set records that were serialized with *procid*. No serialized DFSMSHsm control data set records were found.

System action: LIST processing ends. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0817I HOSTID=*procid* FOUND IN DFSMSHSM CONTROL DATA SET RECORD, TYPE=*rtype*, KEY=*rkey*, RESET {SUCCESSFUL | FAILED}

Explanation: A LIST command was issued with the HOST and RESET parameters to list the control data set records that are serialized with *procid* and to reset the processing unit identifier field in the listed records. A control data set *rtype* record with key *rkey* was found to be serialized by *procid*, and the reset function on that record was either successful or failed as indicated in the message. This message is issued for each serialized record found.

Note: When the record type is V, the volume as well as the SDSF serialization information is reset.

System action: LIST processing continues. DFSMSHsm processing continues. If the reset failed, the processing unit identifier field in the listed record is not nulled.

Programmer response: If the reset failed, notify the system programmer. See the preceding messages for the reason for the failure. After the problem is corrected as described in the preceding messages, reissue the LIST command.

Source: DFSMSHsm

ARC0823I VOLUME *volser* IS NOT A PRIMARY OR MIGRATION VOLUME

Explanation: The specified volume serial number *volser* is not an eligible volume for the function being performed as it is a volume residing in a copy pool backup storage group.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0824I RECYCLE ENCOUNTERED A CONFLICT BETWEEN ERRORALTERNATE(MARKFULL) AND A PATCH TO THE YGCB

Explanation: Conflict between SETSYS DUPLEX(MIGRATION(Y ERRORALTERNATE(MARKFULL))) and existing patch to turn off all SYNCDEVs for the recycle alternate tape (YGCB_BYPASS_ALT_SYNC is ON).

System action: DFSMSHsm processing continues.

Operator response: Specify SETSYS DUPLEX(MIGRATION(Y ERRORALTERNATE(CONTINUE))).

System programmer response: Specify SETSYS DUPLEX(MIGRATION(Y ERRORALTERNATE(CONTINUE))) or set YGCB_BYPASS_ALT_SYNC flag OFF.

Programmer response: None.

Source: DFSMSHsm

ARC0825D RECYCLE TAPE LIST CREATED, DSN=*dsname*. DO YOU WISH TO CONTINUE? REPLY 'N' TO STOP RECYCLE OR 'Y' WHEN READY TO MOUNT TAPES.

Explanation: Because a RECYCLE command has the EXECUTE and TAPELIST parameters specified, DFSMSHsm writes the tape list output into a data set or SYSOUT file and deallocates the data set. While preventing this or another host from trying to recycle the same category of tape volumes, DFSMSHsm allows the tape operator to use this tape output to retrieve nonempty tapes before requesting that they be mounted on the tape drives.

System action: No tapes of the specified category are recycled until the operator responds with 'Y'.

Programmer response: Reply 'Y' to continue recycle processing when you have the first pull group of nonempty tapes available for mounting and recycling. Reply 'N' to end the recycling of the specified volume category.

Source: DFSMSHsm

ARC0830I RECYCLE COMMAND PROCESSING STARTING

Explanation: A RECYCLE command has started to process.

System action: RECYCLE processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0831I RECYCLE COMMAND PROCESSING ENDING

Explanation: The RECYCLE command has completed processing.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0832I RECYCLE STARTING ON VOLUME *volser* AT *time* ON *date* SYSTEM *sysid*

Explanation: RECYCLE command processing of the volume *volser* has started. The volume serial number of the volume being recycled is *volser*. The time of day the RECYCLE processing began is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). The date of RECYCLE processing is *date*, expressed *yy/mm/dd* (year, month, day). The SMF system identifier of the system on which the RECYCLE is processing is *sysid*.

System action: RECYCLE processing of the volume proceeds.

Programmer response: None.

Source: DFSMSHsm

ARC0833I RECYCLE ENDED ON VOLUME *volser*, *number* DATA SETS MOVED, TIME *time*, RC=*retcode*, REAS=*reascode*

Explanation: RECYCLE processing of volume *volser* has ended. The time of day RECYCLE processing ended is *time*, expressed as *hh:mm:ss* (hours, minutes, seconds). *number* is the number of data sets that were moved from the volume to selected output tape volumes as indicated in the associated ARC0734I messages. For *retcode* values, see Table 17 on page 566. The *reascode* is either the TCB completion code if the task abnormally ended or the return code from the data mover subtask. The reason code is in hexadecimal.

Note: When RECYCLE processes a tape in which all data sets are no longer valid, this message indicates that zero data sets were moved. Zero is valid and does not represent a RECYCLE processing problem.

System action: See Table 17 on page 566 for the system action related to the specific return code reported by this message.

Programmer response: See the programmer response for the specific return codes reported by this message in Table 17 on page 566.

Source: DFSMSHsm

ARC0834I Recycle TASK *id* ENDING. RC=*return-code*, REAS=*reason-code*.

Explanation: A recycle task is ending. The task is identified by *id* and can be a number between 1 and 15.

System action: Recycle processing for other recycle tasks continues. The following return code values explain the actions of the ending task and the actions required, if any, to correct the error: For return codes not listed below, see Table 17 on page 566.

Retcode Meaning

- | | |
|----|--|
| 00 | The task ended successfully. |
| 23 | This recycle task abended. The reason code is the ECB completion code. Respond to the preceding messages describing the abend. |
| 24 | This recycle task ended because there is no more work for it to do. This is a normal condition. |
| 28 | This task is ending because the operator requested a decrease in the number of recycle tasks. |

Programmer response: None.

Source: DFSMSHsm

ARC0835I RECYCLE TERMINATED EARLY, RC=*retcode*, REAS=*reascode*

Explanation: During RECYCLE command processing, an error or failure has occurred that has caused RECYCLE processing to end even though volumes remain that are eligible for recycling.

- If EXECUTE has been specified, the remaining volumes are not recycled.
- If EXECUTE TAPELIST has been specified and the tape lists have been produced but the operator's reply says not to continue recycling, no volumes are mounted and no data sets are moved for the specified tape category.
- If the VERIFY or the DISPLAY parameter has been specified, the remaining volumes are not listed.

For *retcode* values, see Table 18 on page 570. For *reascode* values, see Table 17 on page 566.

System action: See the system action for specific return codes in Table 18 on page 570.

Programmer response: See the programmer response for specific return codes in Table 18 on page 570.

Source: DFSMSHsm

ARC0836I MAXIMUM NUMBER OF RECYCLE RETRY ATTEMPTS FOR TAPE *volser* HAS BEEN EXCEEDED

Explanation: DFSMSHsm fails to recycle *volser* tape maximum allowed retry times after takeaway process.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0837I NO (ML2 | BACKUP) VOLUMES WERE FOUND TO BE ELIGIBLE FOR RECYCLE, CRITERIA USED=*percent*%

Explanation: A RECYCLE command has been issued that specifies the DAILY, SPILL, ML2, ALL or BACKUP parameter. The criterion is *percent*.

No volumes of the specified type are eligible for processing because DFSMSHsm has detected one of the following situations:

- The specified percent-valid criterion has not been met for any volume.
- Each volume that has met the percent-valid criterion is ineligible for processing. For details about recycle eligibility, see *z/OS DFSMSHsm Storage Administration*.

System action: Recycle processing ends. DFSMSHsm processing continues.

Programmer response: For eligibility information about a particular volume, issue the RECYCLE command with the DISPLAY parameters specifying the desired volume. For more information about recycle eligibility, see *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC0838I VOLUME *volser* FULL={YES | NO}, PERCENT VALID=*pct*, VOLUME TYPE={ML2 | SPILL | DAILY(*day*) | UNASSIGNED}, FAILED RECYCLE={YES | NO}, DISASTER ALTERNATE={YES | NO}, FAILED CREATION={YES | NO}

Explanation: During the processing of a recycle request for a specific volume, the information requested is displayed. If a volume belongs to a connected set, there will be an ARC0838I message for each volume in the set.

FULL=NO indicates that the tape is not yet marked full and may receive more data.

pct is the percentage of valid blocks of data on the tape volume.

DAILY, SPILL, ML2, or UNASSIGNED is the DFSMSHsm volume category of *volser*.

day is the day in the backup cycle to which the volume belongs if it is a daily backup volume.

FAILED RECYCLE=YES indicates that this volume has failed a previous recycle attempt.

DISASTER ALTERNATE=YES indicates that the tape has a disaster alternate copy.

FAILED CREATION=YES indicates a mismatch between the number of data sets on the volume as recorded in the OCDS TIOC record and the actual number of data sets residing on the volumes.

System action: This message is the normal result of a RECYCLE DISPLAY request. However, if the EXECUTE

parameter was specified, DFSMSHsm has determined that the tape is ineligible for processing. See ARC0445I message that follows.

Programmer response: For more information about the volume *volser*, issue a LIST or HLIST command with the TTOC parameter and specify the volume.

When FAILED CREATION=YES, the extended AUDIT MEDIACONTROLS command should be used to resolve the missing TTOC data set entries for the tape volume *volser*. If a data check or an invalid file block identifier is encountered by AUDIT MEDIACONTROLS, the RECYCLE command can be issued with the FORCE parameter. Recycle processing will invalidate data sets that encounter a data check or invalid file block identifier. For information about extended AUDIT MEDIACONTROLS, RECYCLE FORCE and the z/OS *DFSMSHsm Storage Administration* for the, see

Source: DFSMSHsm

ARC0839I RECYCLE TASK *id* COULD NOT BE STARTED. RC=return-code, REAS=reason-code.

Explanation: A recycle task cannot be started. The task is identified by *id* and is a number between 1 and 15.

System action: If the task *id* is 1, then recycle processing ends. If the task *id* is not 1, then recycle processing continues with a reduced number of tasks. DFSMSHsm processing continues.

Programmer response:

Retcode Meaning

52 See the preceding ARC0305I message for the specific failing code.

90 See message ARC0090I for a further explanation of the error.

Source: DFSMSHsm

Retcode Meaning

52 A GETMAIN error has occurred. DFSMSHsm has failed to get virtual storage for the YQE.

90 A failure occurred trying to attach this recycle task. The reason code is the return code from MVS.

ARC0840I MAXRECYCLETASKS=*ytasks*, RECYCLE INPUT DEALLOCATION FREQUENCY BACKUP=*bfreq*, MIGRATION=*mfreq*.

Explanation: A DFSMSHsm QUERY command was issued with the SETSYS parameter. The maximum number of recycle tasks allowed to process concurrently is *ytasks*. When processing backup tapes, the input drive is deallocated for every *bfreq* recycled connected sets, per task. When processing migration tapes, the input drive is deallocated for every *mfreq* recycled connected sets, per task. If either *bfreq* or *mfreq* is zero, then the input drive is not deallocated during recycle processing of that category.

System action: None.

Programmer response: None.

Source: DFSMSHsm

ARC0841I RECYCLED NET *number* {BACKUP | ML2} VOLUMES TOWARD A LIMIT OF *limit*.

Explanation: A DFSMSHsm QUERY command was issued with the ACTIVE parameter. This message identifies the net number of volumes freed by the currently active RECYCLE command, and the LIMIT specified in the RECYCLE command.

The net *number* of volumes freed is computed as the number of volumes freed minus the number of volumes used for output for the category mentioned.

If limit is ***, then the RECYCLE command did not specify a limit.

System action: Processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0842I {INPUT | OUTPUT} VOLUME(S) DEALLOCATION FAILED DURING TERMINATION OF A RECYCLE TASK.

Explanation: During termination of a recycle task, an attempt to deallocate an outstanding allocation failed.

System action: If other recycle tasks are still active, then the recycle processing will continue. If this task was the last active task, recycle processing will end.

Programmer response: Determine the cause of the deallocation failure from ARC0200I or ARC0208I messages in the command activity log. To free the allocated tape drive you must stop DFSMSHsm.

Source: DFSMSHsm

ARC0843I RECYCLE COMMAND INVALID, 'VOLUME' OR 'CATEGORY OF VOLUMES' MUST BE SPECIFIED

Explanation: A RECYCLE command was issued without specifying the VOLUME or the type of volume to be processed. One must be specified.

System action: RECYCLE processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the RECYCLE command specifying the type of volume or the specific volume to be recycled.

Source: DFSMSHsm

ARC0844I RECYCLE COMMAND INVALID. 'EXECUTE', 'VERIFY', OR 'DISPLAY' MUST BE SPECIFIED

Explanation: A RECYCLE command has been issued without specifying the EXECUTE, VERIFY, or DISPLAY parameter. One must be specified.

System action: RECYCLE processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the RECYCLE command specifying the EXECUTE, VERIFY or DISPLAY parameter.

Source: DFSMSHsm

ARC0845I CONNECTED SET BEGINNING WITH VOLUME *volser* NOT RECYCLED. RC=*return-code*.

Explanation: A connected set beginning with the volume identified by *volser* was not recycled. The recycle of the connected set has ended. For *return code* values, see Table 17 on page 566.

System action: See Table 17 on page 566 for the system action related to the specific return code reported by this message.

Programmer response: See the programmer response for specific return codes in Table 17 on page 566.

Source: DFSMSHsm

ARC0846I {ML2 | SPILL | DAILY} TAPES ARE BEING RECYCLED BY ANOTHER HOST

Explanation: During tape selection of a generic recycle request, a tape group (ML2, Spill or Daily) was found to be already in process on another host. Only one host is allowed to recycle a tape group at one time.

System action: If RECYCLE ALL or RECYCLE BACKUP was specified, processing will continue for another group of tapes, if possible. Otherwise, recycle processing will end.

Programmer response: Wait until the other host has completed before reissuing the recycle request.

Source: DFSMSHsm

ARC0847I RECYCLE INPUT VOLUMES FREED=*nnnn*, OUTPUT VOLUMES USED=*nnnn*.

Explanation: At the end of a RECYCLE EXECUTE command, this message is displayed, identifying the number of input volumes returned and the number of output volumes used. When PARTIALTAPE(REUSE) is in effect, the first output tape selected for each recycle task is not included in the number of output volumes used.

Programmer response: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC0849I RECYCLE COMMAND SELECTION CRITERIA INVALID

Explanation: A RECYCLE command has been issued that specifies the SELECT parameter. However, the SELECT parameter is invalid because DFSMSHsm detected one of the following parse errors:

- SELECT was specified, but neither INCLUDE nor EXCLUDE was specified.
- SELECT and VOLUME were both specified, but SELECT is only valid on the generic RECYCLE command.
- INCLUDE or EXCLUDE, or both, were specified without a subparameter.
- The EXCLUDE ranges were not within the INCLUDE ranges.
- The RANGE parameter's subparameter has an invalid volser range specified; the beginning volser was specified after the ending volser.

System action: All other RECYCLE parse errors are detected and reported. RECYCLE processing ends. DFSMSHsm processing continues.

Programmer response: Correct any parse errors, and resubmit the command.

Source: DFSMSHsm

ARC0850I DFSMSHSM CONTROL DATA SET UPDATE STARTING

Explanation: An UPDATEC command was issued to combine entries in the journal data set with restored copies of the migration, backup, and offline control data sets. The update is in process. ARC0854I messages follow describing individual entries processed.

System action: DFSMSHsm is put into emergency mode while the update is taking place. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0851I DFSMSHSM CONTROL DATA SET UPDATE COMPLETED {SUCCESSFULLY | UNSUCCESSFULLY}

Explanation: The UPDATEC command completed either successfully or unsuccessfully or an error occurred in processing the UPDATEC command. If the message indicates that the UPDATEC was completed successfully, the DFSMSHsm control data sets were successfully updated. If the message indicates that the UPDATEC command was completed unsuccessfully, a previous message was issued indicating the error that occurred causing the UPDATEC command to be unsuccessful.

If the UPDATEC command was successful and if the HOLD command was previously issued, and no more UPDATEC requests are required, the RELEASE command can be issued. If a backup version of the newly updated control data sets is required, issue the BACKVOL command with the CONTROLDATASET parameter.

System action: DFSMSHsm continues processing.

Operator response: If the DFSMSHsm UPDATEC command completed successfully, issue the BACKVOL command with the CONTROLDATASET parameter if desired.

If the DFSMSHsm UPDATEC command completed unsuccessfully, notify the storage administrator.

Programmer response: See the previously issued error message ARC085xI or ARC0025I message and determine the cause of the UPDATEC error.

Source: DFSMSHsm

ARC0852I DFSMSHSM CDS UPDATE TERMINATED { I/O ERROR ON | INVALID } JOURNAL DATA SET

Explanation: During reading of the DFSMSHsm journal data set, an I/O error occurred or an invalid journal data set was used. The UPDATEC command cannot finish processing successfully.

System action: The UPDATEC command ends. DFSMSHsm processing continues without further journaling.

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Operator response: Notify the system programmer. If your installation procedures require the DFSMSHsm journal data, shut down DFSMSHsm.

Programmer response: Correct the cause of the I/O error or the invalid journal data set, and rerun the UPDATEEC command for the failing journal.

Source: DFSMSHsm

ARC0853I ERROR ALLOCATING JOURNAL - *dsname*

Explanation: An attempt was made to allocate a DFSMSHsm journal data set during processing of an UPDATEEC command. The journal data set whose name is *dsname* could not be allocated.

System action: The UPDATEEC command ends. DFSMSHsm processing continues.

Programmer response: After making sure that the DFSMSHsm journal data set is available and cataloged, reissue the command.

Source: DFSMSHsm

ARC0854I ACTION=*action* RC=*retcode* TYPE=*type* KEY=*key*

Explanation: An UPDATEEC command was issued to apply journal records to the restored copy of the control data set. Message ARC0854I is issued describing each journal record applied. The action is either INSERT, UPDATE, or DELETE. The return code from modifying the control data set is *retcode*. For *retcode* values, see Table 9 on page 559. The control data set record type is *type*. The control data set record key is *key*.

System action: The UPDATEEC command processing continues.

Programmer response: If a nonzero return code is associated with the message, determine the cause of the error (see ARC0184I). Use the FIXCDS command to fix the CDS record.

Source: DFSMSHsm

ARC0855I MCDS, BCDS, OCDS, OR ALL - NOT SPECIFIED

Explanation: An UPDATEEC command was issued without specifying which control data set DFSMSHsm should update. You must specify MIGRATIONCONTROLDATASET, BACKUPCONTROLDATASET, OFFLINECONTROLDATASET, or ALL.

System action: The UPDATEEC command fails. DFSMSHsm processing continues.

Programmer response: Be sure to specify on the UPDATEEC command which control data set DFSMSHsm is to update.

Source: DFSMSHsm

ARC0860E {MCDS | BCDS | OCDS | JOURNAL} SPACE MONITORING DISABLED - RC=*retcode*. MIGRATION, BACKUP, FRBACKUP, DUMP, AND RECYCLE HELD.

Explanation: An error occurred in either accessing the multiple-host processor control record (MHCR) in the migration control data set or in initially setting up space monitoring that disabled space monitoring of the specified data set. The return code *retcode* describes the error condition. For *retcode* values, see Table 9 on page 559.

System action: DFSMSHsm space monitoring of the migration control data set, backup control data set, offline control data set, or journal is disabled. The DFSMSHsm functions of migration, backup, fast replication backup, dump, and recycle are held.

Operator response: When the problem has been corrected or the message is no longer needed, take the following action to delete the message:

- If the message identifier is not available, issue the DISPLAY R,I command to get the ID.
- To delete the message, issue the following command using the message identifier obtained from the above DISPLAY R,I command for the *id*:

```
CONTROL C,I,id
```

Programmer response: The problem with the multiple-host processor control record (MHCR) in the migration

control data set should be corrected through the VSAM recovery process that is required. Note that while space monitoring is disabled, the multiple-host processor control record (MHCR) is not accumulating space use statistics. The record must be brought up to date by deleting it (DFSMSHsm creates a new one). In this case, DFSMSHsm obtains space use data from the VSAM catalog. For a return code of 28, you might have to reallocate the data set using the IDCAMS EXPORT and IMPORT commands or copy it using the IDCAMS REPRO command. Note that in a multiple processing unit environment, the only way to ensure that the catalog space use statistics are accurate is to reallocate or copy the data set by using IDCAMS EXPORT and IMPORT commands or the REPRO command.

Source: DFSMSHsm

ARC0875I BASE TTOC RECORD FOR VOLUME *volser* INDICATES SOME TTOC RECORDS WERE NOT WRITTEN TO OCDS

Explanation: The AUDIT function has detected that this volume lists in-storage TTOC records that are not written to the OCDS. This allows the audit to fast forward to an indicated point on this tape volume, reducing the time required to audit this tape and restore the OCDS records.

System action: Audit processing continues.

Operator response: None.

Programmer response: None.

Source: DFSMSHsm

ARC0876I AUDIT MEDCTL CANNOT RESUME ON VOLUME *volser* BECAUSE {THE VOLUME IS DISK | FIX IS NOT SPECIFIED | THE TAPE IS IN FAILEDCREATE STATUS}

Explanation: The optional parameter RESUME was specified, but the audit command with RESUME cannot execute for the reason given in the message.

THE VOLUME IS DISK

MEDCTL RESUME is only valid for tape.

FIX IS NOT SPECIFIED

MEDCTL RESUME is only valid when the FIX parameter is specified. If the initial AUDIT is issued without specifying FIX and the AUDIT is held, and then the generated FIXCDS commands are manually issued, the results of AUDIT MEDCTL with RESUME are unpredictable. Manually entering patches generated by NOFIX is discouraged by IBM.

THE TAPE IS IN FAILEDCREATE STATUS

If additional entries are added to a tape while AUDIT is held and a FAILEDCREATE situation occurs setting TTCFAIST=ON, AUDIT will add the missing TTOC entries. On completion of this audit, the AUDIT MEDCTL RESUME command can be issued again to resume with the last data set being processed when audit was held.

System action: RESUME is not executed.

Operator response: See the explanation.

Programmer response: See the explanation.

Source: DFSMSHsm

ARC0877I AUDIT IS STARTING ON VOLUME *volser* ON EXTENSION *xxxx*

Explanation: When RESUME is specified on the AUDIT MEDCTL command, this message is issued stating the extension where audit is starting. If possible, audit will resume on the data set being processed when the interrupt occurred. If audit cannot resume, it will start at the beginning of the tape.

System action: Audit is starting on the TTOC base or extension indicated in the message.

Operator response: None.

Programmer response: None.

Source: DFSMSHsm

ARC0900I • ARC0903I

ARC0900I DFSMSHSM ERROR CODE *retcode* IN MODULE *modname* TYPE {LOG | SNAP | ABEND | FATAL | SNAP FAILED}

Explanation: A DFSMSHsm error occurred. The module *modname* detected an error of the type indicated in the message text. The internal DFSMSHsm error code is *retcode*. If the ESTAE exit processed the error, 900 (decimal) was added to the error code to identify that the ESTAE exit was invoked.

If TYPE is SNAP FAILED, *retcode* indicates the internal return code from the SNAP macro. However, when *retcode* is 0, the SNAP data set could not be opened. A SNAP failure always causes an abnormal end (abend) to occur.

If *retcode* is *9nn*, an abend occurred after the return code was set to *nn*. If *nn* is nonzero, the explanation for *nn* depends on what function DFSMSHsm was running.

Function

Explanation of Abend

Recovery/Recall

ARC11*nn*

Space Management

ARC12*nn*

Backup

ARC13*nn*

For example, if you receive a return code of 931 and you were running RECOVERY, message ARC1131I explains the return code that was set before the abend occurred.

If the *retcode* is not *9nn*, see "Table 1 Entries that pass error codes to ARCERP" in *z/OS DFSMSHsm Diagnosis* for the explanation.

System action: DFSMSHsm ends only if the option is FATAL. Otherwise, DFSMSHsm performs the option indicated in the message and continues processing. If the option is ABEND, DFSMSHsm reinstates the terminating task after the dump.

Programmer response: Investigate the error using the dump. Restart DFSMSHsm if necessary. The system programmer can set a trap in the module for the particular DFSMSHsm error code to examine system status the next time the error occurs.

Source: DFSMSHsm

ARC0901I DFSMSHSM DEBUG, MOD=*name*, CODE=*x*

Explanation: The module producing the message is *name*, and the debugging data is *x*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0902I MODULE ARCSPCNV CALLED WITH BAD DASD DEVICE CODE OF 'xx.'X

Explanation: Module ARCSPCNV has been called with a device code (fourth byte of DEVTYP field) that is not one of the DFSMSHsm-supported DASD device types defined in the DASD volume table.

System action: DFSMSHsm processing continues, but substitutes the characteristics of a 3330 volume.

Programmer response: This could be caused because of local modification of the DASD volume table.

Source: DFSMSHsm

ARC0903I VSAM CONTROL INTERVAL BUSY TOO LONG ON READ-FOR-UPDATE OF DFSMSHSM RECORD TYPE=*type*, KEY=*key*

Explanation: DFSMSHsm was attempting to read a record for update from one of its control data sets and received a

control-interval-busy status from VSAM. DFSMSHsm retried the read for update every second for 5 minutes and got the same result.

System action: DFSMSHsm has failed to read the record. The DFSMSHsm function running at the time has probably failed as well. See subsequent messages regarding the status of the DFSMSHsm function. DFSMSHsm processing continues.

Programmer response: Determine whether this is a VSAM error or the result of a previous abnormal end when the control interval was in use. If the record being accessed is one critical to DFSMSHsm, the control interval can be released by stopping all DFSMSHsms that share the control data sets and then restarting them.

Source: DFSMSHsm

ARC0904I VSAM CONTROL INTERVAL BUSY TOO LONG ON THE WRITE OF DFSMSHSM RECORD
TYPE=*type*, KEY=*key*

Explanation: DFSMSHsm was attempting to write a record to one of its control data sets and received a control-interval-busy status from VSAM. DFSMSHsm attempted to write the record every second for 30 seconds and got the same result.

This message can also occur if DFSMSHsm was requested to shut down while the retries were occurring. In this case, there might not be an error.

System action: DFSMSHsm has failed to write the record. The DFSMSHsm function running at the time has probably failed as well. See subsequent messages regarding the status of the DFSMSHsm function. DFSMSHsm processing continues.

Programmer response: Determine whether this is a VSAM error or the result of a previous abnormal end when the control interval was in use. If the record being accessed is critical to DFSMSHsm, the control interval can be released by stopping all DFSMSHsms that share the control data sets and then restarting them.

Source: DFSMSHsm

ARC0905E ERROR UPDATING DATA SET VTOC ENTRY FOR *dsname*, RC= *retcode*

Explanation: An error occurred during BACKUP. The CONCURRENT COPY function was used and the data-set-changed indicator was turned off when the concurrent copy session was established. After the backup failed, the error recovery path attempted to reset the data-set-changed indicator back ON, but the update of the data set VTOC entry failed. As a result, the data-set-changed indicator remains off and the data set does not have a valid current backup copy.

The request to the common VTOC access facility (CVAF) to write the data set VTOC entry failed. The return code is the contents of register 15 on return from CVAF. See the *z/OS DFSMSdfp Advanced Services (Return Codes from CVAFDIR)*, for a description of the return code.

System action: None. DFSMSHsm processing continues.

Programmer response: Either reset the data-set-changed indicator to on so a backup is made the next time AUTOBACKUP runs, or issue a command to backup the data set. If the problem still exists, notify the storage administrator.

Source: DFSMSHsm

ARC0909E (MCDS CONTROL | BCDS CONTROL | OCDS CONTROL | JOURNAL) DATA SET IS ABOUT *percent%* FULL

Explanation: The percentage of space used in the migration control data set (MCDS), backup control data set (BCDS), offline control data set (OCDS), or journal data set is *percent*. The installation-specified threshold for space were exceeded. This threshold is specified as *thresh* on the SETSYS MONITOR command. When the specified threshold exceeds, DFSMSHsm issues this attention message.

Note: If a number is concatenated to the control data set name (such as MCDS2), then the message refers to a single volume of a multicluster CDS.

The numerator is the amount of space between the beginning of the data set and the high-used point in the data set. For the control data sets, DFSMSHsm does not subtract the free space below the high-used point because it can still exist when VSAM indicates the data set full. For example, there can be free space in some control intervals (CI) and

ARC0910E

control areas (CA) below the high-used point in a key-sequenced data set (KSDS). However, an insert of a new logical record may still get a return code indicating an out-of-space condition if there is no more space available above the high-used point in the KSDS. Space utilization in a VSAM KSDS is dependent on the location of a new record insert. For example, space must be free in the CI or a CI must be free in the CA where VSAM performs the insert. Otherwise, VSAM tries to obtain a new CA after the high-used point to split the current CA.

The denominator is the total space available in the data set, which is the amount of space between the beginning and the end of the data set (high-allocated).

System action: DFSMSHsm processing continues.

Operator response: Notify the system programmer or storage administrator.

System programmer response: If the MCDS, BCDS, or OCDS is full enough to require action, DFSMSHsm should be shut down.

Prior to a DFSMSHsm shutdown, there are some options you can use:

- Delete old or unneeded records, such as old statistics records, by using the DELETE parameter of the FIXCDS or REPORT command.
- Run migration cleanup using the SETSYS command with the SECONDARYSPMGMTSTART parameter and the DEFINE command with the SECONDARYSPMGMTCYCLE parameter.

After DFSMSHsm shutdown:

- Reclaim fragmented space by performing an IDCAMS EXPORT and IMPORT of the data set or by copying the data set out and back using the IDCAMS REPRO command. If reclaiming fragmented space does not provide sufficient space, a larger control data set should be allocated.

Programmer response: Issue a QUERY command specifying the CONTROLDATASETS parameter to determine additional information about the data set in question. If you want to change the threshold at which DFSMSHsm issues this message, use the SETSYS command with the MONITOR parameter to respecify the threshold.

If the DFSMSHsm journal data set is full enough to require action, begin automatic backup processing by either using the SETSYS command the AUTOBACKUPSTART parameter, or the BACKVOL command with the CONTROLDATASETS parameter. This creates backup copies of the MCDS, BCDS, OCDS, and nulls the journal data set to make all the space in it available. See the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC0910E DFSMSHSM {MCDS | BCDS | OCDS} IS FULL. REORGANIZE CDS. MIGRATION, BACKUP, FRBACKUP, DUMP, AND RECYCLE HELD.

Explanation: An attempt to write a record into one of the DFSMSHsm control data sets has failed. This is because of a lack of space, a VSAM control area is full, or the control data set has attempted to extend to another volume that is not DEFINEd using the IDCAMS KEYRANGES parameter.

System action: The DFSMSHsm functions of migration, backup, fast replication backup, dump, and recycle are held. DFSMSHsm processing continues. DFSMSHsm will write another message, for example ARC0734I, to indicate the failed status of the backup, migration, or recycle request being processed when the condition occurs.

If DFSMSHsm is processing a backup request, it retries the request one time. If the target volume for the backup request is a tape, that tape is marked full and another tape is selected for the retry.

If the ARC0910E message was received for the OCDS, reorganize the OCDS before you release functions that go to tape. If the backup function goes to DASD, and does not need tape, it will run without an OCDS. Primary Space Management will migrate data sets to migration level 1; however, those data sets that need to migrate directly to tape will fail. Migration will be limited to non-tape devices. Do not run recycle function without an OCDS that is defined and usable.

Operator response: When the problem is corrected or the message is no longer needed, take the following action to delete the message:

- If the message identifier is not available, issue the DISPLAY R,I command to get the ID.
- To delete the message, issue the following command using the message identifier *id* obtained from the above DISPLAY R,I command:

CONTROL C,I,id

Programmer response: In a multiple processing unit environment, shut down DFSMSHsm in the other processing units. Copy the data sets out and back, using the IDCAMS EXPORT and IMPORT command.

As an alternative, scratch the existing data sets, use IDCAMS to import a backup copy of the data sets, and then run the UPDATEC command to apply the journal data set. If this condition persists, you might have to reallocate the data sets with more space requested. If a backup tape has been marked full, that tape can be recycled.

For additional information, see *z/OS DFSMSHsm Storage Administration* for the under the section “Maintaining DFSMSHsm Control Data Sets”, and *z/OS DFSMSHsm Implementation and Customization Guide*.

Source: DFSMSHsm

ARC0911E (MCDS | BCDS | OCDS) INDEX DATA SET IS ABOUT *percent* % FULL

Explanation: The percentage of space used in the data set is *percent*. The installation-specified threshold for space was exceeded. This threshold is specified as *thresh* on the SETSYS MONITOR command. When the specified threshold exceeds, DFSMSHsm issues this attention message.

Note: If a number is concatenated to the control data set name (such as MCDS2), then the message refers to a single volume of a multicluster CDS.

The numerator is the amount of space between the beginning of the data set and the high-used point in the data set.

The denominator is the total space in the data set, which is the amount of space between the beginning and the end of the data set (high-allocated).

Note: If the data set is defined so it can extend, the total space increases. Thus, DFSMSHsm may issue this message more than once. DFSMSHsm issues this message every time the percent drops below and then reaches the threshold. For this reason, DFSMSHsm recommends that the data set be defined without secondary allocation. If the VSAM index data set is allowed to fill up and the index cannot extend, DFSMSHsm performance degrades. This message indicates that the CDS must be reorganized and the size of the VSAM index must be increased.

System action: DFSMSHsm processing continues.

Operator response: Notify the system programmer or storage administrator.

Programmer response: Issue a QUERY command specifying the CONTROLDATASETS parameter to determine additional information about the data set in question. If you would like to change the current threshold, use the SETSYS command with the MONITOR parameter to respecify the threshold at which DFSMSHsm should begin issuing this message.

If the MCDS, BCDS, or OCDS is full enough to require action, DFSMSHsm should be shut down.

Prior to a DFSMSHsm shutdown, there are some options you can use:

- Delete old or unneeded records, such as old statistics records, by using the DELETE parameter of the DFSMSHsm FIXCDS or REPORT command.
- Run migration cleanup using the SETSYS command with the SECONDARYSPMGMTSTART parameter and the DEFINE command with the SECONDARYSPMGMTCYCLE parameter.

After DFSMSHsm shutdown:

- Reclaim fragmented space by performing an IDCAMS EXPORT and IMPORT of the data set or by copying the data set out and back using the IDCAMS REPRO command. If reclaiming fragmented space does not provide sufficient space, a larger control data set must be allocated for the VSAM index.

Source: DFSMSHsm

ARC0920I ERROR ON POINT MACRO, BLOCKID= *blkid*, RC= *retcode*

Explanation: A SETSYS command has specified that the 3480 single-file format is being used.

DFSMSHsm has issued a POINT macro to position to a block of data (*blkid*) on a 3480 tape volume. The POINT macro has failed. There are three possible return codes, as follows:

Retcode Meaning

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- 4 Does not support block ID.
- 8 Invalid input parameters are specified.
- 12 An I/O error has occurred for the LOCATE (*blkid*) command. The data set block is not found.

System action: The recall, recovery, or recycle fails. DFSMSHsm processing continues.

Programmer response: For more information about the POINT macro and its return codes, see *z/OS MVS Programming: Authorized Assembler Services Guide* or *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC0921I ERROR ON NOTE MACRO, RC= *retcode*

Explanation: A SETSYS command has specified that the 3480 single-file format is being used. DFSMSHsm has issued a NOTE macro for a 3480 tape volume. The NOTE macro has failed. There are three possible return codes:

Retcode Meaning

- 4 Does not support block ID.
- 8 Invalid input parameters are specified.
- 12 An I/O error has occurred during the RDBLKID command.

System action: The migration, backup, or recycle action fails. DFSMSHsm processing continues.

Programmer response: For more information about the NOTE macro and its return codes, see *z/OS DFSMS Using Data Sets* or *z/OS DFSMS Macro Instructions for Data Sets*

Source: DFSMSHsm

ARC0922I ERROR ON SYNCDEV MACRO, RC= *retcode*, REAS = *reas*

Explanation: A SETSYS command has specified that the 3480 single-file format is being used. DFSMSHsm has issued a SYNCDEV macro to flush the 3480 tape buffer. The SYNCDEV macro has failed. The three possible return codes follow:

Retcode Meaning

- 4 Invalid device (not a buffered tape) is targeted, or invalid input parameters are specified.
- 8 Permanent I/O error exists for the RDBLKID or SYNCHRONIZE command.
- 12 Permanent I/O error exists for earlier channel program.

System action: The migration fails. DFSMSHsm processing continues.

Programmer response: For more information about the SYNCDEV macro and its return and reason codes, see *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC0923I ERROR CLOSING TAPE DATA SET *dsname*, RC= *retcode*

Explanation: DFSMSHsm has attempted to close a single-file 3480 tape data set. The CLOSE attempt has failed. There are six possible return codes, as follows:

Retcode Meaning

- 4 An error has occurred during processing of the FREEPPOOL macro.
- 8 A nonzero return code from the CLOSE macro exists.
- 12 A CLOSE abnormal end (abend) (X'14') has occurred.
- 16 An indeterminate abend has occurred during processing of the CLOSE macro.
- 20 Some other abend has occurred during processing of the CLOSE macro.
- 24 An error has occurred in reading or writing a control data set record.

System action: The tape volume on which the CLOSE macro processing has failed is marked full to prevent further processing on the volume. DFSMShsm processing continues.

Programmer response: Correct the condition causing the error.

Source: DFSMShsm

ARC0931I (H)CANCEL COMMAND COMPLETED, NUMBER OF {REQUESTS | TCBS | ADDRESS SPACES} CANCELLED=*n*

Explanation: A CANCEL or HCANCEL command was issued with the REQUEST, USERID, or DATASETNAME parameter, or a CANCEL command was issued with the TCBADDRESS or SASINDEX parameter. The number of cancellations by the command is *n*.

System action: The number of requests, TCBS or address spaces indicated were cancelled. REQUEST, USERID and DATASETNAME only cancel commands awaiting processing. The TCBADDRESS and SASINDEX parameters are used to cancel active tasks.

For TCBADDRESS and SASINDEX, *n* will be 1 if the cancellation code is executed and 0 if a detectable error occurred. If an invalid but plausible value was passed in *tcbaddress* or SASINDEX, *n* will be 1 even though no cancellation took place. The actual cancellation of an active task will be accompanied by other messages from the system.

Programmer response: None.

Source: DFSMShsm

ARC0932I (H)CANCEL COMMAND REJECTED, USER NOT AUTHORIZED

Explanation: If a CANCEL or HCANCEL command was issued with the REQUEST, USERID, or DATASETNAME parameter, the user was not an authorized DFSMShsm user or was not authorized by RACF facility class, and the USER ID is not the same as the request USER ID. If a CANCEL command was issued with TCBADDRESS or SASINDEX, the user was not an authorized DFSMShsm user or was not authorized by RACF facility class.

System action: DFSMShsm processing continues.

Programmer response: Contact a DFSMShsm-authorized user if it is imperative to cancel requests or active tasks that you are not authorized to cancel.

Source: DFSMShsm

ARC0933I (H)CANCEL COMMAND REJECTED, (H)CANCEL CANNOT BE ISSUED VIA BATCH IN EXISTING ENVIRONMENT

Explanation: A batch request specified a CANCEL, HCANCEL, or HSEND CMD CANCEL command on a system that did not have RACF installed and had not issued the SETSYS ACCEPTPSCBUSERID command.

System action: The cancel request fails. DFSMShsm processing continues.

Programmer response: If the system supports a user ID in the protected step control block (PSCB), enter SETSYS ACCEPTPSCBUSERID and a user ID. Reissue the CANCEL or HCANCEL command on the batch request. The operator issuing the command from the system console can cancel the request.

Source: DFSMShsm

ARC0934I *userid* NOT AUTHORIZED TO ISSUE AUTH COMMAND

Explanation: An AUTH command has been issued from a user ID (*userid*) that is not permitted to authorize other users. Before a user ID can be used to authorize other users, it must be specified by the command AUTHDBA(CONTROL).

System action: DFSMShsm processing continues.

Programmer response: A *userid* that has been authorized with the AUTHDBA(CONTROL) command can authorize this user ID.

Source: DFSMShsm

ARC0935I ERROR INVOKING SSI FOR SMS SERVICES, SUBFUNCTION = *func*, DATA = *data type*, R15RC = *rcl*, SSIRC = *rc2*, SSIREAS = *reas*

Explanation: DFSMShsm has attempted to invoke the subsystem interface (SSI) to issue an SMS service.

SUBFUNCTION is the SMS-defined code for the subfunction being requested, as follows:

- 1 = Get active configuration data.
- 5 = Perform ACS processing.
- 14 = Invoke VTOC/Data Set Services Create.
- 15 = Invoke VTOC/Data Set Services Delete.

DATA is the type of configuration data being requested if SUBFUNCTION is 1. Possible values are:

- 0 = Get lock token.
- 1 = Free lock token.
- 2 = Get base configuration.
- 4 = Return a management class definition.
- 6 = Return a storage group definition.
- 7 = Return a list of volumes associated with a storage group.
- 10 = Return the list of management classes associated with configuration.
- 12 = Return the list of storage groups associated with configuration.
- 13 = Return a volume definition.
- 29 = Return a copy pool definition.
- 30 = Return the list of copy pools associated with configuration.

For all other subfunctions, this field will contain ****.

- R15RC is the return code from the invocation of the SSI. SSIRC is the return code from SMS services. SSIREAS is the reason code from the SMS subfunction. The values for R15RC are documented in the values for R15RC z/OS *MVS Using the Functional Subsystem Interface*.
- SSIRC is the return code from SMS services. SSIREAS is the reason code from the SMS subfunction. The values for SSIRC and SSIREAS are documented in the z/OS *DFSMShsm Diagnosis*.

System action: The function requesting the SSI ends. DFSMShsm processing continues.

Programmer response: Determine the error from either or both return and reason codes and possible related SMS messages that precede this message in the DFSMShsm command activity log. Correct the error and retry the failing function.

Source: DFSMShsm

ARC0936I ERROR RETRIEVING SMS VTOC/VVDS DATA, FUNC = (ACCESS | FREE), RC=*retcode*, REASON=*reas1*, SUBREAS=*reas2*

Explanation: DFSMShsm attempted to retrieve VTOC and catalog entry information from an SMS-managed volume, or attempted to free storage associated with the retrieval of this information. An error was encountered. The following table shows the possible values for RC, REASON and SUBREAS:

Table 2. ARC0936I Return and Reason codes

Code	Meaning
RC = 8 REASON = R15-CVAFFILT SUBREAS = Byte 1-internal Byte 2 or 3, CVSTAT Byte 4, X'8B'	Error reading VTOC.
RC = 12 REASON = R15-CATALOGENTRYMGR SUBREAS = 0	Error accessing CATENTRY.
RC = 12 REASON = 98-CATALOGENTRYMGR SUBREAS = Bytes 1,2-catalog module identifier Byte 3-Internal REASON, Byte 4- Internal RC.	Error accessing CATENTRY.
RC = 16 REASON = R15-GETMAIN or FREEMAIN SUBREAS = Byte 1-internal Byte 2-0 Bytes 3 and 4, X'78' or X'05'	Processing error (GETMAIN or FREEMAIN).

Table 2. ARC0936I Return and Reason codes (continued)

Code	Meaning
RC = 32 REASON = 0 SUBREAS = 0	Parm list error.
RC = 64 REASON = 0 SUBREAS = 0	Major Error (ABEND).
RC = 900 REASON = 0 SUBREAS = 0	An abend occurred.

For further information about the reason codes and subreason codes associated with return code 8, see *z/OS DFSMSdfp Diagnosis*.

For further information about the reason codes for return code 12, see *z/OS MVS System Messages, Vol 6 (GOS-IEA)*, under message IDC3009I, return code 50, where the reason code under return code 50 corresponds to the reason code in this message.

For further information about the reason codes and subreason codes associated with return code 16, see *z/OS MVS Programming: Assembler Services Reference ABE-HSP*.

System action: The volume function processing ends. DFSMSHsm processing continues.

Programmer response: Determine the error from either, or both, the return and reason codes. Correct the error and retry the failing function.

Source: DFSMSHsm

ARC0937I FAILED TO SCRATCH SMS MANAGED DATA SET *dsname* FROM VOLUME *volser*, RC = *retcode* {, SCRATCH STATUS CODE = *dadrc* |, CATALOG REASON CODE = *catreas*}

Explanation: DFSMSHsm tried to scratch (or scratch and uncatalog) SMS-managed data set *dsname* from volume *volser*.

For a scratch failure, DADSM scratch returned *retcode* and status code *dadrc*.

For a failure while uncataloging:

- *retcode* is the return code from the uncatalog request.
- *catreas* is the reason code from the uncatalog request.
- Message ARC0950I contains further data about the failure.

System action: The function requesting the scratch ends. DFSMSHsm continues.

Programmer response: Determine the source of the error from the return code and status or reason code. Correct the error and retry the failing function.

Source: DFSMSHsm

ARC0938I PARTIAL RELEASE OF UNUSED DASD SPACE FOR DATA SET *dsname* WAS NOT SUCCESSFULLY PROCESSED, RC=*retcode*, REASON=*reascode*

Explanation: DFSMSHsm attempted to release unused DASD space allocated to a sequential, extended format VSAM KSDS, or partitioned data set *dsname*. The PARTREL macro returned *retcode* in register 15 and a *reascode* in the PARTREL parameter list. For the meaning of *retcode* and *reascode*, see *z/OS DFSMSdfp Diagnosis*.

System action: DFSMSHsm processing continues.

Programmer response: For more information about the PARTREL macro and its return codes, see *z/OS DFSMSdfp Diagnosis*.

Source: DFSMSHsm

ARC0939I SMS MANAGED DATA SET *dsname* WAS BACKED UP SUCCESSFULLY BUT UPDATE OF THE LAST-BACKED-UP DATE IN CATALOG FAILED, CATRC=*rc*, CATREAS=*reas*

Explanation: DFSMSHsm has attempted to invoke catalog SVC 26 to alter the last-backed-up date in the catalog. A catalog error has occurred and the alter has failed. The SMS-managed data set, indicated by *dsname*, has been backed up successfully but the last-backed-up date in the catalog has not been updated.

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The catalog has returned the return code of *rc* and reason code of *reas*. Catalog services return codes and reason codes are documented in *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009I.

Message ARC0950I contains further information about the failure.

Note: The ARC0905I and ARC0939I message may be received if you requested the GDG base be released after the T0 connection is established when using concurrent copy. This could occur if a new generation for the same GDG is being created while the oldest generation is being backed up because roll-off processing will be able to obtain the GDG base after it is released and could scratch the catalog entry of the oldest generation before the physical backup is complete and backup attempts to alter the catalog entry with the last backup date.

System action: BACKUP processing continues.

Programmer response: Determine the source of the error from the return and reason codes. Correct the error and retry the failing function.

Source: DFSMSHsm

ARC0940I ELIGIBLE SMS MANAGED VOLUME *volser* NOT ADDED BY *func*, RC = *retcode*, REAS = *reascode*

Explanation: DFSMSHsm attempted to internally ADDVOL a SMS-managed volume (*volser*) on behalf of a function (*func* (migration, backup, or dump)). The ADDVOL of the volume failed. Possible values of *retcode* and *reascode* are:

Retcode Meaning

- | | |
|----|--|
| 4 | Storage group definition not found (REAS = 0). |
| 8 | Error reading MCV record (REAS = return code from read. See Table 9 on page 559). |
| 12 | Error creating MCV record (REAS = return code from write. See Table 9 on page 559). |
| 13 | Device table entry not found (REAS = 0). |
| 16 | Error updating MCV record (REAS = return code from update. See Table 9 on page 559). |
| 19 | Volume not mounted (REAS = 0). |
| 52 | GETMAIN error (REAS = return code from GETMAIN). |

System action: The volume is not processed by function *func*. DFSMSHsm processing continues.

Programmer response:

Retcode Action

- | | |
|-------|---|
| 4 | Define the storage group to SMS. |
| 8, 12 | See the preceding ARC0184I message for more information about the error. |
| 13 | Follow problem determination procedures. |
| 16 | See the preceding ARC0184I message for more information about the error. |
| 19 | Mount the volume. |
| 52 | Determine if more storage is needed for DFSMSHsm. Correct the error and retry the failing function. |

Source: DFSMSHsm

ARC0941I THE {NUMBER OF BACKUP VERSIONS (DATA SET EXISTS) | NUMBER OF BACKUP VERSIONS (DATA SET DELETED)} VALUE SPECIFIED FOR {*management class-name*} IS GREATER THAN THE DFSMSHSM MAXIMUM ALLOWABLE NUMBER OF BACKUP VERSIONS - VERSIONS IS SET TO {*maximum allowable number of backup versions*}

Explanation: The value specified in either the NUMBER OF BACKUP VERSIONS (DATA SET EXISTS) or the NUMBER OF BACKUP VERSIONS (DATA SET DELETED) for the indicated management class was larger than the number of backup versions allowed for the current DFSMSHsm BCDS maximum record length. The following values are the valid maximum allowable number of backup versions for different BCDS record lengths:

- Record length of 2040 to 6543 — 29 maximum versions
- Record length of 6544 or more — 100 maximum versions

System action: The maximum allowable number of backup versions DFSMSHsm keeps for a data set based on the DFSMSHsm BCDS maximum record length was substituted for the value in either the NUMBER OF BACKUP VERSIONS (DATA SET EXISTS) or the NUMBER OF BACKUP VERSIONS (DATA SET DELETED). DFSMSHsm processing continues.

Programmer response: If the maximum number of backup versions in the indicted management class is less than or equal to 100, either increase the BCDS maximum record length (as described in the support use section of the *z/OS DFSMSHsm Implementation and Customization Guide*), or reduce the indicated management class value to a number equal to or lower than the DFSMSHsm allowable maximum number of backup versions. If the maximum number of backup versions in the indicated management class is greater than 100, reduce the indicated management class value to a number equal to or lower than the DFSMSHsm allowable maximum number of backup versions.

Source: DFSMSHsm

ARC0945I OPEN OF DDNAME=*ddname* FAILED, VSAM REASON CODE IS X'*reason-code*'.

Explanation: An attempt to open the DFSMSHsm control data set specified by DDNAME=*ddname* was unsuccessful. VSAM failed the attempt with OPEN reason code X'*reason-code*'.

System action: If the error occurred while opening the MCDS during DFSMSHsm startup, the startup of DFSMSHsm is incomplete. For other cases, DFSMSHsm processing will be limited, depending on the control data set in error.

Programmer response: For an explanation of the failure, see the IEC161I message preceding this message. For additional information, see Macro Instructions for Data Sets, VSAM Macro Return and Reason Codes for OPEN reason codes in the ACBERFLG field of the ACB. Correct the problem and restart DFSMSHsm.

ARC0946I {MCDS | BCDS} {LOW KEY | HIGH KEY} = *key*

Explanation: A QUERY command was issued with the CONTROLDATASETS parameter. This message is issued by DFSMSHsm for the low key and high key for each cluster of a multicluster CDS. Repeating X'00' and X'FF' bytes are truncated to the two most significant bytes. If this CDS was not defined with key ranges, then the displayed ranges are the boundaries that DFSMSHsm has calculated to use.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC0947I CDS SERIALIZATION TECHNIQUE is *technique*

Explanation: A QUERY command was issued with the CONTROLDATASETS parameter. This message is issued by DFSMSHsm to describe the current CDS serialization technique in use. Possible values for *technique* are:

ENQUEUE

The CDSs are serialized using a global enqueue product.

RESERVE

The CDSs are serialized using volume reserves.

BOTH The CDSs are serialized using a global enqueue product as well as volume reserves.

RLS CDSSHR=RLS was specified in the startup procedure. The CDSs are accessed in record level sharing mode.

NON-SHARED

Not processing in a shared environment.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC0948I (MCDS | BCDS | OCDS) INDEX TOTAL SPACE=*kbytes* KBYTES, CURRENTLY ABOUT *percent*% FULL, WARNING THRESHOLD=*thresh* % , CANDIDATE VOLUMES=*numvols*

Explanation: A QUERY command was issued with the CONTROLDATASETS parameter. This message contains information about the VSAM index for the migration control data set (MCDS), backup control data set (BCDS), or offline control data set (OCDS). The message is issued once for each control data set (CDS.)

ARC0950I

Note: If a number is concatenated to the control data set name (such as MCDS2), then the message refers to a single data set of a multicluster CDS.

- TOTAL SPACE=*kbytes* KBYTES

The total space allocated in kilobytes is *kbytes*. This figure is based on the amount of space between the beginning and end of the index (high allocated). If the index is defined so that it can extend, this value increases. This value is used as the denominator in the calculation of the %. FULL; see below.

- CURRENTLY ABOUT *percent*% FULL

The percentage of space used in the data set is *percent*

The numerator is the amount of space between the beginning of the data set and the high-used point in the data set.

The denominator is the total space (TOTAL SPACE) in the data set as described above.

This value may vary in size if the data set is defined so it can extend.

- WARNING THRESHOLD=*thresh*%

The installation-specified threshold percentage of occupancy is *thresh* specified by the SETSYS MONITOR command which, when exceeded, causes the issuance of attention message ARC0911E.

- CANDIDATE VOLUMES=*numvols* indicates the number of candidate volumes for the CDS.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC0950I ERROR INVOKING CATALOG *function* FUNCTION, DSN = *datasetname*, VOLUME = *volser*, REQUEST=*request*, CATRC=*rc*, CATREAS = *reas*

Explanation: DFSMSHsm has attempted to invoke the catalog SVC 26 to perform the *function* FUNCTION on the data set *datasetname*. indicates the volume serial on which the function has been attempted for the data set.

While processing the *function* FUNCTION, a request, indicated by *request*, is being processed when the catalog error occurs. The following are the descriptions of the possible values indicated for *request*:

- LOCATE function.
 - SUPERLOCATE — Superlocate catalog request.
 - NONSUPLOC — Regular locate catalog request (not a superlocate request).
- DEFINE function.
 - SMSDEFBCS — Define SMS BCS entry request.
 - SMSDEFNVR — Define SMS NVR entry in catalog entry request.
 - SMSGDSROLIN — Make an SMS-managed data set an active generation data set.
 - SMSRECAT — Recatalog a SMS data set.
- ALTER function.
 - SMSALTERBCS — Alter SMS BCS entry request.
 - SMSALTRNWNM — Rename SMS-managed data set request.
 - SMSALTRCATALOGENTRY — Alter SMS catalog entry request.
 - ALTERACFIND — Turn on the RACF indicator request. The RECALL or RECOVER command processing completes.
- DELETE function.
 - SMSDELBCS — Delete SMS BCS entry request.
 - SMSDELNOBCS — Delete SMS VTOC and catalog entries request.
 - SMSDELALL — Delete entire SMS-managed data set request.

The catalog has returned the return code of *rc* and the reason code of *reas*. Catalog services return codes and reason codes are documented in the *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009I.

If *volser* contains '*****', the catalog request was for multiple volumes.

System action: The DFSMSHsm function requesting the CATALOG function ends. DFSMSHsm processing continues.

Programmer response: Determine the error from the return and reason codes. Correct the error and retry the failing function.

Source: DFSMSHsm

ARC0951I DUPLEXING OF TAPE VOLUMES FOR THE CURRENT {MIGRATION | BACKUP | UNKNOWN} VOLUME {volser} HAS ENDED DUE TO AN ERROR, RC=*rc*, REAS=*reas*

Explanation: Duplexing for migration or backup tape volumes is active, but an error has been detected on the alternate tape volume. Continued use of this specific task will not produce concurrently created duplex tapes. However, tape copies will be scheduled for this and all subsequent volumes.

Return Code:

Meaning

- 0 Indeterminate failure.
- 60 ESTAE setup failure.
- 61 Internal ADDVOL failed.

Reason Code:

Meaning

- 4 Error creating MCV record.
- 8 Error deleting MCV record.
- 12 Error reading MCV record for the volume that was to be internally ADDVOLed.
- 16 Error writing MCV record for the volume that was to be internally ADDVOLed.
- 18 MCV(T) could not be updated for duplex alternate.
- 20 Error creating MCT record.
- 24 Error deleting MCT record.
- 28 Error reading MCT record for the volume that was to be internally ADDVOLed.
- 32 Error writing MCT record for the volume that was to be internally ADDVOLed.
- 36 Error creating TTOC record.
- 40 Error reading TTOC record.
- 44 Error writing TTOC record.
- 48 Error changing key of TTOC record.
- 52 Error deleting BVR volume entry.
- 56 Error creating BVR volume entry.
- 60 Error updating BVR volume entry.
- 64 The tape volume contains valid DFSMSHsm data. The file sequence number in the MCV or MCT record is nonzero.
- 68 The tape volume is RACF-protected, but does not appear in the RACF tape volume set of DFSMSHsm. In addition, the tape volume is not in the DFSMSHsm inventory of BACKUP or MIGRATION volumes.
- 72 The tape volume is RACF-protected, but does not appear in the RACF tape volume set of DFSMSHsm. In addition, the tape volume was in the DFSMSHsm inventory of BACKUP or MIGRATION volumes. The DFSMSHsm control data set record (MCT OR MCV) indicates that the tape volume is empty (the file sequence number is zero). The tape volume is being removed from the DFSMSHsm inventory of BACKUP or MIGRATION volumes.
- 80 An error occurred when DFSMSHsm attempted to add the tape volume to its RACF tape-volume-set.

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- 84 An error occurred when DFSMSHsm attempted to delete the tape volume from its RACF tape-volume-set.
- 97 Internal error in module ARCTEOV.
- 100 Error reading MCT record for the mounted tape volume.
- 104 Error writing MCT record for the mounted tape volume.
- 108 Error reading MCV record for the mounted tape volume.
- 112 Error writing MCV record for the mounted tape volume.
- 69 Syncdev failure.
- Reason Code:**
Meaning
- 0 Unknown error.
- 4 Invalid device (not buffered tape), or invalid input parameters (including parameters not in key of caller).
- 8 Permanent I/O error (during read block ID or SYNCHRONIZE command).
- 12 Permanent I/O error indication for an earlier channel program.
- 79 EOVS on original tape.
- 80 Recycle ABEND.
- 81 EOVS error on alternate tape.
- 82 Duplex copy not open during tape spanning check.
- 83 Open ABEND.
- 84 Length mismatch between original and alternate tape.
- 85 Tape not mounted.
- 86 Shutdown during tape mount.
- 87 CDS I/O error.
- 88 Error allocating alternate tape.
- Reason Code:**
Meaning
- 8 Alternate tape not allocated.
- 16 GETMAIN failure for alternate MVT.
- 20 Failure checking STGCLASS.
- 89 Capacitymode of open tape does not match capacitymode requested.
- 90 Write I/O error.
- 91 Close error.
- Reason Code:**
Meaning
- 4 Freepool failure.
- 8 CLOSE macro failure.
- 12 CLOSE ABEND (X'14').
- 16 Indeterminate CLOSE ABEND.
- 20 CLOSE ABEND.
- 24 Error reading or writing an MCV or MCT.

- 69 Syncdev error.
- 70 Read buffered log error.
- 80 Medium sense error.
- 93 Unexpected end of volume.
- 94 Error allocating alternate tape.
- Reason Code:**
Meaning
- 42 Error attempting to read the JFCB.
- 52 Error attempting GETMAIN storage for DCB. DCB exit list and JFCB work area.
- 95 Open failure.
- Reason Code:**
Meaning
- 11 CDS record update error.
- 20 TTOC update failed.
- 24 CDS I/O error.
- 25 Input CDS error.
- 35 Error opening input data set.
- 36 Error opening output data set.
- 54 User exit ABEND.
- 60 Failure to establish ESTAE.
- 61 Internal ADDVOL failed. If duplex alternate, the RACF call of TEOV failed.
- 67 Error in NOTE macro.
- 68 Error in POINT macro.
- 111 Error writing MCT record or MCV record.
- 125 Error reading MCT record or MCV record.
- 98 Maximum number of volumes for DDNAME exceeded.

System action: DFSMSHsm processing continues.

Programmer response: Analyze all associated error messages to determine the root cause of the failure. Save associated PDA trace logs, dumps and console logs in case further analysis is needed.

ARC0952I THE ORIGINAL OF A DUPLEXED PAIR WAS REPLACED BY THE ALTERNATE: *volser*. ALL DUPLEX INDICATORS HAVE BEEN REMOVED.

Explanation: A TAPERREPL command requested that an alternate tape created by the duplex tape function replace the original. Because a duplex pair no longer exists, the TTOC and MCV/MCT have been updated to indicate this. This is not an indication that the TAPERREPL has been completed.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC0953I RELEASING DUPLEX TAPE (VOLSER) BECAUSE OF AN ERROR. ORIGINAL TAPE: (VOLSER)

Explanation: Duplexing has ended for the original tape volser because an error has occurred on the duplex tape specified in the message. The duplex tape is now released to the system for reuse.

System action: Processing continues for the original tape. A tapecopy will be scheduled.

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Programmer response: None required. Note that you can use console automation to preserve the duplex tape until the tapecopy has completed.

ARC0960I VOLUME = *volser*, LIBNAME = *libname*, STORAGE GROUP = *storagegroup*

Explanation: This message is issued by DFSMSHsm prior to message ARC0962A, as a result of finding that a group of tape volumes, having a spanning data set, were not stored in the same tape library or in the same storage group.

- *volser* is the volume serial of the volume found in tape library.
- *libname* is the name of the library.
- *storage group* is the storage group assigned to the tape volume.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0961I INCONSISTENCY IN TAPE LIBRARY VOLUME STORAGE EXISTS

Explanation: This message is issued by DFSMSHsm as a result of RC06 when a group of tape volumes having spanning data sets were not stored in the same library or the same storage group.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0962A ALL VOLUMES NOT CONTAINED IN THE SAME TAPE LIBRARY OR STORAGE GROUP. ENTER 'C' TO CANCEL OR MAKE CORRECTION AND ENTER 'R' TO RETRY

Explanation: Volumes specified in the preceding ARC0960I messages must be in the same library and in the same storage group for input processing by DFSMSHsm.

System action: All other DFSMSHsm processing outside of this task continues.

Place all tapes in the same library and storage group or remove all tapes from the library.

After a reply of R is received, DFSMSHsm checks the library status again and continues processing if all volumes are found in one library and storage group or all are external to any library. Otherwise, this message is repeated.

After the reply of C is received, DFSMSHsm cancels the function for which the volumes were requested.

Operator response: After correction has been made reply R to the message. If correction cannot be made reply C to the message.

Source: DFSMSHsm

ARC0963I ERROR RETRIEVING TAPE VOLUME RECORD FOR VOLUME *volser*, CBRXVOL RC=*cbrxvolrc*

Explanation: DFSMSHsm was attempting to retrieve a tape volume record for a single volume from the library configuration data base when an error was encountered.

volser is the volume serial of the volume expected to be found in a tape library whose tape volume record was found to be in error.

cbrxvolrc is the return code received by DFSMSHsm from CBRXVOL.

The possible values for *cbrxvolrc* are:

Value **Meaning**

8 Parameter list error.

12 Internal processing error. The request could not be completed due to failure of a system service.

16 Catalog authorization error. The user of CBRXVOL does not have SAF/RACF authority to perform the requested function on the integrated catalog facility user catalog which contains the LCDB.

20 Catalog access error.

System action: DFSMSHsm processing of this function ends.

Programmer response: Take corrective action based on the *cbrxvolrc*.

Source: DFSMSHsm

ARC0964I ERROR RETRIEVING TAPE LIBRARY RECORD FOR LIBRARY *libname*, CBRXLIB RC=*cbrxlibrc*

Explanation: DFSMSHsm was attempting to retrieve a single tape library record from the library configuration data base when an error was encountered.

libname is the name of the library whose record was found in error.

cbrxlibrc is the return code received by DFSMSHsm from CBRXLIB.

The possible values for *cbrxlibrc* are

Value Meaning

8 Parameter list error.

12 Internal processing error. The request could not be completed due to failure of a system service.

16 Catalog authorization error. The user of CBRXVOL does not have SAF/RACF authority to perform the requested function on the integrated catalog facility user catalog which contains the LCDB.

20 Catalog access error.

System action: DFSMSHsm processing of this function ends.

Programmer response: Take corrective action based on the *cbrxlibrc*.

Source: DFSMSHsm

ARC0965I ERROR INVOKING LCS SERVICES TO PROCESS VOLUME = *volser*, FUNCTION = *func*, RC = *retcode*, LCS RC = *lcsrc*, LCS REAS = *lcsreas*

Explanation: An error occurred when DFSMSHsm was attempting to invoke the library control system (LCS).

FUNCTION indicates the LCS service DFSMSHsm was requesting. The possible values for *func* are:

- *TVE* (Test Volume Eligibility) — DFSMSHsm was requesting LCS to check if volume *volser* could be mounted on the allocated device.

The possible values for *retcode* are:

Retcode Meaning

8 DFSMSHsm invoked the CBRXLCS macro to process volume *volser*. The function requested was *func*. An error occurred during this processing. *lcsrc* contains the return code from the LCS and *lcsreas* contains the reason code from the LCS.

12 An abnormal end (abend) occurred when DFSMSHsm invoked the CBRXLCS macro to process volume *volser*. The function requested was *func*.

System action: If the function requested is *CUA*, the tape is not available for selection from the library common scratch pool. If the function requested is *TVE*, the tape is marked unavailable and DFSMSHsm processing continues.

Programmer response: Return codes have the following actions:

Reascode

Meaning

8 Take corrective action based on the meaning of *lcsrc* and *lcsreas*.

12 Follow the problem determination procedures.

60 Take corrective action based on the message ARC0304I that precedes this message.

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Source: DFSMSHsm

ARC0966E TAPE ALLOCATION REQUESTED WAS INCORRECTLY PERFORMED FOR VOLUME = *volser*,
FOR FUNCTION = *func*, DSNAME = *dsname*, RC = *rc*

Explanation: DFSMSHsm has requested a tape device to be allocated. However, as a result of ACS filtering, the results of the allocation are not consistent with what DFSMSHsm is expecting.

volser indicates the volume for which DFSMSHsm has been attempting to allocate a device.

func indicates the DFSMSHsm function requesting the tape device allocation.

dsname indicates the data set name DFSMSHsm that has been passed to allocation.

rc indicates the particular error that has been found after the allocation. The explanation of the return codes are:

Retcode Meaning

- 8 A nontape device has been allocated instead of a tape device.
- 12 DFSMSHsm expected the allocated device to be in a tape library, and a nontape library device has been allocated.
- 16 DFSMSHsm expected the allocated device not to be in a tape library, and a tape library device has been allocated.

Note: This condition might have occurred, because OAM is not active on the system when DFSMSHsm attempted to determine the library status of the volume. Check to make sure whether OAM was started or not. If not, start OAM and retry the failing process.

System action: Processing ends for the task requesting the allocation. The function being performed is held. Other DFSMSHsm processing continues.

Programmer response: If the allocation results are not what the installation desires, modify the ACS routines accordingly and reissue the command.

Note: Automatic Functions will not process volumes if the minimum time has not elapsed. The minimum time defaults to 14 hours and is stored in a patchable field in the MCVT. You can find examples of patches that can be issued to run an automatic function multiple times a day in Tuning DFSMSHsm in *z/OS DFSMSHsm Implementation and Customization Guide*

Source: DFSMSHsm

ARC0967I ERROR DETERMINING IF A STORAGE CLASS IS ASSIGNED TO THE {BACKUP |
MIGRATION | DUMP | TAPECOPY} TAPE OUTPUT DATA SET NAME *dsname*. FUNCTION IS
HELD. RC=*rc*

Explanation: DFSMSHsm has attempted to determine if a storage class name has been assigned to the functional single-file tape output data set name. DFSMSHsm could not access this information and cannot accurately determine if the tape output environment is controlled by ACS routines, which implies an automated tape library environment. The indicated function is held.

dsname is the data set name passed to SMS services to determine if a storage class is assigned to it.

rc indicates the error that has been encountered while attempting to determine if a storage class is assigned to the data set name *dsname*.

Retcode Meaning

- 8 An error has occurred while building the data area passed to SMS services.
- 16 An error has occurred during the invocation of SMS services.

System action: DFSMSHsm processing of this function ends.

Programmer response: Determine why the routines could not access the information needed to determine whether a storage class is assigned.

Source: DFSMSHsm

ARC0968I ERROR UPDATING TAPE VOLUME RECORD FOR VOLUME *volser*, CBRXVOL RC = *cbrxvolrc*

Explanation: DFSMSHsm was attempting to update a tape volume record for a single volume in the library configuration data base when an error was encountered.

- *volser* is the volume serial number of the volume whose tape volume record was being updated when the error occurred.
- *cbrxvolrc* is the return code received by DFSMSHsm from CBRXVOL.

The possible values for *cbrxvolrc* are as follows:

Retcode Meaning

- | | |
|----|--|
| 8 | Parameter list error. |
| 12 | Internal processing error. The request could not be completed due to failure of a system service. |
| 16 | Catalog authorization error. The user of CBRXVOL does not have SAF/RACF authority to perform the requested function on the integrated catalog facility catalog which contains the library configuration data base. |
| 20 | Catalog access error. |

System action: DFSMSHsm processing of this function continues.

Programmer response: Take corrective action based on the *cbrxvolrc*

Source: DFSMSHsm

ARC0970I TAPE ALLOCATION REQUEST DENIED BY ARCTEEXT EXIT FOR ALLOCATION BEGINNING WITH TAPE *volser1*

Explanation: Installation-wide exit ARCTEEXT has returned a return code 8, which indicates that tape allocation should not be attempted. *volser1* is the first or only volume in the DFSMSHsm tape volume set.

System action: The command fails. DFSMSHsm processing continues.

Programmer response: Determine why the ARCTEEXT installation-wide exit indicates that the allocation should not be attempted. If that action is not what the installation desires, modify and replace the ARCTEEXT installation-wide exit and reissue the command.

Source: DFSMSHsm

ARC0980I ALTERPRI {REQUEST | USER | DATASETNAME} COMMAND STARTING ON HOST=*hostid*

Explanation: An ALTERPRI REQUEST, USER, or DATASETNAME command has been issued and is being processed on the specified *hostid*. The response to this command follows this message.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0981I ALTERPRI {REQUEST | USER | DATASETNAME} COMMAND COMPLETED ON HOST=*hostid*, RC=*retcode*

Explanation: An ALTERPRI REQUEST, USER, or DATASETNAME command has completed on the specified *hostid*. The *retcode* indicates the outcome of the ALTERPRI command.

Retcode Meaning

- | | |
|---|---|
| 0 | The priority was successfully altered for all associated requests. |
| 2 | The priority was successfully altered for all associated requests. However, one or more errors occurred during ALTERPRI processing. |
| 4 | The priority was successfully altered for some associated requests, and was not altered for some associated requests. |

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8 The priority was not altered for any of the associated requests.

12 No associated requests found.

System action: DFSMSHsm processing continues.

Programmer response: The *retcode* responses are as follows:

Retcode Action

- 0 See the corresponding ARC0982I messages to ensure the intended requests were reprioritized.
- 2 See the corresponding ARC1506E messages and take appropriate action as described in the ARC1506E message text.
- 4 See the corresponding ARC0982I and ARC0983I messages to determine which requests were successful (if any) and which failed. If necessary, take action as instructed for the ARC0983I message.
- 8 See the corresponding ARC0982I and ARC0983I messages to determine which requests were successful (if any) and which failed. If necessary, take action as instructed for the ARC0983I message.
- 12 Determine whether the ALTERPRI command was specified correctly, and if necessary, issue the QUERY REQUEST command to determine which requests to reprioritize. Reissue the ALTERPRI command with the appropriate parameters.

Note: If the command was issued correctly and the desired request was not found, the request may have already been selected for processing or may have been on an unsupported queue at the time that the ALTERPRI command was issued.

Source: DFSMSHsm

ARC0982I *type* MWE FOR {VOLUME | DATA SET | AGGREGATE GROUP | CONTROL FILE DATA SET | COPY POOL} {*name* | *name*, SGROUP = *sg* | *name*, COPY POOL = *cpname*} FOR USER *userid*, REQUEST *reqnum*, REPRIORITIZED TO {HIGH | LOW }

Explanation: An ALTERPRI command has been issued with the REQUEST, USER, or DATASETNAME parameter. This message is issued for each request that matches the information specified on the ALTERPRI command, and was reprioritized.

Possible values for *type* are ABACKUP, ARECOVER, BACKUP, DELETE, DUMP, FRBACKUP, FREEVOL, FRRECOV, MIGRATE, RECALL, and RECOVER.

In the message text:

name

Is one of the following:

- Volume serial number, if VOLUME appears. If SGROUP follows *name*, the request was for the BACKVOL command specifying storage group *sg*. If COPY POOL follows *name*, the request was for a FRBACKUP or FRRECOV command specifying copy pool *cpname*.
- Data set name, if DATA SET appears.
- Aggregate group name, if AGGREGATE GROUP appears.
- Name of the control file data set used in the ARECOVER command, if CONTROL FILE DATA SET appears.
- Copy pool name, if COPY POOL appears.

userid The user identification of the initiator of this request.

reqnum The request number. For any request generated internally by DFSMSHsm, the *reqnum* will be zero.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0983I *type* MWE FOR {VOLUME | DATA SET | AGGREGATE GROUP | CONTROL FILE DATA SET | COPY POOL} {*name* | *name*, SGROUP = *sg* | *name*, COPY POOL = *cpname*} FOR USER *userid*, REQUEST *reqnum*, WAS NOT REPRIORITIZED, RC=*retcode*

Explanation: An ALTERPRI command was issued with the REQUEST, USER, or DATASETNAME parameter. This message is issued for each request that matches the information specified on the ALTERPRI command, but was not reprioritized. The reason the request was not reprioritized is explained as determined by the *retcode*.

Possible values for *type* are ABACKUP, ARECOVER, BACKUP, DELETE, DUMP, FRBACKUP, FREEVOL, FRRECOV, MIGRATE, RECALL, and RECOVER.

In the message text:

name Is one of the following:

- Volume serial number, if VOLUME appears. If SGROUP follows *name*, the request was for the BACKVOL command specifying storage group *sg*. If COPY POOL follows *name*, the request was for a FRBACKUP or FRRECOV command specifying copy pool *cpname*.
- Data set name, if DATA SET appears.
- Aggregate group name, if AGGREGATE GROUP appears.
- Name of the control file data set used in the ARECOVER command, if CONTROL FILE DATA SET appears.
- Copy pool name, if COPY POOL appears.

userid The user identification of the initiator of this request.

reqnum The request number. For any request generated internally by DFSMSHsm, the *reqnum* will be zero.

Retcode Meaning

- | | |
|---|--|
| 4 | The LOW keyword was specified on the ALTERPRI command. Lowering the priority of this request will affect the priority of other recall requests for the same tape. Therefore, this request cannot be reprioritized. |
| 8 | An error occurred while attempting to reprioritize a request on the CRQ. See corresponding ARC1506E message. |

System action: Other requests may be reprioritized for this command. DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem. Reissue the ALTERPRI command when necessary.

Retcode Action

- | | |
|---|--|
| 4 | None. |
| 8 | Take action as specified for the corresponding ARC1506E message. |

Source: DFSMSHsm

ARC0990I PASS 1-2 TIME STAMP SEPARATION, TIME *hh:mm:ss* FOR VOLUME *volser*, FUNCTION *function*

Explanation: This is a performance-related message mainly intended for DFSMSHsm development use.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC0992I WARNING: VOLUME (*volser*) HAS PREVIOUSLY BEEN ADDVOLED TO ANOTHER SYSTEM AS A (OVERFLOW | NOOVERFLOW) VOLUME.

Explanation: The ADDVOL command was executed with different OVERFLOW/NOOVERFLOW parameters for volume *volser* across more than one system. It is recommended the OVERFLOW/NOOVERFLOW parameter be consistent for the same volume when it is utilized in more than one system.

System action: Processing continues.

Programmer response: When issuing the ADDVOL command, specify the same OVERFLOW/NOOVERFLOW

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parameter for the same volume across systems to avoid this message.

Source: DFSMSHsm

ARC1000I {*dsname* | VOL=*volser* | *agname* | *cpname*} {MIGRATE | BACKVOL | BACKDS | DELETE | RECALL | RECOVER | FREEVOL | ABACKUP | ARECOVER | FRBACKUP | FRRECOV | STORAGE GROUP=*storagegroup* MIGRATE | *dsname* CLASS TRANSITION} PROCESSING ENDED

Explanation: DFSMSHsm completed a data set, volume, aggregate, copy pool request, migration, or class transition. The data set name is *dsname*. The volume serial number of the volume is *volser*. The name of the aggregate group that was processed is *agname*. The name of the copy pool is *cpname*. The name of the storage group is *storagegroup*. The type of operation performed by DFSMSHsm is indicated in the message text.

This message does not necessarily indicate success of the function, merely completion of processing.

For FRRECOV, when ', ***' is appended to *dsname*, multiple data set names were specified on the FRRECOV command.

System action: DFSMSHsm processing continues.

Programmer response: If the command failed, correct the error or errors indicated by the previous error message(s) and resubmit the command.

Source: DFSMSHsm

ARC1001I {*dsname* | VOL=*volser* | *command*} *operation* FAILED, RC=*retcode* REAS=*reascode*

Explanation: A DFSMSHsm request has failed. The following describes the message variables:

- *dsname* indicates the name of the data set.
- *volser* indicates the volume serial number.
- *command* indicates the command and its associated command parameters.
- *operation* indicates the requested operation.
- *retcode* indicates the return code.
- *reascode* indicates the reason code.

A following related message provides you with further information about the failure. The two digits of the message number specified as *nn*, indicate the *retcode*. The related message number also indicates the DFSMSHsm function processing when the failure has occurred, as shown on the following table.

Table 3. Return Code Identifier

Function	Message Group
Recovery/Recall	ARC11 <i>nns</i>
Space Management	ARC12 <i>nns</i>
Backup	ARC13 <i>nns</i>
Aggregate Backup/Recovery	ARC6 <i>nns</i>
Fast Replication	ARC18 <i>nns</i>

For example, if the related message is ARC1131I:

ARC1131I indicates that the recovery/recall function has failed. The *nn* is 31 which is the *retcode*. See Table 4 on page 552 for the meaning of *retcode* 31 or see message ARC1131I for expanded information.

For FRRECOV, when ', ***' is appended to *dsname*, multiple data set names were specified on the FRRECOV command.

The *s* in the message number indicates the type code.

Note: All commands can cause an ARC16*nns* message to be issued if an error is detected at the time the command is entered or if an error occurs in processing a long-running command.

The following describes other conditions:

If *reascode* is:

zero If *reascode* is zero or the related message gives no explanation, no further information is discernible.

If *retcode* is

900 A *retcode* of 900 indicates an abnormal end (abend) has occurred. The abend code is listed in message ARC1900I.

9nn If *retcode* is in the form 9nn and nn is greater than zero, this indicates that an abend has occurred after the return code has been set to nn.

For example, if *retcode* is 931 and the function is recovery:

The recovery function issues ARC11nns messages.

The *retcode* of 931 establishes 31 as the nn variable.

The result: ARC11nns + 31 = message ARC1131I.

93 A *retcode* of 93 indicates a Fast Replication function has failed. The *reascode* is in the form nn-mm where nn represents the last two digits of the ARC1800 series message (ARC18nn) and mm represents the ARC18nn return code. For example, ARC1001I RC=93, REAS=06-40 represents message ARC1806 RC40. This is only applicable when the function is Backup or Recover.

Note: Space management includes FREEVOL.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Follow the programmer response for the value of *reascode* in the related message.

Source: DFSMSHsm

ARC1003I INVALID MWE FUNCTION CODE

Explanation: ARCCTL encountered a management work element (MWE) on the general MWE queue that had an invalid function. (For example, a code of 4)

System action: The MWE failed. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1004I DFSMSHSM NOT ACTIVE - REQUEST *rnumber* QUEUED

Explanation: A nonwait-type request was issued while DFSMSHsm was not active. The request was assigned the DFSMSHsm request number *rnumber* and was queued for later processing. The request number is used in the QUERY or HQUERY command.

System action: The DFSMSHsm request is queued until DFSMSHsm is started.

Programmer response: None.

Source: DFSMSHsm

ARC1005I DFSMSHSM NOT ACTIVE - REQUEST REJECTED

Explanation: A wait-type request was issued while DFSMSHsm was not active. The request was rejected.

System action: OS/VS2 MVS processing continues.

Operator response: Restart DFSMSHsm, if desired.

Programmer response: Request that DFSMSHsm be started. Reissue the command when DFSMSHsm is ready.

Source: DFSMSHsm

ARC1006I DFSMSHSM REJECTED REQUEST, RC=*retcode*

Explanation: A request to DFSMSHsm was rejected. The values for *retcode* are:

Retcode Meaning

- 4 DFSMSHsm is not active.
- 8 There is no space for the DFSMSHsm work element. A JES3 request was made. DFSMSHsm is not accepting JES3 requests.
- 12 A post was requested for a nonexistent DFSMSHsm work element.
- 16 A JES3 request was made. DFSMSHsm is not accepting JES3 requests.
- 20 DFSMSHsm is already active.
- 24 The user is not authorized for the request.
- 28 A DFSMSHsm command was too long.
- 32 There was an invalid buffer size for the catalog read.
- 36 Input management work element (MWE) does not reside within a valid user storage area.
- 40 The allotted amount of common service area (CSA) storage for MWEs is exceeded.
- 44 The data set name passed to DFSMSHsm was invalid.
- 100 There was an invalid DFSMSHsm function code in the MWE.
- 104 There was an invalid DFSMSHsm function code in the MWE that was built in the DFSMSHsm address space.
- 108 A NOWAIT asynchronous request was received.
- 112 An asynchronous request was received from an unauthorized user.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response:**Retcode Meaning**

- 4 Retry the operation when DFSMSHsm is active.
- 8 No CSA space is available.
- 12, 16, 32
- 100 or 104 DFSMSHsm had an internal error.
- 20 No action is necessary.
- 24 The user is not authorized for the request.
- 28 Break up the command into several shorter commands and reissue them.
- 36 Retry the request.
- 108 or 112 Another program issued an invalid request directly to DFSMSHsm via the DFSMSHsm supervisor call (SVC).

Source: DFSMSHsm

**ARC1007I {COMMAND | MIGRATE | DELETE | BACKVOL | BACKDS | RECALL | RECOVER} REQUEST
rnumber SENT TO DFSMSHSM**

Explanation: The TSO command processor has completed verification of a request for the DFSMSHsm operation indicated in the message text. The command is sent to DFSMSHsm. The specific DFSMSHsm request number is *rnumber*.

System action: The user is notified of the request number assigned. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMShsm

ARC1008I {*agname* | *dsname* | **VOL=***volser*, **SGROUP=***sg* | **COMMAND** | **CDS** } *operation***REQUEST** *rnumber*
WAS CANCELED

Explanation: A CANCEL or HCANCEL command with the REQUEST, USERID, or DATASETNAME parameter is specified. This message is issued to the originator of the request for each canceled request. For example, an operator can issue the CANCEL command with the DATASETNAME *dsname* parameter. In this instance, there may be management work elements (MWEs) on the queues originated from several user IDs requesting operations on the same data set. This message is then issued to each user ID that requested DFSMShsm processing against the data set. This message is also issued if the ARCRPEXT exit requests the purge of the MWE.

If SGROUP follows *volser*, the request was for a BACKVOL command specifying storage group *sg*.

The following is a list of valid *operations*:

- MIGRATE
- DELETE
- BACKDS
- BACKVOL
- RECALL
- RECOVER
- COMMAND
- EXPIREBV
- ABACKUP
- ARECOVER

System action: The user ID is notified of the canceled MWE. DFSMShsm processing continues.

Programmer response: None.

Source: DFSMShsm

ARC1009I **JES3 C/I REQUEST FAILED BY DFSMSHSM FOR DSN=** *dsname*,**RC=***mwwerc* **REAS=***mwwereas*

Explanation: The DFSMShsm SVC 26 intercept module IGG026DU failed a JES3 converter/interpreter (C/I) request for the migrated data set *dsname*. The return code *mwwerc* and the reason code *mwwereas* are the return and reason codes returned by DFSMShsm to IGG026DU in the DFSMShsm management work element (MWE).

The values for *mwwerc* are:

- 04 — IGG026DU could find no volumes in the JES3 volume pool.
- 13 — DFSMShsm could either not determine that the data set was migrated, or could not determine candidate volumes to which the data set would be recalled.
- 20 — DFSMShsm attempted to invoke the automatic class selection (ACS) function in an SMS active environment and was unsuccessful. The data set was SMS-managed when migrated and cannot be recalled unless the ACS function is operable or the data set is forced to be recalled as non-SMS-managed.

System action: The C/I locate request fails.

Programmer response: The following action should be taken for the following *mwwerc* return codes:

- 04 — Primary volume must be defined to DFSMShsm in a JES3 environment prior to attempting to process a JES3 C/I request.
- 13 — Determine whether the data set is migrated using the DFSMShsm LIST and FIXCDS commands. If the DFSMShsm recall exit ARCRDEXT is being used, then ensure that it is operable.
- 20 — If SMS is active, ensure that the ACS storage class and management class routines are functioning properly.
- Other *mwwerc* return codes — Consult your DFSMShsm service representative to determine the error that occurred.

Source: DFSMShsm

ARC1010I USER REQUEST FOR A MIGRATED DATA SET FAILED.

Explanation: DFSMSHsm processing was unable to complete during an attempt to do one of the following:

- Recall a migrated data set during allocation processing
- Recall a migrated data set during open processing
- Delete a migrated data set during scratch processing
- Recall a password-protected migrated data set during scratch processing
- Read the migration control data set entry for a migrated data set during scratch processing
- Recall a migrated data set during rename processing
- Read the migration control data set entry for a migrated data set during rename processing
- Recall a migrated data set during delete or alter processing

System action: The allocation, open, scratch, rename, delete, or alter of the data set fails. DFSMSHsm processing continues.

When this message is received because a TSO user pressed the ATTENTION key to interrupt the system action (such as OPEN), the system action fails but the DFSMSHsm request (such as RECALL) continues processing and completes normally unless an unrelated error occurs.

Programmer response: A WRITE TO PROGRAMMER message accompanies this message, providing more detail about the error. For a TSO user, the message appears on the terminal screen if the WTPMSG parameter of the PROFILE command was used. Follow the programmer response indicated for the message.

Source: DFSMSHsm

ARC1015I THE PATCH OF THE DMVST CONTROL BLOCK IS {NOT RECOMMENDED}

Explanation: DFSMSHsm does not recommend patching the DMVST control block to control data movement at the data set level. The patch for which this message was issued will no longer be supported in a future release.

System action: DFSMSHsm processing continues.

Programmer response: Remove the patch from the startup procedure.

Source: DFSMSHsm

ARC1017I LOAD OF ADRXMAIA FAILED. THE CROSS-MEMORY INVOCATION OF DFSMSDSS DISABLED FOR MIGRATION, BACKUP, RECOVER, DUMP, RESTORE AND CDS BACKUP

Explanation: The load of ADRXMAIA failed. Cross-memory invocation of DFSMSDss is disabled for migration, backup, recover, dump, restore and CDS backup.

System action: DFSMSHsm processing continues. DFSMSDss will not be invoked using its cross-memory application interface.

Operator response: None.

System programmer response: None.

Programmer response: Determine why the load failed. The most likely cause is that ADRXMAIA cannot be found in the load library concatenation.

Source: DFSMSHsm

ARC1020I DFSMSHSM IS RECALLING FROM {TAPE | DASD | UNKNOWN} DSN=*dsname*, {YOU MAY CONTINUE THE RECALL IN THE BACKGROUND AND FREE YOUR TSO SESSION BY PRESSING THE ATTENTION KEY | PLEASE RETRY THE USER REQUEST AFTER THE RECALL HAS COMPLETED.}

Explanation: While allocating the data set *dsname*, the allocation process detected that the data set is currently migrated. If "YOU MAY CONTINUE ..." appears, your session has been placed in a wait state, and the data set is then recalled. You may receive control (return to a nonwait state) without the recall having finished by pressing the ATTENTION key; the recall still happens in the background. Be aware that if the reason for the recall is an immediate need for the data, that data will likely not be available when control is returned to your session before the

recall has completed. Therefore, there will likely be a failure in some non-DFSMSHsm request.

If "PLEASE RETRY ..." appears, the RECALL command is scheduled, and the request fails with *retcode 38, reascode 50* rather than placing the user in a wait state. After RECALL processing completes, retry the request. In either case if the data set is recalled from tape, the operator is requested to mount the tape.

A device type of UNKNOWN means the data set is in incomplete status and cataloged on a primary volume. In this case, DFSMSHsm does not know if the data set is recalled from tape or DASD.

System action: If "YOU MAY CONTINUE ..." appears, the allocation and recall processing continues with the session in a wait state. If "PLEASE RETRY ..." appears, recall processing is scheduled and your session is not in a wait state.

Programmer response: If "YOU MAY CONTINUE ..." appears, you may get control back before recall has completed by pressing the ATTENTION key.

Source: DFSMSHsm

ARC1023A CONVERTING TO A NON-WAIT WILL FAIL THE USER REQUEST, BUT WILL ALLOW THE {RECALL | RECOVER | MIGRATE | BACKUP | DELETE | HSEND CMD} TO COMPLETE IN THE BACKGROUND. CONVERT Y OR N?

Explanation: While a DFSMSHsm command specified with the WAIT parameter was in process, an ATTENTION interruption from a TSO terminal was encountered. This message describes the command being processed and allows you to cancel the WAIT parameter without cancelling the command.

Note: *dsname* may appear as ***** if the data set name is unknown.

System action: The processing of the command continues to completion. The status of the WAIT depends upon the user's response.

Operator response: A Y response will terminate the wait, while the command processes to completion. An N response will keep the user in a wait state until the command has completed processing.

Source: DFSMSHsm

ARC1025A DO YOU WISH TO CANCEL DFSMSHSM LIST REQUEST? Enter Y or N

Explanation: While DFSMSHsm was processing the HLIST command, an ATTENTION interruption was encountered from a TSO terminal.

System action: The continued processing of the HLIST command depends upon the operator response. DFSMSHsm processing continues regardless of the response.

Operator response: A Y response will terminate DFSMSHsm processing of the HLIST command. Conversely, an N response will allow DFSMSHsm processing of the HLIST command to complete.

Source: DFSMSHsm

ARC1030I DATA SET *dsname* OF *nnnn* TRACKS ELIGIBLE FOR MIGRATION/BACKUP TO AN OVERFLOW VOLUME HAS BEEN REDIRECTED TO A NOOVERFLOW VOLUME

Explanation: A data set with a size of *nnnn* tracks that is eligible for migration/backup to an OVERFLOW ML1 volume has been redirected to a NOOVERFLOW ML1 volume because of not enough free space.

System action: DFSMSHsm processing continues.

Operator response: Increase the number of volumes or volume sizes of the OVERFLOW ML1 volume pool, or decrease the OVERFLOW threshold.

System programmer response: None.

Programmer response: None.

Source: DFSMSHsm

ARC1040I CATALOG SEARCH INTERFACE CANNOT BE LOADED, ABEND CODE IS *xxx*, REASON CODE IS *yyy*

Explanation: DFSMSHsm attempted to load the Catalog Search Interface module IGGCSI00 but the load failed. The message indicates the abnormal end (abend) and reason codes from the attempted load.

System action: DFSMSHsm function fails.

Programmer response: Use the explanations of the abend and reason codes in *z/OS MVS System Commands*, to determine the reason for the load failure. Correct the error and retry the function. If you cannot correct the problem, contact IBM Support.

Source: DFSMSHsm

ARC1051I UNIT OR {VOLUME | TOVOLUME } NOT SPECIFIED, BOTH REQUIRED

Explanation: In a request to DFSMSHsm for recall or backup command processing, either the VOLUME or UNIT parameter has been specified, but not both. In a request to DFSMSHsm for recover command processing, either the TOVOLUME or UNIT parameter has been specified, but not both.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with all the required information. See *z/OS DFSMSHsm Storage Administration* for a description of the required parameters.

Source: DFSMSHsm

ARC1052I UNSUPPORTED UNIT TYPE - *unittype*

Explanation: DFSMSHsm does not support the unit type specified with the UNIT parameter of a command requesting a recall, recovery, or backup operation. The type specified on the command is *unittype*.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Change the unit type and reissue the command. See *z/OS DFSMSHsm Managing Your Own Data* for a list of the valid unit types.

Source: DFSMSHsm

ARC1055I INVALID CHARACTERS USED IN *dsnfilter*

Explanation: A request to DFSMSHsm for a recall, migrate, backup, delete, or recover operation included a data set filter, *dsnfilter*, that used an invalid sequence of characters. A filter must follow ***** with either a period or blank.

System action: Processing of the data set filter ends. Processing continues on any other data sets or filters specified in the user command.

Programmer response: Reissue the command with a corrected filter, deleting from the command any data set names and filters processed correctly the first time.

Source: DFSMSHsm

ARC1056I *dsname* NOT IN CATALOG

Explanation: A request was sent to DFSMSHsm for a recall, deletion, or migration operation on a data set *dsname*. The operation could not be completed because the data set name was not found during the standard catalog search.

This can also occur if a request was sent to backup *dsname*, but the data set is not cataloged and the VOLUME parameter was not specified on the command.

System action: Processing of the data set ends. Processing continues on any other data sets or filters specified in the user command.

Programmer response: Reissue the command with a corrected *dsname*, deleting from the command any data set names and filters processed correctly the first time.

If the command is HBACKDS and *dsname* is spelled correctly, add VOLUME and UNIT parameters identifying the location of the data set, and reissue the command.

Source: DFSMSHsm

ARC1058I OBTAIN ERROR - *dsname*, RC=*retcode*

Explanation: The HBACKDS command was issued with the parameter CHANGEDONLY. To determine whether *dsname* was changed since the last backup, DFSMSHsm tried retrieving the data set's VTOC entry. The OBTAIN function encountered an error trying to retrieve the VTOC entry for *dsname*.

If the HBACKDS command specified a data set filter, then *dsname* can be the name of the data component of a VSAM cluster with a name matching the filter.

If *dsname* is uncataloged, then DFSMSHsm tried to retrieve the VTOC entry from the volume specified on the HBACKDS command. If *dsname* is cataloged, DFSMSHsm tried to retrieve the VTOC entry from the first volume indicated in the catalog entry.

The values for *retcode* are:

Retcode Meaning

- 4 The required volume was not mounted.
- 8 The data set VTOC entry was not found in the VTOC of the specified volume.
- 12 A permanent I/O error was encountered, or an invalid VTOC entry was found during the processing of the specified volume.
- 16 There was an invalid work area pointer.

System action: DFSMSHsm treats *dsname* as unchanged and does not try to back it up. Processing continues on any other data sets or filters specified in the HBACKDS command.

Programmer response: If *retcode* is 4, correct the problem and reissue the HBACKDS command, deleting from the command any data set names and filters backed up the first time. If *retcode* is 8 or 12, first ensure you spelled *dsname* correctly; if so, then notify the system programmer to take corrective action. If *retcode* is 16, notify the storage administrator to take corrective action.

Source: DFSMSHsm

ARC1059I CATALOG ERROR - *dsnfilter*, RC=*retcode*, REASON=*reascode*

Explanation: DFSMSHsm encountered a catalog error when processing the data set name or filter *dsnfilter*. RC=*retcode* is the return code and REASON=*reascode* is the reason code returned from Catalog Management.

Return and reason codes returned by Catalog Management are documented in *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009I.

In addition, return code 100 means Catalog Management detected an error while searching catalogs:

**REASCODE
MEANING**

- 4 Indicates an error returning information about a data set entry.
- 8 Indicates an error returning information about a catalog entry.

System action: Processing of the data set filter ends. Processing continues on any other data sets or filters specified in the user command.

Programmer response: For all return codes, notify the storage administrator. Perform catalog problem determination; examine possible recovery.

Source: DFSMSHsm

ARC1060I NEWNAME SPECIFIED WITH MORE THAN ONE DSNAME

Explanation: A request to DFSMSHsm to recover multiple data sets (specified in a list or using a filter) also specified the NEWNAME parameter. DFSMSHsm cannot determine which of the recovered data sets should be given the NEWNAME; NEWNAME is valid only when recovering a single data set.

System action: The operation ends. DFSMSHsm processing continues.

ARC1061I • ARC1065I

Programmer response: Reissue the command without the NEWNAME parameter or limit the command to a single data set name.

Source: DFSMSHsm

ARC1061I NO DSNAMES MATCH FOR *dsfilter*

Explanation: A request to DFSMSHsm for a recall, recovery, migration, backup, or deletion operation failed. No data set names were found that match *dsfilter*.

System action: Processing of the data set ends. Processing continues on any other data sets specified in the user command.

Programmer response: Correct the data set name and reissue the command.

Source: DFSMSHsm

ARC1062I *number* DATA SETS PROCESSED FOR *dsnfilter*

Explanation: A DFSMSHsm command was issued with a data set filter *dsnfilter*. The number of processed data sets is *number*. Note that DFSMSHsm cannot process certain requests for a data set when another operation is concurrently processing that data set, or when a recall or delete is requested for a data set not migrated.

If *number* is zero:

for HBACKDS CHANGEDONLY, no data set name matching the filter was for a changed data set.

for HDELETE, no data set name matching the filter was for a migrated data set.

System action: DFSMSHsm processing continues.

Programmer response: If more information is required about the original request, issue the HQUERY command with the REQUEST parameter. HLIST can also be used to list the data set status.

Source: DFSMSHsm

ARC1063I INVALID DATE SPECIFIED

Explanation: An HRECOVER command has been issued with an invalid DATE parameter. The format of the date is *mm/dd/yy* or *yy/mm/dd*.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with a valid date. See the *z/OS DFSMSHsm Managing Your Own Data* for more information about the format of the DATE parameter.

Source: DFSMSHsm

ARC1064I INVALID VOLUME SERIAL NUMBER - *volser*

Explanation: An HBACKDS, HRECALL, or HRECOVER command was issued. The volume serial number (*volser*) is too long or contains invalid characters.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Determine the correct volume serial number and reissue the command.

Source: DFSMSHsm

ARC1065I MEMBER NAME NOT ALLOWED IN DSNAME

Explanation: DFSMSHsm received a command with the member name specified in either the data set name or the new data set name. Member names cannot be specified in either the data set name or the new data set name.

System action: Processing of the data set ends. DFSMSHsm processing continues with any other data set name specified in the command.

Programmer response: Reissue the command with the data set name only.

Source: DFSMSHsm

ARC1066I DATA SET NOT MIGRATED

Explanation: The data set name specified in a request for an HRECALL or HDELETE command processing was not cataloged as being migrated.

System action: HRECALL or HDELETE command ends. DFSMSHsm processing continues.

Programmer response: Determine if the data set should be migrated by using LISTCAT, HLIST or LISTVTOC. If the data set should be migrated, then catalog the data set as being on *volser* MIGRAT.

Source: DFSMSHsm

ARC1067I MM/DD/YY DATE FORMAT NOT VALID AFTER 1999

Explanation: The HRECOVER command was issued after 1 January 2000 with DATE(mm/dd/yy).

System action: DFSMSHsm uses the date to determine which backup version should be recovered.

Programmer response: After 1999, the date must be specified as yyyy/mm/dd.

Source: DFSMSHsm

ARC1068I INVALID PARAMETER SPECIFIED FOR RECOVERY OF {DATA SET=*dsname* | VOLUME=*volser*}, RC=*return code*

Explanation: A request to recover data set *dsname* or volume *volser* was specified with an invalid parameter. The invalid parameter is explained by the corresponding *retcode*.

Retcode Meaning

- 2 TIME specified without DATE.
- 4 Invalid TIME specified.
- 6 TIME specified on a volume recovery request.

System action: DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the backup request.

Retcode Meaning

- 2 Reissue the recovery request with the DATE keyword or without the TIME keyword.
- 4 Reissue the recovery request and specify the time in the following format: hhmmss. If the current date is specified, ensure that the time is not greater than the current time.
- 6 Reissue the volume recovery request without the TIME keyword.

Source: DFSMSHsm

ARC1069I THE DATA SET BACKUP VERSION TO RECOVER MAY BE A RETAINED COPY

Explanation: A data set recover command was issued and the backup version to recover was not found. Retained backup copies exist for this data set, so the version to recover might be found amongst the retained copies.

System action: The request fails. DFSMSHsm processing continues.

Programmer response: See the corresponding ARC1001I or ARC0734I message to determine the data set name. Issue the LIST DATASETNAME command for this data set on a z/OS V1R11 or later system to view all available backup copies. If the version to recover is found in the LIST output, issue the proper data set recovery request on a z/OS V1R11 or later system.

Note: If the data set recovery request was issued as a part of volume recovery, reissue the volume recovery request on a z/OS V1R11 or later system.

Source: DFSMSHsm

ARC1070I • ARC1103I

ARC1070I VSAM DATA SET=*dsname* RECOVERED WITH GENERATED DATA AND INDEX COMPONENT NAMES

Explanation: The backup version used to recover data set *dsname* was created with the NEWNAME GENVSAMCOMPNames(YES) option. Therefore, the data and index components that the data set was recovered to might not be the original data and index component names.

System action: DFSMSHsm processing continues.

Programmer response: If necessary, rename the data and index component names for data set *dsname*. If an AIX was recovered along with data set *dsname*, additionally rename the AIX data and index component names.

Source: DFSMSHsm

ARC1071I RECOVERY OF DATA SET=*dsname* FAILED, VERSION PARAMETER IS INVALID

Explanation: VERSION(0) is not allowed on the RECOVER command, as multiple version 0 backup copies might exist.

System action: DFSMSHsm processing continues.

Programmer response: Issue the LIST DSNAME(*dsname*) command to display the backup versions for data set *dsname*. Determine the generation or date that corresponds to the version to recover and issue the RECOVER GENERATION or RECOVER DATE command.

Source: DFSMSHsm

ARC1101I ERROR READING DFSMSHSM CONTROL DATA SET DURING RECALL/RECOVER/RESTORE/DELETE

Explanation: While DFSMSHsm has been processing a request to recall or delete a data set, or to recover or restore a data set, an error has occurred during the reading of the migration or backup control data set. The name of the data set or volume being processed is given in message ARC1001I.

System action: Processing of this data set or volume ends. DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: If *reascode* is 16 or 20, another error message from an access method, error recovery procedure, or catalog management routine will be present. Take the corrective action suggested for that specific message.

Source: DFSMSHsm

ARC1102I DATA SET IS NOT MIGRATED/BACKED UP

Explanation: The data set name specified in a request for a recall, recovery, delete, or alter operation was not found in the migration control data set or the backup control data set.

System action: The recall, recovery, delete, or alter ends. DFSMSHsm processing continues.

Programmer response: Issue the HLIST command to determine the fully qualified data set name. Reissue the recall, recovery, delete, or alter request with the corrected data set name.

Source: DFSMSHsm

ARC1103I MIGRATION/BACKUP/DUMP VOLUME NOT AVAILABLE

Explanation: A recall, recovery, or restore operation has been requested. The necessary migration, backup, or dump volume is not available.

In message ARC1001I, the *reascode* has the following values:

DASD Reascode	Meaning
---------------	---------

4	Migration volume device type is not DASD.
---	---

- 8 Volume type for the migration or backup volume is incorrect.
- 12 An error occurred in reading MCV or MCT record.
- 16 No MCV or MCT record found for the migration or backup volume.
- 20 No MVT, MCV, or MCT record found.

Tape Reascode
Meaning

- 4 Record not found
- 8 Control interval in use
- 12 Work area not large enough
- 16 Physical error
- 20 Logical error
- 22 OCDS not defined
- 24 BCDS not defined
- 26 The tape volume needed for this recovery is being used on a different host

System action: Processing of this data set ends. DFSMSHsm processing continues.

- 26 The LIST HOST(hostid) command can be used to determine volumes that are serialized through the volume record in a multiple processing unit environment. If the serialization is in error, use the RESET keyword with LIST HOST(hostid) to correct this situation by removing the processing unit ID.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: Issue the LIST or HLIST command to determine the necessary volume. Have that volume made available to the system, and reissue the request.

Source: DFSMSHsm

ARC1104I NO PRIMARY VOLUME AVAILABLE FOR RECALL

Explanation: During RECALL command processing (either automatic or explicit), there have been no acceptable primary volumes with the required space management attributes, or there have been no volumes available with enough free space to recall a data set. To determine why DFSMSHsm cannot find any volumes, examine the following parameters:

- RECALL parameter of the SETSYS command
- VOLUMEPOOL or POOL parameter of the DEFINE command
- AUTORECALL parameter of the ADDVOL command
- Primary volume attributes of the ADDVOL command and the MCDRECAL flags in the MCD record

See *z/OS DFSMSHsm Storage Administration* for details of recall target volume selection.

If the data set organization is BDAM, the data set must be recalled to a volume with the same device type from which the data set migrated unless the VOLUME or DAOPTION parameter of the HRECALL or RECALL command is used.

If the data set organization is not BDAM, one of the following conditions must exist:

- The data set block size plus the key length is less than the track size of the candidate volume.
- The candidate volume is the same device type from which the data set migrated.
- The candidate volume supports track overflow and the data set record shows track overflow.

This message can also be issued in a JES3 system if all the volumes in a user-defined pool are offline during DFSMSHsm initialization when the volumes are added and the pools defined. Even when the volumes are subsequently mounted, DFSMSHsm cannot recall data sets to them with valid data set reservation by JES3, although

ARC1105I • ARC1106I

the volumes will appear in response to a QUERY command with the POOL or VOLUMEPOOL parameter. Therefore, the message can show a DFSMSHsm error, but it is caused by violation of an operational restriction.

System action: The recall operation ends. DFSMSHsm processing continues.

Programmer response: Contact the storage administrator to make non-SMS volumes available for recall. Non-SMS volumes are made available for recall with the ADDVOL command on JES2 systems or by issuing the DEFINE VOLUMEPOOL or DEFINE POOL command.

Source: DFSMSHsm

ARC1105I RECALL OF DATA SET *dsname* TO VOLUME *volser* REJECTED. EXISTING SETUP VOLUME LIST DOES NOT INCLUDE THE VOLSER REQUESTED

Explanation: A RECALL command to a specific volume was made for the data set, but the data set has a previous request, and a JES3 setup has occurred. The data set can only be recalled to one of the preselected volumes. The volume serial numbers of the preselected volumes are contained in the MCD record in the migration control data set.

System action: RECALL command processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the RECALL command without specifying the volume to which the data set is to be returned, or specify one of the preselected volumes listed in the MCD record in the migration control data set. The MCD record can be viewed by using the FIXCDS command.

If the recall request was made by specifying a volume serial number in a JCL DD statement, remove the volume serial number. Rerun the job.

Source: DFSMSHsm

ARC1106I CANNOT ALLOCATE PRIMARY COPY ON TARGET VOLUME

Explanation: A dynamic allocation error occurred while DFSMSHsm was trying to allocate the output data set during recall or recovery. The data set name is in message ARC1001I. In message ARC1001I, the *reascode* has the following values and meanings:

Reascode

Meaning

- | | |
|----|--|
| 6 | Volume is in use. |
| 8 | The volume is not be mounted. |
| 12 | Invalid SVC 99 parameter list. |
| 16 | There is another dynamic allocation error. |
| 20 | The request was cancelled by a installation-wide exit. |
| 24 | There was an invalid parameter list. |
| 37 | The unit type and volume serial number from the mounted volume table are inconsistent. |
| 39 | An error occurred in setting the RACF indicator on in the DSCB. |
| 40 | An attempt was made to place a non-SMS-managed data set on an SMS-managed volume. It is not possible to allocate a data set that is not SMS managed on a volume that is SMS managed. There are two conditions that can cause this: <ul style="list-style-type: none">• The user-specified target volume of the recall or recovery is SMS managed.• The user did not specify a target volume on the request.<ul style="list-style-type: none">– For recall, the volume was chosen by DFSMSHsm from its list of non-SMS-managed primary volumes.– For recovery, DFSMSHsm chose the volume from which the data set was backed up. |
| 41 | The volume allocated was a different volume than the one requested by DFSMSHsm. <p>This situation could arise if the ACS routines allowed a new allocation of a DFSMSHsm-owned or a DFSMSHsm-named output data set to be placed on SMS-managed storage. These data sets cannot be placed on SMS-managed volumes.</p> |

System action: The operation ends. DFSMSHsm processing continues.

Programmer response:**Reascode****Action**

- 6 Try the request later when the volume is not in use by another user or job.
- 8 Notify the storage administrator. Correct the problem and retry the operation.
- 12 DFSMShsm had a logic error and built an invalid parameter list for SVC 99.
- 16, 20 Notify the storage administrator. Correct the problem and retry the operation.
- 24, 37 DFSMShsm had a logical error and built an invalid parameter list.
- 39 An error occurred in accessing the DSCB to set the RACF indicator on. The errors are:
- Failure to read the JFCB.
 - Failure to open the VTOC.
 - The wrong record was returned from the read.
- 40 If you specified a target volume on the RECALL or RECOVER command, then you should reissue the command specifying a volume that is not SMS managed.
- If DFSMShsm selected the target volume during a recall, it will remove the volume from its list of non-SMS-managed primary volumes. Reissue the command and DFSMShsm will select a different volume.
- To recover a cataloged SMS-managed data set as non-SMS managed, the FORCENONSMS, TOVOLUME, and UNIT parameters must be specified with the RECOVER command to provide DFSMShsm with a valid non-SMS-managed target volume.
- If a data set is to be recovered as non-SMS managed, the TOVOLUME and UNIT parameters should be specified with the RECOVER command to provide DFSMShsm with a valid non-SMS-managed target volume, if all of the following conditions apply:
- The volume from which the data was backed up is currently SMS managed, but was not SMS managed when the backup version was made.
 - The data set is not currently cataloged.
 - System ACS routines will cause the data set to be recovered as non-SMS managed.
- 41 Ensure that the ACS routines do not allow DFSMShsm-owned data sets or DFSMShsm-named output data sets for recall or recovery to be filtered to SMS-managed volumes. The new allocations for these data sets are done using a specific volume and unit on the dynamic allocation request.

For all reason codes except 39 and 41, DFSMShsm issues message ARC0503E to the command log preceding this message, and it gives the dynamic allocation reason code.

Source: DFSMShsm

ARC1107I ERROR RENAMING PRIMARY COPY

Explanation: During a recall or recover operation, an error occurred in renaming the primary copy of the data set being recalled or recovered.

If *reascode* in message ARC1001I is not 78, then *reascode* is a number that can be broken into a pair of two-digit numbers, *xyyy*, that represent the return code and status code from the RENAME macro.

If *reascode* is 78, then the error occurred when using SVC26 to perform an ALTER NEWNAME function. In this case, message ARC0780I was issued with the catalog return and reason codes.

The return code from the RENAME macro issued by DFSMShsm is *xx*. The values for *xx* are:

XX Meaning

- 4 No volumes containing any part of the data set were mounted, nor did register 0 contain the address of a unit that was available for mounting a volume of the data set to be renamed. The data set might be a VIO data set, which cannot be renamed.
- 8 An unusual condition was met on one or more volumes.

ARC1108I • ARC1110I

12 DFSMSHsm passed an invalid volume list.

The rename status code returned to DFSMSHsm is *yy*. The values for *yy* are:

YY	Meaning
----	---------

- | | |
|---|---|
| 0 | The data set VTOC entry for the data set has been renamed in the VTOC on the volume pointed to. |
| 1 | The VTOC of this volume does not contain the data set VTOC entry for the data set to be renamed. |
| 2 | The macro instruction failed when the correct password was not supplied in the two attempts allowed, or the user tried to rename a VSAM data space. |
| 3 | A data set with the new name already exists on this volume. |
| 4 | A permanent I/O error was met, or an invalid data set VTOC entry was found during the attempt to rename the data set on this volume. |
| 5 | The volume could not be verified as mounted, and no device was available on which the volume could be mounted. |
| 6 | The operator was unable to mount the volume. For the Mass Storage System, a volume mount failure occurred. |
| 7 | The specified data set could not be renamed on this volume because it was being used. |

System action: The recall, recovery, or restore operation ends. DFSMSHsm processing continues.

Programmer response: Analyze the rename return and status codes to determine why the rename failed. Take the appropriate corrective action.

Source: DFSMSHsm

ARC1108I ERROR CATALOGING DATA SET

Explanation: During a recall, recovery, or restore operation, an attempt was made to catalog or recatalog the new copy of the data set, or to uncatalog the old copy prior to recovery. The CATALOG macro failed. In message ARC1001I or ARC0734I, the values for *reascode* are the return codes from the CATALOG macro. See *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009.

System action: The recall, recovery, or restore operation ends. DFSMSHsm processing continues.

Programmer response: Run the IDCAMS LISTCAT command to obtain a list of the catalog entries. Correct the catalog discrepancy or select a new data set name for the RECOVER or HRECOVER command.

Source: DFSMSHsm

ARC1109I ERROR UPDATING DFSMSHSM CONTROL DATA SET DURING RECALL/ RECOVER/DELETE

Explanation: While DFSMSHsm was processing a request to recall, recover, or delete a data set, an error occurred during the updating of the migration control data set or the backup control data set. The name of the data set being processed is given in message ARC1001I. For *reascode* values, see Table 9 on page 559.

System action: The recall, recover, or delete operation ends. DFSMSHsm processing continues.

Programmer response: If *reascode* in message ARC1001I is 4, 8, or 12, notify the storage administrator or system programmer to take the appropriate action, as defined by the reascode. If *reascode* is 16 or 20, another error message from an access method, error recovery procedure, or catalog management routine will be present. Take the corrective action suggested for that specific message.

Source: DFSMSHsm

ARC1110I DELETE OF MIGRATED DATA SET FAILED

Explanation: The migrated data set was selected for DFSMSHsm deletion. If the *reascode* value on the preceding ARC1001I message is 0, the data set is protected by an expiration date in the catalog or F1 DSCB, or in both.

In the associated message ARC1001I, the reason code has the following meaning:

Reascode**Meaning**

- 7 DFSMShsm has entered a setup for the data set for recall in a JES3 environment, but the expiration date of that setup has not been reached.
- 10 The data set is in incomplete status. Issue a DFSMShsm RECALL command for the data set.
- 12 Error when checking the catalog entry expiration date. There was either a GMAIN failure, the LISTCAT failed, or the expiration date was invalid. See any preceding messages for more information

System action: The migrated data set is not deleted. DFSMShsm processing continues.

Programmer response: If the user-supplied data set expiration date has not been reached, you can use the PURGE parameter on the DELETE or HDELETE command to delete the data set. If you want to find out the expiration date, an authorized DFSMShsm storage administrator can use the FIXCDS command to display the MCDEXPDT field.

If the JES3 setup expiration date has not been reached, an authorized DFSMShsm storage administrator can use the FIXCDS command with the PATCH parameter to change the expiration date to a date in the past. Then a delete request will be successful.

Source: DFSMShsm

ARC1111I UNEXPECTED EOF ON BACKUP/MIGRATED COPY

Explanation: During a recovery or recall operation, an unexpected end-of-file condition occurred. DFSMShsm expects a data set descriptor record to be the first record in the data set. The data set descriptor record was not found before an end-of-file mark was read, or a premature end-of-file mark was met after reading the CDD. Message ARC1001I precedes this message, giving the data set name.

System action: The command ends. DFSMShsm processing continues.

Programmer response: The data set might be empty or damaged. DFSMShsm cannot recover or recall this version of the data set. Recover the next latest backup version of that data set.

Source: DFSMShsm

ARC1112I ERROR READING BACKUP/MIGRATED COPY

Explanation: During the reading of a backup version or migration copy of a data set, an error has occurred. An access method or hardware error message may precede this message or may be found in the DFSMShsm job log SYMSG data set. Message ARC1001I also precedes this message, giving the operation in process and the name of the data set being processed. The reason codes are:

Reascode**Meaning**

- 0 An I/O error has occurred.
- 4 Invalid data or record length encountered.
- 8 Record length larger than block size.
- 12 Decompression failure.

System action: The command ends. DFSMShsm processing continues.

System programmer response: If *reascode* is 4 while attempting to recover a VB data set, the MCVTF_NO_RECOV_TAPE_OPT bit can be temporarily patched ON to disable recovery tape mount optimization. This will allow DFSMShsm to retry recoveries for this type of failure. If *reascode* is 8 during volume recovery, the RECOVER *dsname* command may be used to attempt recovering the data set. To aid in problem resolution, see the information about maintaining DFSMShsm control data sets in *z/OS DFSMShsm Storage Administration*.

Programmer response: If *reascode* is 0, respond to the associated access method or hardware error message if available. For all reason codes, the input data set may be unusable and would have to be replaced by a backup copy.

Source: DFSMShsm

ARC1113I • ARC1114I

ARC1113I I/O ERROR WRITING PRIMARY COPY

Explanation: While DFSMSHsm was writing the primary copy of a data set during a recall or recovery operation, an I/O error occurred or invalid data was found. If an I/O error occurred an access method or hardware error message should precede this message or be found in the DFSMSHsm job log SYSMMSG data set.

Message ARC1001I also precedes this message, giving the operation in process, the name of the data set, and a reason code.

Reascode

Meaning

- | | |
|----|---|
| 0 | An I/O error occurred while writing a record to a sequential or partitioned data set. |
| 1 | An I/O error occurred while writing the directory. |
| 2 | An I/O error occurred while writing member data. |
| 3 | An I/O error occurred while writing the end of file. |
| 4 | Direct access output data set is out of extents or an I/O error occurred while rewriting the directory. |
| 5 | An I/O error occurred while writing the note list. |
| 8 | Direct access data records exceed the track capacity of the output device. |
| 10 | Record to be moved beyond output buffer. |
| 12 | An I/O error occurred while writing a full track of direct access records. |
| 16 | An I/O error occurred while writing a direct access block for DAOPTION(RELBLK). |

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: If *reascode* in message ARC1001I is 0, 12, or 16, respond to the associated access method or hardware error message. If *reascode* in message ARC1001I is 4, DFSMSHsm did not correctly allocate the space required for the data set. If *reascode* in message ARC1001I is 8, data records from a track of the source device (the original primary volume) will not fit on a track of the target device. This may be the result of the source device track length being larger than the target device track length. Another cause may be the result of hardware architecture. For example, at small block sizes (less than 256), more records will fit on a 3380 track than will fit on a 3390 track. This is true even though the maximum track capacity of a 3390 is greater than a 3380. At a blocksize of 80, the 3380 track will hold 83 records while only 78 records will fit on a 3390 track. Therefore, if such a data set is migrated from a 3380, then you need to recall the data set back to a 3380. Or, if the data is to be accessible by relative block addressing, then another option is to recall the data set to a 3390 using the DAOPTION(RELBLK) option. If *reascode* in message ARC1001I is 10, the data set may have an invalid count key data field.

Source: DFSMSHsm

ARC1114I CATALOG LOCATE ERROR

Explanation: During a recall, recovery, or restore operation, a LOCATE macro has been issued to find a data set entry using the standard catalog search. The LOCATE macro has failed. In message ARC1001I, the values for *reascode* are:

Reascode

Meaning

- | | |
|----|--|
| 4 | Either the required catalog does not exist, or it is not open. |
| 8 | One of the following conditions has occurred: <ul style="list-style-type: none">• The entry is not found.• A CVOL pointer is found in a CVOL.• An alias is found for a generation data group base.• A protection check has failed for a VSAM password-protected data set. |
| 20 | There is a syntax error in the name. |
| 24 | One of the following conditions has occurred: <ul style="list-style-type: none">• The self-describing record of the catalog is bad. |

- A permanent I/O or unrecoverable error has been encountered.
- There is a nonzero ESTAE return code.
- An error has been found in a parameter list.

28 The request is for a LOCATE by TTR, which is an invalid function.

40 See message ARC0765I, which is written to the user. The catalog that contains the entry for the data set name being recovered must own the volume to which the data set is to be recovered.

OTHERS

For the explanation of the VSAM catalog return code passed back because of the LOCATE processing, see message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*.

System action: The recall, recovery, or restore operation ends. DFSMSHsm processing continues.

Programmer response: If the *reascode* is 24, and the catalog is damaged badly enough to cause a locate failure, you may have to delete the catalog using the force option before retrying the recover. With the bad catalog entry deleted the recover can succeed.

Otherwise, notify the storage administrator to take corrective action according to *reascode* in message ARC1001I.

Source: DFSMSHsm

ARC1115I DELETE NOT ALLOWED FOR VSAM CLUSTER OR COMPONENT NAME, OR MIGRATION COPY NAME

Explanation: A delete request for a migrated data set was received by DFSMSHsm. The request specified a VSAM component name or cluster name, or the migration copy data set name. If the request came from the SVC 29 intercept or from the SMS subsystem delete intercept, DFSMSHsm does not support deletion of migrated data sets using any of these names. For any other delete request source, DFSMSHsm will only delete a VSAM data set if the base cluster name is used on the request, and will only delete a non-VSAM data set if the original data set name is used on the request.

The data set name is given in the preceding ARC1001I message, along with a *reascode*. The *reascode* indicates the type data set name used, and has the following meanings:

Reascode

Meaning

- | | |
|----|--|
| 01 | The name used on the request was a data component name. |
| 02 | The name used on the request was an index component name. |
| 03 | The name used on the request was a path name. |
| 04 | The name used on the request was an alternate index (AIX) cluster name. |
| 05 | The name used on the request was a base cluster name from either the SVC 29 or SMS subsystem delete intercept. |
| 06 | The name used on the request was the migration copy data set name. |

System action: The delete request fails. If the request was processed through SVC 26 and an alternate index cluster name was specified, the data set will be recalled and the delete request for the AIX will be processed by catalog management. DFSMSHsm processing continues.

Programmer response: A request through SVC 29 or the SMS Subsystem should not be made with a VSAM cluster or component name. You should modify the job or program to issue the AMS DELETE command, specifying the name of the cluster that you want to delete. If you want to delete an alternate cluster, you should recall the data set first, then issue the AMS DELETE command for the AIX.

Source: DFSMSHsm

ARC1116I DATA SET ALLOCATED TO ANOTHER USER OR JOB

Explanation: During a recall or recovery operation, an attempt was made by DFSMSHsm to enqueue on a data set with the ENQ service routine. Or, for a recall, the data set record in the migration control data set was serialized by another processor in a multiple processing unit environment. Multiple-processing unit serialization is done by updating the processing unit ID field in the data set record. The data set, identified by *dsname* in message ARC1001I,

ARC1117I • ARC1118I

was allocated by another user or job and is not available for use by the request described in message ARC1001I.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

System programmer response: The LIST HOST(*hostid*) command can be used to determine data sets that are serialized through the data set record in a multiple processing unit environment. If the serialization is in error, the RESET keyword can be used with LIST HOST(*hostid*) to correct this situation by removing the processing unit ID. The data set is available.

Source: DFSMSHsm

ARC1117I ERROR READING JFCB

Explanation: During a DFSMSHsm recovery or recall operation, DFSMSHsm has issued a RDJFCB macro to read the job file control block (JFCB). This message is preceded by a SNAP dump if the JFCB is being read to allocate a data set on tape, and is preceded by message ARC1001I if the JFCB is being read to restore the creation date, expiration date, last-referenced date, or last-changed date. The RDJFCB request has failed. Message ARC1001I precedes this message with the data set name involved, *retcode*, and the RDJFCB return code. For information about the RDJFCB return code, *z/OS DFSMS Using Data Sets*.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator to assist in determining the status of the JFCB and VTOC. Correct any discrepancies, and retry the recall or recovery operation.

Source: DFSMSHsm

ARC1118I ERROR DURING PROCESSING OF THE DAOPTION FOR A DATA SET RECALL OR RECOVERY

Explanation: A recall or recovery of a data set with a DAOPTION specified was received by DFSMSHsm. An error was encountered while processing the DAOPTION. The preceding ARC1001I message contains the data set name, operation in progress, and the *reascode*. *Reascode* has the following meanings:

Reascode

Meaning

- | | |
|---|---|
| 2 | DAOPTION(SAMETRK) was specified but either the VOLUME specified has a different track length than the track length of the L0 device on which the data set last existed, or the TOVOLUME specified or the volume selected for a recover has a different track length than that of the L0 device on which the data set last existed. |
| 4 | DAOPTION(RELTRK) was specified but either the VOLUME specified has a track length less than the track length of the L0 device on which the data set last existed, or the TOVOLUME specified or the volume selected for a recover has a track length less than the track length than that of the L0 device on which the data set last existed. |
| 10 | Data set is to be SMS-managed upon completion of the request. Only non-SMS-managed data sets are supported in conjunction with the DAOPTION parameter. |
| 13 | DAOPTION(RELBLK) was specified but the data set block size is greater than 32K. |
| 14 | A DAOPTION was specified for a recall or recover command but the data set organization of the data set specified is not direct access. |
| 16 | The data set record format must be fixed or fixed-blocked when using DAOPTION(RELBLK). |
| 18 | DAOPTION(RELBLK) cannot be specified when a data set is to be restored from a dump copy. |
| The following <i>reascodes</i> represent internal DFSMSHsm errors. All errors due to an inconsistent user request are identified in the previous <i>reascode</i> definitions. | |
| 20 | DAOPTION(SAMETRK) was specified but the target volume track size is not equal to the last L0 volume's track size. This indicates an internal DFSMSHsm programming error. |
| 22 | DAOPTION(RELTRK) was specified but the target volume track size is smaller than the last L0 volume's track size. This indicates an internal DFSMSHsm programming error. |
| 26 | No DAOPTION was specified but the target volume track size is smaller than the last L0 volume's track size. This indicates an internal DFSMSHsm programming error. |

- 28 This is possibly the result of the user entering a volume(*xxxxxx*) with a device type inconsistent with what was specified on the unit(*yyyy*) parameter for a directed recall. Otherwise, this indicates an inconsistent track length mix for the target or last L0 volume.
- 30 An invalid device type was detected in a BCDS MCT record while DFSMSHsm was recovering a data set. This indicates an internal DFSMSHsm programming error.
- 34 A recover is to be done but an MCC record does exist. This indicates an internal DFSMSHsm programming error.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: For reason codes 2, and 4, verify consistency between DAOPTION and the selected target volume. Retry the function after corrective actions have been taken.

For reason codes 10, 13, 14, 16 and 18, verify the request and retry the function.

For reason codes 20, 22, 26, 28, 30 and 34, follow the problem determination steps.

Source: DFSMSHsm

ARC1119I ERROR UPDATING DATA SET VTOC ENTRY

Explanation: During a DFSMSHsm recover or recall operation, an I/O error has occurred. The SYNAD exit from the data management CHECK service routine is taken while attempting to update a data set VTOC entry on a volume having a nonindexed VTOC. For volumes having an indexed VTOC, the CVAF macro returns a nonzero value in register 15.

This message is preceded by message ARC1001I, where *dsname* is the data set name involved. There might be an additional error message in the DFSMSHsm job log SYMSG data set.

System action: The recovery or recall operation ends. DFSMSHsm processing continues.

Programmer response: If recovering a deleted VSAM data set using the DFSMSHsm FROMDUMP and DUMPVOLUME parameters, a DFSMSdss physical restore is attempted. The data set may have been restored even though the data set VTOC entry update has failed. If the data set has been restored, no special action is needed. See the section titled "Other Considerations for Availability Management" in *z/OS DFSMSHsm Storage Administration*

If recalling a VSAM data set, a reason code of 19 in message ARC1001I indicates the original failure code. A reason code other than 19 in message ARC1001I indicates that one of the following errors occurred:

If the data set has a backup version, you may issue an HRECOVER or RECOVER command without the FROMDUMP parameter before issuing a RECOVER command with the FROMDUMP parameter. A catalog entry is created for the data set if the FROMDUMP parameter is not specified. Then, when the FROMDUMP parameter is used, DFSMSHsm will have sufficient information to update the data set VTOC entry after restoring the data set.

Retry the operation, and if the problem still exists, notify the storage administrator.

Source: DFSMSHsm

ARC1120I UNSUPPORTED DEVICE TYPE REQUESTED

Explanation: One of the following errors occurred during a recall or recovery operation:

- In a DFSMSHsm recall or recovery request for a data set, the VOLUME or TOVOLUME and UNIT parameters were specified. A parameter value was specified incorrectly or was invalid.
- An invalid unit name was detected in a BCDS MCT record while DFSMSHsm was recovering the VCAT copy data set or the second VTOC copy data set listed in the MCP record for the volume being recovered. (The first VTOC copy data set was not issued because of an error that occurred during the recovery processing.)
- An invalid unit name was detected in a BCDS MCT record while DFSMSHsm was recovering a data set.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: If an invalid unit name was detected in a control data set record, correct it using the FIXCDS command with the PATCH parameter. If a parameter error cannot be determined, notify the storage administrator to get the correct unit name.

Source: DFSMSHsm

ARC1121I REQUESTED VOLUME FOR RECOVERY/RECALL NOT AVAILABLE

Explanation: During a DFSMSHsm data set recovery operation, the dynamic allocation of a volume ended. Dynamic allocation routines determined that the volume required was not available to the system, or the operator cancelled the mount request.

System action: The recovery operation ends. DFSMSHsm processing continues.

Programmer response: Use the LIST or HLIST command to identify the volume in question. Determine why the necessary volume is unavailable. Make sure the volume is mounted or online as necessary, and retry the recovery operation. The DISPLAY operator command might help to determine where the necessary volume is or its status.

Source: DFSMSHsm

ARC1122I ERROR PROCESSING PASSWORD PROTECTED DATA SET, RECOVERY/RECALL/DELETE TERMINATED

Explanation: The data set specified in a DFSMSHsm command is write password protected. When DFSMSHsm was checking the password, it encountered an error. The data set name and *reascode* are given in message ARC1001I.

The values for *reascode* are:

Reascode**Meaning**

- | | |
|----|---|
| 0 | Only pertains for VSAM data sets. The user specified an incorrect password. |
| 4 | The data set is non-VSAM. The user is only authorized to read the data set, but requested to write to or delete the data set. |
| 8 | The data set is non-VSAM. The user specified an incorrect password. |
| 12 | The data set is non-VSAM. An I/O error occurred in checking the password. |
| 16 | The data set is non-VSAM. An OBTAIN error or some other error occurred while DFSMSHsm was accessing the data set. |

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Verify that the correct data set name was specified. Provide the appropriate password. Follow installation procedures to request that the system programmer obtain the password of the data set for you, if you have the required authority to use the data set but not the password.

Source: DFSMSHsm

ARC1123I ALTER REQUEST FAILED DURING RESTORE OF VSAM DATA SET

Explanation: While DFSMSHsm has been processing a request to restore a VSAM data set with a new name, an error has occurred in trying to alter the data set name in the catalog. The data set has been restored successfully; however, an alter request (SVC 26) to change the name has failed. The name of the data set being processed is in the preceding ARC1001I message. Message ARC0775I also precedes this message, giving the catalog management return and reason codes. These return and reason codes are documented in message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*.

System action: The command ends. The data set is restored and still has its original name. DFSMSHsm processing continues.

Programmer response: Alter the name manually with the IDCAMS ALTER command. Analyze the catalog management return and reason code to see if any other corrective action must be taken.

Source: DFSMSHsm

ARC1124I NOT ENOUGH PRIMARY SPACE FOR RECALL/RECOVERY

Explanation: During a recall or recovery operation, an attempt was made to allocate space to restore a data set on a level 0 volume. There was not enough space on the volume selected, the VTOC was full, or the index to the VTOC was full, and there was no other primary volume available. If an attempt was made to recover an unmovable data set, it is possible that another data set is allocated to the space where the unmovable data set must go.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: Reorganize the space on the level 0 volumes, or add more volumes. When space is available on a volume, retry the recall or recovery operation.

Source: DFSMSHsm

ARC1125I RECALL FAILED DUE TO BAD VALUES RETURNED FROM THE RECALL INSTALLATION-WIDE EXIT

Explanation: The installation-wide exit was taken to select up to five volumes from a list provided by DFSMSHsm on which to attempt recall of the data set. All values returned by the installation-wide exit do not coincide with the positions of any of the volumes in the list provided by DFSMSHsm.

System action: The recall operation ends. DFSMSHsm processing continues.

Programmer response: If the installation-wide exit generated the value, there might be an algorithm error. Correct the cause of the incorrect value, relink the exit module if necessary, and reload the exit with the SETSYS command. Until the recall installation-wide exit is fixed, the system programmer can use the SETSYS command to turn off the recall exit and allow DFSMSHsm to process the undirected recalls.

Source: DFSMSHsm

ARC1126I RECALL FAILED - PRIOR ERROR IN RECALL INSTALLATION-WIDE EXIT

Explanation: The undirected recall (no recall target volume was specified) failed because the recall installation-wide exit routine is to be taken, but an error occurred in the exit routine during a previous recall operation.

System action: The recall operation ends. DFSMSHsm processing continues.

Programmer response: Fix the recall installation-wide exit routine. Issue the RELEASE command with the RECALL parameter. Retry the recall operation. Until the recall installation-wide exit is fixed, the system programmer can use the SETSYS command to turn off the recall exit and allow DFSMSHsm to process the undirected recalls.

Source: DFSMSHsm

ARC1128I BACKUP/DUMP COPY DOES NOT EXIST

Explanation: A RECOVER or HRECOVER command was issued, but no backup version or dump copy exists for the specified data set or volume. Message ARC1001I precedes this message giving the data set name or volume serial number. The *reascode* in message ARC1001I gives an indication of the conditions and the necessary action to take to correct the situation.

Reascode

Meaning

- | | |
|---|---|
| 0 | A BCDS record describing the data set or volume was not found. You may also get this <i>reascode</i> when the data set recovered has only a physical dump copy and the device type of the original volume that was dumped is not similar to the device type of the target volume selected for the restore. |
| 4 | The BCDS entry was found for the data set or volume. However, one of the following occurred: <ul style="list-style-type: none"> • A backup version or dump copy of the data set or volume is not available. • A backup version or dump copy of the data set or volume does not meet the date, generation, or version requirements. You may also get this reason code if a dump copy exists for the data set, but DFSMSHsm cannot find it because: <ul style="list-style-type: none"> – The data set is not currently cataloged to the source volume of the dump copy. – There is no incremental backup version that meets the date or generation specified to allow DFSMSHsm to determine where the dump copy is. • A dump copy does not meet the date, data set restore, dump generation, dump volume, or dump class requirements. • The data set was not found in a dump VTOC copy data set. • A cataloged backup version was not found for the data set when FROMVOLUME was not specified. |

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- 12 A recover request was issued without specifying FROMDUMP(DUMPVOLUME(*volser*)) for a multivolume data set. A BCDS backup version was not found for the data set.
- A dump copy is used to restore a multivolume data set only if FROMDUMP(DUMPVOLUME(*volser*)) was specified by a DFSMSHsm authorized user. If FROMDUMP(DUMPVOLUME(*volser*)) was not specified, DFSMSHsm only recovers a multivolume SMS-managed data set using an incremental backup version. This ensures the entire data set is recovered as one entity, or to verify an authorized user knows which piece of the data set is restored from which dump copy. DFSMSHsm does not back up multivolume non-SMS-managed data sets.
- 16 A recover request was issued for a VSAM SMS key range data set. A BCDS backup version was not found for the data set. Since DFSMSdss does not support key range data sets, only the backup version is used to recover a VSAM SMS key range data set.
- 20 The NEWNAME parameter was specified for a VSAM data set when the original data set exists and no backup copy exists (only a DUMP COPY exists). DFSMSdss does not support the NEWNAME parameter for VSAM data sets, so the restore must use the original data set name.
- 24 A recovery command specified with the RCVRQD keyword was issued for a data set. A BCDS backup version was not found for the data set. DFSMSHsm does not support the recovery of a physical dump copy of a data set if the RCVRQD keyword was specified.

System action: The recovery operation of this data set ends. DFSMSHsm processing continues.

Programmer response: Consider the following actions and reissue the command:

Reascode

Meaning

- 0 If this occurred due to dissimilar unit types, reissue the command directing the data set to the correct unit type.
- 4 Issue a LIST or HLIST command with the BACKUPCONTROLDATASET and DATASETNAME parameters to retrieve information about backup versions of the data set and then perform one of the following:
- Be sure you specify the correct data set name.
 - If the data set was cataloged at the time it was backed up, do not specify the FROMVOLUME parameter.
 - If the data set was uncataloged at the time it was backed up, specify the FROMVOLUME parameter with the volume serial number of the volume from which it was backed up.
 - If the DATE parameter was specified, a backup version created on or before the date specified does not exist. Specify a correct date.
- If there is an eligible dump copy, but no eligible incremental backup version, perform one of the following:
- Reissue the RECOVER or HRECOVER command with the FROMVOLUME parameter.
 - Reissue the RECOVER or HRECOVER command with the REPLACE parameter after the data set is cataloged to the source volume of the dump copy.
 - If the GENERATION parameter was specified and a backup version of the specified relative generation number does not exist, specify a correct generation number.
 - If the VERSION parameter was specified and the specified version number does not exist, specify a correct version number.
- 12 Issue a LIST command with PVOL BCDS ALLDUMPS to retrieve the information about dump copies and dump volumes of the primary volume. Then issue a LIST command with DVOL DUMPCONTENTS to retrieve information about each dump copy of the data set. Perform one of the following:
- Reissue the command with:
FROMDUMP(DUMPVOLUME(*volser*))
- if a dump copy exists for a piece of the data set and only one piece of the data set is to be restored.
- Reissue several commands:
RECOVER FROMDUMP(DUMPVOLUME(*volser*))
- to restore several pieces of the data set if dump copies exist for the data set.

- 16 No action required.
- 20 If you want to retain the original data set, copy the original data set to a new data set name. Then restore the dump copy of the data set to the original data set name by issuing the RECOVER command without the NEWNAME parameter.
- 24 Reissue the recovery command without the RCVRQD keyword.

If a corresponding ARC1069I message precedes this message, see the ARC1069I application programmer response.

Source: DFSMSHsm

ARC1129I CANNOT RENAME, DATA SET ALREADY EXISTS ON VOLUME

Explanation: A RECOVER or HRECOVER command was issued with the NEWNAME parameter. The data set name specified with the NEWNAME parameter has already been used on the volume where the data set is being recovered. The data set name is indicated in message ARC1001I.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Choose a different data set name and reissue the command.

Source: DFSMSHsm

ARC1130I ERROR DURING RECALL

Explanation: An error was detected while DFSMSHsm was performing a recall operation. The possible values for the reason code are:

Reascode

Meaning

- 4 A request submitted through the ARCHRCAL macro with ASYNC=YES has failed; however DFSMSHsm could not communicate the return or reason codes to the requestor.

System action: The recall operation ends. DFSMSHsm processing continues.

Programmer response: The reason codes have the following actions:

Reascode

Action

- 4 See all the preceding related messages or the corresponding FSR record for details on the failures, determine what caused the errors, and resubmit the request.

Source: DFSMSHsm

ARC1131I CANNOT MOUNT VOLUME NECESSARY FOR RECALL/RECOVERY

Explanation: During a DFSMSHsm recall or recovery operation, the volume where the requested data set resides is not mounted. The allocation routine passed a return code of 8, which indicates that one of two conditions occurred:

- The operator cancelled the requested mount.
- The CDS records for the volume indicate that the data was written in CAPACITYMODE(EXTENDED) and the input unit recorded in the CDS is not CAPACITYMODE switchable.

Message ARC1001I precedes this message, giving the data set name involved.

- 1 The allocation routine passed a return code of 8, indicating that the operator canceled the requested mount.
- 2 For DFSMSHsm MVS V1R5 or higher, the CDS records for the volume indicate that the data was written in CAPACITYMODE(EXTENDED) and the input unit that is recorded in the CDS is not capable of CAPACITYMODE switching.

For DFSMSHsm MVS V1R4, CAPACITYMODE(EXTENDED) is not supported.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: For Reason Code 1, have the required volume available to the system. The DISPLAY operator command might help determine the volume status. Retry the recall or recovery operation when the volume

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is available. For Reason Code 2 and DFSMSHsm MVS V1R5 or higher, make sure that the unit that is recorded in the CDS records for the volume is capable of CAPACITYMODE switching.

For Reason Code 2 and DFSMSHsm MVS V1R4, use DFSMSHsm MVS V1R5 or higher for the operation.

Source: DFSMSHsm

ARC1133I OLD COPY OF DATA SET EXISTS, BUT REPLACE NOT SPECIFIED

Explanation: A RECOVER or HRECOVER command was issued to DFSMSHsm. The REPLACE parameter was not specified. A data set already exists on the volume with the same name as that specified in the command. If the NEWNAME parameter was specified, it is the new name that already exists. The data set name is given in message ARC1001I.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Determine whether the old copy of the data set is needed. If the old copy is not needed, reissue the command with the REPLACE parameter. If both copies of the data set are needed, reissue the command with the NEWNAME parameter or a new data set name as that parameter.

Source: DFSMSHsm

ARC1134I RECOVERY FAILED - ERROR SCRATCHING OLD COPY

Explanation: A RECOVER or HRECOVER command was issued with the REPLACE parameter. During DFSMSHsm processing, the data management scratch service routine was invoked to scratch the old copy. The scratch failed. Message ARC1001I precedes this message, giving the data set name. Message ARC0528I or ARC0545I will appear in the backup activity log, giving the return and reason codes or status codes for the error.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: See the explanation for message ARC0528I or ARC0545I. Take the appropriate action.

Source: DFSMSHsm

ARC1135I ERROR OPENING INPUT DATA SET DURING RECALL/RECOVERY

Explanation: DFSMSHsm issued the OPEN macro to open an input data set. During open processing, the ESTAE routine was invoked. An OPEN error message with component identifier IEC normally precedes this message if this is a true OPEN error. Message ARC1001I also precedes this message, giving the operation in process and the data set name. If the recall failure is indicated in message ARC1001I and the user data set is in the small data set packing (SDSP) data set, this error is related to opening the SDSP VSAM data set.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: Take the action indicated by the OPEN error message, and retry the DFSMSHsm operation.

Source: DFSMSHsm

ARC1136I ERROR OPENING OUTPUT DATA SET DURING RECALL/RECOVERY

Explanation: The OPEN macro was issued by DFSMSHsm to open an output data set or the VTOC on the target volume of the recall or recovery operation. The OPEN process failed. An OPEN error message with component identifier IEC precedes this message, indicating the data set name that the OPEN failed for. Message ARC1001I also precedes this message, indicating which operation was in process and the name of the data set it was processing.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: Take the action indicated by the OPEN error message, and retry the DFSMSHsm operation.

Source: DFSMSHsm

ARC1137I VOLUME AND UNIT SPECIFIED ARE INCONSISTENT

Explanation: The unit type specified is not the correct unit type for the volume specified for a recovery operation.

System action: The recovery operation ends. DFSMSHsm processing continues.

Programmer response: Verify the unit type and volume specified. Correct the mismatch and reissue the command.

Source: DFSMSHsm

ARC1138I I/O ERROR READING FROM A BACKUP OR MIGRATION VOLUME

Explanation: DFSMSHsm has taken a data control block exit because a read error has occurred in reading the VSAM data set backup version being recovered or the migration copy being recalled. Message ARC1001I gives the data set name.

The reason code displayed in the ARC1001I message could either be the return code from an internal DFSMSHsm call to IDCAMS or a DFSMSHsm reason code. The IDCAMS return codes are 4, 8, 12 and 16. For an explanation of these return codes, see *z/OS DFSMS Macro Instructions for Data Sets*. A reason code of 0 indicates that an I/O error has occurred. A reason code of 2 indicates that an invalid data or record length has been encountered.

System action: Recovery or recall of the data set ends. DFSMSHsm processing continues.

Programmer response: For reason codes 4, 8, 12, and 16, respond to the associated access method or hardware error message if available. For all reason codes, the input data set may be unusable and would have to be replaced with a backup copy.

Source: DFSMSHsm

ARC1139I ERROR PROCESSING RACF PROTECTED DATA SET, RECOVERY/RECALL/DELETE TERMINATED

Explanation: During a recall, recovery, restore, or delete operation of DFSMSHsm, an attempt was made to process a Resource Access Control Facility (RACF) protected data set. The data set name and a reason code are given in the preceding ARC1001I message. For *reascode* values, see Table 19 on page 571.

System action: The recall, recovery, restore, or delete operation ends. DFSMSHsm processing continues.

Programmer response: If RACF denied access, there is an associated RACF message. If the data set name and DSCB do not match, there is an associated access method message. If an I/O error caused the reading of the JFCB to fail, an associated error message can be found in the DFSMSHsm job log SYSMMSG data set. Respond to the associated message. If an abnormal end occurs during RACF processing, the reason code is 20 and probably occurs because the RACF profile does not agree with the catalog entry.

Source: DFSMSHsm

ARC1140I RECOVERY FUNCTION DISABLED

Explanation: The recovery function was disabled, or the installation is not allowing recovery. The NOBACKUP parameter of the SETSYS command may have been used to disallow recovery.

System action: The recovery operation ends. DFSMSHsm processing continues.

Programmer response: If an installation does not normally provide for the DFSMSHsm recovery function, this is the result of an invalid command. If the function is disabled, issue SETSYS BACKUP to enable it, then retry the RECOVER command. Notify the storage administrator of this condition if it is unexpected.

Source: DFSMSHsm

ARC1141I ERROR DURING CLEANUP OF DATA SET, RECALL FAILED

Explanation: RECALL command processing of the data set specified in message ARC1001I failed.

If the data set specified in message ARC1001I is a VSAM data set, then the RECALL command failed while attempting to allocate the target volume or import the migration copy. An attempt to recatalog the cluster name, or one of the cluster's object or path names (if it was eligible for RECALL processing by any of those names), failed.

If the data set specified in message ARC1001I is a non-VSAM data set, then the error occurred while trying to

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recatalog the data set as migrated when the RECALL command failed.

The *reascode* in message ARC1001I is the original failure code and it corresponds with message ARC11xxI, where xx is the *reascode*.

System action: The RECALL command ends. DFSMSHsm processing continues.

Programmer response: If it is a VSAM data set, then it is necessary to find out which object(s) need to be recataloged by you. To find this information, do the following:

1. Use the FIXCDS command to display the MCD record for the migrated VSAM data set.
2. Using the field MCDMCANM in the MCD record as the key, use the FIXCDS command to display the MCO record for the data set (if an MCO record exists).
3. Using the object names that exist in the MCO record, or just using the base cluster name if an MCO record does not exist, use the TSO LISTCAT command to list the catalog entry for the object name(s).
4. For any entry name that does not have a non-VSAM catalog entry with a volume serial number of MIGRAT, use the AMS DEFINE non-VSAM command to create a catalog entry for the object, with a volume serial number of MIGRAT.
5. The data set recall should be reattempted using any of the object names that are now cataloged properly.

If it is a non-VSAM data set then do the following:

1. Use the TSO LISTCAT command to list the catalog entry.
2. If the entry name does not have a catalog entry use the AMS DEFINE non-VSAM command to create a catalog entry for the data set, with a volume serial number of MIGRAT.
3. If the entry name does have a catalog entry but the volume serial number is not MIGRAT, then uncatalog the data set and then use the AMS DEFINE non-VSAM command to create a catalog entry for the data set, with a volume serial number of MIGRAT.
4. Use the reason code to determine the reason the recall failed. Fix the problem and then reattempt the recall of the data set.

Source: DFSMSHsm

ARC1142I FAILED TO UNCATALOG 'A' ENTRIES FOR THE VSAM SPHERE

Explanation: When a VSAM data set is migrated, each of the VSAM components is cataloged as a non-VSAM data set ('A' entry) to volume serial number MIGRAT. In preparation for a VSAM recall, the catalog entries for the migrated data set must be uncataloged. A failure, other than a no-record-found condition, was encountered. The recall of the data set cannot be performed until all the entries associated with the base cluster are uncataloged. Current status of the data set cannot be determined. The data set name for which the recall failed is given in the ARC1001I message.

System action: The recall operation ends. DFSMSHsm processing continues.

Programmer response: Recall the data set using the following steps:

1. List the data set by issuing a DFSMSHsm LIST command for the data set name.
2. Issue uncatalog requests for all the names associated with the data set, including the base cluster name. All the cataloged names that must be uncataloged for the RECALL command to be successful are included in the output of the DFSMSHsm LIST command. During the recall attempt that caused this condition, one or more of the associated names might have been uncataloged. Here, your uncatalog request will fail because of a no-record-found condition.
3. To recall the data set to a device type other than the device type it was last migrated from, use an IDCAMS DEFINE command to define the data set on the volume where the data set is to reside. If there is no device type change, skip this step.
4. Issue a RECALL command for the data set. Use the base cluster name for the recall.

Source: DFSMSHsm

ARC1143I ERROR RETRIEVING CATALOG INFORMATION DURING DATA SET RECOVER/RESTORE

Explanation: A failure occurred in retrieving information from a catalog for a data set being recovered or restored, or for the NEWNAME specified on HRECOVER/RECOVER command. For an HRECOVER/RECOVER data set request, the name of the data set being processed is in the ARC1001I message that precedes this message. For a volume request, the data set name appears in the text of the associated ARC0734I message with return code 43. In message ARC1001I or ARC0734I the *reascode* has the following values:

Reascode**Meaning**

- | | |
|----|---|
| 5 | An attempt was made to recover a backup copy of a data set that has the same name as a Generation Data Group (GDG) base entry. DFSMSHsm does not support the backup of GDG base entries. |
| 6 | non-VSAM catalog error. |
| 10 | A VSAM component is multivolume. |
| 14 | A locate error occurred (other than not found), or a data set is a non-ICF catalog, or a data set is a page or swap data set. If there is an associated message IDC3009I in the system log, then follow message IDC3009I return code 14, reason code NN in the programmer response. |
| 15 | A VSAM component has a logical record length that is too large. |
| 16 | A component of the VSAM data set was open. |
| 18 | An error occurred in locating catalog information for a base data or base index component of a VSAM data set. |
| 19 | An error occurred in locating catalog information for a base path of a VSAM data set. |
| 28 | An error occurred in locating catalog information for an alternate index of a VSAM data set. |
| 38 | An error occurred in locating catalog information for a data or base index component of an alternate index. |
| 39 | An error occurred in locating catalog information for an alternate index path of a VSAM data set. |
| 52 | An error occurred in getting virtual storage to contain the catalog information. |
| 60 | An attempt was made to recover an uncataloged non-SMS generation data set but the generation data group (GDG) is no longer defined or is not found through the generic catalog locate; that is, the GDG base entry cataloged in an OSCVOL catalog. |

System action: Processing for the data set ends. DFSMSHsm processing continues.

Programmer response: Follow the corrective action in the problem determination section. Resubmit the request after corrective action has been taken. If *retcode* = 60, define the GDG and reissue the RECOVER command. To recover the generation data set, define the GDG or allocate a generation data set using the same name as the target data set and reissue the RECOVER command.

For *reascode* of 18: If a VSAM data set is cataloged and was backed up with the BACKDS command (there is no BACKUP VTOC), you may need to uncatalog the data set before recovering it. If the target volume was reformatted in preparation for the recovery, there will not be a VVDS or a NVR entry for the VSAM data set. Use a DELETE NOSCRATCH command against the data set and then RECOVER it.

Source: DFSMSHsm

ARC1145I TOVOLUME CANNOT BE A MIGRATION VOLUME OR DATA SET IS MIGRATED

Explanation: A RECOVER or HRECOVER command was issued. The receiving volume specified in the TOVOLUME parameter is a migration volume, or the data set to be recovered is a migrated data set and NEWNAME is not specified. If NEWNAME is specified, the NEWNAME data set is a migrated data set or the data set is a VSAM data set.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command. Either use an acceptable volume as the receiving volume, or, if the data set to be recovered is a migrated data set, recall the data set first or specify NEWNAME with the RECOVER command.

Source: DFSMSHsm

ARC1146I OBTAIN ERROR READING DATA SET VTOC ENTRY DURING RECALL/RECOVERY

Explanation: While DFSMSHsm was performing a recovery, restore, or recall operation, the OBTAIN macro was used to read the data set VTOC entry of an original data set name, or a new name for recover or restore security checking, or the migration copy indicated in message ARC1001I. In message ARC1001I, *reascode* is the return code from the OBTAIN macro.

The values for *reascode* are:

Reascode**Meaning**

- | | |
|----|--|
| 4 | The required volume was not mounted. This code can occur when attempting to recover from a dump copy when the original volume is no longer available. To allow this recovery to be successful, use the TOVOLUME keyword to direct the recovery to another volume. Use of the TOVOLUME keyword must reference a volume in the correct storage group if the data set is SMS-managed. This code also occurs when the user data set is moved to tape and the volser in the catalog is that of a tape. To enable a recover in this case, first delete the existing catalog entry and then re-request the recover. |
| 8 | The data set VTOC entry was not found in the VTOC of the specified volume. |
| 12 | A permanent I/O error was encountered, or an invalid data set VTOC entry was found during the processing of the specified volume. |
| 16 | There was an invalid work area pointer. |

System action: The recovery, restore, or recall operation ends. DFSMSHsm processing continues.

Programmer response: If *reascode* in message ARC1001I is 4, correct the problem and reissue the command. If *reascode* is 8 or 12, notify the system programmer to take corrective action. If *reascode* is 16, notify the storage administrator to take corrective action.

Source: DFSMSHsm

ARC1147I RECALL/RECOVERY FAILED - PARTITIONED DATA SET HAS A MEMBER WITH MORE THAN 1 NOTE LIST

Explanation: A data set cannot be backed up or migrated with more than 1 note list. The operation fails with message ARC1215I. In this case, the data set on the migration or backup volume indicates the data set has more than 1 note list.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: The data set cannot be recalled or recovered in the current status. Notify the storage administrator to take corrective action

Source: DFSMSHsm

ARC1148I RECALL FAILED. THE DATA SET IS IN INCOMPLETE STATUS.

Explanation: A data set in incomplete status means the data set is cataloged on a primary volume, but the complete data set remains uncataloged on a migration volume. This can only occur for VSAM data sets.

In the associated message ARC1001I, the reason code has the following meaning:

Reascode**Meaning**

- | | |
|---|---|
| 2 | During the recall of a data set in incomplete status, the data set cataloged on a primary volume must first be deleted before recalling the migrated data set. In this instance, the delete operation failed. |
| 4 | During recall, DFSMSHsm attempted to alter the catalog entry to remove the incomplete status, but the alter operation failed. |

System action: The recall fails leaving the data set in incomplete status.

Programmer response: See the associated ARC0950I message giving the catalog return and reason codes for the failure. When the reason for the failure is corrected, reissue a RECALL command.

If your VSAM sphere has objects or options such that the DELETE of the data set fragment on L0 does not work

(when APAR OY60012 is applied), the volume clean up can be done manually and the data set can be recalled. Verify that the migrated data set still exists uncataloged on a migration volume. Then proceed with the following steps:

1. Issue the TSO LISTCAT command to list the catalog entry.
2. Use the AMS DELETE NOSCRATCH command, while logged on under the RACF group ARCCATGP, to uncatalog the data set on the primary volume.
3. Use the AMS DELETE VVR command to delete each component from the primary volume(s).
4. Use the AMS DEFINE NONVSAM command to create a catalog entry for the data set with a volser of MIGRAT.
5. RECALL the data set. If the first recall fails, issue the recall again since the first recall allowed DFSMSHsm to update records.

Source: DFSMSHsm

ARC1149I DEVICE AND DATA SET ARE INCOMPATIBLE

Explanation: During a recall or recovery of a non-VSAM data set, the target volume was found to have a track size less than the block size plus the key length of the data set. Either the target device does not support track overflow or the track overflow option was not requested for the RECFM parameter in the DCB when the data set was created.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Primary space is needed on a compatible device. Reissue the command directing it to a specific compatible volume.

Source: DFSMSHsm

ARC1150I NO UNIT AVAILABLE TO MOUNT MIGRATION/BACKUP COPY

Explanation: During a recall or recovery operation, an attempt was made to allocate the migration copy or backup version of the data set identified in message ARC1001I. The allocation routines determined that the required volume is not online, nor are any units available on which to request a mount.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: Arrange to have a unit made available for this request, and retry the operation.

Source: DFSMSHsm

ARC1151I ANOTHER DFSMSHSM FUNCTION ACTIVE FOR DATA SET, RECALL REJECTED

Explanation: This message may or may not represent a problem. A recall request is unable to complete for either one of the following reasons:

- The data set is in use by another DFSMSHsm operation; or
- The data set is on an unavailable SDSP volume.

The data set name is given in message ARC1001I.

System action: The recall operation ends. DFSMSHsm processing continues.

Programmer response: DFSMSHsm attempted this recall several times. Retry the recall at a later time. If the recall continues to fail with message ARC1151I, or if this message occurs frequently, consult your DFSMSHsm service representative to assist you in resolving this problem. If the ARC1001I message preceding message ARC1151I has a reason code, then save this reason code for when you contact your service representative.

Source: DFSMSHsm

ARC1152I GET/FREEMAIN ERROR - RECALL/RECOVERY TERMINATED

Explanation: During a recall or recovery operation, a GETMAIN or FREEMAIN macro was issued for virtual storage. The macro failed.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Operator response: See the programmer response.

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Programmer response: Retry the recall or recovery operation. If the problem occurs again, notify the storage administrator.

Source: DFSMSHsm

ARC1153I MSS UNAVAILABLE - RECALL/RECOVERY TERMINATED

Explanation: A recall or recovery operation was requested for a data set that resides in the Mass Storage System. The Mass Storage System was either not ready to accept orders or was not initialized.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: Retry the operation when the mass storage system is available.

Source: DFSMSHsm

ARC1154I RECALL FAILED DUE TO AN ERROR IN AN INSTALLATION EXIT

Explanation: The ARCRDTEXT exit for the volume selection of an undirected recall of a data set ended abnormally. DFSMSHsm continues to recall any data set that is automatically directed or command directed to a given volume. To release the recall function, issue the RELEASE command with the RECALL parameter.

System action: DFSMSHsm processing continues with limited RECALL processing. DFSMSHsm fails all undirected recalls with message ARC1126I.

Operator response: If you determine that the recall function can run without the installation-wide exit, turn off the installation-wide exit using the SETSYS command with the EXITOFF parameter. DFSMSHsm runs without the volume selection routine. If you determine that the ARCRDTEXT exit will not abnormally end (abend) again, issue a RELEASE command with the RECALL parameter. DFSMSHsm runs with the ARCRDTEXT volume selection routine exit.

Programmer response: The existing version can be reactivated using the SETSYS command. Correct the cause of the abend and reinstall the exit module.

Source: DFSMSHsm

ARC1155I VSAM RECALL/RECOVERY FAILED - ERROR IN IMPORT

Explanation: Recovery or recall has been attempted for a VSAM data set but an IDCAMS IMPORT command has been unable to complete successfully. The data set name and IDCAMS return code are given in message ARC1001I. If the reason code in the ARC1001I message is 4, 8, 12, or 16, it is the return code from IDCAMS.

The IDCAMS error messages are contained in the activity logs. If a recall fails, review the migration activity log. If a recover fails, review the backup activity log. To review the activity logs, issue the RELEASE HARDCOPY command. If the logs are on DASD, new logs are created and the logs with the messages can be browsed. If the logs are directed to SYSOUT, they are printed.

In the following two special cases the *reascode* in ARC1001I is *not*: the IDCAMS return code.

- When an IDCAMS IMPORT command fails with *retcode* 28 in message IDC3351I, DFSMSHsm issues message ARC0769I and retries the IMPORT command. If IMPORT processing fails again with *retcode* 28 in message IDC3351I, DFSMSHsm issues message ARC0786I and retries the IMPORT command once more. The next failure with *retcode* 28 in message IDC3351I results in this message (ARC1151I) with *reascode* 3351 in message ARC1001I. Recovery processing requires MCVTF_NO_RECOV_TAPE_OPT be patched temporarily ON for these retries to occur.
- When an IDCAMS IMPORT command fails with message IDC3020I, DFSMSHsm retries IMPORT processing up to 5 times. If the 5 retries fail with error message IDC3020I, IMPORT processing is not successful; and the result is message ARC1155I with *reascode* 3020 in message ARC1001I.

System action: The recovery or recall of this data set ends without completing. DFSMSHsm processing continues.

Programmer response: Do one or all of the following:

- If *reascode* is 0, the data set has been recalled except for one or more alternate index clusters (AIX) that failed IMPORT processing. Manually rebuild these AIX clusters. See the preceding ARC0767I or ARC0768I message.
- If *reascode* is 12 for a recover function, check the command activity log for an SMS IGD306I-UNEXPECTED ERROR DURING INTEXPDT PROCESSING, RETURN CODE 8, REASON CODE 1017 message. This message may indicate a problem with the data set expiration date in the MCC record. Use the FIXCDS command to display the MCC

record and check the MCCEXPDT field for a valid date. Correct this field and retry recovering the data set. Following the RECALL or RECOVER, check the Format1 DSCB expiration field (dslexpdt) for non-VSAM data sets or the catalog expiration data for VSAM data sets and correct this field if necessary. Failing to correct this field will result in the same RECALL or RECOVER failure for the data set next time DFSMSHsm tries to recall or recover it.

- Respond to the IDCAMS return code and retry the operation. The IDCAMS error messages are contained in the activity logs. If a RECALL command fails, review the migration log. If a RECOVERY command fails, review the backup log. If message IDC3032I BUFFER SPACE TOO SMALL is issued, the device type of the volume to which the data is being recovered differs from the device type of the volume from which the data has been migrated. Issue an IDCAMS DEFINE command for the data set on the target volume and retry the RECALL or HRECALL command. Before issuing the DEFINE command, uncatalog all previous object names that will be used again. If the IDCAMS message IDC3020I INSUFFICIENT SPACE ON USER VOLUME is issued during IMPORT processing of an AIX for a VSAM cluster, the recall ends but the base cluster is recalled successfully. The migrated copy is scratched; therefore create the alternate index from the base cluster.
- If in a multiple processing unit environment with different levels of DFP, the data set might have been migrated or backed up by control interval (CIMODE) processing. DFSMSHsm can only recall or recover the data set on an MVS/XA Data Facility Product Version 2 Release 1.0 or subsequent release system with the appropriate program temporary fix (PTF) applied. Contact your system programmer to see if CIMODE processing has been in effect. If it has been in effect, try to recall or recover the data set on a processing unit with the appropriate level of MVS/XA Data Facility Product.
- An I/O error might prevent the migration version from being recalled. Therefore, if repeated attempts to recall the data set result in this message and a backup copy of the data set exists, issue a DFSMSHsm DELETE command for the data set followed by a DFSMSHsm RECOVER command.

Source: DFSMSHsm

ARC1156I VSAM RECALL/RECOVERY FAILED - CATALOG LOCATE ERROR

Explanation: An attempt has been made to recover or recall a VSAM data set. A LOCATE parameter has failed in getting the catalog name, catalog volume serial, or password. The reason code given in message ARC1001I is the VSAM catalog return code. For detailed information, see message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*.

System action: The data set is not recovered or recalled. DFSMSHsm continues to process other data sets that have been specified by this command or other commands.

Programmer response: Correct the catalog information and retry the request.

Source: DFSMSHsm

ARC1157I RECOVERY FAILED - DATA SET CANNOT BE RECOVERED WITH NEWNAME

Explanation: A VSAM data set was being recovered with the NEWNAME parameter specified. The reason code is given in a message ARC1001I.

The values for *reascode* are:

Reascode

	Meaning
4	There were alternate indexes on the original data set that cannot be recovered when NEWNAME is requested.
8	Specify a new data set name that directs allocation to the same catalog as the old data set name.
10	RECOVER command processing will not recover a VSAM data set to replace a non-VSAM data set, nor will it recover a non-VSAM data set to replace a VSAM data set. Therefore, a backup version must have the same data set organization as the data set it is to replace, or the existing data set with the same name must be deleted before recovering a backup version of it.
12	DFSMSHsm cannot recover a backup version of a base cluster when NEWNAME is specified if the base cluster has a path defined on it. Therefore, if a data set exists with the same name as specified with NEWNAME, use the IDCAMS RENAME command to rename the existing data set and recover the backup version without specifying NEWNAME. If no data set exists with the old data set name, you get reason code 16.

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- 14 The NEWNAME specified on the RECOVER command is a non-SMS-managed VSAM key range data set. DFSMShsm and DFSMSdss do not support non-SMS-managed VSAM key range data sets.
- 16 DFSMShsm cannot recover a backup version of a VSAM data set unless the old data set name exists from which the old object names can be found in the catalog. This reason code indicates that a catalog error occurred when DFSMShsm was trying to find the old object names.
- 18 This error could occur because the user is trying to recover a backup version with the NEWNAME parameter specified and the old data set name is not in the catalog. If the old data set name is in the catalog, the catalog entry's associated fields do not specify data and index components.
- 20 An integrated catalog facility catalog cannot be renamed when it is being recovered.
- 36 The NEWNAME specified on the RECOVER command is a multiple volume data set and FROMDUMP(DUMPVOLUME) was not specified. DFSMShsm does not back up and recover multiple volume non-VSAM or multiple volume VSAM non-System Managed Storage (SMS) data set. The FROMDUMP(DUMPVOLUME) is required to restore a dump copy for a multiple volume non-VSAM or multiple volume VSAM non-SMS-managed data set. This is to ensure that an authorized user knows which piece of the data set is being restored from which dump copy.

System action: If the reason code is 4, the VSAM base cluster was recovered, but none of the alternate index (AIX) clusters were recovered. In all other cases, no data was recovered. Recovery processing of this data set ends. DFSMShsm processing continues.

Programmer response: If the reason code is 4 and AIX clusters are needed, use IDCAMS to build the needed AIX clusters.

Source: DFSMShsm

ARC1158I RECOVER DATA SET FAILED

Explanation: A data set is being recovered, but a possible logical error exists relating to data integrity. Message ARC1001I or ARC0734I gives the data set name and the reason code.

The values for *reascode* are:

Reascode

Meaning

- 8 The data set name is currently cataloged, but it is not the name of a VSAM base cluster or a non-VSAM data set.
- 10 The data set name specified in the NEWNAME parameter is currently cataloged, but it is not the name of a VSAM base cluster or non-VSAM data set, or it is not the same VSAM type (LDS, KSDS, ESDS, or RRDS) as the VSAM data set being recovered.
- 12 The data set organization of the backup version selected differs from the data set organization of the data set for which there is a current catalog entry (one is a VSAM data set and the other is a non-VSAM data set), or the data set organization of the old data set name differs from the data set organization of the new data set name.
- 14 The data set is a non-SMS keyrange data set. DFSMShsm does not support backup and recovery of a non-SMS keyrange data set. This data set must be RECOVERED as an SMS-data set.
- 16 A backup version of an uncataloged data set is to be used to recover a data set, but a cataloged data set exists on the receiving volume. A backup version of an uncataloged data set may not be used to replace a cataloged data set.
- 18 RECOVER processing of a data set backed up while open is requested to a non-SMS target and FORCENONSMS is not specified.
- 20 During volume recovery, a data set is not recovered because a cataloged data set with the same name exists which has a creation date since the date of backup. If you want the recovered data set to replace the more recently defined data set, issue a RECOVER or HRECOVER command for the data set you want to recover and specify the REPLACE parameter.

During volume restore with APPLYINCREMENTAL, a data set was not recovered because a cataloged data set with the same name exists which has a creation date since the date of backup. If the data set is not on the volume dump VTOC, but is on the volume backup VTOC, the data set has a catalog entry but not a

- VTOC data set entry after the volume restore with updates is done. The user may have to uncatalog the data set to delete the catalog entry after the volume restore with updates.
- 21 The backup version has a format-8 DSCB.
- 22 A extended format data set is backed up by datamover DFSMSHsm.
- 23 A large format sequential format data set was backed up by datamover DFSMSHsm.
- 24 The tape volume is not mounted.
- 26 The recovery of an integrated catalog facility (ICF) catalog is requested by an unauthorized user or an alias is specified instead of the catalog's true data set name on the HRECOVER command.
- 28
- A data or index component of a catalog exists on the volume where the catalog is to be recovered.
 - The volume could not be mounted to verify the presence of any components of the catalog.
 - The OBTAIN request fails for other than a not-found condition.
- 30 The recovery of the ICF catalog is directed to a volume other than the volume from which it is backed up.
- 32 During volume recovery, a data set recovery failed because the data set is currently cataloged on another volume.
- 34 FROMDUMP(DUMPVOLUME) is not specified to restore a multivolume extended format data set which can only be backed up by DFSMSdss physical full volume dump.
- 36 Cataloged multiple volume data sets are not recovered by Incremental Volume Recovery or by full Volume Restore during the APPLYINCREMENTAL process. The message ARC1158I may be received during Volume Restore with APPLYINCREMENTAL processing if the multiple volume data set is in the Dump Copy VTOC or the Backup Copy VTOC being processed. For example, the message is issued when the Restore process restored a segment of a multiple volume data set, but not all segments of the data set were restored since some segments reside on other volumes. If the multiple volume data set was backed up from the volume where the base is cataloged, then a more recent backup copy may exist. Because VSAM data sets have multiple components, more than one message may be received for the same VSAM sphere.
- 38 An extended format data set is filtered by ACS routines to be recovered or restored to a non-SMS-managed volume.
- 40 The data set is currently uncataloged, but the backup version is a cataloged data set.
- 44 FROMVOLUME is specified to recover or restore an extended format data set to a non-SMS-managed volume.
- 46 Cataloged extended format data sets are not recovered by Incremental Volume Recovery or by full Volume Restore during the APPLYINCREMENTAL process. The message ARC1158I may be received during Volume Restore with APPLYINCREMENTAL processing if the extended format data set is in the Dump Copy VTOC or the Backup Copy VTOC being processed. For example, the message is issued when the Restore process restored a segment of an extended format data set, but not all segments of the data set were restored since some segments reside on other volumes. If the extended format data set was backed up from the volume where the first portion of the data set is cataloged, then a more recent backup copy may exist. Because VSAM data sets have multiple components, more than one message may be received for the same VSAM sphere.
- 48 The data set organization of the target data set differs from the data set organization of the original data set from which the cataloged data set was backed up.
- 50 A preallocated target with record level sharing (RLS) attributes was found. DFSMSHsm 1.3.0 or higher must be used to process this data set.
- 51 A pre-allocated target data set has a format-8 DSCB.
- 66 The MCC indicates the data set is greater than 2 Terabytes. This exceeds the architectural limit for systems prior to V1R13.

System action: The recovery operation of this data set ends. DFSMSHsm processing continues.

For reason code 36, the RECOVER command ends because DFSMSHsm does not recover multiple volume data sets

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during a volume recovery process. DFSMSShsm recovers SMS VSAM and SMS non-VSAM multiple volume data sets only by a data set recover command.

Programmer response: Consider the following actions and reissue the command:

Reascode

Action

- 8 or 10** Specify a new data set name, a non-VSAM data set name, or a VSAM base cluster data set name. If the VSAM base cluster is preallocated, it must be the same type (LDS, KSDS, ESDS, or RRDS) as the VSAM data set being recovered.
- 12** Either select a backup version whose data set organization agrees with the data set organization of the currently cataloged data set, or specify old and new data set names of data sets that agree in data set organization.
- 16** Delete the cataloged data set already on the target volume, move the existing data set to another volume, or specify a different target volume with the TOVOLUME parameter.
- 21** Use V1R12 or higher to recover the data set.
- 22** Verify the backup version contains good data. If not, notify your system programmer. If the backup version is good, the MCCFDMV flag could be accidentally turned off by a DFSMSShsm-authorized user through a FIXCDS PATCH command. Issue a FIXCDS PATCH command to turn on MCCFDMV flag and then reissue the RECOVER command to recover the extended format data set.
- 23** Determine which field, MCCFLFS or MCCFDMV, is in error and use the FIXCDS command to correct it. Reissue the RECOVER command for the data set.
- 26 or 30**

See *z/OS DFSMSShsm Storage Administration* in the section titled, "Availability Management Procedures" under the topic, "Backing Up and Recovering an ICF Catalog".
- 32** To recover the backup version, issue a RECOVER or HRECOVER command for the data set and specify the REPLACE parameter.
- 34** Reissue the RECOVER command with the FROMDUMP(DUMPVOLUME) parameter to restore each extended format of the data set. To find out the DUMPVOLUME which contains the physical full volume dump copy of the data set, issue a LIST command with the PVOL BCDS ALLDUMPS parameter to retrieve the information about dump copies and dump volumes of the primary volume. Then issue LIST commands with DVOL DUMPCONTENTS to retrieve the information about the dump copies of the data set. If the data set no longer exists before the restore, the data set must be cataloged by the user after all extended formats are restored. Neither DFSMSdss nor DFSMSShsm catalogs the multivolume extended format data set during physical dump copy restore processing.
- 36** DFSMSShsm does not recover a cataloged multiple volume data set during Volume Recovery or during Volume Restore with APPLYINCREMENTAL processing. This provides the opportunity to work with the individual data set. If the Volume Restore restored the part of the data set that resided on this volume, and return code 58 and reason code 46 of message ARC0734I were received from the APPLYINCREMENTAL process, then the restored part of the data set may be down level. Determine the type of action required for this data set. You can rescue or repair data with REPRO, BLDINDX or similar utilities. Otherwise, you can recover using individual data set requests, such as with the RECOVER or HRECOVER data set commands.
- 38** Modify the ACS filter routine to direct the extended format data set to be recovered or restored to SMS-managed volumes. DFSMSShsm does not recover or restore an extended format data set to non-SMS-managed volumes.
- 44** Reissue the RECOVER command without specifying the FROMVOLUME parameter. DFSMSShsm does not recover or restore an extended format data set to non-SMS-managed volumes.
- 46** DFSMSShsm does not recover an extended format data set that spans multiple volumes during Volume Recovery or during Volume Restore with APPLYINCREMENTAL processing. This provides the opportunity to work with the individual data set. If the Volume Restore restored the part of the data set that resided on this volume, and return code 58 and reason code 46 of message ARC0734I were received from the APPLYINCREMENTAL process, then the restored part of the data set may be down level. Determine the type of action required for this data set. You can rescue or repair data with REPRO, BLDINDX, or similar utilities. Otherwise, you can recover using individual data set requests, such as with RECOVER or HRECOVER data set commands.

- 48 Check the data set organization of the target data set. If the selected backup version was cataloged when the backup copy was made, then the organization of the target data set must have the same data set organization as the original data set from which the backup version was made.
- 50 To maintain the record level sharing (RLS) information in the target data set, use DFSMSHsm 1.3.0 or higher. To perform the recovery using a down-level system, delete the preallocated target or delete the RLS attributes. Recovering the data set using a down-level system will cause the RLS attributes to be lost.
- 51 To perform the recovery, delete the preallocated target.
- 66 Use DFSMSHsm V1R13 or higher to recover this data set.

Source: DFSMSHsm

ARC1159I RECOVERY FAILED - ERROR DELETING OR ALLOCATING EXISTING DATA SET

Explanation: Recovery of a VSAM data set has been in progress when either a deletion of the existing data set fails for a reason other than its catalog entry has not been found, or an allocation error has occurred. Message ARC1001I gives the base cluster name being recovered. For a deletion error, the reason code is the VSAM catalog return code, as documented by Message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*. For an allocation error, the preceding message ARC0503E gives the base cluster name being allocated. Message ARC0503E also gives the return code, reason code, and information code from dynamic allocation. The reason code in preceding message ARC1001I is the return code from dynamic allocation.

System action: Recovery of the VSAM data set ends. DFSMSHsm processing continues.

Programmer response: For a deletion error, make the corrections indicated by the VSAM catalog return code as documented by message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*. For an allocation error, take corrective action based on the meaning of the return code and reason code issued in the message ARC0503E.

Source: DFSMSHsm

ARC1160I ESTAE MACRO FAILURE DURING RECALL/RECOVERY/DELETE

Explanation: DFSMSHsm attempted to set up an ESTAE environment during a recall, recover, or delete process, but the MVS function was unsuccessful.

System action: The processing for this data set ends. DFSMSHsm processing continues.

Programmer response: Inform the system programmer of the message, and examine the return code from the previous message.

Source: DFSMSHsm

ARC1161I LICENSED PROGRAM NOT AT SUFFICIENT LEVEL

Explanation: The recall or recover of the data set failed because the required licensed program is not at a sufficient level. The data set name and the *reascode* are contained in the preceding ARC1001I or associated ARC0734I message.

The *reascode* value gives the reason the recall or recover could not be done. Valid values for *reascode* are:

Reascode

Meaning

- 4 The data set is a PDSE data set and support is not currently available on the system. A global non-recoverable SMSX resource was previously lost and DFSMS* PDSE support was disabled at that time.
- 8 The data set was migrated or backed up with DFSMSdss data movement and DFSMSHsm determined that DFP is not of a sufficient release level to support the DFSMSdss invocation from DFSMSHsm to recall or recover the data set. The minimum level for DFSMSdss data movement support is DFP version 2.3.0.
- 12 The data set was a Large Format Sequential data set which was migrated or backed up with a version of DFSMS which supports these data sets. The existing level of DFSMS does not support Large Format data sets.

System action: The recall or recovery of the data set ends. DFSMSHsm processing continues.

Programmer response: Recall or recover the data set on a level of DFSMSHsm/DFSMS that supports Large Format Sequential data sets.

ARC1162I • ARC1166I

Source: DFSMSHsm

ARC1162I DFSMSDSS NOT AT SUFFICIENT LEVEL

Explanation: The recall or recover of the data set failed because DFSMSdss is not at a sufficient level. The data set name and the *reascode* are contained in the preceding ARC1001I or associated ARC0734I message.

The *reascode* value gives the reason the recall or recover could not be done. Valid values for *reascode* are:

Reascode

Meaning

- | | |
|---|--|
| 4 | DFSMSHsm determined that it should invoke DFSMSdss to restore the data set or volume from a full volume dump copy, or the FROMDUMP parameter was specified for the RECOVER command. DFSMSHsm then determined that DFSMSdss is not of a sufficient release level to support invocation from DFSMSHsm. DFDSS 2.2.0 or a later release is required. |
| 8 | The data set was migrated or backed up using DFSMSdss data movement but an insufficient level of DFSMSdss is installed to recall or recover the data set. DFDSS 2.5.0 or a later release is required. |

System action: The recall or recovery of the data set ends. DFSMSHsm processing continues.

Programmer response: It may be possible to issue the recall/recover request from a different processing unit in a multiple processing unit environment. It may also be possible to recover a backup version that is older than the most recent dump copy by using the GENERATION parameter on the RECOVER or HRECOVER command. Otherwise, a sufficient level of DFSMSdss must be installed on the system.

Source: DFSMSHsm

ARC1164I VOLUME ALLOCATION ERROR DURING RECOVERY

Explanation: An error occurred in allocating a tape under DFSMSHsm control during recovery processing.

- The tape required for recovery cannot be mounted for one of the following reasons:
 - The tape is in use by another DFSMSHsm function.
 - The operator cancelled the request, possibly because there are no available units, or there are physical tape problems.

System action: Any processing requiring the volume in error does not occur. DFSMSHsm processing continues.

Programmer response:

- For tape: retry the recovery later when resources may be available to allow allocation to succeed, or contact the operator to determine the exact cause of the problem so that the correct course of action may be taken.
- For MSS: retry later when the MSS is not so busy.

Source: DFSMSHsm

ARC1165I RECALL OF A DATA SET HAS BEEN CHANGED TO A NOWAIT REQUEST. REQUEST NUMBER IS *reqnum*

Explanation: WAIT request *reqnum* was queued on a host that is disconnecting from the common recall queue. Because of this, DFSMSHsm will be unable to determine when the request is completed by a remote host and notify the originator of the request. The WAIT request is converted to a NOWAIT request so that the originator of the request is no longer left waiting, but the request is still eligible to be processed by a remote host. Message ARC1001I gives the data set name.

System action: The request is changed to a NOWAIT request. DFSMSHsm processing continues.

ARC1166I DATA SET RESTORE FAILED

Explanation: DFSMSHsm has invoked DFSMSdss to do a physical data set restore from a dump volume or a fast replication target volume. DFSMSdss has returned the nonzero reason code *reascode* in message ARC1001I preceding this message. The values and meanings for *reascode* are as follows:

Reascode

Meaning

- 8 The restore has ended prematurely, did not run, or has begun to run and an error message has been issued.
- 12 The restore did not run. DFSMSHsm issues an ending message.
- 16 The restore left the data set in an unusable condition.
- 20 The attach of ADRDSSU or ADRXMAIA failed.
- 4xx An internal error occurred.
- 9xx An abend occurred.

System action: The DFSMSHsm recover task ends. DFSMSHsm processing continues.

Programmer response: If a RECOVER command was issued, determine if a DFSMSHsm incremental backup version exists for the data set by using the LIST or HLIST command. If a DFSMSHsm incremental backup version does exist and it is recent enough, issue the RECOVER or HRECOVER command specifying which backup version you want.

If an FRRECOV command was issued, determine and resolve the cause of the error and reissue the command.

DFSMSHsm routes the DFSMSdss messages to the user or the dump activity log. See *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for an explanation of any accompanying DFSMSdss messages. DFSMSdss message numbers are prefixed with ADR.

Source: DFSMSHsm

ARC1167I DATA SET REFERENCED DURING VOLUME RECOVERY

Explanation: A RECOVER command was issued with the APPLYINCREMENTAL keyword. DFSMSHsm is indicating that the data set was referenced after the volume was restored but before the RECOVER of the dataset. The data set name is identified in the ARC0734I message issued to the backup activity log by the volume recovery process. Therefore, the data set may not be the most current one. If the data set was referenced but is now closed, the recover will fail.

System action: Recovery of the data set fails. DFSMSHsm processing continues.

Programmer response: Determine if the reference to the restored copy of the data set was appropriate. If it was not, the most recent backup copy should be recovered by using the DFSMSHsm RECOVER or HRECOVER command. If the reference was made by a job or a procedure, the job or procedure may need to be rerun after the recovery.

Source: DFSMSHsm

ARC1168I DATA FORMAT OR POSITIONING ERROR DURING RECALL/RECOVERY

Explanation: During the recall or recovery of a data set, the positioning to the DFSMSHsm copy of the data set has failed. In general, this error occurs when the DFSMSHsm copy of the data set is stored in 3480 single file format and the POINT macro fails to locate the first record of the DFSMSHsm copy. However, this error can occur with reason code 16, for either tape-stored data or DASD-stored data, if the first record does not contain a required DFSMSHsm control block (the common data set descriptor (CDD)). The name of the data set targeted for recall or recovery appears either in the preceding ARC1001I message or in the associated ARC0734I message having a return code of 68. The reason code in the ARC1001I or ARC0734I message can be:

Reascode

Meaning

- 4 The POINT macro has failed due to a DFSMSHsm internal error. The specified device does not support the block ID.
- 8 The POINT macro has failed due to a DFSMSHsm internal error. Invalid input parameters have been supplied to the POINT macro.
- 12 An I/O error in the LOCATE BLOCK ID command has occurred; the data set block has not been found.
- 16 The first record that has been read for the DFSMSHsm copy of the data set did not contain a valid common data set descriptor. The DFSMSHsm copy of the data set may have been overwritten, or if the data set resides on tape, the positioning done by the POINT macro may have been incorrect.

System action: Recall or recovery of the data set fails. DFSMSHsm processing continues.

Programmer response: For more information about the POINT macro and its return codes, see *z/OS MVS*

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Programming: Authorized Assembler Services Guide or z/OS DFSMS Macro Instructions for Data Sets.

Source: DFSMSHsm

ARC1169I RECALL/RECOVER FAILED DUE TO AN ERROR IN DFSMSDSS

Explanation: A RECALL or RECOVER command was issued for a data set originally migrated or backed up using DFSMSdss as the datamover. The DFSMSdss RESTORE command was issued to move the data set. When DFSMSHsm issues this message, the corresponding DFSMSdss messages should be consulted. The DFSMSdss messages with prefix ADR are listed in the migration activity log (for RECALL) or backup activity log (for RECOVER). The data set name is contained in the preceding ARC1001I or associated ARC0734I message. The value of the last DFSMSdss message number issued for the highest severity error encountered during DFSMSdss processing is also in the ARC1001I or ARC0734I message. However, in some cases the return code is other than the DFSMSdss message number. These cases are as follows:

1. If the value of this return code is 9999, DFSMSdss did not end normally, and DFSMSHsm could not determine the final RESTORE command processing return code. The DFSMSdss messages must be used to determine the cause of the failure.
2. If the value of this return code is 9990, it is the result of an abnormal end in DFSMSdss.
3. If the value of the reason code is 9928, DFSMSHsm is unable to recall a data set *dsname*, because DFSMSdss datamover detected, during restore (recall), the data set had internal errors when dumped (migrated). See the ARC0075E message for more information.

System action: This data set operation fails. DFSMSHsm processing continues.

System programmer response: When the DFSMSdss message requests the operation be retried using the NOPACKING option, issue the RECALL or RECOVER command with DFDSOPTION(RETRY) to attempt a successful RECALL or RECOVER.

You must correct the errors in the partitioned data set after the successful processing of the RECALL or RECOVER command.

Programmer response: Review the response required for the DFSMSdss error and take the appropriate action. The DFSMSdss messages can be found in *z/OS MVS System Messages, Vol 1 (ABA-AOM)*.

Source: DFSMSHsm

ARC1170I DFSMSHSM ENCOUNTERED AN SMS-RELATED ERROR WHILE PROCESSING A DATA SET

Explanation: During the recall, delete, recovery, or restore of a data set, DFSMSHsm attempted to perform a task for a data set that required access to the storage management subsystem (SMS). The data set name is given in the preceding ARC1001I message, along with a *reascode*. The following are *reascode* values and meanings:

Reascode

Meaning

- | | |
|----|---|
| 01 | An error occurred while attempting to determine the SMS construct names. Either DFSMSHsm encountered an error attempting to invoke the automatic class selection (ACS) routines or the ACS routines failed. Check the command activity log for messages indicating the actual failure reason. Look for ARC0935I for a failure reason and SMS message IGD306I. If you received SMS IGD306I— UNEXPECTED ERROR DURING INTEXPDT PROCESSING, RETURN CODE 8, REASON CODE 1017, the problem may be the data set expiration date in the DFSMSHsm MCC record for a recover function or the data set expiration data in the DFSMSHsm MCD record for a recall function. |
| 02 | An error occurred while attempting to allocate space on the target volume for the recall or recovery of a non-VSAM data set. Either DFSMSHsm encountered an error attempting to invoke the VTOC/Data Set Services' (VDSS) create space function or VDSS had a failure creating the space. If the storage class assigned by your ACS routines is using guaranteed space, ensure that the assigned storage class has the original volume serials that the data set was created with, otherwise allocation fails. Check the command activity log for messages indicating the actual failure reason. Look for ARC0935I for a failure reason and SMS message IGD306I. If you received SMS IGD306I-UNEXPECTED ERROR DURING INTEXPDT PROCESSING, RETURN CODE 8, REASON CODE 1017, the problem may be the data set expiration date in the DFSMSHsm MCC record for a recover function. |

- 03 An error occurred while attempting to create a non-VSAM data set record (NVR) in the VSAM catalog entry on the target volume. The DEFINE NVR function failed. Message ARC0950I was issued to the command activity log with the actual failure reason.
- 04 An error occurred attempting to alter the BCS entry in the catalog for a non-VSAM data set. The data set was either SMS-managed before the recall or recovery and was being recalled or recovered to non-SMS-managed storage, or the data set was being recalled or recovered to SMS-managed storage. The target volume, device type, and SMS construct names were to be altered in the BCS entry. The alter function failed. Message ARC0950I was issued to the command activity log with the actual failure reason.
- 05 An error occurred in obtaining the management class definition for the data set.
- 06 The version of DFSMSdss installed on the system is not of a sufficient level to support SMS-managed data sets. A sufficient level of DFSMSdss is required to restore an SMS-managed data set, unless FORCENONSMS is specified.
- 07 An SMS-managed data set is not eligible for automatic recall through the OPEN DSCB not found exit (IFG0EX0A). One of the following occurred:
- An allocation (either a batch job or TSO CLIST) with a subsequent OPEN for an SMS-managed data set specified a non-SMS-managed volume.
 - An allocation for an SMS-managed data set specified an SMS-managed volume, and the SMS subsystem was not installed or was not active.
- A 213-2C ABEND will occur. The recall is not permitted because the results would be unpredictable.
- 08 SMS is inactive, and the FORCENONSMS parameter was not specified for a recall or recovery. Interaction with the SMS subsystem is required in order to process the request.
- 09 An error occurred attempting to create a non-VSAM entry in the catalog (BCS entry). The Define BCS function failed. Message ARC0950I was issued to the command activity log with the actual failure reason.
- 10 An SMS-managed data set is not eligible for automatic recall directly from a VSAM OPEN call. One of the following situations occurred:
- An allocation (either a batch job or TSO CLIST) with a subsequent VSAM OPEN for an SMS-managed data set specified a non-SMS-managed volume.
 - An allocation for an SMS-managed data set specified an SMS-managed volume, but the SMS subsystem was either not installed or was not active.
 - An OPEN was done without a preceding allocation.
- The OPEN will fail. The recall is not permitted because the results would be unpredictable. The data set would not necessarily be recalled to the volume that the OPEN request specified.
- 12 An SMS-managed data set could not be renamed to a temporary name. Message ARC0780I was issued to describe the problem. Message ARC0950I was issued to the command activity log with the actual failure reason.
- 13 A non-SMS-managed data set cannot be recovered to an SMS-managed volume. The data set being processed was determined by ACS routines to be a non-SMS-managed data set, but the target volume is an SMS-managed volume.
- 14 An SMS-managed data set cannot be restored from a physical dump copy to a non-SMS-managed volume. The data set being recovered has been determined by ACS routines to be SMS managed, but the target volume selected by DFSMSHsm is a non-SMS-managed volume.
- 20 An SMS-managed data set is to be restored but not cataloged. This request may be made only by a DFSMSHsm authorized user. This condition arises when a VSAM data set which does not have an applicable backup version is to be restored. DFSMSHsm can catalog a VSAM data set during restore only by recovering the data set prior to the restore. All SMS-managed data sets must be cataloged.
- 24 An error occurred while attempting to allocate space on the target volume for the recall or recovery of a BDAM data set. Either DFSMSHsm encountered an error attempting to invoke the VTOC data set services (VDSS) create space function or VDSS had a failure creating the space. The data set was a direct access data set and DFSMSHsm issued an SMS track allocation request. The target volumes available either have track sizes smaller than the requested size for the data set, or the target volumes do not have enough free space available (in tracks) for the request. If DFSMSHsm is the data mover and the storage class for the data set

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has guaranteed space specified, then this error may occur if the data set is being directed to a volume that is not in a storage group associated with that storage class. Message ARC0935I was issued to the command activity log with the actual failure reason.

- 25 Error in retrieving the management class definition.
- 26 Error in moving the management class definition.
- 27 Error in retrieving the default management class definition.

System action: The operation, which is indicated in the ARC1001I message preceding this message, terminates for the data set. DFSMSHsm processing continues.

Programmer response:

Reascode

Meaning

- 01 If the command activity log has an SMS IGD306I—UNEXPECTED ERROR DURING INTEXPDT PROCESSING RETURN CODE 8, REASON CODE 1017 message associated with the failing data set, then the problem may be the data set expiration date. If you were recalling a data set, use the FIXCDS command to display the MCD record for the data set and check the MCDEXPDT field. Correct this field and retry recalling the data set. If you were recovering a data set, use the FIXCDS command to display the MCC record for the backup version and check the MCCEXPDT field. Correct the MCCEXPDT field and retry recovering the data set. Following the RECALL or RECOVER, check the Format1 DSCB expiration field (dslexpdt) for non-VSAM data sets and correct this field if necessary. Failing to correct this field will result in the same RECALL or RECOVER failure for the data set.
- 02 If the command activity log has an SMS IGD306I—UNEXPECTED ERROR DURING INTEXPDT PROCESSING RETURN CODE 8, REASON CODE 1017 message associated with the failing data set, then the problem may be the data set expiration date. If you were recalling a data set, use the FIXCDS command to display the MCD record for the data set and check the MCDEXPDT field. Correct this field and retry recalling the data set. If you were recovering a data set, use the FIXCDS command to display the MCC record for the backup version and check the MCCEXPDT field. Correct the MCCEXPDT field and retry recovering the data set. Following the RECALL or RECOVER, check the Format1 DSCB expiration field (dslexpdt) for non-VSAM data sets and correct this field if necessary. Failing to correct this field will result in the same RECALL or RECOVER failure for the data set.
- 05 See message ARC0935I in the command activity log for the specific failure. List the catalog information to determine the management class name. Define the management class if it does not exist. If the management class exists, contact the IBM Support Center.
- 08 Do one of the following:
 - Reissue the request when the SMS subsystem is active.
 - Reissue the request with the FORCENONSMS parameter specified.
- 06 Do one of the following:
 - Reissue the request when a sufficient level of DFSMSdss is installed.
 - Reissue the request without specifying the FROMDUMP parameter. Instead, use the GENERATION parameter on the command. This causes an incremental backup version to be used for the recovery of the data set.
 - The FORCENONSMS and TOVOLUME parameters can also be used to force the data set to a non-SMS-managed volume.
- 07 An HRECALL command can be used to recall the data set when SMS is active, or the explicit volume serial can be removed from the JCL or CLIST.
- 10 An HRECALL command can be used to recall the data set when SMS is active or an allocation of the data set can be done without specifying the volume serial number.
- 13 Issue a data set RECOVER command with either FORCENONSMS or TOVOLUME, specifying a non-SMS-managed volume. This recovers the data set to a non-SMS-managed volume.
- 14 Issue a data set RECOVER command with the TOVOLUME parameter specifying an SMS-managed volume that has a device type similar to the original volume that has been dumped. This restores the data set to an SMS-managed volume.

- 20 Do one of the following:
- Preallocate the SMS VSAM data set.
 - Have the recover request issued by a DFSMSHsm authorized user.
 - If the data set is not preallocated, a DEFINE CLUSTER RECATALOG IDCAMS command must be issued after the restore is complete.
- 24 Ensure the ACS routine does not target the data set to a pool of volumes with smaller track sizes than the original source device. Ensure that at least one volume in the volume pool has enough free space to honor the allocation request. If DFSMSHsm is the data mover, ensure the data set is not directed to a device that is not in a storage group associated with the storage class of the data set.

For each of the other error conditions listed above that have a corresponding message containing more information about the failure, consult the corresponding message. The corresponding message is written in the command activity log. See the programmer response sections of the appropriate related message for more details.

Retry the operation after corrective action has been taken, or after investigation has determined the error will not recur.

If not attempted previously, an authorized DFSMSHsm user may use the FORCENONSMS parameter to recall or recover the data set to non-SMS-managed storage. This may provide a temporary bypass for the problem.

Source: DFSMSHsm

ARC1171I USER NOT AUTHORIZED TO RECOVER OS CVOL

Explanation: Data set recovery of an OS CVOL can only be issued by a user with space management authority or by the system operator. Message ARC1001I precedes this message giving the data set name.

System action: The recovery operation ends. DFSMSHsm processing continues.

Programmer response: Use the HSENDCCMD command or see the storage administrator for authorization.

Source: DFSMSHsm

ARC1172I DFSMSHSM ENCOUNTERED AN SMS-RELATED ERROR WHILE SELECTING A TARGET VOLUME

Explanation: During the recovery or restore of a data set, DFSMSHsm has attempted to select an initial target volume for processing the recovery or restore function. An error has occurred that has caused the function to end. The data set name is given in the preceding ARC1001I message, along with a reason code. The reason code has the following meanings:

Reascode

- | Meaning |
|--|
| 1 SMS is not installed in the system. |
| DFSMSHsm has attempted to process an SMS-managed volume, as indicated in the volume VTOC entry, but SMS is not installed on the system in which DFSMSHsm is running. |
| A DFSMSHsm-authorized user may resubmit the request with the FORCENONSMS parameter to recover the data set to non-SMS-managed storage. |
| 4 SMS is not active in the system. |
| DFSMSHsm has attempted to process an SMS-managed volume but SMS is not active in the system; reattempt the request when SMS is active. |
| Also, a DFSMSHsm-authorized user may resubmit the request with the FORCENONSMS parameter to recover the data set to non-SMS-managed storage. |
| 5 An error has occurred in reading the volume VTOC entry for the volume being selected. |
| DFSMSHsm has read the volume VTOC entry to determine if the volume being selected is an SMS-managed volume. The read fails. |
| 6 An error has occurred in retrieving an SMS volume definition. |

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After the volume being selected has been determined to be an SMS-managed volume (by reading the volume VTOC entry), DFSMSHsm has invoked SMS to retrieve an SMS volume definition. SMS fails to retrieve it.

- 7 An error has occurred while retrieving a storage group definition for an SMS volume.

After the volume definition has been retrieved for the volume, DFSMSHsm has invoked SMS to retrieve a storage group definition for the volume. SMS fails to retrieve it.

- 9 The volume being selected is in SMS initial status.

DFSMSHsm has read the volume VTOC entry to determine if the volume being selected is an SMS-managed volume. The volume VTOC entry indicates that the volume is in SMS initial status. DFSMSHsm cannot process a volume in SMS initial status.

A DFSMSHsm authorized user may resubmit the request with the FORCENONSMS parameter to recover the data set to non-SMS-managed storage.

- 11 It cannot be determined if the volume being selected is an SMS-managed volume. The SMS volume definition and the volume VTOC entry do not agree.

- 13 The device type of the volume retrieved from the SMS storage group definition is not supported by DFSMSHsm.

- 15 An error has occurred while reading or writing a migration control data set (MCDS) volume record (MCV).

DFSMSHsm has read an MCV record for the volume being selected. The read has failed, and an ARC0184I message has been issued to indicate the error. If no MCV record exists for the volume, DFSMSHsm has attempted to create an MCV record for the volume. The creation has failed. An ARC0184I message has been issued to indicate the error.

- 19 The volume being selected is not mounted.

DFSMSHsm has attempted to read the volume VTOC entry to determine if the volume being selected is an SMS-managed volume, or has attempted to locate the unit control block (UCB) for the volume being selected and finds that the volume is not mounted.

Contact the storage administrator to determine why the volume is not mounted.

- 52 A GETMAIN error has occurred.

DFSMSHsm has failed to get virtual storage for creating a mounted volume table (MVT) entry for an SMS-managed volume.

A retry may be successful if the GETMAIN failure occurs while DFSMSHsm is performing many simultaneous activities which require large amounts of virtual storage.

System action: The recovery or restore processing ends. DFSMSHsm processing continues.

System programmer response: To aid in problem resolution, see the information about maintaining DFSMSHsm control data sets in *z/OS DFSMSHsm Storage Administration*.

Programmer response: Perform the action that corresponds to the reason code you received.

Source: DFSMSHsm

ARC1173I RECOVERY OF A VSAM COMPONENT FAILED

Explanation: The RECOVER command was issued for a component of a VSAM data set other than the base cluster name. DFSMSHsm does not support the individual recovery of any VSAM components.

System action: The RECOVER command ends. DFSMSHsm processing continues.

Programmer response: Reissue the command, specifying the base cluster name.

Source: DFSMSHsm

ARC1174I DATA SET/VOLUME RECOVER/ RECALL/DELETE FAILED - THE FUNCTION IS HELD

Explanation: A data set recovery, recall, or delete function was requested. The request failed because the requested function was held. Message ARC1001I gives the data set name. The reascode in ARC1001I gives the function that was held as follows:

Reascode

	Meaning
4	RECOVER was held.
8	RECOVER(TAPEDATASET) was held.
12	RECALL was held.
16	RECALL(TAPE) was held.
20	RECALL(TAPE(TSO)) was held.
24	In the CRQplex, there are no connected hosts that are eligible to process any recall requests.

System action: The backup version of the data set is not recovered, the migrated data set on tape is not recalled, or the migrated data set is not deleted. DFSMSHsm processing continues.

Programmer response: Reissue the command after the operator issues the appropriate RELEASE command. For Reascode=24, issue QUERY ACTIVE and examine the CRQPLEX HOLD STATUS in message ARC1540I to determine what the CRQplex HOLD status is. To determine the HOLD status for each host, issue QUERY ACTIVE for each host and examine message ARC1541I.

Source: DFSMSHsm

ARC1175I RECALL OF A DATA SET HAS BEEN CHANGED TO A NOWAIT REQUEST. REQUEST NUMBER IS *nnnn*.

Explanation: A TSO RECALL command requested a data set from tape, but tape recall is held. Message ARC1001I gives the data set name. The request number *nnnn* allows the interactive user to query or cancel the request.

System action: The request is changed to a NOWAIT request for later processing when RECALL is released. DFSMSHsm processing continues.

Programmer response: None. RECALL processing is completed when the operator releases the tape recall function.

Source: DFSMSHsm

ARC1176I ERROR LINKING TO DFSMSDSS DURING RECALL OR RECOVERY

Explanation: DFSMSHsm is recalling or recovering a data set using DFSMSdss as a data mover because the data set was migrated or backed up using DFSMSdss. A request sent to DFSMSHsm to recall or recover a data set failed when the LINK macro used to invoke DFSMSdss for data movement failed. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: The recall or recovery of the data set ends. DFSMSHsm processing continues.

Programmer response: Review the abnormal end code that is displayed as the reason code in the preceding ARC1001I or associated ARC0734I message.

A corresponding ARC0200I message is issued with the module name ARCRDSS and return code 16. A SNAP dump occurs the first time this error is issued. All occurrences of this error are logged. A DFSMSHsm initialization resets the occurrence count, so if DFSMSHsm is reinitialized, a SNAP dump occurs again.

The TRAP command can also be used for this message.

Source: DFSMSHsm

ARC1177I ERROR ALLOCATING DUMMY DD DURING RECALL OR RECOVERY

Explanation: DFSMSHsm is recalling or recovering a data set using DFSMSdss as the data mover because the data set was migrated or backed up using DFSMSdss. A request sent to DFSMSHsm to recall or recover a data set failed when the allocation of a dummy dd for DFSMSdss restore failed. The dynamic allocation error codes are identified in the preceding ARC0503E message. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: The recall or recovery of the data set ends. DFSMSHsm processing continues.

Programmer response: Review the allocation error codes contained in the preceding ARC0503E message.

Source: DFSMSHsm

ARC1178I DFSMSHSM NOT AT SUFFICIENT LEVEL

Explanation: RECALL or RECOVER command processing of the data set failed because DFSMSHsm is not at a sufficient level. Message ARC1001I precedes this message, giving the data set name and the *reascode*.

The *reascode* value gives the reason the RECALL or RECOVER processing could not be done. Valid values for *reascode* are:

Reascode**Meaning**

- 5 The current level of DFSMSHsm cannot recall or recover an extended format data set (sequential striped or compressed). A minimum of DFSMSHsm 1.1.0 is required for sequential striped data sets, and a minimum of DFSMSHsm 1.2.0 is required for extended format compressed data sets.

System action: The RECALL or RECOVER processing of the data set ends. DFSMSHsm processing continues.

Programmer response: It may be possible to issue the RECALL or RECOVER command from a different processing unit in a multiple processing unit environment. Otherwise, a sufficient level of DFSMSHsm must be installed on the system.

Source: DFSMSHsm

ARC1179I ERROR RECALLING DATA SET

Explanation: An error has occurred while recalling a data set. The name of the data set being processed is in the ARC1001I message that precedes this message. In message ARC1001I the *reascode* has the following values:

Reascode**Meaning**

- 1 The MCD for the data set is inconsistent. The MCD indicates the data set is striped and DFSMSHsm has been used as the data mover. Striped data sets must be migrated and recalled with DFSMSdss.
- 2 The MCD for the data set is inconsistent. The MCD indicates the data set is large format sequential and DFSMSHsm has been used as the data mover. Large format sequential data sets must be migrated and recalled with DFSMSdss.
- 3 Automatic class selection (ACS) has not returned a storage class for the striped data set.
- 5 The migration copy has a format-8 DSCB.
- 6 The MCD indicates the data set is greater than 2 Terabytes. This exceeds the architectural limit for systems prior to V1R13.
- 7 Class Transition rules are not followed for recall of this data set.

System action: Processing of the data set ends. DFSMSHsm processing continues.

Programmer response: The *reascode* has the following actions:

Reascode**Meaning**

- 1 Determine which field, MCDFSTRP or MCDFDSS, is in error and use a FIXCDS command to correct it. Reissue the RECALL command for the data set.

- 2 Determine which field, MCDFLFS or MCDFDSS, is in error and use a FIXCDS command to correct it. Reissue the RECALL command for the data set.
- 3 See the system administrator.
- 5 Use V1R12 or higher to recall the data set.
- 6 Use DFSMSHsm V1R13 or higher to recall this data set.
- 7 Use DFSMSHsm V2.1 or higher to recall this data set.

Source: DFSMSHsm

ARC1180I RECALL FAILED - NEEDED VOLUME IN USE BY RECYCLE OR TAPECOPY FUNCTION

Explanation: A RECALL command fails because a tape volume that is needed to perform the recall is allocated and is being used for recycle or tapecopy processing. The data set being recalled is identified in the preceding ARC1001I message.

System action: The RECALL command ends. DFSMSHsm processing continues.

Programmer response: Either wait for recycle or tapecopy function to complete or issue a HOLD command for the recycle or tapecopy function and reenter the RECALL command.

Source: DFSMSHsm

ARC1181I RECALL FAILED - ERROR ALLOCATING TAPE VOLUME

Explanation: A RECALL command failed because of an error in allocating a needed tape volume. The volume being allocated and the type of allocation error that occurred are identified in the preceding ARC0500I message issued to the command activity log. To review the activity log, issue the DFSMSHsm RELEASE HARDCOPY command. The data set being recalled is identified in the preceding ARC1001I message.

System action: The RECALL command ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator to isolate the cause of the error.

Source: DFSMSHsm

ARC1182I RECALL FAILED - TAPE VOLUME NOT AVAILABLE

Explanation: A RECALL command failed because the volume on which the data set resides is in use, and the operator, when asked whether the volume would soon be available, responded to cancel the mount request.

System action: The RECALL command ends. DFSMSHsm processing continues.

Programmer response: Retry the RECALL command at a later time.

Source: DFSMSHsm

ARC1183I WHILE PROCESSING IN DISASTER MODE, AN ERROR OCCURRED DURING THE RECALL OR RECOVER OF A DATA SET

Explanation: While processing in disaster mode, an error occurred causing the RECALL or RECOVER command to fail. The name of the data set is given in message ARC1001I or ARC0734I. When message ARC1001I or ARC0734I indicates a *retcode* = 83, the *reascode* may have the following values:

Reascode

	Meaning
4	The volser in the data set control record (MCD/MCC) is invalid.
12	Failed to read the TTOC for the original volser.
16	Failed to read the backup control data set backup volume record (MCT).
18	The MWE and MCD records do not agree on the device type where the migrated data set resides. Most likely, multiple RECALL commands were issued for the same data set. One recall completed and the data set was migrated to a different device type before the second recall was attempted.

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20 The disaster alternate volume list changed after the MWE was placed on the common recall queue.

52 Failed to GETMAIN storage for the disaster alternate volume list.

System action: The RECALL or RECOVER command fails. DFSMSHsm processing continues.

Programmer response: The *reascode* has the following actions.

Reascode

Meaning

4 Use the FIXCDS command to verify the volser in the data set control record (MCD/MCV).

12 or 16

See the associated ARC0184I message.

20 Recalls will succeed if CRQ is not used.

52 See the associated ARC0307I message.

Source: DFSMSHsm

ARC1184I RECOVER FAILED — TAPE VOLUME NOT AVAILABLE

Explanation: A RECOVER command failed because the volume on which the data set backup copy resides is in use. When asked whether the recover task should continue waiting for the volume, the operator replied no, failing the request.

System action: The RECOVER command ends. DFSMSHsm processing continues.

Programmer response: Retry the RECOVER command at a later time.

Source: DFSMSHsm

ARC1185I NO DATA SET RECOVERY TAPE TASKS CAN BE STARTED

Explanation: The maximum number of allowed data set recovery tape tasks is zero. It means that SETSYS MAXDSTAPERECOVERYTASKS(0) was issued and no Data Set Recovery tape tasks can be started. If no tape tasks can be started, WAIT requests fail and NOWAIT requests process when Data Set Recovery tape tasks are again allowed.

System action: DFSMSHsm processing continues.

Programmer response: If you want Data Set Recovery from tape, ensure that the number of Data Set Recovery tape tasks allowed is not zero and that necessary tape resources are available. If you want Data Set Recovery tape tasks, change the SETSYS MAXDSTAPERECOVERYTASKS value to 1 or greater.

Source: DFSMSHsm

ARC1186I RECALL/RECOVER/RESTORE FAILED - DFSMSHSM SHUTDOWN OCCURRED WHILE WAITING FOR A TAPE MOUNT

Explanation: An attempt was made to recall, recover, or restore a data set, or restore a volume from a tape migration level 2, backup, or dump volume. Before the tape volumes could be mounted, a command was entered to shut down DFSMSHsm. See the preceding ARC1001I message for the data set name or volume serial number.

System action: The operation fails. DFSMSHsm processing continues.

Programmer response: Reissue the RECALL or RECOVER command after DFSMSHsm is restarted.

Contact the operator to see when the tape volume will become available.

Source: DFSMSHsm

ARC1187E RECALL FAILED DUE TO AN ERROR WITH THE COMMON RECALL QUEUE

Explanation: While processing a recall request, an error was encountered with the common recall queue.

System action: The recall request fails. DFSMSHsm processing continues.

Programmer response: Examine the associated ARC1001I message to determine the name of the data set that failed. Determine if message ARC1506E preceded the failure. See *z/OS DFSMSHsm Storage Administration* to learn how to recover from the error.

ARC1188I RESTORE OF DATA SET FAILED

Explanation: The RECOVER command has been issued with the FROMDUMP parameter, but DFSMSHsm has determined that restore cannot be performed. Message ARC1001I precedes this message, giving the data set name and the *reascode*.

The *reascode* value gives the reason the restore cannot be done. Valid values for *reascode* are:

Reascode**Meaning**

- | | |
|----|---|
| 2 | The device type of the original volume that has been dumped is not of a similar device type as the target volume of the restore. |
| 4 | A read error has occurred in reading the control data set record describing the source backup or dump volume. See message ARC0184I preceding this message for the type and key of the record.

Notify the storage administrator or system programmer. |
| 6 | An SMS-managed data set cannot be restored to a non-SMS-managed volume. The data set being recovered has been determined by ACS routines to be SMS managed, but the target volume is a non-SMS-managed volume. |
| 8 | An error has occurred in allocating the dump VTOC copy data set. |
| 10 | The DUMPVOLUME subparameter has been specified for a volume restore, and the specified dump volume does not contain valid data. |
| 14 | An error has occurred in reading the backup or dump VTOC copy data set. |
| 16 | An error has occurred in opening the dump VTOC copy data set. |
| 22 | One of the following has occurred: Either the volume on which the data set is currently cataloged or the volume from which the latest backup version has been made, does not have a dump VTOC copy data set to verify that the data set has been dumped to the existing dump copy. <ul style="list-style-type: none"> • The volume specified with the FROMVOLUME parameter has not been processed by full volume dump, thus does not have a dump VTOC copy data set to verify that the data set has been dumped to the existing dump copy. • No dump copy is found that has the data set restore attribute. |
| 24 | An invalid or unsupported device type is found in the control data set record for the source backup, dump volume, or migration level 1 volume where the VTOC copy data set resides. |
| 30 | The data set is not currently cataloged, no backup version exists, and there is no DUMPVOLUME subparameter provided to indicate what dump copy is required. |
| 32 | DUMPCCLASS and DUMPVOLUME parameters has not been specified, and no dump copy is found that has a retention date other than NOLIMIT. |
| 34 | Restore of an unmovable data set has failed because not enough information is available to preallocate the data set. For an unmovable data set to be successfully restored by DFSMSDss, the data set must exist on the target volume before the restore occurs. |
| 36 | The DUMPCCLASS parameter has been specified, and a dump copy is not found in the specified dump class, or there is no dump VTOC copy data set to verify that the data set has been dumped to the existing dump copy. |
| 38 | No VTOC copy data set entry is found for the requested data set. |
| 40 | The DUMP generation that has been specified is not found or is invalid. |

ARC1188I

- 44 The DATE parameter has been specified, and no eligible dump copy is found that meets the specified date requirements.
- 48 The volume that has been specified with the FROMVOLUME parameter is not the same as the original dump source volume recorded in the dump volume (DVL) record.
- 50 The DUMPVOLUME parameter has been specified, but the dump generation (DGN) record does not indicate that the specified dump volume contains part of a valid dump copy for the volume to be restored.
- 52 The RECOVER data set name command was issued with the FROMDUMP parameter. The dump volume needed has two or more valid dump copies stacked on it, of two or more different volumes. DFSMSHsm cannot tell which dump copy is needed; the FROMVOLUME parameter is not specified or is specified incorrectly; the data set is not cataloged or is migrated, and it has not been backed up; and the SOURCEVOLUME parameter is not specified or is specified incorrectly.
- 54 The DUMPVOLUME parameter has been specified. The DGN record has been found that lists the specified dump volume. This dump generation is not listed as a valid dump generation in the MCP record for the volume to be restored.
- 56 For a VSAM data set restore of a cluster, the data component name has not been found in the dump VTOC copy data set. If there has been an index component in the data set, it is found in the VTOC copy.
- 58 For a VSAM data set restore of a cluster, the index component name has not been found in the dump VTOC copy data set. The data component is found in the VTOC copy.
- 60 An error has occurred in establishing an ESTAE environment.
- 62 Both NEWNAME and FROMDUMP parameters have been requested on the RECOVER command for a VSAM data set, and the original data set exists. DFSMSdss does not support the NEWNAME parameter for VSAM data sets, so the restore must use the original data set name. Two versions of the same data set (one with the original name and one with the new name that contains the restored data after the restore is done) cannot exist when FROMDUMP has been specified. If FROMDUMP and NEWNAME have been specified, the existing data set with the original name must be deleted.
- 64 The dump copy needed for restoring is contained in file two or higher on a dump volume. DFSMSHsm encountered an error trying to read or update the JFCB intended to represent the dump copy when opened by DFSMSdss.
- 70 DFSMSHsm cannot restore an integrated catalog facility (ICF) catalog data set.
- 72 DFSMSdss does not support key range VSAM data sets.
- 74 FROMDUMP has been specified without DUMPVOLUME for a multivolume VSAM data set. A dump copy is used to restore a multivolume data set only if DUMPVOLUME has been specified with the FROMDUMP parameter by a DFSMSHsm authorized user. If FROMDUMP has been specified without any subparameter or with a subparameter other than DUMPVOLUME, DFSMSHsm does not restore the data set. This is to ensure that an authorized user knows which piece of the data set is being restored from which dump copy.
- 76 DFSMSdss does not support data set restore for a VSAM data set currently cataloged in a non-ICF catalog.

System action: The RECOVER command ends. DFSMSHsm processing continues.

Programmer response: Use the LIST command to list the contents of a dump VTOC copy data set, the dump copy information for a given source volume, or the information concerning a dump volume. Correct the information for the RECOVER command and reissue it. If an allocation, open, or read error has occurred, take appropriate corrective action; then, resubmit the command.

For *reascode* 6, issue a data set RECOVER command with the TOVOLUME parameter specifying an SMS-managed volume that has a device type similar to the original volume that has been dumped. This restores the data set from a physical dump copy to an SMS-managed volume.

For reason code 52, specify or correct the FROMVOLUME parameter, or specify or correct the SOURCEVOLUME parameter and reissue the command.

For reason code 62, to restore a data set with the NEWNAME option, rename the existing data set with the original name.

If a backup version exists for the data set and you wish to explicitly recover it, use the GENERATION parameter on either RECOVER or HRECOVER command.

If an ICF catalog data set is to be restored from a dump copy made through DFSMSHsm, a DFSMSHsm LIST command can be used to find the dump tape volumes that contain the dump copy of the catalog data set. The restore will follow the steps documented in *z/OS DFSMSHsm Storage Administration*, in section, “Availability Management Procedures” under, “Backing Up and Recovering an ICF Catalog”.

For reason code 64, reissue the RECOVER command.

For *reascode* 72 or 76, reissue the RECOVER command without specifying the FROMDUMP keyword if an incremental backup version exists for the data set.

For *reascode* 74, issue a LIST command with the PVOL BCDS ALLDUMPS parameter to retrieve the information about dump copies and dump volumes of the primary volume. Then issue a LIST command with DVOL DUMPCONTENTS parameter to retrieve the information about the dump copies of the data set.

Source: DFSMSHsm

ARC1189W DFSMSHSM HAS RECALLED/RECOVERED A VSAM KEYRANGE DATA SET. THE KEYRANGES HAVE BEEN REMOVED.

Explanation: The data set being recalled or recovered is a VSAM keyrange data set. VSAM keyrange data sets are not fully supported for recall or recover when DFSMSHsm (IDCAMS) is specified as the datamover. When a data set is recalled or recovered, the associated keyrange is removed.

System action: The recall or recover operation ends. DFSMSHsm processing continues.

System programmer response: To prevent the removal of the keyranges during future recall or recover activity, use DFSMSdss as the datamover. In order to use DFSMSdss as the datamover, do not use the “PATCH .DMVST.+0” command.

Source: DFSMSHsm

ARC1190I MIGRATED RACF-PROTECTED VSAM CLUSTER MUST BE RECALLED PRIOR TO DELETION

Explanation: A delete operation was requested for a command-migrated VSAM cluster that was not eligible for volume level migration and had RACF protection on objects other than the base cluster. DFSMSHsm cannot delete the RACF profiles for the VSAM cluster identified in the preceding ARC1001I message.

System action: The delete operation ends. DFSMSHsm processing continues.

Programmer response: Delete the VSAM cluster using the following steps:

1. Issue a RECALL or HRECALL command.
2. Issue an IDCAMS command to delete the recalled VSAM cluster.

Source: DFSMSHsm

ARC1191I ERROR UNCATALOGING DATA SET

Explanation: During RECOVERY or RESTORE command processing, the catalog macro has failed while attempting to uncatalog a data set. In message ARC0734I or ARC1001I, the value for *reascode* is the return code from the catalog macro. See *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009I.

System action: The RECOVER or RESTORE command ends. DFSMSHsm processing continues.

Source: DFSMSHsm

ARC1192I TERMINATING DFSMSHSM RECALL/RECOVERY WAIT REQUEST, DFSMSHSM SHUTTING DOWN

Explanation: DFSMSHsm is shutting down because of an abnormal end, MVS CANCEL, FORCE, or normal shutdown. During shutdown all wait-type recall and recovery requests not yet processed are purged from the common service area (CSA) queue.

System action: DFSMSHsm ends.

Programmer response: Restart DFSMSHsm and resubmit the request.

Source: DFSMSHsm

ARC1193I • ARC1197I

ARC1193I FAST REPLICATION RECOVERY FAILED

Explanation: Fast replication recovery failed. The corresponding ARC1001I message identifies the volume or data set being recovered. The cause of the failure can be identified by the reason code field in the ARC1001I message. The reason code field in the ARC1001I message is in the form nn-mm, where nn represents the last two digits of the ARC1800 series message (ARC18nn) and mm represents the ARC18nn return code. For example, ARC1001I RC=93, REAS=06-40 represents message ARC1806 RC40.

System action: DFSMSHsm processing continues.

Programmer response: Take the corrective action according to the reason code in message ARC1001I.

Source: DFSMSHsm

ARC1194I VOLUME RECOVERY FAILURE

Explanation: See the messages that have been issued prior to the ARC1001I RC94 for the specific cause of the failure.

System action: DFSMSHsm ends.

Programmer response: See the Programmer Response for the specific messages that have been issued prior to the ARC1001I RC94 message. An ARC0503E will be issued for an allocation error.

Source: DFSMSHsm

ARC1195I RECALL/RECOVER/RESTORE/FRRECOV FAILED - TAPE VOLUME COULD NOT BE MOUNTED

Explanation: An attempt was made to recall, recover, or restore a data set, or to recover a volume from a tape migration level 2, backup volume, or a fast replication dump copy.

System action: The command fails. HSM processing continues.

Programmer response: Determine why the operator cannot mount the required tape volumes, or why the tape library volume set cannot be changed. Retry the operation when the tapes are available for mounting, or when all of the tapes are contained in one tape library.

Source: DFSMSHsm

ARC1196I VOLUME RESTORE FAILURE

Explanation: See the message that has been issued prior to the ARC1001I RC96 and ARC0623I messages for the specific cause of the failure.

System action: The command fails. DFSMSHsm processing continues.

Programmer response: See the programmer response for the specific message that has been issued prior to the ARC1001I RC96 and ARC0623I messages. If you receive DFSMSdss message ADR367E during volume restore, see topic "Volume Recovery and Restore Considerations" under, "Other Considerations for Availability Management" in the *z/OS DFSMSHsm Storage Administration* for information to aid in problem resolution.

Source: DFSMSHsm

ARC1197I DFSMSHSM INTERNAL ERROR DURING RECALL/RECOVERY

Explanation: An unknown error has occurred during allocation of a data set that has been identified in message ARC1001I.

Associated with this message is a dynamic allocation message in the MSYSOUT data set. There is a SNAP dump associated with this error in the SYSOUT data set for the DFSMSHsm job.

The user can detect the error using the DFSMSHsm TRAP command with a code of 97. The return and reason codes are given in message ARC1001I.

The reason code is the dynamic allocation return code and is printed in hexadecimal format. If the dynamic allocation return code is 1708, the error may have occurred because DFSMSHsm has attempted to recall or recover a VSAM data set as a non-SMS-managed data set and the volume that has been specified on the RECALL or RECOVER command is an SMS-managed volume. Non-SMS-managed data sets cannot be allocated on SMS-managed

volumes. For information about dynamic allocation return codes and reason codes, see the *z/OS MVS Programming: Authorized Assembler Services Guide*.

System action: The RECALL or RECOVER command ends. DFSMSHsm processing continues.

Programmer response: There might be a data set with a duplicate name on the volume. If so, scratch the data set with the duplicate name, and retry the command. If not, respond as indicated to the dynamic allocation message.

If an allocation error of 1708 has occurred, the specified volume may have been converted to SMS managed. Either remove the specification of a volume on the RECALL or RECOVER command, or specify a non-SMS-managed volume.

Source: DFSMSHsm

ARC1198E TAPE(S) CONTAINING NEEDED DATA NOT AVAILABLE.

Explanation: The tape volumes needed for the DFSMSHsm function cannot be allocated. This message may be preceded by message ARC1001I or ARC1020I containing the data set name.

System action: All DFSMSHsm processing outside of this task continues. If a data set function is processing it fails. If a volume function is processing it continues with the next eligible volume.

Programmer response: Contact your operator to determine the availability of tape volumes needed. Operations should check the ARC0790E message issued to the console for a list of volumes needed for this data set.

Source: DFSMSHsm

ARC1199I ERROR DURING RECALL/RECOVERY

Explanation: An error was detected while DFSMSHsm was performing a recall or recovery operation. The return and reason code are given in message ARC1001I. The possible values for the reason code are:

Reascode

	Meaning
4	A data set was requested to be reblocked and the accumulated record length was greater than the DCBLRECL.
8	A direct access data set was targeted to a volume with a smaller track capacity than the volume where the data set originally resided.
12	The DFSMSHsm CDS record that describes the data set indicated a source volume device type that is not supported by DFSMSHsm.

System action: The recall or recovery operation ends. DFSMSHsm processing continues.

Programmer response: The return codes have the following actions:

Retcode Meaning

4	Recall or recover the data set to the device type of the L0 volume the data set came from and correct the data set. When attempting to recover a data set, the MCVTF_NO_RECOV_TAPE_OPT bit can be temporarily patched ON to disable recovery tape mount optimization. This will allow DFSMSHsm to retry recoveries for this type of failure.
8	Recall or recover the data set to the same device type it originally resided on. Or, specify DAOPTION(RELBLK) for the command if relative block accessing of the data set is acceptable.
12	Issue the FIXCDS command with the PATCH parameter to correct the device type. <ul style="list-style-type: none"> • For a recall operation, this value is taken from field MCDUCBTY of the data set MCD record. • For a recover operation, this value is taken from field MCCFRUCB of the data set MCC record.

Source: DFSMSHsm

ARC1201I ERROR DURING MIGRATION SUBTASKING

Explanation: During a DFSMSHsm space management operation, an error in the migration of a subsequent data set on the same L0 volume as this data set was encountered. Due to the nature of migration subtasking and the type of error encountered on the previous data set, this data set migration was also failed.

Refer to the errors in the subsequent data set migrations from the same L0 volume for additional information regarding the initial error.

System action: The space management operation ends for this data set. DFSMSHsm processing continues.

Programmer response: Take corrective action according to reascode in message ARC1001I or ARC0734I of the originally failing data set migration.

Source: DFSMSHsm

ARC1202I CATALOG LOCATE ERROR DURING MIGRATION

Explanation: During a DFSMSHsm space management operation, a LOCATE macro has been issued for a data set entry in the system catalog. The LOCATE has failed. In message ARC1001I, the *reascode* is the return code from the catalog macro.

For the meaning of the reason codes, see Message IDC3009I in *z/OS DFSMS Using Data Sets*.

System action: The space management operation ends. DFSMSHsm processing continues.

Programmer response: Take corrective action according to *reascode* in message ARC1001I or ARC0734I.

Source: DFSMSHsm

ARC1203I OBTAIN ERROR READING DATA SET VTOC ENTRY DURING MIGRATION

Explanation: While DFSMSHsm was performing a space management operation, the OBTAIN macro was used to read the data set VTOC entry of the data set indicated in message ARC1001I or ARC0734I. An error was encountered. In the ARC1001I or ARC0734I message, *reascode* is the return code from the OBTAIN macro.

The values for *reascode* are:

Reascode**Meaning**

- | | |
|----|--|
| 4 | The required volume was not mounted. |
| 8 | The data set VTOC entry was not found in the VTOC of the specified volume. |
| 12 | A permanent I/O error was encountered, or an invalid data set VTOC entry was found in processing the specified volume. |
| 16 | There was an invalid work area pointer provided to the OBTAIN macro by DFSMSHsm. |

System action: The space management operation ends. DFSMSHsm processing continues.

Programmer response: The *reascode* values in message ARC1001I or ARC0734I are as follows:

Reascode**Meaning**

- | | |
|-------|---|
| 4 | Correct the problem and retry the space management. |
| 8, 12 | Notify the storage administrator to take the appropriate corrective action. |
| 16 | Contact the IBM Support Center |

Source: DFSMSHsm

ARC1204I DATA SET IS NOT MOVABLE

Explanation: The migration request is not acceptable to DFSMSHsm because the data set VTOC entry for this data set indicates that the data set is a VSAM data set not cataloged in the integrated catalog facility (ICF) catalog, ISAM, user-labeled, or unmovable. VSAM data sets not cataloged in the ICF catalog cannot migrate.

System action: The space management of the data set ends. DFSMSHsm processing continues.

Programmer response: To archive this data set, use another program.

Source: DFSMSHsm

ARC1205I NO MIGRATION VOLUME AVAILABLE

Explanation: A DFSMSHsm migration request ended because no level 1 or level 2 migration volume was available. The corresponding ARC1001I or ARC0734I message gives the name of the data set whose migration failed. The cause of the failure can be identified by the *reascode* field in the ARC1001I or ARC0734I message:

Reascode**Meaning**

- | | |
|----|---|
| 4 | No level 1 volumes are available. No level 1 volumes were defined for migration, or no more space is available on level 1 volumes that are defined, or there is no space remaining in the VTOC or VTOC index on the volumes that are defined. Reorganize the index, if it is full, and reissue the ADDVOL command to add the migration level 1 volume. |
| 6 | SDSP serialization checking indicated that all SDSPs were in use. |
| 8 | No level 2 volumes available.

There are no DASD level 2 volumes available for association to a key range. One of the following caused DFSMSHsm to attempt to associate a DASD level 2 volume to a key range: <ul style="list-style-type: none"> • No level 2 volume was associated to the data set's key range. • Allocation for the volume associated to the data set's key range failed because the necessary system resources were not available or the volume was already in use by the system. • Allocation for the data set failed because there was not enough free space on the volume or the volume was an MSS volume that could not be mounted.
There are no tape level 2 volumes available. The allocation for the tape volume failed because the necessary system resources were not available or the volume was already in use by the system. |
| 9 | Error reading DFSMSHsm MCV record during SDSP serialization checking. See the associated ARC0184I message to determine the specific read failure. |
| 10 | There are no DASD level 2 volumes available for association to a key range because of an error in reading or writing the DFSMSHsm migration control data set level 2 control record (L2CR). DFSMSHsm must read the L2CR record for each data set that is migrated by command to DASD level 2. It is possible that the error occurred while DFSMSHsm was attempting to associate a DASD level 2 volume to a key range for one of the reasons explained in <i>reascode</i> 8.

If tape migration was being used, there are no tape level 2 volumes available because of an error in reading or writing the DFSMSHsm migration control data set level 2 (L2CR) record. |
| 12 | No DASD level 2 volumes are available for association to a key range because there were 2 errors in reading or writing DFSMSHsm migration control data set volume (MCV) records. See the associated ARC0184I or ARC0187I message for the specific record. DFSMSHsm attempted to associate a level 2 volume to a key range for one of the reasons explained in <i>reascode</i> 8.

If tape migration was being used, there are no tape level 2 volumes available because there were 2 errors in reading or writing DFSMSHsm migration control data set volume (MCV) records. |
| 16 | Invalid device type for the volume associated to the key range of the data set. There was a level 2 volume associated, but the device type in the migration control data set level 2 (L2CR) record listed a device type that is not supported by DFSMSHsm. It is possible that the device type in the migration control data set volume (MCV) record is also incorrect. |
| 20 | The allocation of the level 2 volume failed. |

ARC1206I • ARC1207I

When there is a DASD level 2 volume associated to a key range, DFSMSHsm attempts to allocate the volume. If the allocation of the volume fails because necessary system resources are not available or the volume is already in use by the system, DFSMSHsm disassociates the DASD volume from the key range and associates another DASD level 2 volume. DFSMSHsm tried to allocate the new volume and the allocation failed again.

If tape migration was being used, DFSMSHsm tried to allocate a tape migration level 2 volume, and the allocation failed. If the allocation of the volume failed because the necessary system resources were not available or the tape volume was already in use by the system,

ARC1206I DUPLICATE DATA SET NAME IN DFSMSHSM DATA BASE

Explanation: A MIGRATION command was ended because a data set with the requested name has already migrated. If the data set is a VSAM data set, a DFSMSHsm control data set entry exists with the same name as the VSAM data set and with a non-VSAM organization.

System action: The space management of the data set ends. DFSMSHsm processing continues.

Programmer response: Issue the LIST or HLIST command to display the MCDS information associated with the data set. If the data set does not exist on a migration volume (it has been recalled), issue the FIXCDS command to turn off the MCDFASN bit.

If a listcat shows the data set is cataloged on a primary volume, issue a RECALL command in case the previous recall failed due to a product or system outage.

Source: DFSMSHsm

ARC1207I OBTAIN ERROR ON DATA SET EXTENSION VTOC ENTRY DURING MIGRATION

Explanation: While DFSMSHsm was performing a space management operation, the OBTAIN macro was used to read the data set extension VTOC entry of the data set indicated in message ARC1001I or ARC0734I. An error was encountered. In the ARC1001I or ARC0734I message, *reascode* is the return code from the OBTAIN macro.

The values for *reascode* are:

Reascode

Meaning

- | | |
|----|--|
| 4 | The required volume was not mounted. |
| 8 | The data set VTOC entry was not found in the VTOC of the specified volume. |
| 12 | A permanent I/O error was encountered, or an invalid volume VTOC entry was found during the processing of the specified volume. |
| 16 | There was an invalid work area pointer. If the data set being migrated is an HFS File System, then one of the following may have occurred: <ul style="list-style-type: none">• HFS is not running. The operator must start HFS.• The requested HFS File System has been quiesced. The file system must be unquiesced.• The DFSMSHsm ID has not been identified as a valid OMVS ID. The ID must be defined to OMVS as a valid ID. |
| 20 | The SEEK parameter was specified, and the absolute track address (CCHH) is not within the boundaries of the VTOC. |
| 24 | The data set has a format-8 DSCB and EADSCB=NOTOK is in effect. |

System action: The space management operation ends. DFSMSHsm processing continues.

Programmer response: If *reascode* in message ARC1001I or ARC0734I is 4, correct the problem and retry the space management. If *reascode* is 8 or 12, notify the system programmer to take corrective action. If *reascode* is 16 and none of the HFS errors applies, or if *reascode* is 20, notify the storage administrator to take corrective action.

Source: DFSMSHsm

ARC1208I ERROR ALLOCATING MIGRATION COPY

Explanation: During a space management operation, the dynamic allocation routine has attempted to allocate a migration data set. The allocation has failed with other than a no space indication. In message ARC1001I or ARC0734I, the reason codes *reascode* have the following values:

Reascode

	Meaning
4	More than one data set exists with the same name (migration version) on the volume.
6	The SDSP serialization check indicates that SDSP is in use.
7	The SDSP is needed by recall.
8	The volume could not be mounted.
10	The DFSMSHsm-owned copy of the data set to be migrated is estimated to be greater than 64K tracks. Data sets greater than 64K tracks cannot be migrated to DASD if the owned copy will also be greater than 64K tracks.
16	There is another dynamic allocation error.
20	An installation-wide exit has cancelled the request.
24	There is an invalid parameter list.
37	The unit type and volume serial number from the mounted volume table are inconsistent.
39	An error has occurred in setting the RACF indicator on in the DSCB of the migration copy.
40	The volume is SMS managed.
41	The volume where the migration copy has been allocated (as returned by DYALLOC) is not the same volume that DFSMSHsm has requested. In an SMS environment, the data set is allocated to SMS-managed storage.

System action: The space management operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Reason codes received in message ARC1001I or ARC0734I have the following meanings:

Reascode

	Meaning
7	Retry the operation at a later time.
8, 16, 20	Contact the storage administrator or system programmer to correct the problem, and retry the operation.
10	If you want to migrate the data set, migrate it to tape. Or, if the data mover is DFSMSdss and less than 64K tracks of data are actually in use, try migrating the data set using DFSMSHsm as the data mover if the DFSMSHsm data mover supports the data set's organization. If compaction is not in use for the data set, try migrating the data set with compaction.
24, 37	A logical error has occurred and has built an invalid parameter list.
39	An error has occurred in accessing the DSCB to set the RACF indicator on. The errors are either failure to read the JFCB, failure to open the VTOC, or the wrong record has been returned from the read.
40, 41	Update the SMS storage class routine so migration copies are filtered to a null storage class. See <i>z/OS DFSMSHsm Implementation and Customization Guide</i> for an explanation on how to code the storage class routine.

Source: DFSMSHsm

ARC1209I ERROR RENAMING MIGRATED COPY

Explanation: DFSMSHsm has been unable to create a migration name that does not already exist. A migration name is created when DFSMSHsm migrates a data set or when DFSMSHsm moves a migration copy that does not have a migration name. In creating the migration name, DFSMSHsm uses the time of the day and an algorithm that is described in *z/OS DFSMSHsm Storage Administration*.

ARC1210I • ARC1213I

System action: Migration processing fails for the data set. DFSMSShsm processing continues.

Programmer response: Determine why so many migration copies are being created at the same time with nearly identical names.

Source: DFSMSShsm

ARC1210I CANNOT MIGRATE VSAM DATA SET WITH OUTSTANDING MIGRATION RECORD

Explanation: The data set has an outstanding MCA record. DFSMSShsm failed to delete the record and cannot migrate the data set.

System action: The migration operation ends. DFSMSShsm processing continues.

Programmer response: Use the FIXCDS command to retrieve the MCD record for the data set. The MCD contains the key to the MCA record. Use the FIXCDS command to delete the MCA record. Retry the migration request.

Source: DFSMSShsm

ARC1211I ERROR CREATING/UPDATING RECORD IN MIGRATION CONTROL DATA SET

Explanation: While DFSMSShsm was trying to create a new entry in the migration or offline control data set, or to update an existing entry in the migration control data set, an error occurred. The preceding ARC1001I or the associated ARC0734I message gives the name of the data set. The *reascode* in message ARC1001I or ARC0734I indicates the type of failure.

System action: The data set operation ends. DFSMSShsm processing continues.

Programmer response: Notify the system programmer. If *reascode* is 4, 8, or 12, correct the problem, possibly using the FIXCDS command. If *reascode* is 16, an I/O error is the cause. There is an error message from the error recovery procedure in the DFSMSShsm job log SYSMSG data set. If *reascode* is 20, an internal DFSMSShsm error occurred.

Source: DFSMSShsm

ARC1212I DUPLICATE MIGRATED COPY ALREADY EXISTS ON ANOTHER MIGRATION VOLUME

Explanation: During a FREEVOL operation, migration of a data set was ended, because it was a duplicated migration copy. Another copy exists on a volume indicated by the MCDVSN field in the MCD record.

System action: The migration copy will not be migrated to another volume. FREEVOL processing will continue.

Programmer response: The data set will remain on the source volume. You will probably want to do something with the duplicate data set on the ML1 volume as there will not be a DFSMSShsm record associated with it.

Using the FIXCDS command and information provided in message ARC0734I, you can locate additional information about the data set which is causing the problem. If the migration *copy* name appears in message ARC0734I, read the MCA record first to find the *user* data set name. Then, use the *user* data set name to read the MCD record. If you do not have the migration *copy* name, then use the MCD record first.

Once you have the exact information describing the data set and its locations, you can determine what should be done. For example, you may choose to either delete or recall the data set.

Source: DFSMSShsm

ARC1213I ERROR UPDATING SYSTEM CATALOG DURING MIGRATION

Explanation: While DFSMSShsm has been processing a migration request, the CATALOG macro has attempted to update the computing system catalog. An error has occurred. In message ARC1001I or ARC0734I, the data set name is given, and *reascode* is the return code from the CATALOG macro.

For the meaning of the reason codes, see *z/OS DFSMS Managing Catalogs*. For detailed information, see message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)*.

System action: The migration operation ends. DFSMSShsm processing continues.

Programmer response: Notify the storage administrator to take corrective action for the system catalog based on the meaning of the reason code. Retry the migration after the problem is fixed.

Source: DFSMSHsm

ARC1214I ERROR SCRATCHING DATA SET DURING MIGRATION

Explanation: During a DFSMSHsm space management operation, either the SCRATCH macro (for a non-VSAM data set) or an access method services DELETE command (for a VSAM data set) was issued to delete a data set, or an attempt was made to delete a data set from a VSAM small data set packing (SDSP) data set. The preceding ARC1001I message or the associated ARC0734I message gives the name of the data set.

- For a migration copy that resides in an SDSP dataset, see the associated ARC0546I or ARC0584I message in the appropriate migration or command activity log.
- Otherwise, in message ARC1001I or ARC0734I, the values for *reascode* are:
 - For a non-VSAM data set not residing in an SDSP data set the *reascode* value is:

Reascode

Meaning

4 The *dsname* was scratched, but the volume deallocation failed.

8 The MVT entry could not be found or built for the volume. The *dsname* scratch failed.

12 The volume allocation failed. The *dsname* was not scratched.

16 The SCRATCH macro failed.

20 The SCRATCH macro and the volume deallocation failed.

24 Error uncataloging data set. For SMS data sets, see Message ARC0937I for further details.

- For a VSAM data set not residing in an SDSP data set, the *reascode* value is the return code from the access method services.
- For a migration copy that resides in an SDSP dataset, see the associated ARC0546I or ARC0584I message for the return and reason codes.

System action: The space management operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Notify the system programmer to take the appropriate corrective action.

Source: DFSMSHsm

ARC1215I CANNOT MIGRATE PDS WITH MORE THAN 1 NOTELIST IN MEMBER

Explanation: A MIGRATE or HMIGRATE command was entered specifying a partitioned data set (PDS). At least one member was found to have more than 3 user TTRs or more than one note list. There is a DFSMSHsm restriction that such partitioned data sets will not migrate.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1216I ERROR READING PRIMARY COPY DURING MIGRATION

Explanation: While DFSMSHsm was attempting to read the primary copy of a data set, an I/O error occurred for data sets of any format or invalid records found in a variable format data set.

In the case of incorrect records, a block descriptor word indicates one of the following:

- A block size greater than the record size
- A block size less than 8
- A block size larger than the maximum block size of 32760

If an I/O error occurred, an access method or hardware error message associated with this message was found in the DFSMSHsm job log SYSMSG data set. The name of the data set being migrated appears either in the preceding ARC1001I message, or in the associated ARC0734I message, with a return code 16. For the ARC0734I message, refer to the migration activity log. In message ARC1001I or ARC0734I, the value for the *reascode* is:

ARC1217I • ARC1218I

Reascode

Meaning

0	Actual I/O error on input data set.
2	User header label is bad.
4	User trailer label is bad.
6	Block descriptor word (BDW) indicates an incorrect blocksize.
8	Partitioned data set with no EOF marker after members.
10	Data set was not found in SDSP.
12	GENCB error occurred.
14	Accumulated count fields indicate more than the allowable bytes on a track.
16	Record 1 indicates more than the allowable bytes on a track.
18	Data set in SDSP is greater than 254 2K blocks. The data set is not migrated to an ML2 tape. The data set can be recalled.
20	A count field error occurred.
22	An error occurred reading the input data set residing on ML1 DASD. The data set is a VSAM with at least 1 alternate index.
54	PDS member has an incorrect record length.

System action: The migration operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Reason code 22 indicates that your data set has a record with an invalid length. A dump was taken and the address of the invalid record is in the PDA trace. If an I/O error occurs, respond to the associated access method or hardware error message. For information about the block descriptor word (BDW), see *z/OS DFSMS Using Data Sets*.

Source: DFSMSHsm

ARC1217I I/O ERROR READING PDS DIRECTORY DURING MIGRATION

Explanation: During a DFSMSHsm space management operation, the READ and CHECK macros were used to read the directory of the data set indicated in message ARC1001I or ARC0734I. There was an error, and the SYNAD exit was taken from CHECK. In Message ARC1001I or ARC0734I the values for *reascode* are:

Reascode

Meaning

4	The data set directory is empty.
<i>nn</i>	Error other than an empty data set directory.

System action: The space management for the data set ends. DFSMSHsm processing continues.

Programmer response: There might be an I/O error message associated with this problem in the data set defined for the ddname MSYSOUT in the DFSMSHsm cataloged procedure or in the DFSMSHsm job log SYSMSG data set. Respond to the associated error message.

Source: DFSMSHsm

ARC1218I I/O ERROR WRITING MIGRATED COPY

Explanation: While DFSMSHsm was writing the migrated copy of a data set, an I/O error occurred. An access method or hardware error message precedes this message. Message ARC1001I or ARC0734I gives the data set name.

System action: The migration operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Respond to the associated access method message or hardware error message. Issue a command to cause migration of the data set if forced migration is required.

Source: DFSMSHsm

ARC1219I DATA SET IN USE BY ANOTHER USER OR JOB, MIGRATION REJECTED

Explanation: During DFSMSHsm space management processing, an attempt was made to allocate a data set. The allocation failed because:

- The data set was already allocated to another user or job.
- The data set was already allocated to another step within the batch job which issued the DFSMSHsm command.
- The migration control data set data set record (MCDS) was updated by another processor in a multiple processing unit environment.
- The data set VTOC entry was modified by another program during DFSMSHsm migration processing because the data set was updated by another processor in a multiple-processor environment.

The preceding ARC1001I message or the associated ARC0734I message gives the name of the data set. In message ARC1001I or ARC0734I, the values for *reascode* are:

Reascode**Meaning**

- | | |
|----|---|
| 1 | An error occurred in allocating the non-VSAM data set to be migrated. |
| 2 | The data set VTOC entry was changed after the first OBTAIN was done by the DFSMSHsm at the beginning of the migration process and before the actual migration. If this is an Automount Enabled HFS data set that is not currently mounted to the system issuing the messages, this error code is expected as part of normal processing. Mount the HFS to the system doing extent reduction to avoid this message. |
| 3 | The MCD record of the data set was changed during the migration, or an error occurred in reading the MCD record. |
| 4 | The data set VTOC entry was changed after DFSMSHsm recataloged the data set with the volume serial number MIGRAT, but before DFSMSHsm scratched the source copy. |
| 5 | An error occurred in enqueueing on the base generation name of the generation data set being migrated or, if the alternate method of serializing on GDS data sets is employed, an error occurred in obtaining the system-wide enqueue (ARCENQG) on the fully qualified GDS name of the data set being migrated. |
| 6 | An error occurred in enqueueing on the VSAM base data object name. |
| 7 | An error occurred in enqueueing on the VSAM alternate index (AIX) data object name. |
| 8 | An error occurred in allocating the VSAM base cluster to be migrated. |
| 9 | The data set VTOC entry for the VSAM cluster has been changed after the first OBTAIN macro processing was done by DFSMSHsm at the beginning of the migration process but before the actual migration. |
| 10 | An error occurred in allocating the AIX cluster to be migrated. |
| 11 | The small data set packing (SDSP) data set serialization check indicated that SDSP was in use. |
| 12 | The data set was already allocated to another user. |

Note: *reascode* values 1 through 5 are for non-VSAM data sets. *reascode* values 6 through 11 are for VSAM data sets. *reascode* value 12 is for either non-VSAM or VSAM data sets.

System action: The space management operation of the data set ends. DFSMSHsm processing continues.

Programmer response: If forced migration is required, retry the request when the data set is not in use.

Source: DFSMSHsm

ARC1220I DATA SET NOT ELIGIBLE FOR MIGRATION OR TRANSITION

Explanation: A request sent to DFSMSHsm to migrate a data set failed. The data set name is contained in the preceding ARC1001I or associated ARC0734I message. The values for *reascode* in message ARC1001I or ARC0734I are:

Reascode**Meaning**

- | | |
|---|--|
| 1 | The data set is extended format, but DFSMSdss was not the datamover for extended format data sets. |
|---|--|

ARC1220I

- 2 The data set is extended format, but it is on a non-SMS-managed volume.
- 3 The data set is large format sequential, but DFSMSdss is not the selected datamover for large format sequential data sets.
- 4 A non-SMS-managed data set was cataloged on the wrong volume. A data set cataloged on the wrong volume can result from processing an uncataloged data set that has the same name as a cataloged data set.
- 5 The current level of DFSMSShsm cannot migrate an extended format data set (sequential striped or compressed). A minimum of DFSMSShsm 1.1.0 is required for sequential striped data sets, and a minimum of DFSMSShsm 1.2.0 is required for extended format compressed data sets.
- 6 An attempt was made to migrate a Large Format Sequential data set on a level of DFSMSShsm that does not support them.
- 8 The device type of the volume the data set resides on, as indicated by the catalog, is different from the device type of the same volume currently mounted.
- 12 The data set is a non-SMS-managed multiple volume data set. This type of data set is not supported.
- 16 The data set is an SMS-managed multiple volume non-VSAM data set, but the datamover is DFSMSShsm. This type of data set is only supported if DFSMSdss is the datamover. Multiple volume standard user label data sets are not supported by either data movement method.
- 20 The data set is an SMS-managed multiple volume, non-VSAM data set, and DFSMSdss is the datamover, but USERDATASETSERIALIZATION is not specified and is required for support of this data set.
- 21 The non-VSAM data set has a format-8 DSCB.
- 22 A VSAM data set contains an invalid expiration date. The expiration date obtained from the catalog contains a year greater than 2155. This data set is not supported.
- 24 The data set is an SMS-managed multiple volume, non-VSAM data set, DFSMSdss is the datamover and USERDATASETSERIALIZATION is specified; However, the data set is RACF-indicated. This data set is not supported.
- 26 The DSCB for this migrated data set indicates DS1LSTAR=0, which should not occur for a migrated data set.
- 28 The data set has retained locks.
- 30 The data set is RLS inconsistent.
- 32 The data set is empty, SMS-managed, multiple volume, and physical sequential with a block size of zero.
- 34 FREEVOL processing on a Pre-V1R11 system does not move a catalog information data set.
- | 36 The MIGRATE DATASETNAME command is issued with TRANSITION keyword, but the ACS routines
| return a management class, storage class, and storage group that match the existing assigned constructs or
| management class, storage class or storage group specified by the optional parameters of TRANSITION
| keyword are the same as the current SMS construct of this data set.
- | 38 The MIGRATE DATASETNAME command is issued with the TRANSITION keyword, but the data set is not
| SMS-managed.
- 60 Space management is processing a data set on a primary volume, but the MCD record indicates a valid migrated data set exists with the same name. Issue a RECALL command in case the previous recall failed due to a product or system outage.
- 98 An attempt is made to migrate a data set from ML1 to ML2, but the data set is either not cataloged or is cataloged with a volume serial of other than MIGRATE.

System action: The migration operation of the data set ends. DFSMSShsm processing continues.

Programmer response: Notify the storage administrator. If the data set is cataloged on the wrong volume, the storage administrator can correct the catalog and retry the migration. Multivolume data sets can only be migrated under the restrictions above. To process an unsupported multivolume data set, use another method. If the device type of the volume, as indicated in the catalog, is incorrect, correct the catalog entry and retry the migration. If the data set is updated by another processor in a multiple processing unit environment, review the present status of the data set and proceed accordingly. The values for *reascode* are:

Reascode

Meaning

- 1 Specify DFSMSdss as the datamover for extended format data sets.
- 3 Contact IBM Support and indicate to them that your installation has HSM as the default data mover for migration of Large Format Data sets and that needs to be changed.
- 2 Move the data set to an SMS-managed volume.
- 4 The storage administrator can correct the catalog and retry the command.
- 5 No action required.
- 6 Retry migration on DFSMSHsm V1R7 or higher which supports Large Format Sequential data sets.
- 8 If the device type of the volume, as indicated in the catalog, is incorrect, correct the catalog entry and retry the command.
- 12 No action required.
- 16 Select DFSMSdss as the datamover.
- 20 See the storage administrator.
- 21 No action required.
- 22 If the expiration date is invalid, the storage administrator can correct the catalog and retry the command.
- 24 Use a generic instead of discrete RACF profile to protect the data set.
- 26 Recall the data set.
- 28 The RLS backouts pending for the data set must be completed before the data set is eligible for migration.
- 30 The data set must be forward recovered before it is eligible for migration.
- 32 No action required.
- 34 Issue the FREEVOL command from a V1R11 or later DFSMSHsm system.
- | 36 Modify the ACS routine and resubmit the MIGRATE DATASETNAME command. Update the ACS routines
| to support the desired transition processing or specify correct SMS parameters of TRANSITION keyword.
| Resubmit MIGRATE command
- | 38 Specify the correct name of an SMS-managed data set and resubmit the MIGRATE DATASETNAME
| command.
- 60 Issue a RECALL command in case the previous recall failed due to a product or system outage. If the second recall fails, follow the instructions applicable for all reason codes for this message under Application Programmer Response.
- 98 Issue a TSO LISTCAT command. If the data set is cataloged on a primary volume, issue a RECALL command in case the previous recall failed due to a product or system outage. If the second recall fails, follow the instructions applicable for all reason codes for this message under Application Programmer Response.

Source: DFSMSHsm

ARC1221I MISSING OR UNSUPPORTED DEVICE TYPE FOR SPACE MANAGEMENT

Explanation: If this message has been issued as a result of a volume space management request, DFSMSHsm has received a space management request that is either missing the required UNIT parameter or that has the UNIT parameter specified with an unsupported device type.

If this message has been issued as a result of a request to migrate an individual data set, the volume on which the data set resides is a type of volume that is not supported by DFSMSHsm. This volume can be either a volume that is not managed by DFSMSHsm or a primary volume that has not been added to this particular processing unit. For this type of migration, DFSMSHsm has scanned the device table for the device type for the volume, but the type has not been found. See *z/OS DFSMSHsm Implementation and Customization Guide* for a list of supported devices.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: If a volume space management request has been issued, correct the invalid parameter and retry the operation.

ARC1222I • ARC1224I

If a request to migrate an individual data set has been issued, notify the storage administrator.

Source: DFSMSHsm

ARC1222I ERROR PROCESSING PASSWORD PROTECTED DATA SET, MIGRATION TERMINATED

Explanation: The data set specified in the DFSMSHsm command is password protected. The password was not specified in the command or was specified incorrectly. In message ARC1001I, the operation, the data set name, and the reason code are given.

The values for *reascode* are:

Reascode

Meaning

- | | |
|----|---|
| 0 | Only pertains for VSAM data sets. The user specified an incorrect password. |
| 4 | The data set is non-VSAM. The user is only authorized to read the data set, but requested to write to or delete the data set. |
| 8 | The data set is non-VSAM. The user specified an incorrect password. |
| 12 | The data set is non-VSAM. An I/O error occurred in checking the password. |
| 16 | The data set is non-VSAM. An OBTAIN error or some other error occurred while DFSMSHsm was accessing the data set. |
| 20 | The data set is non-VSAM. DFSMSHsm is in a nonauthorized test mode of operation in which password checking is not attempted. |

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Verify that the correct data set name was specified and that the password, if required, was specified correctly. Notify the system programmer for password assistance if necessary.

Source: DFSMSHsm

ARC1223I CANNOT MOUNT VOLUME NECESSARY FOR MIGRATION

Explanation: During a migration operation, the volume on which the specified data set resides could not be mounted. Message ARC1001I precedes this message, giving the data set name.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Determine the volume in question using the DFSMSHsm LIST or HLIST command. Have the required volume made available to the system for your use. The DISPLAY operator command might help determine the volume status. Reissue the command when the volume is available.

Source: DFSMSHsm

ARC1224I DATA SET NOT AVAILABLE FOR MIGRATION

Explanation: DFSMSHsm received a migration request for the data set identified in message ARC1001I. One of the following occurred:

- The data set is already migrated, and the migration request is not a request to migrate to a level 2 volume.
- The data set is already migrated, but the migration volume it resides on has not been added to DFSMSHsm control.
- The data set is not migrated, but it resides on a migration volume.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator.

Source: DFSMSHsm

ARC1225I ERROR READING DFSMSHSM CONTROL DATA SET DURING MIGRATION

Explanation: During a migration operation, a GET macro was issued to read a DFSMSHsm control data set record. An error occurred. Message ARC1001I precedes this message or the associated message ARC0734I gives the data set name and *reascode*, from DFSMSHsm GET failure. For *reascode* values, see Table 9 on page 559.

System action: The migration operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Take the appropriate action for the reason code you received.

Reascode**Meaning**

4, 8, 12, 16

Take corrective action based on the meaning of the return code in message ARC0184I. When the condition is corrected, retry the operation.

When the *reascode* is 16, another error message, either an access method message or a hardware error recovery procedures message, appears on the data set defined by the DFSMSHsm cataloged procedure with ddname MSYSOUT.

20 An unidentified error happened during execution of the GET macro. Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMSHsm

ARC1226I DFSMSHSM CONTROL DATA SET ENTRY IN USE, MIGRATION TERMINATED

Explanation: During a migration operation, the GET macro was issued to read a DFSMSHsm control data set. The GET macro ended because the necessary control interval was already being used. The preceding ARC1001I message or the associated message ARC0734I gives the name of the data set failing the migration.

System action: The migration operation of the data set ends. DFSMSHsm processing continues.

Programmer response: Retry the operation.

Source: DFSMSHsm

ARC1227I DATA SET HAS NO EXTENTS, MIGRATION REJECTED

Explanation: DFSMSHsm received a migration request for the data set identified in message ARC1001I or ARC0734I. The data set VTOC entry for the data set is a model data set VTOC entry with no extents defined. DFSMSHsm cannot cause migration of data sets with no extents defined.

System action: The migration of the data set ends. DFSMSHsm processing continues.

Programmer response: Be sure the correct data set was specified and that it contains movable data.

Source: DFSMSHsm

ARC1228I SMPM CFQUERY FUNCTION FAILED DURING MIGRATION

Explanation: DFSMSHsm invoked the SMPM CFQUERY function, but the macro failed.

System action: The migration operation ends. DFSMSHsm processing continues.

Programmer response: Inform the system programmer of the message and examine the return code and reason code from the previous ARC0565I message.

Source: DFSMSHsm

ARC1229I DATA FORMAT ERROR DURING MIGRATION OF A MIGRATED DATA SET

Explanation: During migration of an already migrated data set (from a DASD level 1 migration volume to a level 1 or level 2 volume, or from a DASD level 2 migration volume to a DASD or tape level 2 migration volume), the first record read for the DFSMSHsm copy of the data set did not contain a valid common data set descriptor (CDD). The DFSMSHsm copy of the data set may have been overwritten. The name of the data set being processed appears in the associated ARC1001I or ARC0734I message having a return code of 29.

ARC1230I • ARC1232I

System action: Processing of the data set fails. DFSMSHsm processing continues.

Programmer response: Determine if the DFSMSHsm copy of the data set is corrupted.

Source: DFSMSHsm

ARC1230I DATA SET NOT CATALOGED

Explanation: A DFSMSHsm space management operation was requested for a data set that is not cataloged. Uncataloged data sets cannot be space managed. The preceding ARC1001I message or the associated message ARC0734I gives the name of the data set.

System action: The space management of the data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator or the system programmer if the data set is supposed to be cataloged. The data set must be cataloged for space management of the data set to occur.

Source: DFSMSHsm

ARC1231I EXTENSION RECORD MISSING IN TTOC RECORD

Explanation: A tape table of contents (TTOC) record is being scanned, and it is discovered that an extension record that was previously available is missing. The preceding ARC0358I message gives the record type.

System action: Updating of the volumes record ends. DFSMSHsm continues processing.

Programmer response: Analyze the data on the tape volume and use the FIXCDS command to re-create the missing TTOC record in the offline control data set.

Source: DFSMSHsm

ARC1232I VOLUME NOT ELIGIBLE FOR COMMAND SPACE MANAGEMENT

Explanation: A command was issued to perform space management. If the command was a space management request to migrate a volume, the volume specified in the DFSMSHsm migration request is not eligible for space management. One of the following occurred:

- Space management by volume processing cannot occur on this volume because SETMIG VOLUME(*volser*) NOMIGRATION was previously issued.
- The volume specified in the migration request is a backup volume. DFSMSHsm does not support space management of a backup volume.
- The volume that is specified in the migration request is contained within a copy pool backup storage group. DFSMSHsm does not support space management of volumes contained within copy pool backup storage groups.
- The TRANSITIONONLY parameter is specified in the migration request for the non-SMS managed or a non-primary volume. DFSMSHsm does not support space management for these volumes.

If the command was a space management request to migrate an individual data set:

- The data set specified in the migration request resides on a backup volume. DFSMSHsm does not support space management of a backup volume. The name of the data set is given in the previous ARC1001I message.

System action: The command ends. DFSMSHsm processing continues.

Programmer response:

- If the space management command is a volume command that failed because space management by volume processing cannot occur on the volume, issue SETMIG VOLUME(*volser*) MIGRATION and retry the space management command.
- If the space management command is a volume command that failed because the volume is a backup volume, issue a DELVOL command to temporarily remove the backup volume from DFSMSHsm control, retry the migration command, and when the migration of the volume completes, issue an ADDVOL command to put the backup volume back in DFSMSHsm control.
- If the space management command is a request to migrate an individual data set, notify the storage administrator.
- If the space management command is a volume command that failed because the volume is contained within a copy pool backup storage group, do not reissue the command. Volumes contained within copy pool backup storage groups are backup versions of other volumes, and are not eligible for migration.

- If the space management command is a volume command with TRANSITIONONLY parameter that failed because the volume is a non-SMS managed or non-primary volume, retry the migration command without TRANSITIONONLY parameter.

Source: DFSMSHsm

ARC1233I DATA SET NOT ON LEVEL 1 OR LEVEL 2

Explanation: DFSMSHsm received a MIGRATE or HMIGRATE command to cause the data set identified in message ARC1001I to migrate to migration level 2. The system catalog indicates that the data set has migrated, but the migration control data set record for the data set does not exist.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator. The LIST or HLIST command will help identify the level of your data.

Source: DFSMSHsm

ARC1234I LEVEL 2 NOT DEFINED FOR MIGRATION

Explanation: The DFSMSHsm migration request is ended because no migration level 2 structure has been defined.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator and determine if the MIGRATIONLEVEL2 parameter should be used.

Source: DFSMSHsm

ARC1235I ERROR OPENING INPUT DATA SET DURING MIGRATION

Explanation: DFSMSHsm issued the OPEN macro to open either the data set that is to migrate or the SDSP data set that contains the migrated data set. During OPEN processing, the ESTAE routine was invoked. An OPEN error message with component identifier IEC normally precedes this message if this is a true OPEN error. The preceding message ARC1001I or associated message ARC0734I gives the name of the data set that was being migrated.

System action: The migration operation of the data set ends. DFSMSHsm processing continues.

Programmer response: Take the action indicated by the OPEN error message. If the data set cannot be opened, recover the data set from a suitable backup version.

Source: DFSMSHsm

ARC1236I ERROR OPENING/CLOSING OUTPUT DATA SET DURING MIGRATION

Explanation: DFSMSHsm issued the OPEN or CLOSE macro to open or close either an output data set or the SDSP data set during a migration operation. During OPEN or CLOSE processing, the ESTAE routine was invoked. An OPEN or CLOSE error message with component identifier IEC precedes this message. Message ARC1001I or the associated message ARC0734I gives the name of the data set that was being migrated.

Reason code 1 indicates that WORM tape is not supported for this function.

System action: The migration operation of the data set ends. DFSMSHsm processing continues.

Programmer response: Take the action indicated by the OPEN error message. Issue a command to cause migration of the data set if forced migration is required.

Source: DFSMSHsm

ARC1237I NO SPACE FOR MIGRATION COPY

Explanation: During a DFSMSHsm migration operation, an attempt was made to allocate space on a migration volume or in the small data set packing data set for the new migrated copy of the data set identified in message ARC1001I or ARC0734I. The allocation routine passed back a return code of 12, indicating there was no space on the volume, the VTOC was full, the index to the VTOC was full, or the small data set packing data set was full.

ARC1238I • ARC1241I

System action: The migration operation of the data set ends. DFSMSHsm processing continues.

Programmer response: If this message is in response to a data set migration command, retry the data set migration. If the error persists, notify the storage administrator, who can provide space on migration volumes for DFSMSHsm to use.

Source: DFSMSHsm

ARC1238I PASSWORD PROTECTED DATA SET CANNOT BE MIGRATED TO A NON-PASSWORD PROTECTED TAPE

Explanation: A password-protected data set was found to be eligible for migration to a tape volume, but the target volume is not a password-protected tape, and the tape security is not EXPIRATIONINCLUDE or RACFINCLUDE. The data set name is given in the ARC1001I or ARC0734I message.

System action: The data set being processed is not migrated. Migration processing continues. DFSMSHsm processing continues.

Programmer response: Change the security option for DFSMSHsm tape volumes so that password-protected data sets can be migrated to tape, or remove password-protected data sets from volumes that are managed by DFSMSHsm.

Source: DFSMSHsm

ARC1239I ERROR PROCESSING RACF PROTECTED DATA SET, MIGRATION TERMINATED

Explanation: During a migration operation of DFSMSHsm, an attempt was made to process a resource access control facility (RACF) protected data set. One of the following occurred:

- RACF denied access.
- The data set name did not match the data set control block (DSCB).
- There was an error in reading the job file control block (JFCB).
- There was an abnormal end (abend) in RACF processing.

The data set name and a reason code are indicated in message ARC1001I or ARC0734I. For *reascode* values, see Table 19 on page 571.

System action: The migration operation of the data set ends. DFSMSHsm processing continues.

Programmer response: If RACF denied access, there is an associated RACF message. If the data set name and DSCB do not match, there is an associated access method message. If an I/O error caused the reading of the JFCB to fail, there is an associated error message. Respond to the associated message. If an abend occurs during RACF processing, the reason code is 24 and probably occurs because the RACF profile does not agree with the catalog entry.

Source: DFSMSHsm

ARC1240I THE DATA SET MIGRATED, BUT MAY BE CATALOGED ON THE SOURCE VOLUME

Explanation: Due to the unusual conditions during migration, the migrated data set may be cataloged on the source volume.

System action: The data set has already migrated. DFSMSHsm processing continues.

Programmer response: Issue the IDCAMS LISTCAT command. If the data set is cataloged on the source volume rather than on MIGRAT, see the storage administrator.

Source: DFSMSHsm

ARC1241I PREMATURE END OF VOLUME ENCOUNTERED DURING MIGRATION OF A DATA SET

Explanation: During migration processing, an end of volume condition was encountered before the tape had reached the expected percent full capacity. The tape volume was marked full, and the data set was retried but failed with the same error on retry.

System action: The task is ended.

Programmer response: None.

Source: DFSMSHsm

ARC1242I ERROR READING JFCB FOR PRIMARY COPY DURING MIGRATION

Explanation: During a DFSMSHsm migration to tape operation, a RDJFCB macro was issued. The RDJFCB request failed. A data management error message associated with this problem can be found in the DFSMSHsm job log SYMSG data set. Message ARC1001I or ARC0734I identifies the name of the data set in question.

System action: The migration operation of the data set ends. DFSMSHsm processing continues.

Programmer response: Respond to the data management error message as indicated, and retry the operation.

Source: DFSMSHsm

ARC1244I VTOC ERROR DURING ALLOCATION OF DATA SET ON THE TARGET VOLUME

Explanation: During migration to DASD, a VTOC error was encountered on the target volume. The specific type of error can be determined by checking the reason code issued from the ARC0503E message that accompanies this message.

System action: The target volume is marked full to prevent further selection of that volume. The migration operation will attempt to select another target volume and retry the operation.

Programmer response: Perform the appropriate VTOC maintenance on the target volume that failed. After the error has been corrected, issue the ADDVOL command to cause DFSMSHsm to remove the full indication associated with the volume. This allows DFSMSHsm to select the volume as a target for migration.

Source: DFSMSHsm

ARC1245I DATA SET NOT ELIGIBLE FOR MIGRATION

Explanation: A space management operation has been requested for a data set that is not eligible for space management processing. In the preceding ARC1001I message or in the ARC0734I message, the values for *reascode* and its meaning are:

Reascode

Meaning

- | | |
|---|---|
| 1 | The data set is a system data set, a VSAM catalog, or an integrated catalog facility (ICF) catalog. Either the first four characters of the data set name are HSM, or the first five characters of the data set name are SYS1, or the data set name is SYSCTLG. |
| 2 | The SETMIG command restricts the data set by initial characters of the data set name. |
| 3 | The SETMIG command restricts the data set by the full data set name. |
| 4 | The data set has been temporarily prevented from migrating because a JES3 job plans to use it. The end date of this restriction is in the MCD record for the data set. |
| 5 | The management class attribute COMMAND-OR-AUTO-MIGRATE=COMMAND restricts migration of this SMS-managed data set. |
| 6 | The management class attribute COMMAND-OR-AUTO-MIGRATE=NONE restricts migration of this SMS-managed data set. |
| 7 | The setting of the backup-while-open bits restricts migration of this SMS-managed data set. |

Note: Reason codes 90 and higher are not produced unless you have installed a patch titled "Getting an ARC0734I Message Issued with the Appropriate Reason Code for Data Sets Not Selected during Volume Migration or Backup". For more information about this patch, refer to *z/OS DFSMSHsm Diagnosis* topic, "PATCH: Changing Storage in the Address Space of DFSMSHsm" under section, "DFSMSHsm Maintenance Commands".

- | | |
|---|--|
| 8 | The SMS-managed data set is not eligible for migration because it is checkpointed and the minimum number of days since the date last referenced has not elapsed. |
|---|--|

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Note: Reason codes below 90 are not produced during interval migration regardless of the patch described above.

- 90 The SMS-managed data set is not eligible for migration by space management because it is checkpointed and the minimum number of days since the date last referenced has not elapsed.
- 91 The SMS-managed data set is not eligible for migration because it has not gone unused for the number of days specified in the management class definition for PRIMARY DAYS NON USAGE.
- 92 The return code passed back from the data set migration exit (ARCMDEXT), indicates the data set should not be migrated.
- 93 The data set is not eligible for migration because it does not have a current backup copy and it is being directed to tape.
- 94 The data set is not eligible for partial release because it is a multivolume data set.
- 95 The data set is not eligible for migration because it has more than one AIX, more than one path on the base cluster, or more than one path on the AIX.
- 96 The data set is not eligible for migration because the date last referred to in the data set VTOC entry is 0.
- 97 The return code passed back from the space management exit (ARCSAEXT) indicates the data set should not be processed.
- 98 The data set is not eligible for space management because the data set's age is less than the DFSMSHsm integrity age. (For SMS temporary data sets under JES3, this is always 2 days regardless of USERDATASETSERIALIZATION.)
- 99 For VSAM data sets, this reason code is issued when the data set VTOC entry is not for the base data object of a VSAM data set, or is the secondary piece of a key range data set.

For non-VSAM data sets, this reason code is issued when the data set sequence number is not 1. This indicates that the data set is part of a multivolume data set, but is not the first segment of that data set.

Attention: The data set will not be reconnected, but remains eligible for normal migration for Reason Codes 100 through 114.

- 100 Catalog reconnectable flag is off.
- 101 Either the data set has changed since the last recall, or DFSMSHsm cannot determine whether the data set has changed. You may receive this error for the following reasons: the Format1 DSCB change flag is set to on, the creation date of the data set does not match the creation date stored in the MCD, or the MCB record could not be read to verify backup dates.
- 102 Either:
SETSYS TAPEMIGRATION(RECONNECT(NONE))

or
DFHSMDATASETSERIALIZATION

specified.
- 103 CONVERT parameter specified on MIGRATE VOLUME command.
- 104 Forced to ML1 by option on HMIGRATE ISMF panel or FORCML1=YES parameter on ARCHMIG macro.
- 105 The ARCMDEXT installation exit set issues return code 44 for the data set.
- 106 The SETSYS TAPEMIGRATION (RECONNECT (ML2DIRECTEDONLY)) option is in effect and the DFSMSHsm target is ML1 with no override from the ARCMDEXT installation exit.
- 107 The data set cannot be serialized.
- 108 The ML2 volume cannot be serialized.
- 109 There is an error reading the MCD record.
- 110 There is an error updating or creating CDS record.
- 111 There is an error deleting or recataloging original data set.

- 112 There is an error obtaining VTOC data set entry for original data set.
- 113 There is a Getmain/Freemain error.
- 114 There is an error cataloging data set to MIGRAT.
- 115 The return code passed back from the second level migration data set exit (ARCMTEXT) indicates that the data set should not be migrated.
- 116 The ESTAE setup for the data set migration exit (ARCMDEXT) failed.
- 201 A data set eligible for migration from cylinder-managed space is skipped, because high volume threshold is not exceeded and the data set has the 1st three extents allocated in the cylinder-managed space.
- 202 A data set is not eligible for migration, because the low volume threshold is already reached and the data set has the 1st three extents allocated in the cylinder-managed space.

System action: If *reascode* is other than 100–111, the space management operation of the data set ends. For *reascode* 100–111, the data set will not be reconnected, but remains eligible for normal migration. An additional ARC0734I message will be issued when the normal migration of the data set is attempted. DFSMSHsm processing continues.

Programmer response: Perform the action that has been assigned to the *reascode* you have received.

Reascode

- | Reascode | Action |
|----------|---|
| 1 | There is no response needed. |
| 2, 3 | Contact the storage administrator. |
| 4 | Reenter the request after the JES3 prevent-migration date (MCDJDATE) has expired. To determine this date, use the FIXCDS command to display the MCD record. |
| 5, 6 | This data set will only be migrated if the management class definition is changed to allow migration, or the management class associated with the data set is changed to one that allows migration. |
| 7 | This data set can only be migrated if the data base administrator removes it as a candidate for backup-while-open processing. |
| 8 | The default minimum number of days that must have elapsed since the date last referenced is 5. This value may be modified with a patch command documented in the <i>z/OS DFSMSHsm Implementation and Customization Guide</i> . |
| 90 | The default minimum number of days that must have elapsed since the date last referenced is five. This value may be modified with a patch command documented in the <i>z/OS DFSMSHsm Implementation and Customization Guide</i> . |
| 91 | The data set will be eligible for migration after it has gone unused for the number of days specified in the management class definition for PRIMARY DAYS NON USAGE.

If the data set should be considered eligible for migration sooner, it needs to be associated with a management class whose definition of PRIMARY DAYS NON USAGE is smaller than the value specified in the management class currently associated with the data set. |
| 92 | If the data set should be considered eligible for migration, the data set migration exit (ARCMDEXT) must be updated so that it does not exclude the data set from migration. |
| 93 | To migrate the data set directly to tape, perform one of the following: <ol style="list-style-type: none"> 1. Create a backup copy of the data set. This can be done by automatic backup or by issuing a data set backup command (HBACKDS or BACKDS). 2. Ensure that no current backup copy exists before the data set can be migrated to tape. This can be done by specifying AUTO BACKUP=N in the management class definition associated with the data set. |
| 94 | No response required. The only way to release the unused allocated space for a multivolume data set through DFSMSHsm is to migrate the data set and then recall it. |
| 95 | The data set can only be migrated by a data set migration command (HMIGRATE or MIGRATE). |
| 96 | No response required. DFSMSHsm resets the date last referred to in the DFCB to the current date. The next time volume space management is performed, migration eligibility will be done using this date. |

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- 97 If the data set should be considered eligible for migration, the space management exit (ARCSAEXT) needs to be updated to not exclude the data set from migration.
- 98 No response required. The data set is not eligible for migration because the data set's age is less than the DFSMSHsm integrity age. For a discussion of integrity age, refer to *z/OS DFSMSHsm Storage Administration*.
- 99 No response required. DFSMSHsm processes a VSAM data set when it encounters the data set VTOC entry of the base data object. For a key range data set, the data set VTOC entry must be for the first segment of the data set.
- For a non-VSAM data set, processing occurs when the volume with a data set sequence number of 1 is encountered.
- 100 No action required. The data set is ineligible for reconnection until migrated and recalled again.
- 101 No action required. The data set is ineligible for reconnection until migrated and recalled again.
- 102 No action required. Reconnection not permitted by the storage administrator.
- 103 No action required. MIGRATE CONVERT does not use reconnection because an immediate RECALL is scheduled.
- 104 Remove the option forcing migration to ML1 if reconnection to an ML2 copy is desired.
- 105 No action required. ARCMDEXT installation exit has disallowed reconnection.
- 106 No action required. The SETSYS TAPEMIGRATION (RECONNECT(ML2DIRECTONLY)) command was not overridden by the ARCMDEXT installation exit.
- 107 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
- 108 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
- 109 Increase the *reconnectdays* value on SETSYS MIGRATIONCLEANUP command if an excessive number of data sets fail reconnection for this reason.
- 110 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
- 111 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
- 112 No action required. The data set will be retried for normal migration. If obtain error persists, see associated messages.
- 113 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
- 114 No action required for a non-VSAM data set, which remains eligible for reconnection when the volume it resides on is next space managed. For a VSAM data set, see associated message ARC0512I for information on which components could not be cataloged to MIGRAT.
- 115 If the data set should be considered eligible for migration, the second level migration data set exit (ARCMEXT) must be updated so that it does not exclude the data set from migration.
- 116 Contact the IBM Support Center.

201, 202

No response is needed.

Source: DFSMSHsm

ARC1246I OFFLINE CONTROL DATA SET NOT FOUND

Explanation: An attempt has been made to update the offline control data set (OCDS) but the data set does not exist.

System action: The command fails. DFSMSHsm processing continues.

Programmer response: Create the OCDS and restart DFSMSHsm. For details on creation of the OCDS, see *z/OS DFSMSHsm Implementation and Customization Guide*.

Source: DFSMSHsm

ARC1247I TAPE END OF VOLUME ERROR DURING MIGRATION

Explanation: An end-of-volume error or ABENDx37 occurred.

System action: The volume is marked full to prevent its allocation. A new tape volume is selected, and the data set that was in process is retried.

Programmer response: Check the preceding messages and the dump, if applicable, to determine the cause.

Source: DFSMSHsm

ARC1248I MIGRATION COPY OF DATA SET EXCEEDS MAXIMUM NUMBER OF ALLOWABLE TAPE VOLUMES

Explanation: During migration processing, a data set was being moved that exceeded the space on the maximum number of tape volumes allowed for one data set (254). See message ARC0352I for more detail.

System action: The migration of the data set fails. The first volume is marked full, and all other volumes are automatically deleted with an internal DELVOL command.

Programmer response: None.

Source: DFSMSHsm

ARC1249I FAILURE ATTEMPTING TO REMOVE RACF PROTECTION FROM TAPE MIGRATION VOLUME

Explanation: Deletion of a tape table of contents (TTOC) entry from the offline control data set (OCDS) was requested. The migration volume was RACF protected, and the removal of that protection failed. See message ARC0359I for the volume serial number and RACF return code. The return code is the result of the failure of the DFSMSHsm removal of RACF protection.

System action: The deletion of the record fails. DFSMSHsm processing continues.

Programmer response: See message ARC0359I for the appropriate corrective action. Contact the RACF administrator and have the RACF protection removed from the tape volume manually.

Source: DFSMSHsm

ARC1250I NO UNIT AVAILABLE TO MOUNT MIGRATION VOLUME

Explanation: During a migration operation, an attempt was made to allocate the data set that was to migrate. For data set migration, the identity of this data set is found in message ARC1001I. For volume migration, the identity of this data set is found in message ARC0734I. The allocation routines determined that the required volume is not online, nor are any units available on which a mount can be requested.

System action: The migration operation ends. DFSMSHsm processing continues.

Programmer response: See message RAC0503E for dynamic allocation return codes, reason codes, and information reason codes. Arrange to have a unit made available for your request, and retry the operation.

Source: DFSMSHsm

ARC1251I ANOTHER DFSMSHSM FUNCTION ACTIVE FOR DATA SET, MIGRATION REJECTED

Explanation: A migration request is rejected because another DFSMSHsm operation is processing the data set. The data set name is given in message ARC1001I for data set migration, or in message ARC0734I for the individual data set during volume migration. Valid values for the *reascode* are:

Reascode

Meaning

0 The MCD record was in use by another processor.

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1 The data set was moved by another processor or function while this function was processing it.

System action: The migration operation ends for the data set. DFSMSHsm processing continues.

Programmer response: Retry the operation when the data set is available.

Source: DFSMSHsm

ARC1252I GET/FREEMAIN ERROR - MIGRATION TERMINATED

Explanation: During a migration operation, a GETMAIN or FREEMAIN macro was issued for input buffer space. The macro failed.

System action: The migration operation ends. DFSMSHsm processing continues.

Programmer response: Retry the migration operation. If the problem occurs again, notify the storage administrator.

Source: DFSMSHsm

ARC1253I DATA SET NEEDS BACKUP SO IT WAS NOT EXPIRED

Explanation: During SMS expiration processing, the data set was found to still be in need of backup. It is not expired until the backup is done.

DFSMSHsm determines a data set is NOT in need of backup if one of the following situations exists:

- The data set change flag is off in the VTOC entry AND the last backup date in the catalog is nonzero. Note that DFSMSHsm does not verify the existence of the backup version.
- The data set change flag is off in the VTOC entry AND the last backup date in the catalog is zero AND the management class does not request autobackup for this data set.
- The data set change flag is on in the VTOC entry AND the management class does not request autobackup for this data set.
- The MCVT bit (MCVTNDBU) is on, which indicates bypassing the current SMS DBU requirement that a backup copy needs to exist before expiring a data set.

This message is referenced by an associated ARC0734I message. The name of the data set is included in the ARC0734I message.

Note: ADMIN OR USER COMMAND BACKUP must not be specified as NONE and AUTO BACKUP must be specified as Y to request automatic backup.

System action: The individual data set is not expired. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1254I SPACE MANAGEMENT FAILED DUE TO AN ERROR IN AN INSTALLATION EXIT

Explanation: The ARCMDEXT exit for migration processing, ARCADEXT exit for data set deletion or data set retirement processing, or the ARCMMEXT exit for second-level migration processing ended abnormally (abend). DFSMSHsm has placed a hold on the migration function so that no migration or data set deletion commands can be processed until the hold is removed by using the DFSMSHsm RELEASE command.

System action: DFSMSHsm processing continues without the migration function.

Operator response: If you determine that the DFSMSHsm migration function (migration and data set deletion) can process without the installation-wide exit, using the SETSYS command with the EXITOFF parameter, turn off the installation-wide exit, and release the migration function.

Note: If the ARCADEXT exit abends and you turn off the exit and release the migration function, DFSMSHsm might delete data sets that the exit would have kept.

Programmer response: Correct the cause of the abend, and relink the exit module. The exit can be reactivated with a SETSYS command.

Source: DFSMSHsm

ARC1255I VSAM MIGRATION FAILED - ERROR IN EXPORT

Explanation: Migration was attempted for a VSAM data set, but the IDCAMS EXPORT command was unable to complete successfully. The data set name and IDCAMS return code are given in the ARC1001I message for data set migration or in ARC0734I for an individual data set during volume migration. The IDCAMS error messages are contained in the migration activity log. To review the activity log, issue a RELEASE HARDCOPY command. If the logs are on DASD, new logs are created and the log with the messages can be browsed. If the logs are directed to SYSOUT, they are printed.

System action: The migration of the data set ends. DFSMSHsm processing continues.

Programmer response: Respond to the IDCAMS return code and retry the operation. The migration activity log contains messages that further explain the reason for the IDCAMS return code.

Source: DFSMSHsm

ARC1256I ERROR LOCATING DSCB FOR UPDATE

Explanation: A data set was being migrated from a user volume. The data set VTOC entry has been read using the common VTOC access facility, but the DSCB read was not the correct one. The read was for restoring the user's last reference date so that interleave access by DFSMSHsm and the user could be detected.

If ACTION=PARTREL is indicated in message ARC0734I, the update of the last used track (null data set organization) in the VTOC entry fails for an empty data set.

System action: The space management of the data set fails. DFSMSHsm processing continues.

Programmer response: Access the VTOC to be sure that the entry for this data set is not damaged. An associated hardware, data management, or system error message can be found in the DFSMSHsm job log SYSMSG data set.

Source: DFSMSHsm

ARC1257I I/O ERROR UPDATING DSCB

Explanation: During a DFSMSHsm space management operation, an error occurred in updating the data set VTOC entry for the data set being migrated. This message is either preceded by message ARC1001I, or referenced by an associated ARC0734I message. Both messages include the name of the data set being space managed and a reason code. If the reason code is 0, an unrecoverable I/O error occurred, and the DCB SYNAD exit was taken from the data management CHECK service routine. If the reason code is nonzero, a request to the common VTOC access facility (CVAF) to read or write the data set VTOC entry failed. The reason code is the contents of register 15 upon return from CVAF. An associated hardware, data management, or system error message can be found in the DFSMSHsm job log SYSMSG data set.

If ACTION=PARTREL is indicated in message ARC0734I, the update of the last used track (null data set organization) in the VTOC entry fails for an empty data set.

System action: The individual data set is not space managed. DFSMSHsm processing continues.

Programmer response: Retry the space management operation. If the problem still exists, notify the storage administrator.

Source: DFSMSHsm

ARC1258I MIGRATION OR DBA/DBU FAILED FOR DATA SET

Explanation: Space management was attempted for a data set, but was unsuccessful. The data set name and reason codes are given in message ARC1001I or ARC0734I.

The values for *reascode* are:

Reascode**Meaning**

- | | |
|---|--|
| 4 | The data set VTOC entry for a non-VSAM data set indicates that it is possibly multivolume but the catalog entry indicates it is a single volume. |
| 5 | The catalog entry is a generation data group (GDG) entry name. |

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- 6 There was an error in a catalog entry for a data set.
- 7 An error occurred trying to convert the symbolic volser to a real volser.
- 8 No catalog entry was found.
- 9 Unsupported data set for migration. The catalog entry shows the data set as a non-SMS-managed VSAM data set defined with key ranges.
- 10 The catalog entry indicates that the data set is multiple volume. If the data set is a VSAM data set, it is not an SMS-managed data set, and one component is multiple volume.
- 11 Unsupported data set for migration. The catalog entry shows at least one AIX defined with key ranges and the base cluster is *not* defined with key ranges.
- 12 The components of the non-SMS-managed VSAM cluster are on different volumes.
- 14 The catalog entry is not a VSAM base cluster or a non-VSAM data set. The catalog entry might be a VSAM page space, or a locate error occurred for the data set name.
- 15 A component of the VSAM data set has a logical record length that is too large for DFSMSHsm. The maximum allowable record length is 32 752 bytes for a relative record data set and 32 756 bytes for entry sequenced or key sequenced data sets.
- 16 A component of the VSAM data set is open for output.
- 18 A LOCATE error occurred for the data or index component in the VSAM base cluster.
- 19 A LOCATE error occurred for a path component in the VSAM base cluster.
- 20 The data set name is a VSAM component name instead of a cluster name.
- 28 A LOCATE error occurred for the VSAM alternate index (AIX) cluster.
- 38 A LOCATE error occurred for the data or index component in a VSAM AIX cluster.
- 39 A LOCATE error occurred for a path component in the VSAM AIX cluster.
- 40 A least one component of the VSAM data set is empty. The VSAM data component had no data for IDCAMS to move.
- 48 A LOCATE error occurred for the data set or its alias.
- 52 Two or more directory entries for a partitioned data set had the same TTR.
- 53 A directory entry in a partitioned data set has an invalid length value.
- 54 An imbedded record has a zero or negative length. The member name is reported in the associated ARC090II message with module ARCOMPDS.
- 56 A VSAM data set has an invalid expiration date. The expiration date obtained from the catalog contains a year greater than 2155. This data set is not supported.
- 57 A generated name was not found in MCDMCANM for a data set not in an SDSP and migrated by DFSMSHsm R 1.3 or later. Space management is not performed on this data set.
- 58 The authorized program facility (APF) is not available to DFSMSHsm to determine if the data set being processed is in the APF list.
- 60 An SMS definition conflict is detected. DFSMSHsm indicates an SMS-managed data set. The APF QUERY function indicates a non-SMS-managed data set.
- 62 An error occurred while invoking APF for determining if a data set is in the APF list.
- 64 The system list of APF libraries is not available.
- 66 The data set is greater than 2 Terabytes in size. This exceeds the architectural limit for systems prior to z/OS V1R13.
- 67 The data set being migrated is a non-SMS-managed VSAM linear data set which has the Extended Addressable(EA) attribute specified. This data set type is not supported for migration in pre-V2R1 systems.
- 89 The data set being migrated is a VSAM keyrange data set. This data set type is not supported for migration if DFSMSHsm (IDCAMS) is the specified datamover.

System action: The data set is not space managed. DFSMSHsm processing continues.

Programmer response: If a LOCATE error occurred, update the catalog entry, and retry the command. If *reascode* is 40, load data in all the components. If *reascode* is 57, contact your storage administrator or the IBM Support Center for help. If *reascode* is 66, use DFSMSHsm V1R13 to migrate this data set. If the *reascode* code is 67, use DFSMSHsm V2R1 or higher to migrate this data set. If *reascode* is 89, DFSMSdss needs to be the datamover. In order to use DFSMSdss as the datamover, do not use the "PATCH .DMVST.+0" command.

Source: DFSMSHsm

ARC1259I DBA/DBU FAILED - ERROR DELETING DATA SET

Explanation: A VSAM data set was selected and met the criteria for deletion from the volume. The attempted scratch failed, and the data set on the primary volume was not scratched.

System action: DFSMSHsm processing continues.

Operator response: An associated ARC0734I message contains the return code from the delete request. Take the action indicated by the return code from delete.

Source: DFSMSHsm

ARC1260I ESTAE MACRO FAILURE DURING MIGRATION

Explanation: DFSMSHsm attempted to set up an ESTAE environment, but the MVS function was unsuccessful during a migration process.

System action: The migrate operation ends. DFSMSHsm processing continues; however, the migration may be held and need to be released before further migration can occur.

Programmer response: Inform the system programmer of the message and examine the return code from the previous ARC0304I message.

Source: DFSMSHsm

ARC1261I ERROR DURING INTERNAL ADDVOL OF TAPE MIGRATION VOLUME

Explanation: During migration processing, a tape end-of-volume was encountered, and an internal ADDVOL command for a scratch tape was attempted. The ADDVOL command was unsuccessful because of an I/O error on a control data set record or because the volume already contains valid DFSMSHsm data. For additional information about the error, see the preceding ARC0184I or ARC0356I message.

System action: The tape volume specified in the previous ARC0120I message is not added to DFSMSHsm control. Another volume is selected, and DFSMSHsm processing continues.

Programmer response: If the error is because of an I/O error, determine the cause of the error and take corrective action. If the tape volume already contains valid data, a possible operations problem could exist that might need to be investigated.

Source: DFSMSHsm

ARC1262I CDS RECORD IN USE BY ANOTHER HOST

Explanation: During space management processing, an update was attempted on a control data set record that another processing unit is using.

System action: The update to the control data set record is not made. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1263I DATE FORMAT IS INVALID

Explanation: The format of the packed decimal date indicated by the *reason-code* is bad. The format should be X'00yyddd's', where *yy* is the year and *ddd* is the Julian date. The sign bit is *s* and should be either a C or F. The name of the data set being space managed appears either in the associated ARC1001I or ARC0734I message with a return code of 63. The reason code in the ARC0734I or ARC1001I message further clarifies the error that has occurred as follows:

Reascode**Meaning**

- 0 Either the MCDDLRL or the MCDDLCL is bad.
- 2 The SDATADAT field is bad.
- 4 The MCDEXPDT field is bad.

System action: The data set is not processed. DFSMSHsm processing continues.

Programmer response: Perform the action assigned to the *reascode* you received:

Reascode**Meaning**

- 0 Use the FIXCDS command to patch the MCDDLRL or MCDDLCL field in the MCD record to a date with the correct format.
- 2 Contact the IBM Support Center to report the problem.
- 4 Use the FIXCDS command to patch the MCDEXPDT field in the MCD record to a date with the correct format.

Source: DFSMSHsm

ARC1264I ERROR CLOSING INPUT DATA SET DURING MIGRATION

Explanation: During the migration of a data set, an error has occurred when DFSMSHsm has attempted to close the input data set. The input data set is the data set being migrated. The name of the data set being migrated appears either in the preceding ARC1001I message, or in the associated ARC0734I message with a return code of 64. The reason code in the ARC0734I or ARC1001I message further clarifies the error that has occurred, as follows:

Reascode**Meaning**

- 4 A nonzero return code is in register 15 on completion of a FREEPOOL macro. After closing the input data set, DFSMSHsm has issued a FREEPOOL macro to free any I/O buffers that have been acquired by the data management access method routines.
- 8 A nonzero return code is in register 15 on completion of a CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set.
- 12 A CLOSE abnormal end (abend) (X14) has occurred during the processing of the CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during close processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it is not acceptable to ignore the abend condition. Therefore, the DCB ABEND exit has returned to data management with an indication to continue abend processing.
- 16 An abend, other than a CLOSE abend, has occurred during the processing of a CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during close processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it is not acceptable to ignore the abend condition. Therefore, the DCB ABEND exit returns to data management with an indication to continue abend processing.
- 20 An abend has occurred during the execution of the CLOSE macro. The DCB ABEND exit has been given control. The parameter list on entry to the DCB ABEND exit has indicated that it is acceptable to ignore the abend condition. Therefore, the DCB ABEND exit returns to data management with an indication to ignore the abend.

System action: The data set is not successfully migrated. DFSMSHsm processing continues.

Programmer response: For *reascode* 12, 16, and 20, there should be an associated data management message (prefix IEC) at the computing system console and in the DFSMSHsm job log. For information about the CLOSE and FREEPOOL macros and their associated return codes, refer to *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC1265I ERROR CLOSING OUTPUT DATA SET DURING MIGRATION

Explanation: During the migration of a data set, an error has occurred when DFSMSHsm has attempted to close the output data set. The output data set is a migration copy on the DFSMSHsm migration level 1 or level 2 volume. The name of the data set being migrated appears either in the preceding ARC1001I message, or in the associated ARC0734I message with a return code of 65. The *reascode* in the ARC0734I or ARC1001I message further clarifies the error that has occurred, as follows:

Reascode

Meaning

- | | |
|----|---|
| 4 | A nonzero return code is in register 15 on completion of a FREEPOOL macro. After closing the input data set, DFSMSHsm has issued a FREEPOOL macro to free any I/O buffers that have been acquired by the data management access method routines. |
| 8 | A nonzero return code is in register 15 on completion of a CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. |
| 12 | A CLOSE abnormal end (abend) (X14) has occurred during the processing of the CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during CLOSE processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it is not acceptable to ignore the abend condition. The DCB ABEND exit returns to data management with an indication to continue abend processing. |
| 16 | An abend, other than a CLOSE abend, has occurred during the processing of a CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during CLOSE processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit is given control, the parameter list on entry to the DCB ABEND exit has indicated that it is not acceptable to ignore the abend condition. The DCB ABEND exit returns to data management with an indication to continue abend processing. |
| 20 | An abend has occurred during the processing of the CLOSE macro. The DCB ABEND exit has been given control. The parameter list on entry to the DCB ABEND exit has indicated that it is acceptable to ignore the abend condition. Therefore, the DCB ABEND exit returns to data management with an indication to ignore the abend. |

System action: The data set is not successfully migrated. DFSMSHsm processing continues.

Programmer response: For *reascode* 12, 16, and 20 there should be an associated data management message (prefix IEC) at the computing system console and in the DFSMSHsm job log. For information about the CLOSE and FREEPOOL macros and their associated return codes, refer to *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC1266I SPECIFIED L0 VOLUME NOT AVAILABLE FOR SPACE MANAGEMENT

Explanation: A command has been issued to perform space management on a specific level 0 volume, but the volume is not available for the request. The volume is unavailable because another DFSMSHsm volume function is using it.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1267I ERROR OBTAINING BLOCKID DURING MIGRATION

Explanation: A SETSYS command has specified that the 3480 single-file format be used. During migration of a data set to a 3480 tape volume, DFSMSHsm has issued a NOTE macro to obtain the block ID of the next data block to be written. The NOTE macro has failed. The data set being migrated is named either in the preceding ARC1001I message, or in the associated ARC0734I message containing the return code 67. The reason codes for ARC1001I or ARC0734I are as follows:

Reascode**Meaning**

- | | |
|----|---|
| 4 | Does not support this block ID. |
| 8 | Invalid input parameters have been specified. |
| 12 | An I/O error has occurred during the RDBLKID command. |

System action: Migration of the data set fails. The 3480 tape volume used for output is marked full to prevent its further use, and another tape volume is selected. DFSMSHsm processing continues.

Programmer response: For more information about the NOTE macro and its return codes, see *z/OS DFSMS Using Data Sets* or *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC1268I MIGRATION FAILED DUE TO AN ERROR IN DFSMSDSS

Explanation: An attempt has been made to migrate a data set with DFSMSdss as the data mover. The DFSMSdss logical DUMP command has been issued to move the data set.

When this message is issued, the corresponding DFSMSdss messages should be consulted. The DFSMSdss messages with prefix ADR are listed in the migration activity log for this failure.

The preceding ARC1001I or associated ARC0734I message contains the data set name and the value of the last DFSMSdss messages that have been issued for the highest severity error encountered during DFSMSdss processing. In some cases, this return code is other than a DFSMSdss message number. Those cases are as follows:

1. If the value of the return code is 9999, DFSMSdss has abnormally ended (abend) and DFSMSHsm could not determine the final DUMP return code. The DFSMSdss messages must be used to determine the cause of the failure.
2. If the value of the return code is 9990, then it is the result of an abend in DFSMSdss.

System action: The data set operation ends. DFSMSHsm processing continues.

Programmer response: Review the response required for the DFSMSdss error and take the appropriate action. The DFSMSdss messages can be found in *z/OS MVS System Messages, Vol 1 (ABA-AOM)*.

Source: DFSMSHsm

ARC1269I ERROR ON SYNCDEV DURING MIGRATION

Explanation: During migration of a data set to a 3480 single-file format tape volume, DFSMSHsm has issued a SYNCDEV macro to flush the tape buffer and write the data to the tape. The SYNCDEV macro has failed. The data set targeted for migration has been named either in the preceding ARC1001I message, or in the associated ARC0734I message, containing the return code 69. The ARC1001I or ARC0734I reason codes are as follows:

Reascode**Meaning**

- | | |
|----|---|
| 4 | An invalid device (not a buffered tape) has been targeted for migration, or invalid input parameters have been specified. |
| 8 | A permanent I/O error has occurred during the RDBLKID or SYNCHRONIZE command. |
| 12 | A permanent I/O error has been indicated for an earlier channel program. |

System action: Migration of the data set fails. The 3480 tape volume used for output is marked full to prevent its further use. Another tape volume is selected for the migration process. DFSMSHsm processing continues.

Programmer response: For more information about the SYNCDEV macro and its return codes see *z/OS DFSMS*

Using Data Sets or z/OS DFSMS Macro Instructions for Data Sets.

Source: DFSMSHsm

ARC1270I AN ERROR OCCURRED WHILE DFSMSHSM WAS PROCESSING AN SMS MANAGED DATA SET

Explanation: A space management operation was requested for an SMS-managed data set. The data set name was either given in the preceding ARC1001I message or in the associated ARC0734I message, along with the *reascode*. The reason codes have the following meanings:

Reascode

Meaning

- | | |
|----|---|
| 1 | The data set is unmatched. VTOC catalog entry access services indicated the data set being processed does not have all the related data. A data set VTOC entry was not found for the data set. Refer to <i>z/OS DFSMS Using Data Sets</i> for more information. |
| 2 | The data set is unmatched. VTOC catalog entry access services indicated the data set being processed does not have all the related data. A VVR entry was not found for the data set. Refer to <i>z/OS DFSMS Using Data Sets</i> for more information. |
| 3 | The data set is unmatched. VTOC catalog entry access services indicated the data set being processed does not have all the related data. A duplicate VVR entry was found for the data set. Refer to <i>z/OS DFSMS Using Data Sets</i> for more information. |
| 4 | SMS is either not active or not installed. |
| 5 | An error occurred while obtaining the management class definition for the data set. |
| 6 | An error occurred while updating the catalog entry for the data set. |
| 7 | DFSMSHsm detected a discrepancy between the data set VTOC entry and the catalog information for the data set being processed. The discrepancy is one of the following: <ul style="list-style-type: none"> • The catalog information indicated this is an SMS-managed data set (data set is associated with a storage class), but the data set VTOC entry indicated this is a non-SMS-managed data set. • The catalog information indicated this is a non-SMS-managed data set (data set is not associated with a storage class), but the data set VTOC entry indicated this is an SMS-managed data set. |
| 8 | An error occurred while attempting to release unused space for a data set (DADSM PARTREL function). DFSMSHsm was processing a data set associated with a management class that specified the attribute PARTIAL-RELEASE=YES. |
| 9 | An error occurred while locating the 'minus <i>n</i> th' GDG when checking the management class attribute #-GDG-ELEMENTS-ON-PRIMARY. |
| 10 | An error occurred while deleting an SMS-managed data set. |
| 11 | There is no storage class definition in the extract list entry returned by VTOC catalog entry access services. The data set resides on an SMS-managed volume and requires a storage class definition to be processed. |
| 12 | An SMS-managed migrated data set was not migrated during level 1 migration. The data set is associated with a management class that specified the attribute LEVEL-1-DAYS-NON-USAGE=NOLIMIT. |
| 13 | The data set is unmatched. The data set being processed is uncataloged or cataloged to a different volume. VTOC catalog entry access services indicated the data set has a catalog entry for the volume being processed. Refer to <i>z/OS DFSMS Using Data Sets</i> for more information. |
| 14 | A failure occurred retrieving catalog information. See the associated ARC0950I message for the return code and reason code from Superlocate. |
| 16 | DFSMSHsm detected a discrepancy between the data set VTOC entry and the catalog information for the data set being processed. The catalog information indicated that the data set resides on a single volume, but the data set VTOC entry indicated the data set resides on multiple volumes. |
| 60 | Expiration of a VSAM data set failed, because the data set is in incomplete status. Issue a RECALL command for the data set. |

System action: The migration of the data set ends. DFSMSHsm processing continues.

ARC1271I

Programmer response: Perform the action assigned to the *reascode* you received.

Reascode

Meaning

- 1, 2, 3 Run the IDCAMS DIAGNOSE against the catalog and or VVDS for the unmatched data set. Take corrective action for any problems detected.
- 4 If SMS is not installed on your system, it must be installed before DFSMSHsm can process any SMS-managed data sets or volumes; if installed, SMS needs to be activated.
- 5 Refer to message ARC0935I in the command activity log for the specific failure. List the catalog information for the data set to determine the management class name. Define the management class if it does not exist. If the management class exists, contact the IBM Support Center.
- 6 Refer to message ARC0950I in the command activity log for the specific failure.
- 7 Correct the discrepancy, and reissue the request.
- 8 Check for message ARC0938I in the command activity log for the specific PARTREL failure.
If there is no ARC0938I message, the exclusive ENQ for the data set failed and the PARTREL was not performed. In this case, no action is required.
- 9 Update the catalog entry.
- 10 Refer to message ARC0528I or ARC0545I in the command activity log for the specific failure.
- 11, 13, 14 Correct the discrepancy, and reissue the request.
- 16 The data set was open and in the process of extending to another volume when Primary Space Management detected the discrepancy. The discrepancy should end when the process completes.

Source: DFSMSHsm

ARC1271I CLASS TRANSITION FAILED - ERROR IN { AMS ALTER | LOCATE } PROCESSING

Explanation: DFSMSHsm attempted to class transition a data set. The data set name and IDCAMS return code are given in accompanying message ARC0734I for an individual data set during volume processing.

Reascode

Meaning

- nnnn* The IDCAMS ALTER command was unable to complete successfully. IDCAMS error messages are contained in the migration activity log. To review the activity log, issue a RELEASE HARDCOPY command. If the logs are on DASD, new logs are created and the log with the messages can be browsed. If the logs are directed to SYSOUT, they are printed.
- 9900 **plus return code from LOCATE processing**
- 9997 Abend during Last Successful Class Transition Date setting
- 9998 Abend during obtain Last Successful Class Transition Date
- 9999 Abend during ALTER command processing

System action: DFSMSHsm processing continues and the following system action occurs:

Reascode

Meaning

- nnnn* Class transition of the data set ends.
- 9900 **plus return code from LOCATE processing**
Class transition of the data set continues.
- 9997 - 999
Class transition of the data set continues.

Programmer response: Respond to the IDCAMS return code and retry the operation. The migration activity log contains messages that further explain the reason for the IDCAMS return code.

Source: DFSMSHsm

ARC1272I DFSMSHSM ENCOUNTERED AN SMS-RELATED ERROR WHILE OBTAINING AN MVT ENTRY FOR AN SMS-MANAGED VOLUME

Explanation: During the migration of a data set, DFSMSHsm has attempted to find or build a mounted volume table (MVT) entry for the volume containing the data set to be migrated. An error has occurred which has caused the migration to end. The data set name is given in the preceding ARC1001I message or in the associated ARC0734I message, along with a reason code. The reason codes have the following meanings:

Reascode

Meaning

- | | |
|----|--|
| 1 | SMS is not installed in the system.

DFSMSHsm has attempted to process an SMS-managed volume, as indicated in the volume VTOC entry, but SMS is not installed on the system in which DFSMSHsm is running. |
| 4 | SMS is not active in the system.

DFSMSHsm has attempted to process an SMS-managed volume, but SMS is not active in the system. |
| 5 | An error has occurred in reading the volume VTOC entry for the volume being selected.

DFSMSHsm has attempted to read the volume VTOC entry to determine if the volume containing the data set to be migrated is an SMS-managed volume. The read has failed. |
| 6 | An error has occurred in retrieving an SMS volume definition.

After the volume containing the data set to be migrated has been determined to be an SMS-managed volume (by reading the volume VTOC entry), DFSMSHsm has invoked SMS to retrieve an SMS volume definition. SMS fails to retrieve it. |
| 7 | An error has occurred while retrieving a storage group definition for an SMS volume.

After the volume definition has been retrieved for the volume, DFSMSHsm has invoked SMS to retrieve a storage group definition for the volume. SMS fails to retrieve it. |
| 9 | The volume containing the data set to be migrated is in SMS initial status.

DFSMSHsm has attempted to reads the volume VTOC entry to determine if the volume is an SMS-managed volume. The volume VTOC entry has indicated that the volume is in SMS initial status. DFSMSHsm cannot process a volume in SMS initial status. |
| 11 | DFSMSHsm cannot determine if the volume containing the data set to be migrated is an SMS-managed volume. The SMS volume definition and the volume VTOC entry do not agree. |
| 13 | The device type of the volume that has been retrieved from the SMS storage group definition is not supported by DFSMSHsm. |
| 15 | An error has occurred while reading or writing a migration control data set (MCDS) volume record (MCV).

DFSMSHsm has read an MCV record for the volume containing the data set to be migrated. The read has failed, and an ARC0184I message has been issued to indicate the error. If no MCV record exists for the volume, DFSMSHsm has attempted to create an MCV record for the volume. The creation has failed, and an ARC0184I message has been issued to indicate the error. |
| 19 | The volume containing the data set to be migrated is not mounted.

DFSMSHsm has attempted to locate the unit control block (UCB) for the volume containing the data set to be migrated and has found that the volume is not mounted. |
| 52 | A GETMAIN error has occurred.

DFSMSHsm has failed to get virtual storage for creating an MVT entry for an SMS-managed volume. |

System action: The migration ends. DFSMSHsm processing continues.

Programmer response: Perform the action that corresponds to the reason code you received.

Reascode

Meaning

ARC1273I • ARC1276I

- 5 The *reascode* for this error is the return code from the CAMLIST OBTAIN macro. See *z/OS DFSMS Using Data Sets* for further information on the CAMLIST OBTAIN macro.
- 6, 7 See the preceding ARC0935I message in the command activity log for the specific failing code from the subsystem interface (SSI) of SMS.
- 11 Determine why the SMS volume definition and volume VTOC entry do not agree. Correct the inconsistency and issue the MIGRATE command.
- 15 See the preceding ARC0184I message in the appropriate activity log for the specific I/O failing code.
- 52 See the preceding ARC0305I message for the specific failing code.

Source: DFSMSHsm

ARC1273I PDSE DATA SET COULD NOT BE PROCESSED FOR MIGRATION

Explanation: A request sent to DFSMSHsm to migrate a partitioned data set extended (PDSE) data set has failed. The data set name is contained in the preceding ARC1001I or associated ARC0734I message. The *reascode* in the ARC1001I or ARC0734I message gives the reason that DFSMSHsm could not migrate the data set.

Reascode

Meaning

- 4 The datamover is DFSMSHsm.
- 8 PDSE support is not available on the system. A global, non-recoverable SMSX resource has been lost and DFSMS PDSE support has been disabled.

System action: The migration operation of this data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator. If DFSMSHsm is running in a multiprocessing unit environment, and there is another processing unit that can support PDSE data sets, process this data set on the other processing unit.

Source: DFSMSHsm

ARC1274I DATASET/VOLUME MIGRATION FAILED - MIGRATION HELD

Explanation: Migration was being requested, but the HOLD MIGRATION command was in effect. Message ARC1001I gives the data set name or volume serial number.

Note: Volume migration includes the FREEVOL command.

System action: The data set or the volume is not migrated. DFSMSHsm processing continues.

Programmer response: Reissue the command after issuing the RELEASE MIGRATION command.

Source: DFSMSHsm

ARC1276I ERROR LINKING TO DFSMSDSS DURING MIGRATION

Explanation: A request sent to DFSMSHsm to migrate a data set failed when the LINK macro used to invoke DFSMSdss for data movement failed. The data set name is contained in the preceding ARC1001I or associated ARC0734I message. The reason code indicates the abnormal end (abend) code from the LINK macro.

System action: The migration operation of the data set ends. A SNAP dump is generated on the first occurrence of this error. DFSMSHsm backup and migration functions are held.

Programmer response: Review the abend code of the LINK macro.

Source: DFSMSHsm

ARC1277I ERROR ALLOCATING DUMMY DD DURING MIGRATION

Explanation: DFSMSHsm is migrating a data set using DFSMSdss data movement. A request sent to DFSMSHsm to migrate the data set failed when the allocation of a dummy DD for DFSMSdss dump failed. The dynamic allocation error codes are identified in the preceding ARC0503E message. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: The migration of the data set ends. DFSMSHsm processing continues.

Programmer response: Review the allocation error codes contained in the preceding ARC0503E message.

Source: DFSMSHsm

ARC1278I DATA SET NOT CATALOGED IN AN ICF CATALOG

Explanation: A request was sent to DFSMSHsm to migrate a data set. The request failed because DFSMSdss was the data mover; however, the data set was not cataloged in an integrated catalog facility (ICF) catalog. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: The migration operation of this data set ends. DFSMSHsm processing continues.

Programmer response: Catalog the data set in an ICF catalog.

Source: DFSMSHsm

ARC1280I {MIGRATION | CLASS TRANSITION} FAILED - DATA SET IS IN NEED OF BACKUP

Explanation: DFSMSHsm attempted to migrate a data set or execute a class transition to a tape migration level 2 volume, but determined that the data set needed to be backed up. See the preceding ARC1001I message or the associated ARC0734I message for the data set name.

System action: Migration or class transition the data set ends. DFSMSHsm processing continues.

Programmer response: Back up the data set by command or wait until it is backed up automatically and then retry the migration of the data set or class transition.

Source: DFSMSHsm

ARC1281I MIGRATION FAILED - ERROR ALLOCATING TAPE VOLUME

Explanation: A migration request failed due to an error in allocating the target tape volume. The volume being allocated and the type of allocation error that occurred are identified in the preceding ARC0500I message issued to the command activity log. To review the activity log, issue the DFSMSHsm RELEASE HARDCOPY command. The data set being migrated is identified in the preceding ARC1001I message or the associated ARC0734I message. The reason code in message ARC1001I or ARC0734I gives additional information about the error.

Retcode Meaning

- | | |
|----|---|
| 8 | A GETMAIN error occurred during the selection or allocation of a migration tape volume. |
| 12 | Two allocation errors occurred or the allocation of a scratch tape failed. |
| 16 | No unit was available for allocation. |
| 20 | An error occurred while trying to determine whether a storage class is assigned to the single-file tape output data set name. |

System action: The migration of this data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator to isolate the cause of the error.

Source: DFSMSHsm

ARC1282I MIGRATION OF DATA FROM A TAPE VOLUME IS NOT SUPPORTED

Explanation: A command was entered to migrate a data set from a tape migration level 2 volume. Migration from a tape migration level 2 volume to another tape migration level 2 volume is not supported.

System action: Migration of this data set fails. DFSMSHsm processing continues.

ARC1283I • ARC1285I

Programmer response: If you want to move the data set from one tape migration level 2 volume to another tape migration level 2 volume, issue the RECYCLE command. If you want to do anything else with the data set, you must first recall it.

Source: DFSMSHsm

ARC1283I CANNOT MOVE VTOC COPY DATA SET

Explanation: DFSMSHsm was moving a VTOC copy data set from the migration level 1 volume to a target ML1 volume, and the move failed. The data set identified in the associated ARC0734I message could not be moved. The reason code in message ARC0734I has the following meaning:

Reascode

Meaning

- | | |
|----|---|
| 4 | Error allocating or opening the VTOC copy data set on the source volume. |
| 8 | Error allocating, opening, or cataloging the new VTOC copy data set on the ML1 target volume. |
| 12 | I/O error reading the old VTOC copy data set. |
| 16 | I/O error writing to the new VTOC copy data set. |
| 18 | Use V1R12 or higher to move the VTOC copy data set if the VTOC copy data set has a format-8 DSCB. |
| 20 | Error closing or deallocating the new VTOC copy data set. |
| 24 | Dump generation record (DGN) or eligible volume record (MCP) not found. |
| 28 | Error reading the associated DGN or MCP record. Message ARC0184I is also issued to indicate the error. |
| 32 | Error updating the associated DGN or MCP record. Message ARC0184I is also issued to indicate the error. |

System action: Processing of VTOC copy data set fails. DFSMSHsm processing continues.

Programmer response: Determine the cause of the error and take the appropriate corrective action.

Use V1R12 or higher to move the VTOC copy data set.

Source: DFSMSHsm

ARC1284I CONVERT OPTION FOR DATA SET MIGRATE NOT ALLOWED IN A DIRECT TO TAPE ENVIRONMENT

Explanation: A MIGRATE command was entered for a data set with the CONVERT parameter to cause the migration and immediate recall of the data set. The processing unit is running in a direct-to-tape environment, which does not support the CONVERT parameter for data set migration.

This message may also be issued if the ARCHMIG macro was used with the FORCML1=YES parameter specified in a direct-to-tape environment.

System action: The MIGRATE command ends. DFSMSHsm processing continues.

Programmer response: In order to obtain the desired function of the CONVERT parameter, issue a MIGRATE command for the data set followed by a RECALL command directing the data set to the desired volume.

Source: DFSMSHsm

ARC1285I VSAM DATA SET IS MIGRATED TO TAPE, NO TTOC ENTRY EXISTS

Explanation: A VSAM data set was successfully migrated to tape, but there was an error updating the TTOC to reflect the migration of this data set to tape. There is no entry in the TTOC for the migrated data set. For the name of the data set, see the previous ARC1001I message or the associated ARC0734I message with a return code of 85.

System action: The migration of the data set was successful, and the data set can be recalled. DFSMSHsm processing continues.

Programmer response: Call the system programmer and ask if an ARC0538I message has been issued to the operator. If this message has been issued, make sure the system programmer takes appropriate action (see the explanation of message ARC0538I).

Source: DFSMSHsm

ARC1286I MIGRATION FAILED - DFSMSHSM SHUTDOWN OCCURRED WHILE WAITING FOR A TAPE MOUNT

Explanation: An attempt was made to migrate a data set to a tape migration level 2 volume and before the tape volume could be mounted, a command was entered to shut down DFSMSHsm. The migration of the data set failed. See the preceding ARC1001I message or the associated ARC0734I message for the name of the data set.

System action: Migration of the data set ends. DFSMSHsm processing ends because of the shutdown request.

Programmer response: Retry the migration of the data set after DFSMSHsm is restarted.

Source: DFSMSHsm

ARC1287I A DISCREPANCY WAS FOUND IN THE DATA SET VTOC ENTRY

Explanation: DFSMSHsm was attempting to perform space management on a data set and encountered a data set VTOC entry that is inconsistent with IBM standards. The data set name is given in the preceding ARC1001I message or in the associated ARC0734I message along with the *reascode* for the type of discrepancy found. The *reascode* has the following meaning:

Reascode

Meaning

- | | |
|----|--|
| 2 | The data set has a discrepancy in the data set VTOC entry and is indicated to be a PDSE data set. The data set VTOC entry indicates the data set to be a non-SMS-managed data set. PDSE data sets must be SMS-managed. |
| 4 | A data set has a discrepancy between its catalog entry and its data set VTOC entry indicating this is not a PDSE data set. The catalog entry indicates this data set is a PDSE and the data set VTOC entry indicates it is not a PDSE. |
| 6 | The data set has a discrepancy between its data set VTOC entry and its catalog entry indicating this is not a PDSE data set. The data set VTOC entry indicates this data set is a PDSE and its catalog entry indicates it is not a PDSE. |
| 8 | The data set has a discrepancy between its data set VTOC entry and its VSAM volume data set (VVDS) entry indicating this is not a PDSE data set. The data set VTOC entry indicates this data set is PDSE and the VVDS indicates this data set is not PDSE. |
| 10 | The data set has a discrepancy between its VSAM volume data set (VVDS) entry and its data set VTOC entry indicating this is not a PDSE data set. The VVDS indicates this data set is PDSE and the data set VTOC entry indicates this data set is not PDSE. |

System action: The space management of the data set ends. DFSMSHsm processing continues.

Programmer response: Correct the discrepancy. In most cases the data set VTOC entry needs to be corrected based on the true attributes of the data set.

Source: DFSMSHsm

ARC1288I ERROR ALLOCATING A DATA SET

Explanation: An error occurred in dynamic allocation during DFSMSHsm space management. The data set name is given in the preceding ARC1001I or ARC0734I message along with the *reascode* for the type of error found. There may also be an associated ARC0503E message. The reason codes have the following meanings:

Reascode

Meaning

- | | |
|----|---|
| 4 | The data set was in use. |
| 8 | Operator cancelled volume mount. During a DFSMSHsm migration operation, the volume on which the specified data set resides could not be mounted. |
| 12 | The allocation routines determined that the volume on which the data set to be migrated resides is not online, nor are any units available on which a mount can be requested. |

ARC1290I • ARC1294I

- 16 There was some other dynamic allocation error.
- 20 The allocation was cancelled by the installation validation routine for dynamic allocation.
- 24 Invalid parameter list for dynamic allocation.

System action: The operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Perform the following actions based upon the reason code:

Reascode

Action

- 4 Try again later.
- 8 Determine the volume in question using the DFSMSHsm LIST or HLIST command. Have the required volume made available to the system for your use. The DISPLAY operator command might help determine the volume status. Reissue the command when the volume is available.
- 12 Arrange to have a unit made available for your request, and retry the operation.
- 16 There may be an associated ARC0503E message with additional information.
- 20 Contact your installation system programmer for help.
- 24 Contact the IBM Support Center.

Source: DFSMSHsm

ARC1290I MORE THAN 10 BAD MCDS RECORDS WERE ENCOUNTERED.

Explanation: During command level migration, 11 unexpected or unknown migration control data set (MCDS) entries have been encountered.

System action: Command level migration is discontinued.

Programmer response: Notify the storage administrator to find the bad records based on their hex keys and either correct or delete the records. The preceding 11 ARC0564I messages contain the hex keys for the problem MCDS records.

Source: DFSMSHsm

ARC1292I TERMINATING DFSMSHsm MIGRATION WAIT REQUEST, DFSMSHSM SHUTTING DOWN

Explanation: DFSMSHsm is shutting down because of an abnormal end, MVS CANCEL, FORCE, or normal shutdown. During shutdown all wait-type migration requests not yet processed are purged from the common service area (CSA) queue.

System action: DFSMSHsm ends.

Programmer response: Restart DFSMSHsm and resubmit the request.

Source: DFSMSHsm

ARC1294I UNABLE TO OPEN THE VTOC

Explanation: A data set was being space managed from a user volume. The data set VTOC entry for the data set was to be updated, but an error occurred in opening the VTOC. For the name of the data set, see the previous ARC1001I message, or the associated ARC0734I message with a return code of 94.

If ACTION=PARTREL is indicated in message ARC0734I, the update of the last used track (null data set organization) in the VTOC entry fails for an empty data set.

System action: Space management of the data set fails. DFSMSHsm processing continues.

Programmer response: Take the action indicated by the OPEN error message and retry the operation.

Source: DFSMSHsm

ARC1295I MIGRATION FAILED - TAPE VOLUME COULD NOT BE MOUNTED

Explanation: An attempt was made to migrate a data set to a tape migration level 2 volume, and either the operator responded to the mount request with NO, or the timer to mount a tape expired. A new tape volume was selected, and again the operator could not mount the tape. See the preceding ARC1001I message or the associated ARC0734I message for the name of the data set.

The values for *reascode* in either the ARC1001I message or ARC0734I message are:

Reascode**Meaning**

- 4 The failure occurred during initial selection.
- 8 The failure occurred during EOVS.

System action: The migration of the data set ends. DFSMSHsm processing continues.

Programmer response: Determine why the operator cannot mount the tape volume. When the problem is resolved, retry the migration of the data set.

Source: DFSMSHsm

ARC1296I ERROR READING JFCB TO UPDATE VTOC

Explanation: A data set was being space managed from a user volume. The data set VTOC entry for the data set was to be updated, but an error occurred during the JFCB read for the VTOC. For the name of the data set, see the preceding ARC1001I message or the associated ARC0734I message with a return code of 96.

If ACTION=PARTREL is indicated in message ARC0734I, the update of the last used track (null data set organization) in the VTOC entry fails for an empty data set.

System action: Space management of this data set fails. DFSMSHsm processing continues.

Programmer response: Access the VTOC to be sure it is usable.

Source: DFSMSHsm

ARC1297I DFSMSHSM INTERNAL ERROR DURING MIGRATION

Explanation: An unknown error has occurred during allocation of a data set that has been identified in message ARC1001I or the associated message ARC0734I. Associated with this message is a dynamic allocation message in the data set that has been defined as MSYSOUT by the DFSMSHsm cataloged procedure. There is a SNAP dump that has been associated with this error in the SYSOUT data set for the DFSMSHsm job. The return code and reason code are given in message ARC1001I or the associated message ARC0734I. If the return code is 97, the reason code is the dynamic allocation return code and is printed in hexadecimal format. For information about dynamic allocation return codes and reason codes, see *z/OS MVS Programming: Authorized Assembler Services Guide*.

System action: The space management of this data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator or system programmer. There might be a data set with a duplicate name on the volume. If so, scratch the data set with the duplicate name and retry the command. If not, respond as indicated to the dynamic allocation message.

Source: DFSMSHsm

ARC1299I UNSUPPORTED DATA SET FOR MIGRATION

Explanation: DFSMSHsm was considering if a data set was eligible for a space management operation and determined that the data set type is one that DFSMSHsm does not process, by command or automatically, regardless of the selection criteria being applied. The name of the data set is given in the preceding ARC1001I message or the associated ARC0734I message. The return code field in the ARC1001I or ARC0734I message has a value of 99 (to correspond to the ARC1299I message). The reason code field in the ARC1001I or ARC0734I message lists the reason that DFSMSHsm could not space manage the data set.

Reascode**Meaning**

ARC1301I

- 2 The data set is VSAM. One of the following is true:
- The data set is not cataloged in an integrated catalog facility (ICF) catalog.
 - The data set is a VSAM catalog.
 - The data set has the ERASE attribute.
- 4 The data set has a data set organization other than one of the following:
- Physical sequential
 - Partitioned
 - Direct access
 - VSAM
- 6 The data set organization is supported, but the block size is invalid. The block size of the data set is zero, or the block size of the data set plus the key length is greater than the maximum block size supported (which is device dependent), and the track overflow bit (in the data set VTOC entry for the data set, or in the UCB for the device) is off.
- 8 The data set is defined as unmovable.
- 10 The data set has an extent for user labels and is empty or not sequential.
- 12 The data set is split over different cylinders.
- 14 The data set is an authorized program facility (APF) authorized library.
- 16 The data set is a password-protected, generation data set.
- 20 The integrated catalog facility VSAM data set is not migrated, because it has the ERASE parameter specified in the catalog. This data set can be migrated if the ERASE parameter is removed from the catalog and indicated in the data set's RACF profile. RACF 1.7, or greater, and the appropriate level of DFP 2.1.0, or greater, must be installed on the system for full erase-on-scratch processing with DFSMSHsm.
- 22 The data set is a multivolume BDAM data set.
- 24 Use V1R12 or higher to move the migration copy or migrate the data set from the migration volume if migration copy has a format-8 DSCB.
- Note:** Space management includes the FREEVOL command.
- 36 The data set name is invalid.
- 40 The data set occupies more than 65535 tracks and it is not a VSAM, PDSE, or extended format data set.
- 45 The data set is a VSAM data set with more than 1 alternate index (AIX), more than 1 path on the base cluster, or more than 1 path on the AIX.

System action: The space management of this data set ends. DFSMSHsm processing continues.

Programmer response: For *reascode* 20, remove the ERASE parameter from the catalog record, indicate it in the data set's RACF profile, and retry the data set operation. Otherwise, process this data set using a method other than DFSMSHsm.

Storage Administrator: (optional action) If you want DFSMSHsm to stop issuing this message, use the management class attribute of the management class with which the data set is associated to instruct DFSMSHsm not to process the data set.

Use V1R12 or higher to move the migration copy or migrate the data set from the migration volume.

Note: Space management includes the FREEVOL command.

Source: DFSMSHsm

| ARC1301I BACKVOL DUMP FAILED IN THE COMMON QUEUE

| **Explanation:** A BACKVOL DUMP command failed when processed in a common queue. One or more dump
| volumes were not processed. This is a summary message, where the highest reason code for a volume not processed
| is provided in the reason code for ARC1001I return code 01.

- | **System action:** The BACKVOL DUMP operation ends. Some volumes may have been completed. DFSMSShsm processing continues.
- | **Programmer response:** Evaluate the reason codes for the individual volume(s) that have failed. See the Programmer Response for the specific messages that have been issued prior to the ARC1001I RC01.
- | **Source:** DFSMSShsm

ARC1302I CATALOG LOCATE ERROR DURING BACKUP

Explanation: During a DFSMSShsm backup operation, a LOCATE macro was issued for a data set entry in the system catalog. The LOCATE macro failed. In the ARC1001I message, the values for *reascode* are:

Reascode

	Meaning
4	The required catalog does not exist or it is not open.
8	One of the following conditions occurred: <ul style="list-style-type: none"> • The entry was not found. • A CVOL pointer was found in a CVOL. • An alias was found for a generation data group (GDG) base. • A protection check failed for a VSAM password-protected data set.
12	One of the following conditions occurred: <ul style="list-style-type: none"> • An index or generation base entry was found when the list of qualified names was exhausted. • An alias entry was found and was replaced by the true name. • An invalid low level GDG name was found.
16	A data set exists at other than the lowest index level specified.
20	There was a syntax error in the name.
24	One of the following conditions occurred: <ul style="list-style-type: none"> • A permanent I/O or unrecoverable error was encountered. • There was a nonzero ESTAE return code. • An error was found in a parameter list.
28	The request was for a LOCATE by TTR, which is an invalid function.

System action: The backup operation ends. DFSMSShsm processing continues.

Programmer response: Take corrective action according to *reascode* in message ARC1001I.

Source: DFSMSShsm

ARC1303I OBTAIN ERROR READING DATA SET VTOC ENTRY DURING BACKUP

Explanation: While DFSMSShsm was performing a backup operation, the OBTAIN macro was used to read the data set VTOC entry of the data set indicated in message ARC1001I. An error was encountered. In the ARC1001I message, *reascode* is the return code from the OBTAIN macro.

The values for *reascode* are:

Reascode

	Meaning
4	The required volume was not mounted.
8	The data set VTOC entry was not found in the VTOC of the specified volume.
12	A permanent I/O error was encountered, or an invalid data set VTOC entry was found during the processing of the specified volume.
16	There was an invalid work area pointer.

System action: The backup operation ends. DFSMSShsm processing continues.

ARC1304I • ARC1306I

Programmer response: If *reascode* in message ARC1001I is 4, correct the problem, and issue a command to start the backup. If *reascode* is 8 or 12, notify the system programmer to take corrective action. If *reascode* is 16, notify the storage administrator to take corrective action.

Source: DFSMSHsm

ARC1304I CANNOT MOVE BACKUP VERSION OR BACKUP MIGRATED DATA SET, MIGRATION VOLUME REQUIRED NOT AVAILABLE

Explanation: DFSMSHsm was moving backup versions off the migration level 1 volumes or was backing up a migrated data set. The data set identified in the associated ARC0734I message could not be moved or backed up. The migration volume that the backup version resides on or the migration volume containing the eligible data set to be backed up is not available to DFSMSHsm.

System action: The movement of the backup version or the backup of the migrated data set ends. DFSMSHsm processing continues.

Programmer response: If it is necessary for the backup version to be moved to the daily backup volume or a backup version of the migrated data set to be created, ensure that the migration volume is available to DFSMSHsm.

Source: DFSMSHsm

ARC1305I NO MIGRATION LEVEL 1 VOLUME AVAILABLE FOR BACKUP

Explanation: A DFSMSHsm backup operation ended because no level 1 volume was available to put the backup copy of the data set on. One of the following occurred:

- No level 1 volumes were defined.
- No more space is available on level 1 volumes that are defined.
- Volumes that are defined have either the DRAIN, OVERFLOW, or both attributes turned on.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Provide space on level 1 volumes.

Source: DFSMSHsm

ARC1306I CANNOT MOVE BACKUP VERSION OR BACKUP MIGRATED DATA SET, NO DAILY BACKUP VOLUME OF REQUIRED TYPE AVAILABLE

Explanation: DFSMSHsm was moving backup versions off the migration level 1 volumes or backing up a migrated data set. The data set identified in the associated ARC0734I message could not be moved or backed up. At the time the data set migrated or was backed up by a BACKDS or HBACKDS command, it resided on a primary volume that was to be backed up only to tape, but no tape daily backup volume is available, or the data set resided on a primary volume that was to be backed up only to DASD, and no DASD daily backup volume is available. The reason code in the associated ARC0734I message indicates which condition was encountered. The values for *reascode* are:

Reascode

Meaning

- | | |
|---|--|
| 4 | The data set originated from a primary volume that is to be backed up to tape, but no tape backup volumes are available. |
| 8 | The data set originated from a primary volume that is to be backed up to DASD, but no DASD backup volumes are available. |

System action: The movement of the backup version or the backup of the migrated data set ends. DFSMSHsm processing continues.

Programmer response: Assign backup volumes of the appropriate type. Retry the backup operation when the additional backup volumes have been assigned.

Source: DFSMSHsm

ARC1307I OBTAIN ERROR READING DATA SET EXTENSION VTOC ENTRY DURING BACKUP

Explanation: While DFSMSHsm is performing a backup operation, the OBTAIN macro is used to read the data set extension VTOC entry for the data set indicated in message ARC1001I. An error is encountered. In message ARC1001I, *reascode* is the return code from the OBTAIN macro.

The values for *reascode* are:

Reascode**Meaning**

- 4 The required volume is not mounted.
- 8 The data set VTOC entry is not found in the VTOC of the specified volume.
- 12 A permanent I/O error is encountered, or an invalid volume VTOC entry is found during the processing of the specified volume.
- 16 There is an invalid work area pointer.
- 20 The SEEK option is specified, and the absolute track address (CCHH) is not within the boundaries of VTOC.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Reason codes received in message ARC1001I or ARC0734I are:

Reascode**Meaning**

- 4 Correct the problem and issue a command to start the backup.
- 8 If the data set was deleted since the beginning of the volume backup, no action is required. Otherwise, notify the system programmer to take corrective action.
- 12 Notify the system programmer to take corrective action.
- 16, 20 Notify the storage administrator to take corrective action.

Source: DFSMSHsm

ARC1308I ERROR ALLOCATING BACKUP COPY

Explanation: During a DFSMSHsm backup operation, the dynamic allocation routine has been called to allocate a backup version of a data set. The allocation has failed with other than a no space indication. The data set name is in message ARC1001I. In message ARC1001I and ARC0734I, the reason code *reascode* has the following values:

Reascode**Meaning**

- 4 There is more than one data set with the same name on the volume.
- 8 The volume is not mounted.
- 10 The DFSMSHsm-owned copy of the data set to be backed up is estimated to be greater than 64K tracks. Data sets greater than 64K tracks cannot be backed up to DASD.
- 16 There has been another dynamic allocation error.
- 20 An installation-wide exit has cancelled the request.
- 24 There is an invalid parameter list that has been passed to dynamic allocation from DFSMSHsm.
- 37 The unit type and volume serial number from the mounted volume table are inconsistent.
- 39 An error has occurred in setting the RACF indicator on in the DSCB.
- 40 The volume is SMS managed.
- 41 The volume where the backup copy has been allocated (as returned by DYALLOC) is not the same volume that DFSMSHsm has requested. In an SMS environment, the data set is allocated to SMS-managed storage.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Reason codes received in message ARC1001I.

ARC1309I • ARC1311I

Reascode

Meaning

8, 16, 20

Enlist the aid of the storage administrator or system programmer to correct the problem, and retry the operation.

10

If you want to back up the data set, back it up to tape. Or, if the data mover is DFSMSDss and less than 64K tracks of data are actually in use, try backing up the data set using DFSMSHsm as the data mover if the DFSMSHsm data mover supports the data set's organization. If compaction is not in use for the data set, try backing up the data set with compaction.

24, 37

A logical error has occurred and has built an invalid parameter list.

39

An error has occurred in accessing the DSCB to set the RACF indicator on. The errors are failure to read the JFCB, failure to open the VTOC, or the wrong record has been returned from the read.

40, 41

Update the SMS storage class routine so backup copies are filtered to a null storage class. See the topic on "Writing an Automatic Class Selection Routine that Directs DFSMSHsm-Owned Data Sets to Non-SMS-Managed Storage" under the section, "Specifying Commands that Define Your DFSMSHsm Environment" in *z/OS DFSMSHsm Implementation and Customization Guide*, for an explanation on coding the storage class routine.

Source: DFSMSHsm

ARC1309I ERROR RENAMING BACKUP COPY

Explanation: In backing up a data set, DFSMSHsm has been unable to create a backup version of a name that does not exist. In creating the backup version name, DFSMSHsm has used the time of day and the date. See topic, "Specifying the Names of the Backup Data Sets" under section "Names of Backup Versions of Data Sets", in the *z/OS DFSMSHsm Storage Administration*, for a more detailed explanation on how to create the backup version name.

System action: Backup processing for the data set fails. DFSMSHsm processing continues.

Programmer response: Determine why backup versions are being created at the same time with identical names. If this message is issued for a BACKDS NEWNAME DATE request, ensure that a unique time is issued on each command.

Source: DFSMSHsm

ARC1310I ERROR DEALLOCATING BACKUP VOLUME OR UPDATING BVR ENTRY

Explanation: The data set was being processed when it became necessary to select a new backup volume. There was either an error deallocating the backup volume that was being used or updating its backup cycle volume record (BVR) entry.

System action: The data set is not processed, and the volume backup operations ends.

Programmer response: See the message associated with the ending of the volume backup. These messages are ARC0703I, ARC0712I, and ARC0733I.

Source: DFSMSHsm

ARC1311I ERROR CREATING OR UPDATING RECORD IN DFSMSHSM CONTROL DATA SET

Explanation: An error occurred while DFSMSHsm was creating a new entry in the DFSMSHsm control data set or updating an existing entry. Message ARC1001I precedes this message, where *reascode* is the return code indicating the type of failure. For *reascode* values, see Table 9 on page 559.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator. If *reascode* is 4, 8, or 12, correct the problem, possibly using the FIXCDS command. If *reascode* is 16, an I/O error is the normal cause, and an error message from the ERPs should be found in the DFSMSHsm job log SYMSG data set. If *reascode* is 20, an internal DFSMSHsm error occurred. If *reascode* is 21, a retained backup copy was encountered. Retained backup copies can only be processed on a z/OS V1R11 or later system.

Source: DFSMSHsm

ARC1312I FAILING TO CREATE MCM RECORD, BACKUP VERSION WILL REMAIN ON MIGRATION VOLUME

Explanation: A BACKDS or HBACKDS command was issued to back up the data set identified in message ARC1001I. During the data set backup operation, DFSMSHsm failed to create the backup control data set BACKDS record (MCM). This record is created for each data set backed up by the BACKDS or HBACKDS command. The record is used to drive the movement of the backup versions (created by the BACKDS or HBACKDS command) from their temporary location on the migration level 1 volumes to the daily backup volumes. Because the MCM record was not created, the backup version will remain on the migration level 1 volume. This message is preceded by message ARC1001I, which is preceded by message ARC0184I.

System action: The data set is backed up. DFSMSHsm processing continues.

Programmer response: Message ARC0184I contains the type of record, the key to the record being created, and the reason the creation failed. If it is necessary that the backup version be moved to the daily backup volume, you can issue a FIXCDS command and create an MCM record for the backup version.

Source: DFSMSHsm

ARC1313I INVALID PARAMETER COMBINATION ON A DATA SET BACKUP COMMAND

Explanation: A data set backup command was issued with options that conflict. There is one reason for the failure:

- STANDARD and LOGICALEND were both specified on the CC option of the data set backup command. Specifying both is inconsistent.

The data set backup commands are HBACKDS and BACKDS.

System action: The command fails.

Programmer response: Re-enter the command with consistent parameters.

Source: DFSMSHsm

ARC1314E VOLUME NOT ELIGIBLE FOR COMMAND BACKUP

Explanation: A command was issued to back up a volume. The volume is not eligible for backup because it is contained within a CopyPool Backup storage group.

DFSMSHsm only supports dumping volumes that are contained within CopyPool Backup storage groups. Backing up such volumes is not supported.

System action: DFSMSHsm processing continues.

Programmer response: If a backup of the volume is desired, use the DUMP option of the BACKVOL command.

Source: DFSMSHsm

ARC1315I CANNOT BACK UP PDS WITH MORE THAN 1 NOTELIST IN MEMBER

Explanation: DFSMSHsm received a request to back up a partitioned data set (PDS). At least one member of the data set was found to have more than three user TTRs or more than one note list. DFSMSHsm will *not* back up a PDS with more than one note list in any member user TTRs.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Use some other method of backup, if this PDS must be backed up.

Source: DFSMSHsm

ARC1316I ERROR READING PRIMARY COPY DURING BACKUP

Explanation: While DFSMSHsm has attempted to read the primary copy of a data set, an I/O error has occurred, or incorrect records have been found in a variable format data set.

For incorrect records, a block descriptor word suggests a block size greater than the record size, a block size less than 8, or a block size larger than the maximum block size of 32760.

ARC1317I • ARC1318I

If an I/O error has occurred, an access method or hardware error message associated with this message can be found in the DFSMSHsm job log SYSMSG data set. The name of the data set being backed up appears either in the preceding ARC1001I message, or in the associated ARC0734I message, with a return code of 16. For the ARC0734I message, refer to the backup activity log. In Message ARC1001I, the value for the *reascode* is:

Reascode

	Meaning
0	Actual I/O error on input data set.
2	User header label is bad.
4	User trailer label is bad.
6	Block descriptor word (BDW) indicates an incorrect block size.
8	Partitioned data set with no EOF marker after members.
10	Data set not found in SDSP.
12	GENCB error has occurred. If the data set being backed up is an HFS File System, then one of the following may have occurred: <ul style="list-style-type: none">• HFS is not running. The operator must start HFS.• The requested HFS File System has been quiesced. The file system must be unquiesced.• The DFSMSHsm ID has not been identified as a valid OMVS ID. The ID must be defined to OMVS as a valid ID.
14	Accumulated count fields indicate more than the allowable bytes on a track.
16	Record 1 indicates more than the allowable bytes on a track.
54	PDS member has an incorrect record length. See previously issued message ARC0901I for the member name.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: If an I/O error has occurred, respond to the associated access method or hardware error message. For information about the block descriptor word (BDW), see *z/OS DFSMS Using Data Sets*.

Source: DFSMSHsm

ARC1317I I/O ERROR READING PDS DIRECTORY DURING BACKUP

Explanation: During a backup operation, the data management READ and CHECK service routines were used to read the directory of the data set indicated by message ARC1001I. There was an I/O error, and the SYNAD exit was taken from CHECK. In Message ARC1001I, the values for *reascode* are:

Reascode

	Meaning
0	An I/O error occurred.
4	The data set directory is empty.

System action: The backup operation identified in message ARC1001I ends. DFSMSHsm processing continues.

Programmer response: There may be an I/O error message associated with this problem in the data set defined in the DFSMSHsm cataloged procedure for the MSYSOUT DD name or in the DFSMSHsm job log SYSMSG data set. Respond to the associated error message.

Source: DFSMSHsm

ARC1318I I/O ERROR WRITING BACKUP COPY

Explanation: While DFSMSHsm has been writing the backup copy of a data set, an I/O error has occurred. An access method or hardware error message associated with this message has been found in the DFSMSHsm job log SYSMSG data set. Message ARC1001I precedes this message, giving the data set name.

When this message text is considered because of a related ARC0734I message, and the data set backed up is in VSAM format, the reason code displayed in the associated ARC0734I message is the return code from DFSMSHsm's internal call to IDCAMS. For an explanation of these return codes, see *z/OS DFSMS Access Method Services Commands*

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Respond to the associated access method or hardware error message. Retry the backup operation.

Source: DFSMSHsm

ARC1319I DATA SET IN USE BY ANOTHER USER OR JOB, BACKUP REJECTED

Explanation: During backup command processing, an attempt was made to serialize use of a data set. The serialization failed because the data set was already in use for update by another job or user. In message ARC1001I or ARC0734I, the values for *reascode* are:

Reascode

Meaning

- | | |
|----|--|
| 0 | An error occurred in enqueueing or allocating the non-VSAM data set to be backed up. |
| 8 | An error occurred in allocating the VSAM base cluster to be backed up. |
| 12 | An error occurred in enqueueing the VSAM base cluster to be backed up. |

System action: The backup command ends. DFSMSHsm processing continues.

Programmer response: Retry the backup command when the data set is not in use.

Source: DFSMSHsm

ARC1320I DATA SET NOT ELIGIBLE FOR BACKUP

Explanation: A request sent to DFSMSHsm to back up the data set identified in the preceding ARC1001I or associated ARC0734I failed because one of the following occurred:

- The data set was cataloged on the wrong volume.

A data set being cataloged on the wrong volume can result from processing an uncataloged data set that has the same name as a cataloged data set.

Another possibility is that DFSMSHsm scheduled a retry of the backup of a data set in use. When the retry was attempted, the catalog entry for the data set indicated that the data set was on a different volume, with a different device type, or using a different access category (VSAM vs non-VSAM) from the data set of the same name at the time the retry was scheduled.

- The data set is a multivolume or multivolume extended format data set.

Under DFSMSHsm movement, the only multivolume data sets that are supported are SMS-managed VSAM data sets. Under DFSMSdss movement, SMS-managed non-VSAM data sets are also supported if they are not protected by a discrete RACF profile and if USERDATASETSERIALIZATION is used. Multiple volume standard user label data sets and multiple volume unmovable data sets are not supported by either data movement method.

- The device type of the volume on which the data set resides and as indicated by the catalog, is different from the device type of the same volume currently mounted.
- A VSAM data set contains an invalid expiration date. The expiration date obtained from the catalog contains a year greater than 2155. This data set is not supported.
- The non-VSAM data set has a format-8 DSCB.
- The Catalog has a format-8 DSCB.

System action: The backup operation for the data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator to change the environment to allow backup. If the data set is cataloged on the wrong volume, the storage administrator can correct the catalog and retry the command. Multivolume data sets can only be backed up under the restrictions above. To process an unsupported multivolume data set, use another method. If the device type of the volume, as indicated in the catalog, is incorrect, correct the catalog entry and retry the command. If the data set is being updated by another processor in a multiple processing unit environment, review the present status of the data set and proceed accordingly. If the VSAM data set contains an invalid expiration date, change the expiration date in the catalog to a year less than 2155.

Source: DFSMSHsm

ARC1321I MISSING OR UNSUPPORTED DEVICE TYPE FOR BACKUP

Explanation: If this message has been issued as the result of a request to backup an uncataloged data set, the request is missing the required UNIT parameter or the UNIT parameter has been specified with an unsupported device type.

If this message is issued as the result of a request to back up a cataloged data set, the data set has been cataloged to an unsupported device type.

See *z/OS V2R2 Migration*, for a list of supported devices.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: If the data set is uncataloged, correct the invalid UNIT parameter and retry the operation. If the data set is cataloged, notify the storage administrator.

Source: DFSMSHsm

ARC1322I ERROR PROCESSING PASSWORD PROTECTED DATA SET, BACKUP TERMINATED

Explanation: The data set specified in the DFSMSHsm command is write password protected. When DFSMSHsm was checking the password, it encountered an error. In message ARC1001I, the values for *reascode* are:

Reascode**Meaning**

- | | |
|----|---|
| 0 | Only pertains for VSAM data sets. The user specified an incorrect password. |
| 4 | The data set is non-VSAM. The user is only authorized to read the data set, but requested to write to or delete the data set. |
| 8 | The data set is non-VSAM. The user specified an incorrect password. |
| 12 | The data set is non-VSAM. An I/O error occurred in checking the password. |
| 16 | The data set is non-VSAM. An OBTAIN error or some other error occurred while DFSMSHsm was accessing the data set. |
| 20 | The data set is non-VSAM. DFSMSHsm is in a nonauthorized test mode of operation in which password checking is not attempted. |

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Verify that the correct data set name was specified and that the password, if required, was specified correctly. Notify the storage administrator for password assistance if necessary.

Source: DFSMSHsm

ARC1323I CANNOT MOUNT VOLUME NECESSARY FOR BACKUP

Explanation: During BACKUP command processing, the volume on which the specified data set resides could not be mounted. The allocation routine passed a return code of 8. Message ARC1001I precedes this message, giving the data set name.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: Use the LIST or HLIST command to determine the volume in question. Have the required volume made available to the system for your use. The DISPLAY operator command might help to determine the volume status. Reissue the command request when the volume is available.

Source: DFSMSHsm

ARC1324I DFSMSHSM CONTROL DATA SET ERROR DURING BACKUP

Explanation: When a data set was being backed up, an error was encountered during the creation or modification of a migration control data set record. Message ARC1001I gives the data set name of the data set being backed up.

System action: The data set is not backed up. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator, who can determine if there is a problem with the DFSMSHsm control data sets.

Source: DFSMSHsm

ARC1325I ERROR READING DFSMSHSM CONTROL DATA SET DURING BACKUP

Explanation: During a backup operation, a GET macro was issued to read a control data set, and an error occurred. Message ARC1001I precedes this message with the data set name and *reascode*, the code from the GET failure. For *reascode* values, see Table 9 on page 559.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: If the *reascode* is 0, and the command was a BACKVOL, then check if the UNIT parameter was specified if the volume is not ADDVOLED to DFSMSHsm. If the *reascode* is 4, 8, 12, or 16, notify the storage administrator. When the condition is corrected, retry the operation. If the *reascode* is 16, another error message, either an access method message or a hardware error recovery procedures message, appears in the data sets defined by the DFSMSHsm cataloged procedure with ddname MSYSOUT. If the *reascode* is 20, an unidentified error happened during processing of the GET macro. Notify the system programmer.

Source: DFSMSHsm

ARC1326I ERROR DURING BACKUP

Explanation: An error was detected while DFSMSHsm was performing a backup operation. The possible values for the reason code are:

Reascode

Meaning

- | | |
|---|---|
| 4 | A request submitted via the ARCHBACK macro with the ASYNC=YES option failed, but the return and reason codes could not be communicated back to the requestor. |
|---|---|

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: The reason codes have the following actions:

Reascode

Meaning

- | | |
|---|---|
| 4 | Reference all preceding related messages and/or the corresponding FSR record for details on the failures. Determine what caused the errors, and resubmit the request. |
|---|---|

Source: DFSMSHsm

ARC1327I BACKVOL FAILED DUE TO AN ERROR WITH THE COMMON DUMP QUEUE

Explanation: DFSMSHsm attempted to process a BACKVOL operation using its common queue. The volume, command, or operation and its reason for the failure is as described by message ARC10001I. In message ARC1001I, the *reascode* identifies the results. A summary message will also be issued with the same *reascode*.

The *reascode* values are as follows:

- | | |
|-----|--|
| 100 | A SETSYS COMMONQUEUE(DUMP(DISCONNECT FORCE)) command was processed. This return code indicates that active requests from the common queue for this function running in this system were allowed to finish. However, the remote requests submitted to the common queue for this function from this system are failed, but may still complete on another system in the functional group. |
| 102 | A SETSYS COMMONQUEUE(DUMP(DISCONNECT FORCE)) command was processed for a host member that is the current master scheduler. This return code indicates that active requests from the common queue for this function running in the group were allowed to finish. However, any request received from the remote members in the group on this master scheduler system and are waiting to be processed will be failed. |
| 105 | A host in the common queue group became not defined. This return code indicates that the work was assigned by the master scheduler to run in this host of the common queue, but it cannot determine if it completed. |

System action: The system will take the action taken as described by each return code.

ARC1328I • ARC1332I

| **Programmer response:** Notify the storage administrator.

| **Source:** DFSMSHsm

ARC1328I BACKUP FAILED - NO ALIAS IN MASTER CATALOG FOR DATA SET HIGH LEVEL QUALIFIER AND DATA SET NOT CATALOGED IN MASTER CATALOG

Explanation: During a backup operation, one of the following occurred:

- A VSAM data set that was encountered during volume backup is inaccessible through the standard catalog search. The data set is not cataloged in the computing system master catalog, nor is there an alias in the master catalog that corresponds to the data set high level qualifier. DFSMSHsm cannot back up data sets that are inaccessible through the standard catalog search.
- DFSMSHsm scheduled a retry of the backup of a data set. When the retry was attempted, the data set to be backed up was no longer cataloged.

The most likely cause of this problem is that the alias for the high level qualifier was deleted. An alias name in the master catalog points to the user catalog in which data set information is found.

System action: DFSMSHsm processing continues. The backup for the data set is ended.

Source: DFSMSHsm

ARC1329I DATA FORMAT ERROR DURING BACKUP OR MOVEMENT OF A BACKUP VERSION

Explanation: During the movement of a backup version or backup of a migrated data set, the first record read for the DFSMSHsm copy of the data set did not contain a valid common data set descriptor (CDD) or the backup version or backup of a migrated data set has a format-8 DSCB. The DFSMSHsm copy of the data set may have been overwritten. The name of the data set being processed appears in the associated ARC1001I or ARC0734I message having a return code of 29. If the backup version has a format-8 DSCB, use V1R12 or higher to process it.

System action: Processing of the data set fails. DFSMSHsm processing continues.

Programmer response: Determine if the DFSMSHsm copy of the data set is corrupted.

Source: DFSMSHsm

ARC1330I DATA SET NOT CATALOGED, AND VOLUME NOT SPECIFIED

Explanation: The data set identified in message ARC1001I is not cataloged, and the VOLUME parameter was not specified. If the data set is not cataloged, the VOLUME parameter must be specified.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with the VOLUME parameter specified.

Source: DFSMSHsm

ARC1331I EXTENSION RECORD MISSING IN T RECORD

Explanation: While a tape table of contents record is being scanned, it is discovered that an extension record that was previously available is missing. The accompanying ARC0358I message gives the record key.

System action: Updating of the volume record ends. DFSMSHsm processing continues.

Programmer response: Determine, if possible, the cause for the missing record and take corrective action.

Source: DFSMSHsm

ARC1332I REQUEST FOR BACKUP OF AN UNCATALOGED DATA SET FAILED, ONLY A CATALOGED DATA SET WAS FOUND ON THE SPECIFIED VOLUME

Explanation: A BACKDS command has been issued to back up a data set. The VOLUME and UNIT parameters have been specified on the BACKDS command, which implies that the data set to be backed up is an uncataloged data set. However, an uncataloged data set with the specified name does not exist on the volume indicated in the command.

In message ARC1001I, the values for *reason-code* are:

- 4 The computing system catalog indicates that a non-VSAM data set with the specified name exists on the volume.
- 8 The computing system catalog indicates that a VSAM data set with the specified name exists on the volume. Also, the data set VTOC entry for the data set has not been found in the VTOC.
- 12 An OBTAIN for the data set VTOC entry in the VTOC has been successful. The data set VTOC entry has indicated that the data set organization is VSAM. This data set VTOC entry could be for a VSAM base cluster not cataloged in the integrated catalog facility (ICF) or for a component of a VSAM data set cataloged in the ICF. In either case, an uncataloged data set does not exist on the volume.

System action: The backup of the indicated data set ends. DFSMSHsm processing continues.

Programmer response: If the intent is to back up a cataloged data set, reissue the command without specifying the VOLUME and UNIT parameters. If the intent is to back up an uncataloged data set, ensure that the correct volume serial number is specified. For information about the use of the BACKDS command, see *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC1333I CANNOT BACK UP MIGRATIONLEVEL2 DATA SET

Explanation: The data set identified in message ARC1001I resides on a migration level 2 volume. Backup from level 2 volumes is not supported.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: A data set must be on a level 1 or primary volume to be eligible for DFSMSHsm backup. If you want to back up a data set on a level 2 volume, you must recall it.

Source: DFSMSHsm

ARC1334I BACKUP VERSION NOT CREATED

Explanation: DFSMSHsm attempted to create a backup version of a data set. The reason code in message ARC1001I indicated the conditions encountered and the reason the backup version was not created.

In message ARC1001I, the values for *reason-code* are:

Reascode

- | | Meaning |
|---|---|
| 1 | The data set is extended format, but DFSMSdss is not specified as the datamover for extended format data sets. DFSMSHsm datamover cannot move extended format data sets. |
| 2 | The data set is extended format, but it is not SMS-managed. Only SMS-managed extended format data sets can be backed up. |
| 3 | The data set is large format sequential, but DFSMSdss is not specified as the datamover for large format sequential data sets. DFSMSHsm datamover cannot move large format sequential data sets. |
| 4 | A BACKDS or HBACKDS command was issued to back up the non-SMS-managed data set identified in the message ARC1001I. The backup version was not created because the maximum number of backup versions DFSMSHsm is to maintain is 0. Either an ALTERDS or HALTERDS command was issued for the data set, and the value specified for VERSIONS is 0, or if never specified on an ALTERDS or HALTERDS command, the value specified for VERSIONS on the SETSYS command is 0. |
| 5 | The current level of DFSMSHsm cannot backup an extended format data set (sequential striped or compressed). A minimum of DFSMSHsm 1.1.0 is required for sequential striped data sets, and a minimum of DFSMSHsm 1.2.0 is required for extended format compressed data sets. |
| 6 | The installation attempted to backup a Large Format Sequential Data Set. This level of DFSMS/DFSMSHsm does not support backing up large format sequential data sets. |
| 8 | A backup version was not created for an SMS-managed data set because the management class attribute ADMIN-OR-USER-COMMAND-BACKUP indicates the data set should not be backed up. |

For a BACKDS or HBACKDS command, one of the following applies:

ARC1334I

- The management class attribute ADMIN-OR-USER-COMMAND-BACKUP = BOTH is not indicated.
- A management class attribute of ADMIN-OR-USER-COMMAND-BACKUP = ADMIN is indicated, and the user is not DFSMSHsm-authorized to back up the data set.

For a data set processed during volume backup, ADMIN-OR-USER-COMMAND-BACKUP = NONE is specified.

12 The backup-while-open candidate data set is not available to be backed up at the time of the request.

14 The data set is eligible for backup-while-open processing, but DFSMSHsm is the datamover.

Note: Reason codes 90 and higher are not produced unless you have installed a problem determination patch for volume backup. For information about this patch, see the section on “Determining Why SMS-Managed Data Sets Are Not Processed” in Appendix C of *z/OS DFSMSHsm Diagnosis*.

16 An abend or error occurred and cleanup was not completed before continuing. A backup version should be successfully created during the next backup.

17 An abend or error occurred and cleanup was not completed before starting a new source volume. A backup version should be successfully created during the next backup.

18 Backup of this data set was bypassed because of a previous error. A backup version should be successfully created during the next backup.

19 An internal error occurred.

20 A backup version was not created because it would cause an existing version with a non-expired RETAINDDAYS value to roll-off.

90 The management class attribute AUTO BACKUP = N prevents backup of the data set.

91 The backup installation-wide exit (ARCSAEXT) indicates the data set should not be processed.

92 The data set VTOC entry is not for the first segment of a key range data set, or the data set VTOC entry is for the index component of a key range data set.

93 For VSAM data sets, this reason code is issued when the data set VTOC entry is not for the base data object of a VSAM data set.

For non-VSAM data sets, this reason code is issued when the data set sequence number is not 1. This indicates the data set is part of a multivolume data set, but is not the first segment of that data set.

94 A backup version was not created because the data set was not changed since the last time a backup version was made and this:

SETSYS INCREMENTALBACKUP(CHANGEDONLY)

was specified.

95 A backup version was not created because the data set was not changed since the last time a backup version was made. SETSYS INCREMENTALBACKUP(ORIGINAL) was specified and the existence of a backup version is based on the last backup date in the catalog entry record.

96 A backup version was not created because the data set was not changed since the last time a backup version was made. SETSYS INCREMENTALBACKUP(ORIGINAL) was specified and the existence of a backup version is based on the last backup date in the MCB record.

97 The number of days specified in the management class attribute BACKUP FREQUENCY has not elapsed. The existence of a backup version is based on the last backup date in the catalog entry record.

98 The number of days specified in the management class attribute BACKUP FREQUENCY has not elapsed. The existence of a backup version is based on the last backup date in the MCB record.

System action: The BACKUP command processing of the indicated data set ends. DFSMSHsm processing continues.

Programmer response: Perform the action which corresponds to the reason code you received. The values for *reason-code* are:

Reascode

Action

- 1 Specify DFSMSdss as the datamover for extended format data sets.
- 3 Contact IBM Support and indicate to them that your installation has HSM as the default data mover for backup of Large Format Data sets and that needs to be changed.
- 2 See the system administrator to bring the data set under SMS management.
- 4 Issue an ALTERDS or HALTERDS command for the data set and specify a positive nonzero value for the VERSIONS parameter. Then reissue the BACKDS or HBACKDS command.
- 5 It may be possible to back up the data set from a different processing unit in a multiple processing unit environment. Otherwise, a sufficient level of DFSMSHsm must be installed on the system.
- 6 Re-try backup on a level of DFSMS/DFSMSHsm that does support large format sequential data sets.
- 8 If a BACKDS or HBACKDS command is failing because the user is not authorized, perform one of the following:
- Issue the command from a DFSMSHsm-authorized user.
 - Associate the data set with a management class that does not require the user to be DFSMSHsm-authorized.
 - If a data set is not backed up because ADMIN-OR-USER-COMMAND-BACKUP=NONE, associate the data set with a management class that does not specify ADMIN-OR-USER-COMMAND-BACKUP=NONE.
- 12 Retry the backup operation when the data set is available, for example, when the reorganization of a data set completes.
- 14 Specify the DFSMSdss parameter on the SETSYS DATAMOVER command.
- 16 To pursue the source of this problem, save at least two hours of PDA trace prior to the REAS16 failure and contact DFSMSHsm Level 2 service.
- 17 To pursue the source of this problem, save at least two hours of PDA trace prior to the REAS17 failure and contact DFSMSHsm Level 2 service.
- 18 None.
- 19 Contact IBM Support.
- 20 Reissue the backup request on a z/OS V1R11 or later system.
- 90 If the data set should be considered eligible for backup, it needs to be associated with a management class defined with AUTO BACKUP = Y.
- 91 If the data set should be considered eligible for backup, the backup exit (ARCSAEXT) needs to be updated to not exclude the data set from backup.
- 92 No response required. DFSMSHsm processes the key range data set when it encounters the data set VTOC entry for the first segment of the data set.
- 93 No response required. DFSMSHsm processes the VSAM data set when it encounters the data set VTOC entry for the base data object.
- For a non-VSAM data set, processing occurs when the volume with a data set sequence number of 1 is encountered.
- 94 No response required. A current backup version exists.
- 95 No response required. A current backup version exists.
- 96 No response required. A current backup version exists.
- 97 If a backup version was created before the BACKUP FREQUENCY defined for the management class elapsed, perform one of the following:
1. Issue the BACKDS or HBACKDS command to cause a backup version to be created.
 2. Associate the data set with a management class whose definition of BACKUP FREQUENCY is small enough to satisfy the data set's backup requirements.
- 98 If a backup version was created before the BACKUP FREQUENCY defined for the management class elapsed, perform one of the following:
1. Issue the BACKDS or HBACKDS command to cause a backup version to be created.

ARC1335I • ARC1338I

2. Associate the data set with a management class whose definition of BACKUP FREQUENCY is small enough to satisfy the data set's backup requirements.

Source: DFSMSHsm

ARC1335I ERROR OPENING INPUT DATA SET DURING BACKUP

Explanation: DFSMSHsm issued the open macro during BACKUP or SPILL processing. An open error message with component identifier IEC normally precedes this message if this is a true open error.

System action: The backup processing ends. Spill processing continues. DFSMSHsm processing continues.

Programmer response: For backup, take the action indicated by the open error message. Retry the backup operation. For spill, take the action indicated by the open error message except, when all the following conditions are true, no action is required:

- The backup version does not exist as indicated by ABEND213-04, MSGIEC143I 213-04 without MSGIOS000I (NO I/O ERROR), accompanied by MSGARC0834I ACTION=MOVE BV, RC35, which gives the data set name.
- Another DFSMSHsm function is running concurrently that could have deleted the backup version named in the ARC0734I message.

Source: DFSMSHsm

ARC1336I ERROR OPENING OUTPUT DATA SET DURING BACKUP

Explanation: DFSMSHsm issued the OPEN macro to open an output data set during a backup operation. During OPEN processing, the ESTAE routine was invoked. An OPEN error message with component identifier IEC precedes this message. Message ARC1001I also precedes this message, giving the data set name.

Reason code 1 indicates that WORM tape is not supported for this function.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Take the action indicated by the OPEN error message. Retry the backup operation.

Source: DFSMSHsm

ARC1337I NO SPACE FOR BACKUP COPY

Explanation: During a DFSMSHsm backup operation, an attempt was made to allocate space for the new backup copy of the data set identified in message ARC1001I. The allocation routine passed back a return code of 12, indicating there was no space on the volume, the VTOC was full, or the index to the VTOC was full.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: Provide more space on backup volumes for DFSMSHsm. The DFSMSHsm LIST or HLIST command can be used to determine the volumes in question.

If the failed request was a data set backup, then the failure occurred on ML1 volumes. Provide more ML1 space for backup versions and consider providing 1 or more ML1 volumes with the OVERFLOW attribute.

Source: DFSMSHsm

ARC1338I PASSWORD PROTECTED DATA SET CANNOT BE BACKED UP TO A NON PASSWORD PROTECTED TAPE

Explanation: A password-protected data set was found to be eligible for backup, but the target volume is not a password-protected tape, and the tape security protection is not EXPIRATIONINCLUDE or RACFINCLUDE. You can find the data set name of the password-protected data set in an associated ARC0734I message.

System action: The data set being processed is not backed up. Backup processing continues. DFSMSHsm processing continues.

Programmer response: Change the security option for DFSMSHsm tape volumes so that password-protected data sets can be backed up to tape, or remove password-protected data sets from volumes that are managed by DFSMSHsm.

Source: DFSMSHsm

ARC1339I ERROR PROCESSING RACF PROTECTED DATA SET, BACKUP TERMINATED

Explanation: During a DFSMSHsm backup operation, an attempt was made to process a resource access control facility (RACF) protected data set. The data set name and a reason code are given in message ARC1001I. For *reason-code* values, see Table 19 on page 571.

System action: The backup operation ends. DFSMSHsm processing continues.

Programmer response: If RACF denied access, there is an associated RACF message. If the data set name and DSCB do not match, there is an associated access method message. If an I/O error caused the reading of the JFCB to fail, an associated error message can be found in the DFSMSHsm job log SYSMSG data set. Respond to the associated message.

Source: DFSMSHsm

ARC1340I BACKUP OR DUMP FUNCTION DISABLED

Explanation: A BACKDS or BACKVOL command was issued. If the reason code in message ARC1001I preceding this message is 0, either backup is disabled or the computing system is not allowing backup.

System action: The backup or dump operation ends. DFSMSHsm processing continues.

Programmer response: If backup processing is disabled, retry the command at a later date. Backup was either never enabled properly or was disabled due to a subsequent processing error. The storage administrator can refer to the system logs to determine the problem. Some of the messages that may indicate a problem are ARC0738I, ARC1374I, ARC0715I, ARC0134I, ARC0326I, and ARC0103I. If a sufficient level of DFSMSdss is not installed, the dump request is invalid. If the dump function is desired, DFSMSdss must be a Version 2, Release 2.0 or subsequent releases.

Source: DFSMSHsm

ARC1341I PREMATURE END OF VOLUME ENCOUNTERED DURING BACKUP OF A DATA SET

Explanation: During backup processing, an end of volume condition was encountered before the tape had reached the expected percent full capacity. The tape volume was marked full, and the data set was retried but failed with the same error on retry.

System action: The task is ended.

Programmer response: None.

Source: DFSMSHsm

ARC1342I ERROR READING JFCB FOR PRIMARY COPY DURING BACKUP

Explanation: During a backup command processing, an RDJFCB macro was issued. The RDJFCB request failed. A data management error message associated with this problem can be found in the DFSMSHsm job log SYSMSG data set. Message ARC1001I precedes this message, identifying the data set name in question.

System action: The backup command processing ends. DFSMSHsm processing continues.

Programmer response: Respond to the data management error message as indicated, and retry the command.

Source: DFSMSHsm

ARC1343I ERROR REWRITING DSCB FOR PRIMARY COPY DURING BACKUP

Explanation: During backup command processing, an error occurred in updating the data set VTOC entry for the data set being backed up. This message is either preceded by message ARC1001I or referred to by an associated ARC0734I message. Both messages include the name of the data set being backed up and a reason code. If the reason code is 0, an unrecoverable I/O error occurred and the DCB SYNAD exit was taken from the data management CHECK service routine. If the reason code is nonzero, a request to the common VTOC access facility (CVAF) to read or write the data set VTOC entry failed. The reason code is the contents of register 15 on return from CVAF. An associated hardware, data management, or system error message can be found in the DFSMSHsm job log SYSMSG data set.

System action: The backup command processing ends. DFSMSHsm processing continues.

ARC1344I • ARC1349I

Programmer response: Retry the backup command. If the problem still exists, notify the storage administrator.

Source: DFSMSHsm

ARC1344I TAPE VOLUME CANNOT BE ADDED FOR BACKUP, VOLUME ALREADY CONTAINS VALID DFSMSHSM DATA

Explanation: DFSMSHsm attempted to add to its control a volume that contains valid data.

System action: The tape volume is rejected. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1345I ERROR DELETING A DFSMSHSM CDS RECORD

Explanation: During backup processing, a tape table of contents record was being deleted when an error occurred. See message ARC0188I for more detail.

System action: The record deletion is unsuccessful. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1346I NO OFFLINE CONTROL DATA SET FOUND

Explanation: An attempt was made to update the offline control data set, but the data set does not exist.

System action: The command fails. DFSMSHsm processing continues.

Programmer response: Create the offline control data set and reenter the command.

Source: DFSMSHsm

ARC1347I TAPE END-OF-VOLUME ERROR DURING BACKUP

Explanation: An end-of-volume error or ABENDx37 occurred.

System action: The volume is marked full to prevent its allocation. A new tape volume is selected and backup continues.

Programmer response: Check the preceding messages and the dump, if applicable, to determine the cause.

Source: DFSMSHsm

ARC1348I BACKUP VERSION OF DATA SET EXCEEDS MAXIMUM NUMBER OF ALLOWABLE TAPE VOLUMES

Explanation: During backup processing, a data set was being moved that exceeded the space on the maximum number of tape volumes allowed for one data set. See message ARC0352I for the data set name.

System action: The first tape volume is marked full and all other volumes are deleted.

Programmer response: None.

Source: DFSMSHsm

ARC1349I FAILURE ATTEMPTING TO REMOVE RACF PROTECTION FROM BACKUP TAPE VOLUME

Explanation: Deletion of a tape table of contents entry from the offline control data set was requested. The volume was RACF protected. The removal of that protection failed. The return code is the result of the failure of a DFSMSHsm removal of the RACF protection. See message ARC0359I for the volume serial number and return code.

System action: The deletion of the record fails. DFSMSHsm processing continues.

Programmer response: Determine why the RACF protection removal failed and take corrective action.

Source: DFSMSHsm

ARC1350I NO UNIT AVAILABLE TO MOUNT VOLUME DURING BACKUP

Explanation: During backup command processing, an attempt was made to allocate the data set to be backed up, which is identified in message ARC1001I. The allocation routines determined that the required volume is not online, nor are any units available to which a mount can be requested.

System action: The backup command processing ends. DFSMSHsm processing continues.

Programmer response: Arrange to have a unit made available for your request, and retry the operation.

Source: DFSMSHsm

ARC1351I ANOTHER DFSMSHsm FUNCTION ACTIVE FOR DATA SET, BACKUP REJECTED

Explanation: A backup command is rejected because another DFSMSHsm operation is processing the data set. The data set name is given in message ARC1001I.

System action: The backup command ends. DFSMSHsm processing continues.

Programmer response: Retry the command when the data set is available.

Source: DFSMSHsm

ARC1352I GET/FREEMAIN ERROR - BACKUP TERMINATED

Explanation: During backup command processing, a GETMAIN or FREEMAIN macro was issued for input buffer space. The macro failed.

System action: The backup command ends. DFSMSHsm processing continues.

Programmer response: Retry the backup command. If the problem occurs again, notify the storage administrator.

Source: DFSMSHsm

ARC1353I VSAM OPEN RESOURCE NOT AVAILABLE, BACKUP OF DATA SET FAILED

Explanation: During backup command processing of a VSAM data set, an attempt was made to enqueue on the VSAM open resource for the data set. The resource was not immediately available.

System action: The backup command processing ends for the data set. DFSMSHsm processing continues.

Programmer response: Try the backup command again later, or wait for the next automatic backup.

Source: DFSMSHsm

ARC1354I BACKUP FAILED DUE TO AN ERROR IN AN INSTALLATION EXIT. BACKUP IS HELD.

Explanation: The ARCBDEXT exit for backup processing abnormally ended (abend). DFSMSHsm has placed a hold on the backup command processing so no data set will be backed up until the hold is removed with a DFSMSHsm RELEASE command with the BACKUP parameter. If processing a volume backup command, the reason for the abend is given in the associated ARC0734I message, in the reason code field.

System action: DFSMSHsm processing continues without the backup function.

Operator response: If the backup function can run without the installation-wide exit, turn off the installation-wide exit with a SETSYS command with the EXITOFF parameter and release the backup function with the RELEASE command with the BACKUP parameter. DFSMSHsm will then run without the exit and its own backup data set criteria. If this was an unusual circumstance, the exit will not abend again. The backup function should be started again with the RELEASE command with the BACKUP parameter.

Programmer response: Fix the cause of the abend and relink the exit module. The exit can be reactivated with a SETSYS command when DFSMSHsm is started.

Source: DFSMSHsm

ARC1355I VSAM BACKUP FAILED - ERROR IN EXPORT

Explanation: A backup command was issued for a VSAM data set, but the IDCAMS EXPORT command was unable to complete successfully. The data set name and IDCAMS return code are given in the ARC1001I message for data set backup or in the ARC0734I message for an individual data set during volume backup.

The IDCAMS error messages are contained in the backup activity log. To review the activity log, issue the RELEASE HARDCOPY command. If the logs are on DASD, new logs are created and the log with the messages can be browsed. If the logs are directed to SYSOUT, they are printed.

System action: The backup command ends without a backup version being made. DFSMSHsm processing continues.

Programmer response: Respond to the IDCAMS return code and retry the operation. The backup activity log contains messages that further explain the reason for the IDCAMS return code.

Source: DFSMSHsm

ARC1356I BACKUP FAILED FOR DATA SET

Explanation: A backup command was issued for a data set. The data set name and reason codes are given in message ARC1001I.

The values for *reason-code* are:

- 5 An attempt was made to backup a GDG base entry. The data set is only an entry in the catalog and not a cataloged data set.
- 6 There was an error in a catalog entry for a non-VSAM data set.
- 7 An error occurred trying to convert the symbolic volser to a real volser.
- 8 No catalog entry was found for a VSAM data set.
- 9 Unsupported data set for backup. The catalog entry shows the VSAM data set to be a non-SMS-managed data set defined with key ranges.
- 10 The catalog entry indicates that the data set is a multivolume data set. If the data set is VSAM, it is not an SMS-managed data set, and one component is multivolume.
- 11 Unsupported data set for backup. The catalog entry shows at least one AIX defined with key ranges and the base cluster is *not* defined with key ranges.
- 12 The components of the non-SMS-managed VSAM cluster are on different volumes.
- 14 The catalog entry is not a VSAM base cluster or a non-VSAM data set; the catalog entry is a VSAM page space, or a locate error occurred for the data set name.
- 14 The catalog entry is not a VSAM base cluster and not a non-VSAM data set, or the catalog entry is a VSAM page space or swap space, or a locate error occurred for the data set name.
- 15 A component of the VSAM data set has a logical record length too large for DFSMSHsm. The maximum allowable logical record length is 32 752 bytes for a relative record data set and 32 756 bytes for entry-sequenced or key-sequenced data sets.
- 16 A component of the VSAM data set is open for output.
- 18 A LOCATE error occurred for the data or index component of the VSAM base cluster.
- 19 Locate error on base path component.
- 20 The data set name is a VSAM component name instead of a cluster name.
- 24 The catalog entry indicates that the data set is a non-VSAM multivolume data set. The data set's *volser* list also indicates multiple volumes.
- 28 A LOCATE error occurred for a VSAM alternate index (AIX) cluster.
- 38 A LOCATE error occurred for the data or index component of the VSAM AIX cluster.
- 39 Locate error on AIX path component.
- 40 At least one component of the VSAM data set is empty.

- 48 A LOCATE error occurred for the data set.
- 52 A GETMAIN error occurred during the process of getting the catalog information about a VSAM data set.
- 54 Backup-While-Open data sets are not supported when bypass of the data set enqueue is requested through the ARCHBACK macro or the ARCBDEXT user exit. They are also not supported by the inline backup function.
- 56 A VSAM data set has an invalid expiration date. The expiration date obtained from the catalog contains a year greater than 2155. This data set is not supported.
- 60 Backup of a VSAM data set failed because the data set is in incomplete status. Issue a RECALL command for the data set.
- 62 The return code passed back from the data set backup exit (ARCBDEXT) indicates that the data set should not be backed up.
- 64 The ESTAE setup for the data set backup exit (ARCBDEXT) failed.
- 65 The migration copy has a format-8 DSCB.
- 66 Data set size exceeds 2 Terabytes. This exceeds the architectural limit for systems prior to V1R13.
- 67 The data set being backed up is a non-SMS-managed VSAM linear data set which has the Extended Addressable(EA) attribute specified. This data set type is not supported for backup in pre-V2R1 systems.
- 405 The VTOC entries for the data set indicate that there are more tracks allocated to a VSAM data set on the first volume than the total number of tracks allocated to the data set.

System action: The data set is not backed up. If the reason code is 48, no VSAM data sets are backed up from the volume. DFSMSHsm processing continues.

Programmer response: If a locate error occurred, fix the catalog entry and retry the command. If the reason code is 40, load data in all the components. If the reason code is 405 examine the VTOC entries for the data set on all volumes to ensure that they are correct. Backing up a component of a VSAM cluster or an association such as an AIX results in a reason code 14. DFSMSHsm backs up the entire VSAM base cluster, which includes all the components and associations. If the reason code is 62 and the data set should be considered eligible for backup, the data set backup exit (ARCBDEXT) must be updated so that it does not exclude the data set from backup. If the reason code is 64, contact the IBM Support Center. If the reason code is 66, use DFSMSHsm V1R13 or higher to backup this data set. If the reason code is 67, use DFSMSHsm V2R1 or higher to backup this data set.

Source: DFSMSHsm

ARC1357I VSAM BACKUP FAILED - PASSWORD LOCATE ERROR

Explanation: The backup of a VSAM data set was in progress. A LOCATE could not find the password of the catalog that owns the volume. Message ARC1001I gives the data set name and the VSAM catalog return code.

System action: The data set is not backed up. DFSMSHsm processing continues.

Programmer response: Correct the problem identified by the VSAM catalog return code.

Source: DFSMSHsm

ARC1358I BACKUP FAILED FOR DATA SET

Explanation: A backup command was issued for a data set but was unsuccessful. The data set name and return code are given in message ARC1001I, as follows:

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- 52 Two or more directory entries for a partitioned data set had the same TTR.
- 53 A directory entry in a partitioned data set has an invalid length value.
- 54 An imbedded record has zero or negative length. The member name is reported in the associated ARC0901I message with module ARCOMPDS.
- 55 Data set backup to DASD is not allowed.
- 56 Data set backup to TAPE is not allowed.

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- 66 Data set size exceeds 2 Terabytes. This exceeds the architectural limit for systems prior to V1R13.
- 67 The data set being backed up is a non-SMS-managed VSAM linear data set which has the Extended Addressable(EA) attribute specified. This data set type is not supported for backup in pre-V2R1 systems.

System action: The data set is not backed up. DFSMSShsm processing continues.

Programmer response: If the reason code is 66, use DFSMSShsm V1R13 or higher to backup this data set. If the reason code is 67, use DFSMSShsm V2R1 or higher to backup this data set.

Source: DFSMSShsm

ARC1359I DATA SET BACKUP COMMAND FAILED

Explanation: CC REQUIRED, VIRTUALREQUIRED or CACHEREQUIRED was specified on the data set backup command and the user was not RACF authorized to the STGADMIN.ADR.DUMP.CNCURRNT profile.

System action: DFSMSShsm processing continues.

Programmer response: Reissue the command without specifying CC or obtain proper authority to STGADMIN.ADR.DUMP.CNCURRNT before reissuing the command.

Source: DFSMSShsm

ARC1360I ESTAE MACRO FAILURE DURING BACKUP

Explanation: DFSMSShsm attempted to set up an ESTAE environment, but the MVS function was unsuccessful during a backup process.

System action: The module issuing the macro ends processing.

Programmer response: Examine the return code from the previous ARC0304I message, and take appropriate action based on that return code explanation.

Source: DFSMSShsm

ARC1361I ERROR DURING INTERNAL ADDVOL OF TAPE VOLUME

Explanation: During backup processing, a tape end-of-volume was encountered and an internal ADDVOL command was attempted for the next tape. The command was unsuccessful because of an I/O error on a control data set record or because the volume already contains valid DFSMSShsm data.

System action: The tape volume specified in the previous ARC0120I message is not added to DFSMSShsm control. DFSMSShsm processing continues.

Programmer response: If the error is because of an I/O error, determine the cause of the error and take corrective action. If the tape volume already contains valid data, an operations problem could exist that might need to be investigated.

Source: DFSMSShsm

ARC1362I CDS RECORD IN USE BY ANOTHER HOST

Explanation: During backup processing, an update was attempted on a control data set record that is in use by another processor.

System action: The update will not be made. DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSShsm

ARC1363I VOLUME DEALLOCATION ERROR DURING BACKUP

Explanation: An error was encountered during the backup process in deallocating a volume under DFSMSShsm control.

System action: Any processing that requires the volume in error will not occur. DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1364I ERROR CLOSING INPUT DATA SET DURING BACKUP

Explanation: During the backup command processing of a data set or the movement of a backup version from one volume to another, an error has occurred when DFSMSHsm has attempted to close the input data set. If a data set is being backed up, the input data set is the data set being backed up. If a backup version is being moved, the input data set is the already existing backup version on the source volume. The name of the data set being backed up or the name of the backup version being moved appears either in the preceding ARC1001I message, or in the associated ARC0734I message, with a return code of 64. The *reason-code* in the preceding ARC1001I message or in the associated ARC0734I message further clarifies the error that has occurred, as follows:

- 4 A nonzero return code is in register 15 on completion of a FREEPOOL macro. After closing the input data set, DFSMSHsm has issued a FREEPOOL macro to free any I/O buffers that have been acquired by the data management access method routines.
- 8 A nonzero return code is in register 15 on completion of a CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set.
- 12 A CLOSE abnormal end (abend) (X14) has occurred during the processing of the CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during CLOSE processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it is not acceptable to ignore the abend condition. The DCB ABEND exit has been returned to data management with an indication to continue abend processing.
- 16 An abend, other than a CLOSE abend, has occurred during the processing of a CLOSE macro. DFSMSHsm has issued a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during CLOSE processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it is not acceptable to ignore the abend condition. The DCB ABEND exit has been returned to data management with an indication to continue abend processing.
- 20 An abend has occurred during the processing of the CLOSE macro. The DCB ABEND exit has been given control. The parameter list on entry to the DCB ABEND exit has indicated that it is acceptable to ignore the abend condition. The DCB ABEND exit has been returned to data management with an indication to ignore the abend.

The data set has not been successfully backed up, or the backup version has not been successfully moved.

System action: DFSMSHsm processing continues.

Programmer response: For *reason-code* 12, 16, and 20 there should be an associated data management message (prefix IEC) at the computing system console and in the DFSMSHsm job log. For information about the CLOSE and FREEPOOL macros and their associated return codes, see *z/OS DFSMS Using Data Sets* and *z/OS DFSMS Macro Instructions for Data Sets*, respectively.

Source: DFSMSHsm

ARC1365I ERROR CLOSING OUTPUT DATA SET DURING BACKUP

Explanation: During the backup of a data set or the movement of a backup version from one volume to another, an error has occurred when DFSMSHsm has attempted to close the output data set. The output data set is the DFSMSHsm backup version on the target volume. The name of the data set being backed up, or the name of the backup version being moved, appears either in the preceding ARC1001I message, or in the associated ARC0734I message, with a return code of 65. The *reason-code* in the ARC0734I or ARC1001I message further clarifies the error that has occurred, as follows:

- 4 A nonzero return code is in register 15 on completion of a FREEPOOL macro. After closing the input data set, DFSMSHsm issues a FREEPOOL macro to free any I/O buffers that are acquired by the data management access method routines.
- 8 A nonzero return code is in register 15 on completion of a CLOSE macro. DFSMSHsm issues a CLOSE macro to close the input data set.

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- 12 A CLOSE abnormal end (abend) (X14) has occurred during the processing of the CLOSE macro. DFSMSHsm issues a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during CLOSE processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it has not been acceptable to ignore the abend condition. The DCB ABEND exit returned to data management with an indication to continue abend processing.
- 16 An abend, other than a CLOSE abend, has occurred during the processing of a CLOSE macro. DFSMSHsm issues a CLOSE macro to close the input data set. An ESTAE recovery routine has been given control during CLOSE processing. The DCB ABEND exit may also have been given control. If the DCB ABEND exit has been given control, the parameter list on entry to the DCB ABEND exit has indicated that it has not been acceptable to ignore the abend condition. The DCB ABEND exit returned to data management with an indication to continue abend processing.
- 20 An abend has occurred during the processing of CLOSE macro. The DCB ABEND exit has been given control. The parameter list on entry to the DCB ABEND exit has indicated that it has been acceptable to ignore the abend condition. The DCB ABEND exit returned to data management with an indication to ignore the abend.

The data set is not successfully backed up, or the backup version is not successfully moved.

System action: DFSMSHsm processing continues.

Programmer response: For *reason-code* 12, 16, and 20, there should be an associated data management message (prefix IEC) at the computing system console and in the DFSMSHsm job log. For information about the CLOSE and FREEPOOL macros and their associated return codes, see *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC1366I BACKUP OF DATA SET FAILED, DATA SET HAS A RETIRED VERSION

Explanation: One or more backup versions is marked as being a retired version, for example, a backup version of a data set that has been deleted. Because backup command processing can result in the deletion of old backup versions, the request is rejected.

System action: The backup command ends. DFSMSHsm processing continues.

Programmer response: The LIST or HLIST commands can be used to determine which backup versions are considered retired. If the backup version is no longer needed, the BDELETE or HBDELETE commands can be used to delete retired backup versions when the VERSIONS parameter is specified. If the backup version is needed, the RECOVER or HRECOVER command (without the NEWNAME parameter) can be used to recover the data set and turn off the retired version indicators.

Source: DFSMSHsm

ARC1367I ERROR OBTAINING BLOCKID DURING BACKUP

Explanation: A SETSYS command has specified that the 3480 single-file format has been used. During backup command processing of a data set to a 3480 tape volume, DFSMSHsm has issued a NOTE macro to obtain the block ID of the next block to be written. The NOTE macro processing has failed. The data set targeted for backup is named either in the preceding ARC1001I message, or in the associated ARC0734I message, with the return code 67. The ARC1001I or ARC0734I reason codes are as follows:

- 4 Does not support this block ID.
- 8 Invalid input parameters are specified.
- 12 An I/O error has occurred during the RDBLKID command.

System action: The backup command fails. The 3480 tape volume used for output is marked full to prevent its further use and another tape volume is selected for the backup procedure. DFSMSHsm processing continues.

Programmer response: For more information about the NOTE macro and its return codes, see *z/OS DFSMS Using Data Sets* or *z/OS DFSMS Macro Instructions for Data Sets*.

Source: DFSMSHsm

ARC1368I BACKUP FAILED DUE TO AN ERROR IN DFSMSDSS

Explanation: A backup command has been issued for a data set and DFSMSdss is the data set data mover. The DFSMSdss DUMP command has been issued to move the data set. When this message is issued, the corresponding DFSMSdss messages should be consulted. The DFSMSdss messages with prefix ADR are listed in the backup activity log for this failure. The data set name is contained in the preceding ARC1001I or associated ARC0734I message. The value of the last DFSMSdss message number issued for the highest severity error encountered during DFSMSdss processing is also in the ARC1001I or ARC0734I message. In some cases the return code is other than the DFSMSdss message number. These cases are as follows:

1. If the value of this return code is 9999, DFSMSdss has abnormally ended (abend) and DFSMSHsm could not determine the final DUMP return code. The DFSMSdss messages must be used to determine the cause of the failure.
2. If the value of this return code is 9990, then it is a result of an abend in DFSMSdss.

System action: The data set operation ends. DFSMSHsm processing continues.

Programmer response: Review the response required for the DFSMSdss error and take the appropriate action. The DFSMSdss messages are found in *z/OS MVS System Messages, Vol 1 (ABA-AOM)*.

Source: DFSMSHsm

ARC1369I ERROR ON SYNCDEV DURING BACKUP

Explanation: A SETSYS command has specified that the 3480 single-file format is being used. During backup command processing of a data set to a 3480 tape volume, DFSMSHsm has issued a SYNCDEV macro to flush the tape buffer and write the data to the tape. The SYNCDEV macro has failed. The data set targeted for backup is named either in the preceding ARC1001I message, or in the associated ARC0734I message, containing the return code 69. The ARC1001I or ARC0734I reason codes are as follows:

- 4 An invalid device (not a buffered tape) is targeted for the backup function, or invalid input parameters are specified.
- 8 A permanent I/O error has occurred during the RDBLKID or SYNCHRONIZE command.
- 12 A permanent I/O error is indicated for an earlier channel program.

System action: The backup command fails. The 3480 tape volume used for output is marked full to prevent its further use, and another tape volume is selected for the backup procedure. DFSMSHsm processing continues.

Programmer response: For more information about the SYNCDEV macro and its return codes, see *z/OS DFSMS Using Data Sets*.

Source: DFSMSHsm

ARC1370I AN ERROR OCCURRED WHILE DFSMSHSM WAS PROCESSING AN SMS MANAGED DATA SET

Explanation: A backup command was issued for an SMS-managed data set. The data set name is given in the preceding ARC1001I or ARC0734I message, along with the *reason-code*. The reason code has the following meanings:

- 1 The data set is unmatched: The catalog indicates that the data set processing does not have all related data. A data set VTOC entry is not found for the data set.
- 2 The data set is unmatched: The catalog indicates that the data set processing does not have all related data. A VVR entry is not found for the data set. This condition could be the result of a recall being in process at the same time that backup is processing the volume.
- 3 The data set is unmatched: The catalog indicates that the data set processing does not have all related data. A duplicate VVR entry is found for the data set.
- 4 DFSMS is not active or is not installed.
- 5 Error obtaining the management class definition for the data set.
- 7 DFSMSHsm detected a discrepancy between the data set VTOC entry and the catalog information associated with the data set processing. The discrepancy is one of the following:

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- The catalog information indicates that this is an SMS-managed data set (data set is associated with a storage class), but the data set VTOC entry indicates this is a non-SMS-managed data set.
- The catalog information indicates that this is a non-SMS-managed data set (data set is not associated with a storage class), but the data set VTOC entry indicates this is an SMS-managed data set.

10 Error deleting an SMS-managed data set.

11 There is no storage class name in the extract list entry of catalog information. The data set resides on an SMS-managed volume and requires a storage class definition to be processed.

13 The data set is unmatched. The data set processing is uncataloged or cataloged to a different volume than the volume DFSMShsm processed on which the data set is found. The data set is not indicated as being an uncataloged data set, and hence DFSMShsm attempts to process a cataloged data set.

DFSMShsm was attempting to process the data set as cataloged and found it to be unmatched for one of the following conditions:

- The data set is uncataloged.
- The data set was deleted by another job or user while backup was processing the volume.
- The data set was found on the volume being backed up, but is cataloged to a different volume.

System action: Backup command processing of the data set ends. DFSMShsm processing continues.

Programmer response:

1, 2, 3 Run IDCAMS DIAGNOSE against the catalog and or VVDS for the unmatched data set. Take corrective action for any problems detected.

4 If SMS is not installed on the system, it must be installed before DFSMShsm can process any SMS-managed data sets or volumes. If SMS is installed, it needs to be activated.

5 List the catalog information for the data set to determine the management class name. See message ARC0935I in the command activity log for the specific failure. Define the management class if it does not exist. If the management class exists, contact the IBM Support Center.

7 Correct the discrepancy and reissue the request.

10 See message ARC0528I or ARC0545I in the backup activity log or to message ARC0937I or ARC0950I in the command activity log for the specific failure.

11 Correct the discrepancy and reissue the request.

13 If the data set is uncataloged, recatalog the data set using the IDCAMS DEFINE RECATALOG function.

If a catalog entry exists for the same named data set, the data set which failed to be backed up may have been erroneously uncataloged and a new data set with the same name may have been created. If you wish to delete the uncataloged data set in order to prevent DFSMShsm from producing this error for the data set, use the IDCAMS DELETE NVR function.

Note: See *z/OS DFSMS Access Method Services Commands* for information regarding the IDCAMS DEFINE and DELETE functions.

Source: DFSMShsm

ARC1371I USER NOT AUTHORIZED TO BACKUP OS CVOL

Explanation: A backup command was issued for a data set of an OS CVOL. The BACKUP command can only be issued by a user with space management authority or by the system operator. Message ARC1001I precedes this message giving the data set name.

System action: The backup command ends. DFSMShsm processing continues.

Programmer response: Use the HSENDCCMD command or see the storage administrator for authorization.

Source: DFSMShsm

ARC1372I DFSMSHSM ENCOUNTERED AN SMS-RELATED ERROR WHILE OBTAINING AN MVT ENTRY FOR AN SMS MANAGED VOLUME

Explanation: During backup command processing of a data set, DFSMSHsm has attempted to find or build an MVT entry for an SMS-managed volume for processing the backup command. An error has occurred that has caused the function to end. The data set name is given in the preceding ARC1001I message, along with a reason code. The reason codes have the following values and meanings:

- 4 SMS is not active in the system.
DFSMSHsm attempts to process an SMS-managed volume, but SMS is not active in the system.
- 5 Error reading volume VTOC entry for the volume being selected.
DFSMSHsm reads the volume VTOC entry to determine if the volume being selected is an SMS-managed volume. The read fails.
- 6 Error retrieving an SMS volume definition.
After the volume being selected is determined to be an SMS-managed volume (by reading the volume VTOC entry), DFSMSHsm has invoked SMS to retrieve a SMS volume definition. SMS fails to retrieve it.
- 7 An error has occurred while retrieving a storage group definition for an SMS volume.
After the volume definition has been retrieved for the volume, DFSMSHsm invoked SMS to retrieve a storage group definition for the volume. SMS fails to retrieve it.
- 9 The volume being selected is in SMS initial status.
DFSMSHsm reads the volume VTOC entry to determine if the volume being selected is an SMS-managed volume. The volume VTOC entry indicates that the volume is in SMS initial status. DFSMSHsm cannot process a volume in SMS initial status.
- 11 DFSMSHsm cannot determine if the volume being selected is an SMS-managed volume. The SMS volume definition and the volume VTOC entry do not agree.
- 13 If the data set is uncataloged, recatalog the data set using the IDCAMS DEFINE RECATALOG function.
If a catalog entry exists for the same named data set, the data set which has failed to be backed up may have been erroneously uncataloged and a new data set with the same name may have been created. If you wish to delete the uncataloged data set in order to prevent DFSMSHsm from producing this error for the data set, use the IDCAMS DELETE NVR command.

Note: See *z/OS DFSMS Access Method Services Commands* for information regarding the IDCAMS DEFINE and DELETE commands.
- 15 An error has occurred while reading or writing a migration control data set (MCDS) volume record (MCV).
DFSMSHsm reads an MCV record for the volume being selected. The read failed, and an ARC0184I message has been issued to indicate the error. If no MCV record existed for the volume, DFSMSHsm has attempted to create an MCV record for the volume. The creation has failed, and an ARC0184I message has been issued to indicate the error.
- 19 The volume being selected is not mounted.
DFSMSHsm has attempted to locate the unit control block (UCB) for the volume being selected and finds that the volume is not mounted.
- 52 A GETMAIN error has occurred.
DFSMSHsm has failed to get virtual storage for creating a mounted volume table (MVT) entry for an SMS-managed volume.

System action: The backup ends. DFSMSHsm processing continues.

Programmer response: Perform the action that corresponds to the reason code you received:

- 5 The *reason-code* for this error is the return code from the CAMLST OBTAIN macro. See *z/OS DFSMSdfp Advanced Services* for further information about the CAMLIST OBTAIN macro.

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- 6, 7 See the preceding ARC0935I message in the command activity log for the specific failing code from the subsystem interface (SSI) of SMS.
- 11 Determine why the SMS volume definition and volume VTOC entry do not agree. Correct the inconsistency and issue the BACKDS command.
- 15 See the preceding ARC0184I message in the appropriate activity log for the specific I/O failing code.
- 52 See the preceding ARC0305I message for the specific failing code.

Source: DFSMSHsm

ARC1373I PDSE DATA SET COULD NOT BE PROCESSED FOR BACKUP

Explanation: A request sent to DFSMSHsm to back up a PDSE data set, failed because one of the following conditions occurred. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

The values for *reason-code* are:

- 4 DFSMSHsm is the data mover.
- 8 The level of MVS/SP on the processing unit that attempted to process this data set was insufficient to support PDSE data sets. MVS/SP 3.2 and DFP 3.2.0, or greater, are required.

System action: The backup command processing of this data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator. If DFSMSHsm is running in a multiprocessing unit environment, and there is another processing unit that can support PDSE data sets, process this data set on the other processing unit.

Source: DFSMSHsm

ARC1374I DATA SET/VOLUME BACKUP OR VOLUME DUMP FAILED — FUNCTION HELD

Explanation: A data set or volume backup was being requested, but HOLD BACKUP was in effect, or a volume dump was being requested, but HOLD DUMP was in effect. Message ARC1001I gives the data set or volume name and the reason code.

Retcode Meaning

- 02 Data set backup to DASD is held.
- 03 Data set backup to TAPE is held.

System action: The data set or volume is not processed. DFSMSHsm processing continues.

System programmer response: To ensure that data set backup processes successfully while TAPE is held, you can issue TAPE(TASKS(0)) or increase the DASDSELECTIONSIZE(max) value, or both.

Programmer response: Reissue the command after the operator issues a RELEASE BACKUP or RELEASE DUMP command.

Source: DFSMSHsm

ARC1376I ERROR LINKING TO DFSMSDSS DURING BACKUP

Explanation: A request sent to DFSMSHsm to back up a data set failed when the LINK macro used to invoke DFSMSDss for data movement failed. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: The backup of the data set ends if this is HBACKDS or BACKDS command processing. The backup of the volume ends if this is volume or automatic processing. Backup and migration are held until the problem is fixed. A SNAP dump is generated on the first occurrence. DFSMSHsm processing continues.

Programmer response: Review the abnormal end code that is displayed as the reason code in the preceding ARC1001I or associated ARC0734I message.

Source: DFSMSHsm

ARC1377I ERROR ALLOCATING DUMMY DD DURING BACKUP

Explanation: DFSMSHsm is backing up a data set using DFSMSdss data movement. A request sent to DFSMSHsm to back up the data set failed when the allocation of a dummy DD for DFSMSdss dump failed. The dynamic allocation error codes are identified in the preceding ARC0503E message. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: Backup command processing of the data set ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator. The storage administrator should review the ARC0503E message and its dynamic allocation codes to determine the type of failure and possible causes.

Source: DFSMSHsm

ARC1378I UNCATALOGUED DATA SET COULD NOT BE PROCESSED FOR BACKUP

Explanation: A request sent to DFSMSHsm to back up an uncatalogued data set failed because DFSMSdss was the data mover or because the data set is backed up with the RETAINDDAYS keyword specified.. The data set name is contained in the preceding ARC1001I or associated ARC0734I message. The *return-code* in the ARC1001I or ARC0734I message has a value of 78 (to correspond to the ARC1378I message). The *reason-code* in the ARC1001I or ARC0734I message lists the reason that DFSMSHsm could not back up the data set.

Retcode Meaning

- 0 User specified *volser* and unit *unittype* on the BACKDS or HBACKDS command which indicates backup of an uncatalogued data set.
- 4 Data set is not catalogued.
- 8 Data set is catalogued, but not in an integrated catalog facility (ICF) catalog.

System action: Backup command processing of this data set ends. DFSMSHsm processing continues.

Programmer response: Catalog the data set in an ICF catalog.

Source: DFSMSHsm

ARC1380I BACKUP VERSION INVALIDATED DURING SPILL PROCESSING

Explanation: The SPILL process was running. A VTOC to the DASD backup volume was read and a list of valid versions to move was built. Later, when the movement occurred, the BCDS data set record that describes the backup version was found to be missing. The most likely reason for this to occur is that the backup version was deleted between the time the list was built and the time the list was processed.

Another possible reason for this error is that the index to the BCDS has been destroyed and must be recovered. This condition would be indicated by the occurrence of several messages related to errors accessing the BCDS. The delete can happen because a new version was created (automatically or by command), or a BDELETE command was issued for it.

System action: None.

Programmer response: No action is needed now unless this message is issued frequently. DFSMSHsm will correct the situation the next time the backup volume is cleaned up.

Source: DFSMSHsm

ARC1381I BACKUP OF DATA SET=*dsname* TO NEWNAME=*newdsname* FAILED, RC=*retcode*

Explanation: A request to DFSMSHsm for a backup of data set *dsname* failed. The NEWNAME parameter or one of its associated keywords was specified on the backup request. The reason for the failure is explained as determined by the *retcode*.

Retcode Meaning

- 2 DATE, TIME, SPHERE, or GENVSAMCOMPNames specified without NEWNAME.
- 3 GENVSAMCOMPNames specified without required YES/NO parameter.
- 4 TIME specified without DATE.

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- 6 NEWNAME specified with VOLUME and UNIT.
- 8 Multiple data sets were specified for backup to the new name *newdsname*.
- 10 *Dsname* and *newdsname* are the same.
- 12 Invalid date specified.
- 14 Invalid time specified.
- 16 Data set *dsname* is uncataloged.
- 18 Data set *dsname* is migrated.
- 20 Backup of data set *dsname* is not supported with the NEWNAME parameter.
- 22 DFSMSHsm internal error.
- 24 *Dsname* is a VSAM data set, and *newdsname* is uncataloged or migrated. DFSMSHsm is unable to assign the proper new names to the data and index components.
- 26 Data set *newdsname* is uncataloged or has been migrated outside of DFSMSHsm, and data set *dsname* is VSAM with associated AIX/PATH components. Therefore, DFSMSHsm is unable to determine the new names to assign to the AIX/PATH components. If the data set is cataloged and was not migrated outside of DFSMSHsm, an error occurred while reading a cds record associated with data set *newdsname*.
- 28 Data sets *dsname* and *newdsname* do not have the same number of AIXs, PATHs on the AIX, and/or PATHs on the base cluster.
- 30 Error occurred while reading a cds record associated with data set *newdsname*.
- 32 User not authorized to data set *newdsname*, or error processing RACF authority check.
- 34 Error processing data set *newdsname*.
- 36 The maximum number of backup versions DFSMSHsm is to maintain for data set *newdsname* is zero. Either an (H)ALTERDS command was issued for the data set, and the value specified for VERSIONS is zero, or if never specified on an (H)ALTERDS command, the value specified for VERSIONS on the SETSYS command is zero.
- 38 Data set *newdsname* has a retired backup version.
- 40 A backup version with the specified date and time already exists for data set *newdsname*.
- 42 Error occurred while invoking the ACS routines for data set *newdsname*.
- 44 Error occurred while obtaining the management class definition for data set *newdsname*.
- 46 Management class attributes indicate that data set *newdsname* is not eligible to back up. One of the following applies:
- A non-DFSMSHsm-authorized user issued the command and management class attribute ADMIN-OR-USER-COMMAND-BACKUP=BOTH is not indicated.
 - A DFSMSHsm-authorized user issued the command and management class attribute ADMIN-OR-USER-COMMAND-BACKUP=NONE is indicated.
- 48 Only one AIX and one PATH can exist for the data set to back up as well as the data set specified as the NEWNAME parameter.
- 50 Data sets *dsname* and *newdsname* do not have the same SMS-managed/non-SMS-managed status.
- 52 A GETMAIN error occurred.
- 54 Data sets *dsname* and *newdsname* do not have the same data set organization.
- 56 Data sets *dsname* and *newdsname* do not have the same base cluster structure. One data set has an index component, and the other does not.
- 58 The date specified with the DATE keyword is prior to the date of the oldest existing backup version of data set *newdsname*, and the maximum number of backups of this data set has been reached. Therefore, the version was rolled-off.
- 60 RETAINDDAYS was specified with NEWNAME and DATE. Creating a new version with the specified date and retention period would result in a backup copy that has already expired.

- 62 RETAINDAYS was specified with NEWNAME and DATE, and the specified date is earlier than the date when the most recent retained backup copy was created. This would result in creating a backup version within the set of existing retained copies, which is not allowed.

System action: The backup request fails. DFSMShsm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the backup request.

Retcode Meaning

- 2 Reissue the backup request with the NEWNAME keyword.
- 3 Reissue the backup request with the proper GENVSAMCOMP NAMES parameter.
- 4 Reissue the backup request with the DATE keyword, or remove the TIME keyword and reissue the backup request.
- 6 Reissue the backup request without the VOLUME and UNIT keywords.
- 8 Reissue the backup request specifying a single, fully-qualified data set name as the data set to be backed up.
- 10 Reissue the backup request without the NEWNAME keyword, or correct the NEWNAME parameter and reissue the command.
- 12 Reissue the backup request and specify the date in the following format: yyyy/mm/dd. Ensure that the date specified is not beyond the current date.
- 14 Reissue the backup request and specify the time if the following format: hhmmss. If the current date is specified, ensure the time is not beyond the current time.
- 16 Determine if the correct data set name was specified. DFSMShsm only supports the NEWNAME keyword for cataloged data sets.
- 18 Recall the data set and then reissue the backup request.
- 20 Some data set types, such as the following, are not supported for backup with the NEWNAME parameter: User labeled sequential non-empty data sets, ICF catalogs, unmoveable data sets with one extent, and APF authorized libraries.
- 22 Contact the IBM Support Center.
- 24 Reissue the backup request with the GENVSAMCOMP NAMES(YES) parameter.
- 26 If the data set is uncataloged or was migrated outside of DFSMShsm, reissue the backup request with the SPHERE(NO) parameter. Otherwise, contact the IBM Support Center.
- 28 Reissue the backup request with the SPHERE(NO) parameter.
- 30 Contact the IBM Support Center.
- 32 If RACF denied access, there is an associated RACF message. If the data set name and DSCB do not match, there is an associated access method message. If an I/O error caused the reading of the JFCB to fail, an associated error message can be found in the DFSMShsm job log SYSMSG data set. Respond to the associated message.
- 34 See the corresponding message ARC1356I for further explanation of the error.
- 36 Issue an (H)ALTERDS command for the data set and specify a positive non-zero value for the VERSIONS parameter. Then reissue the backup request.
- 38 Determine if the retired version must be maintained. Issue the BDELETE command to delete the retired version and then reissue the backup request.
- 40 Determine if the correct date and time were specified on the command. If necessary, use the BDELETE command to delete the existing version with the same timestamp. Then reissue the backup request.
- 42 If SMS is active, contact the IBM Support Center.
- 44 If data set *newdsname* is cataloged, list the catalog information for the data set to determine the management class name. See message ARC0935I in the command activity log for the specific failure. Define the management class if it does not exist. If the management class exists, contact the IBM Support Center.
- 46 If the command failed because the user is not authorized, perform one of the following:

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- Issue the command from a DFSMSHsm-authorized user.
- Associate the data set with a management class that does not require the user to be DFSMSHsm-authorized.

If the command failed because ADMIN-OR-USER-COMMAND-BACKUP=NONE, associate the data set with a management class that does not specify ADMIN-OR-USER-COMMAND-BACKUP=NONE.

48 Reissue the command with the SPHERE(NO) parameter.

Note: When DFSMSHsm backs up a data set with the SPHERE(NO) option, the user must rebuild any associated AIXs/PATHs when the data set is recovered.

50 Determine if the correct data set names were specified on the command. If an incorrect data set name was specified, reissue the backup request with the proper data set names.

52 Contact the IBM Support Center.

54 Determine if the correct data set names were specified on the command. If an incorrect data set name was specified, reissue the backup request with the proper data set names.

56 Determine if the correct data set names were specified on the command. If an incorrect data set name was specified, reissue the backup request with the proper data set names.

58 Determine if any of the existing backup versions can be deleted with the (H)BDELETE command. Then reissue the BACKDS NEWNAME DATE command.

60 Ensure that the specified DATE and RETAIN_DAYS parameters are correct. If necessary, reissue the backup request with the proper parameters.

62 Ensure that the date specified on the backup request is correct. If the specified date was correct, and this new version must be created, either reissue the request specifying a date that is after the date of the most recent retained backup copy, or use the BDELETE command to delete all retained copies with dates after the date specified on the command and then reissue the original request. Issue the LIST DATASET NAMES command to obtain a list of all retained backup copies and corresponding dates for this data set.

Source: DFSMSHsm

ARC1384I FAILURE DURING BACKVOL DUMP PROCESSING

Explanation: An error was detected by the module ARCDRDSS while DFSMSHsm was performing volume dump processing. The corresponding ARC1001I message identifies the volume being dumped. The cause of the failure can be identified by the *reason-code* field in the ARC1001I message:

- 2 Early termination, DFSMSHsm shut down. RECOVER held at END-OF-DATA-SET, DUMP held at END-OF-DATA-SET, AUTO DUMP held at END-OF-DATA-SET, BACKUP disabled, or DFSMSHsm is in emergency mode.
- 4 Error creating, updating or reading the DVL record during DUMP or error adding the volume to DFSMSHsm's RACF tape volume set.
- 6 Operator refused to mount a tape during an end of volume condition.
- 8 Operator refused to mount a tape during initial open processing.
- 10 Shutdown was requested while waiting for a tape to be mounted.
- 12 40 volume limit was exceeded during DUMP operation.
- 16 DFSMSdss error.
- 20 Failure attempting to attach DFSMSdss task.
- 30 An OPEN or CLOSE ABEND was detected by DFSMSdss and reported in message ADR049E.
- 400® Invalid macro identifier.
- 401 Function request not specified.
- 402 Full volume DUMP requested, but the pointer to the DGN record was not specified.
- 403 Pointer to the caller's RCB not specified.

- 404 Pointer to input volume MVT not specified.
- 405 Pointer to output volume MVT not specified for restore request.
- 406 Pointer to the data set name to be restored not specified.
- 407 RENAMEUNCONDITIONAL requested, but the pointer to the new name of the data set was not specified.
- 408 Full volume dump requested, but the number of DUMP copies to be created for this generation was not specified.
- 409 The number of output MVTs passed is not the same as the number of dump copies to be reproduced for this generation.
- 410 Invalid completion code in ECB.
- 411 More than one function was requested.
- 412 Data set restore requested without DFSMS work area pointer.
- 9XX Abend occurred in the DFSMSdss task (xx is the return code from DFSMSdss prior to 900 being added to it).

System action: The BACKVOL processing fails. DFSMSHsm processing continues.

Programmer response: Take corrective action according to the *reason-code* in message ARC1001I.

Source: DFSMSHsm

ARC1385W DFSMSHSM HAS BACKED UP A VSAM KEYRANGE DATA SET. THE KEYRANGES MAY BE REMOVED.

Explanation: The data set being backed up is a VSAM keyrange data set. VSAM keyrange data sets are not fully supported for backup or recover when DFSMSHsm (IDCAMS) is specified as the datamover. When a data set is recovered, the associated keyrange will be removed.

System action: The backup operation ends. DFSMSHsm processing continues.

System programmer response: The data set can be successfully backed up and recovered without losing the keyranges by using DFSMSdss as the datamover. In order to use DFSMSdss as the datamover, do not use the "PATCH .DMVST.+0" command.

Source: DFSMSHsm

ARC1386I DFSMSHSM SHUTDOWN WAS ISSUED WHILE DATA SET BACKUP WAS WAITING FOR A TAPE MOUNT

Explanation: DFSMSHsm was shut down while the backup task was waiting for a tape mount. The data set name is given in message ARC1001I or ARC0734I.

System action: The backup operation ends.

Programmer response: Reissue the BACKUP after DFSMSHsm is restarted.

Source: DFSMSHsm

ARC1387I A DISCREPANCY WAS FOUND IN THE DATA SET VTOC ENTRY

Explanation: DFSMSHsm was attempting to backup a data set and encountered a data set VTOC entry that is inconsistent with IBM standards. The data set name is given in the preceding ARC1001I message along with the *reason-code* for the type of discrepancy found. The reason codes have the following meanings:

- 2 The data set has a discrepancy in the data set VTOC entry and is indicated to be a PDSE data set. The data set VTOC entry indicates the data set to be a non-SMS-managed data set. PDSE data set must be SMS-managed.
- 4 A data set has a discrepancy between its catalog entry and its data set VTOC entry indicating this is not a PDSE data set. The catalog entry indicates this data set is a PDSE and the data set VTOC entry indicates it is not a PDSE.

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- 6 The data set has a discrepancy between its data set VTOC entry and its catalog entry indicating this is not a PDSE data set. The data set VTOC entry indicates this data set is a PDSE and its catalog entry indicates it is not a PDSE.
- 8 The data set has a discrepancy between its data set VTOC entry and its VSAM volume data set (VVDS) entry indicating this is not a PDSE data set. The data set VTOC entry indicates this data set is PDSE and the VVDS indicates this data set is not PDSE.
- 10 The data set has a discrepancy between its VSAM volume data set (VVDS) entry and its data set VTOC entry indicating this is not a PDSE data set. The VVDS indicates this data set is PDSE and the data set VTOC entry indicates this data set is not PDSE.

System action: Backup command processing ends. DFSMSHsm processing continues.

Programmer response: Correct the discrepancy. In most cases, the data set VTOC entry needs to be corrected based on the true attributes of the data set.

Source: DFSMSHsm

ARC1388W DATA SET BACKUP {DASD | TAPE} TASKS ALLOWED IS REDUCED FROM *mm* TO *nn*

Explanation: While performing data set backup, a required resource was not available. If tape tasks is indicated, the maximum number (*mm*) of allowed tasks has been reduced because tape resources were not available.

System action: Data set backup continues, using the new value (*nn*). If *nn* is reduced to zero and data set backup goes to tape, DFSMSHsm will continue to back up data sets to ML1 DASD that are below the value specified by DASDSELECTIONSIZE(maximum), or that specify the TARGET(DASD) on the backup command.

Operator response: Notify the system programmer.

System programmer response: Correct the problem that led up to the mount refusal and ensure that enough tape drives are available to satisfy the number of tapes allowed on DFSMSHsm. After correcting these problems, either release data set backup or change the data set backup SETSYS values so that DFSMSHsm uses new values for the number of allowed tasks.

Source: DFSMSHsm

ARC1389E NO DATA SET {TAPE | DASD} TASKS CAN BE STARTED

Explanation: The maximum number of allowed data set backup tape or DASD tasks is zero. This means that no tape or DASD tasks can be started. If neither tape nor DASD tasks can be started, WAIT requests will fail and NOWAIT requests will process when tape or DASD tasks are again allowed.

System action: DFSMSHsm processing continues.

Operator response: Notify the system programmer.

System programmer response: If a data set backup to tape is desired, ensure that the number of tape tasks allowed is not zero and that necessary tape resources are available. If tape tasks are desired, then either release data set backup or change data set backup SETSYS values to have DFSMSHsm use the SETSYS maximum values for tape allowed tasks.

Source: DFSMSHsm

ARC1390I NO DATA SET BACKUP TAPE TASKS CAN BE STARTED. DASDSELECTIONSIZE IS IGNORED

Explanation: The maximum number of allowed data set backup tape tasks is zero because a SETSYS DSBACKUP(TAPE(TASKS(0))) was issued. Data set backup work will now be processed to DASD.

System action: DFSMSHsm will back up all data sets to ML1 DASD.

Operator response: Notify the system programmer.

System programmer response: If data set backup to tape is desired, ensure that the number of allowed tape tasks is not zero and that necessary tape resources are available. If tape tasks are desired, then either release data set backup or change data set backup SETSYS values so that DFSMSHsm uses the SETSYS maximum values for tape allowed tasks.

Source: DFSMSHsm

ARC1392I TERMINATING DFSMSHSM BACKUP WAIT REQUEST, DFSMSHSM SHUTTING DOWN

Explanation: DFSMSHsm is shutting down because of an abnormal end, MVS CANCEL, FORCE, or normal shutdown. During shutdown, all wait-type backup requests not yet processed are purged from the common service area (CSA) queue.

System action: DFSMSHsm ends.

Programmer response: Restart DFSMSHsm and resubmit the request.

Source: DFSMSHsm

ARC1393I FAST REPLICATION DUMP FAILED

Explanation: Fast replication dump failed. The corresponding ARC1001I message identifies the volume being dumped. The cause of the failure can be identified by the reason code field in message ARC1001I. The reason code field in message ARC1001I indicates which ARC18nn message should be referenced.

System action: Fast replication dump processing fails. DFSMSHsm processing continues.

Programmer response: Take the corrective action according to the reason code in message ARC1001I.

Source: DFSMSHsm

ARC1395I REFUSAL TO MOUNT TAPE ENDED BACKUP

Explanation: During backup, a request to mount a tape was refused. The data set name and reason code are given in message ARC1001I if this was a data set backup request, or in message ARC0734I if this was a BACKVOL request.

The meanings for *return-code* values are:

Retcode Meaning

- 4 An INITIAL tape mount request was refused.
- 8 An EOVS tape mount request was refused.

System action: The backup operation ends.

Programmer response: Reissue the backup command when tapes can be mounted or issue a data set backup command with TARGET(DASD) option.

Source: DFSMSHsm

ARC1396I FAILURE DURING BACKVOL DUMP PROCESSING

Explanation: An error was detected while DFSMSHsm was processing a dump of a volume or storage group. The corresponding ARC1001I message identifies the volume being dumped. The cause of the failure can be identified by the *reason-code* field in the ARC1001I message:

- 01 Source volume in use by another DFSMSHsm function (usually after 2 attempts, separated in time).
- 08 Serialization of the source volume, or the SDSF data set on the source volume failed.
- 10 No eligible dump classes.
- 11 Nonzero return code other than 10 from volume dump processing.
- 12 Nonzero return code from volume allocation.
- 14 Nonzero return code from dump volume selection.
- 16 Early termination condition exists.
- 17 Nonzero return code from generating a VTOC or VCAT copy data set name.
- 18 Nonzero return code from VTOC copy data set utility.
- 20 Nonzero return code from invoking DFSMSDss dump or restore function.
- 22 Error writing new DGN record.

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- 24 Error reading MCP record.
- 26 Error updating MCP record.
- 52 GETMAIN error.
- 400 Invalid input index.
- 401 Input index does not point to valid DTCB.

System action: BACKVOL command processing fails. DFSMSHsm processing continues.

Programmer response: Take corrective action according to the *reason-code* in message ARC1001I.

Source: DFSMSHsm

ARC1397I DFSMSHSM INTERNAL ERROR DURING BACKUP

Explanation: An unknown error has occurred during allocation of a data set identified in message ARC1001I. Associated with this message is a dynamic allocation message in the data set defined in the DFSMSHsm cataloged procedure as MSYSOUT. There is a SNAP dump associated with this error in the SYSOUT data set for the DFSMSHsm job. The return code and reason code are given in message ARC1001I. If the return code is 97, the reason code is the dynamic allocation return code and is printed in hexadecimal format. For information about dynamic allocation return codes and reason codes, see the *z/OS MVS Programming: Authorized Assembler Services Guide*.

System action: The backup operation described in message ARC1001I ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator or system programmer. There might be a data set with a duplicate name on the volume. If so, scratch the data set with the duplicate name, and retry the command. If not, respond as indicated to the dynamic allocation message.

Source: DFSMSHsm

ARC1398I SOURCE BACKUP COPY COULD NOT BE SCRATCHED WHILE MOVING BACKUP VERSION

Explanation: While trying to move a backup copy from one device to another, the scratch of the source data set failed. There may be an associated ARC0528I message with further information.

System action: The affected backup copy is not moved.

Programmer response: No response is necessary. The next time that autobackup processing moves backup versions, it will retry the move. Or if you want, you can run the FREEVOL command with the ML1BACKUPVERSIONS parameter.

Source: DFSMSHsm

ARC1399I UNSUPPORTED DATA SET FOR BACKUP

Explanation: A backup command was issued for a data set that DFSMSHsm did not back up. There are some data set types not be backed up by the DFSMSHsm, either automatically or by command. The data set name is contained in the preceding ARC1001I or associated ARC0734I message. In the ARC1001I or ARC0734I message, *return-code* has a value of 99 (corresponding to the ARC1399I message). The *reason-code* in the ARC1001I or ARC0734I message lists the reason DFSMSHsm could not back up the data set.

The values for *reason-code* are:

Reascode

Meaning

- 4 Unsupported data set organization. Unsupported types of data sets might be identified prior to checking for backup eligibility.
- 7 Unable to determine data set size.
- 8 The data set organization is supported, but the block size is invalid. The block size of the data set is zero, or the block size of the data set plus the key length is greater than the maximum block size supported (which is device dependent), and the track overflow bit (in the data set VTOC entry for the data set, or in the UCB for the device) is off.

- 12 Unsupported standard-user-label data set, which is either a model DSCB, a nonsequential data set, an empty data set, or an unmovable data set.
- 14 Standard-user-label data sets are not supported by the inline backup function.
- 16 Split cylinder (or shared extent) data set.
- 20 Unmovable data set with more than one extent on the volume.
- 22 The data set is a multivolume BDAM data set.
- 24 Unsupported sequential data sets with the last-volume indicator turned off, or any data set with the volume sequence number greater than 1, and the data set name is not SYSCTLG. This usually occurs on a multivolume data set. Non-SMS multivolume data sets are not supported.
- 28 VSAM volume data set (SYS1.CATALOG ENTRY).
- 36 Invalid data set name.
- 40 The data set occupies more than 65535 tracks and it is not a VSAM, PDSE, or extended format data set.
- 45 The data set is a VSAM data set with more than 17 AIXs defined to it.
- 50 Backup of an uncataloged PDSE is not supported.

System action: The data set backup operation ends. DFSMSHsm processing continues.

Programmer response: If it is necessary to have a backup version of the data set, create the backup version using a method other than DFSMSHsm.

Source: DFSMSHsm

ARC1400I DSN=*dsn*, SIZE= - *nnnn* M-BYTES

Explanation: The data set size being passed to a installation-wide exits program for analysis is greater than 2 TB. Because the data set is larger than 2TB in size, DFSMSHsm passed a value of X'7FFFFFFF' to one of its installation-wide exits. This message, however, shows the actual size of the data set.

In the message text:

dsn The name of the data set.

nnnn The real size of the data set in megabytes. The data set size value to be processed is greater than the limit of FIXED(31) size in kilobytes. The maximum value of X'7FFF FFFF' kilobytes is set to the variable being processed.

System action: Processing continues.

Operator response: None.

System programmer response: None.

Programmer response: None.

Source: DFSMSHsm

ARC1492I TERMINATING DFSMSHSM LIST WAIT REQUEST, DFSMSHSM SHUTTING DOWN

Explanation: DFSMSHsm is shutting down because of an abnormal end (abend), MVS CANCEL, FORCE, or normal shutdown. During shutdown, all wait-type list requests not yet processed are purged from the common service area (CSA) queue.

System action: DFSMSHsm ends.

Programmer response: If DFSMSHsm ends because of an abend, determine the cause of the abend and correct the problem. Restart DFSMSHsm and resubmit the request.

Source: DFSMSHsm

ARC1500I

ARC1500I PLEXNAME = *HSMplex_name*, PROMOTE PRIMARYHOST = {YES | NO}, PROMOTE SSM = {YES | NO}, COMMONQUEUE RECALL BASE NAME = {*basename* | *****}, COMMON RECALL QUEUE TAPEDATASETORDER = {PRIORITY | FBID | *****}, COMMON DUMP QUEUE BASE NAME={*basename* | *****} AND MSC = {YES | NO | ***}

Explanation: A QUERY command was issued with the SETSYS parameter. This messages describes the current implementation.

Parameter

Meaning

PLEXNAME=*HSMplex_name*

The name of the HSMplex of which this host is a member. The default name is ARCPLEX0. If this host is active on a system in XCF-local mode, then this value is not used.

PROMOTE PRIMARYHOST =

YES This host is eligible to be promoted for the responsibilities of the DFSMSHsm primary host.

NO This host is not eligible to be promoted for the responsibilities of the DFSMSHsm primary host.

PROMOTE SSM =

YES This host is eligible to be promoted for the responsibilities of a DFSMSHsm SSM host.

NO This host is not eligible to be promoted for the responsibilities of a DFSMSHsm SSM host.

COMMON RECALL QUEUE

BASE NAME *basename*

is prefixed by 'SYSARC_' and suffixed by '_RCL' to specify the structure name that is to be used for the common recall queue. ***** indicates that *basename* has not been specified.

TAPEDATASETORDER =

PRIORITY

DFSMSHsm recalls data sets from a single tape in priority order and in FIFO order within the same priority.

FBID DFSMSHsm recalls data sets from a single tape in ascending FBID order.

***** This host is not connected to the CRQ.

COMMON DUMP QUEUE

BASE NAME *basename*

is the name of the dump common queue specified on the SETSYS CQ(DUMP(CONNECT(*basename*))) that is running in the HSMplex_name. ***** indicates that a SETSYS CONNECT has not been specified for the dump common queue.

MSC =

YES This host can be the master scheduler for the common dump queue. The system enabled to be the master scheduler is assigned at DFSMSHsm startup or during recovery.

NO This host cannot be the master scheduler for the common dump queue.

*** This host did not receive the MSC sub-parameter on the SETSYS command. By default this host can be the master scheduler for the common dump queue. The system enabled to be the master scheduler is assigned at DFSMSHsm startup or during recovery.

System action: DFSMSHsm continues processing.

Programmer response: None.

Source: DFSMSHsm

ARC1501I CONNECTION TO STRUCTURE *structure_name* WAS {SUCCESSFUL | UNSUCCESSFUL}, RC = *retcode*, REASON = *reascode*

Explanation: DFSMShsm attempted to connect to the coupling facility list structure that was specified by the SETSYS COMMONQUEUE(*function* (CONNECT(*basename*))) command. The return code and reason code are those that were returned by coupling facility connection services. For an explanation of the return and reason codes, see the IXLCONN macro in *z/OS MVS Programming: Sysplex Services Reference*.

function can be derived from *structure_name* as follows:

Function	Recall	Structure_name
		SYSARC_ <i>basename</i> _RCL

Return Code
Response

X'00', X'04'
DFSMShsm successfully connected to the specified structure.

X'08' Invocation error. An internal DFSMShsm error occurred.

X'0C' The specified structure is temporarily unavailable.

X'10' Fatal Coupling Facility error. An internal XES error occurred.

System action: If the connection was successful, this DFSMShsm host is enabled to exploit the function provided by the specified structure. If the connection was unsuccessful, the DFSMShsm host continues to process requests locally. DFSMShsm processing continues.

Programmer response:

Return Code
Response

X'00', X'04'
None

X'08' Contact IBM support.

X'0C' Based on the return code and reason code, determine why the structure is temporarily unavailable. Take any necessary action. DFSMShsm will automatically retry the connection when the system notifies it that the specified structure is available.

X'10' Contact IBM support.

ARC1502I DISCONNECTION FROM STRUCTURE *structure_name* WAS {SUCCESSFUL | UNSUCCESSFUL}, RC = *retcode*, REASON = *reascode*

Explanation: DFSMShsm attempted to disconnect from the coupling facility list structure specified by the SETSYS COMMONQUEUE(*function* (DISCONNECT)) command. The return code and reason code are those that were returned by coupling facility connection services. For an explanation of the return and reason codes, see the IXLDISC macro in *z/OS MVS Programming: Sysplex Services Reference*.

function can be derived from *structure_name* as follows:

Function	Recall	Structure_name
		SYSARC_ <i>basename</i> RCL

Return Code
Response

X'00', X'04'
DFSMShsm successfully disconnected from the specified structure.

X'08' Invocation error. An internal DFSMShsm error occurred.

X'0C' There are no coupling facility services available.

X'10' Fatal coupling facility error. An internal XES error occurred.

System action: For RC = X'00' or X'04', DFSMShsm discontinues use of the structure. For RC = X'08' or X'10', DFSMShsm continues to use the structure. For RC = X'0C', no action is taken. DFSMShsm processing continues.

ARC1503E • ARC1505E

Programmer response:

Return Code

Response

X'00', X'04'

None

X'08' Contact IBM support.

X'0C' Based on the return code and reason code, determine why the structure is temporarily unavailable. Take any necessary action.

X'10' Contact IBM support.

ARC1503E THIS HOST LOST ITS CONNECTION TO STRUCTURE *structure_name* DUE TO A {CONNECTIVITY LOSS | STRUCTURE FAILURE | DFSMSHsm ABEND}

Explanation: This host unexpectedly lost its connection to the specified structure. DFSMSHsm will continue processing any remote requests that it has currently selected, but will be unable to notify the originating host when they complete. All requests on the common recall queue that are associated with the failed structure that originated on this host will be processed by this host. See *z/OS DFSMSHsm Storage Administration* for more information.

System action: For the cases of a connectivity loss or structure failure, DFSMSHsm will attempt to reconnect when it is notified by the system that the structure is available. In the case of a DFSMSHsm abend, DFSMSHsm discontinues use of the structure.

Programmer response: Determine the cause of the failure. If you do not want DFSMSHsm to reconnect to the structure when it becomes available, issue SETSYS COMMONQUEUE(*function*(DISCONNECT)), where *function* corresponds to the subject structure. To continue to use the structure after an abend, reissue the SETSYS COMMONQUEUE CONNECT command.

function can be derived from *structure_name* as follows:

	Structure_name
FunctionRecall	SYSARC_ <i>basename</i> _RCL

ARC1504I DISCONNECTION FROM STRUCTURE *structure_name* MAY BE DELAYED

Explanation: DFSMSHsm is in the process of disconnecting from the specified structure. The actual disconnection will not be performed until the following conditions are met:

- The host has moved all of its unselected requests from the common queue to the local queue.
- The host has completed all remote requests that it is currently processing.
- Requests that were initiated on this host that are currently being processed by a remote host have completed.

After these conditions are met, the host will disconnect from the specified structure and issue message ARC1502I.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1505E THE {ENTRIES | ELEMENTS} FOR STRUCTURE *structure_name* ARE MORE THAN 95% IN-USE. ALL NEW REQUESTS WILL BE DIRECTED TO THE LOCAL QUEUE.

Explanation: The entries or elements for the specified structure *structure_name* are more than 95% in-use. In order to prevent in-process requests from failing, DFSMSHsm discontinues placing requests onto the specified structure. DFSMSHsm will resume placing requests onto the structure once it is below 85% full.

System action: DFSMSHsm processing continues.

Programmer response: Increase the size of the specified structure through an ALTER or REBUILD to prevent this from occurring again.

ARC1506E AN INVOCATION OF THE COUPLING FACILITY LIST STRUCTURE {IXLLSTC | IXLLSTE | IXLLSTM} MACRO COMPLETED UNSUCCESSFULLY, RC = *retcode*, REASON = *reascode*

Explanation: DFSMShsm received an unexpected return code and reason code from a coupling facility list structure macro. It is possible that the DFSMShsm structure now has logical inconsistencies.

For RC=8, REASON=*xxxx0859*, an attempt was made to connect to a structure that was allocated by a host in another HSMplex. Each DFSMShsm host may only connect to a structure that is associated with that HSMplex of which it is a member.

System action: For RC=8, REASON=*xxxx0859*, DFSMShsm disconnects from the structure. For other errors, DFSMShsm processing continues.

Programmer response: For RC=8, REASON = *xxxx0859*, specify a structure that was not allocated by a host in another HSMplex. For any other return codes, see *z/OS MVS Programming: Sysplex Services Reference*.

For other errors, see *z/OS DFSMShsm Storage Administration*.

ARC1507E DFSMShsm CANNOT PROCESS THE SETSYS REQUEST TO {CONNECT TO | DISCONNECT FROM} STRUCTURE *structure_name*, REASON = *reascode*

Explanation: A SETSYS COMMONQUEUE command failed to complete as expected. *structure_name* indicates the name of the structure that is being connected to or disconnected from. The reason code meanings and responses are indicated below.

The base name that was specified on a SETSYS COMMONQUEUE CONNECT command can be derived from *structure_name* as follows:

	Structure_name
FunctionRecall	SYSARC_ <i>basename</i> _RCL

Reason Code
Meaning

- 1 DFSMShsm cannot connect to the specified structure because the connection is already in progress.
- 2 DFSMShsm cannot disconnect from the specified structure until the connection is complete. (DFSMShsm is currently attempting to connect.)
- 3 DFSMShsm is already connected to a structure for the specified function.
- 4 DFSMShsm is currently in the process of disconnecting from the specified structure.
- 5 DFSMShsm is in the process of handling a failed connection.

System action: DFSMShsm processing continues.

Programmer response: Consider the reason code and reissue the command, if necessary.

Reason Code
Response

- 1 Wait for the connection complete message, ARC1501I. If *structure_name* of the ARC1501I message is the desired coupling facility, no action is required. Otherwise, use the SETSYS COMMONQUEUE (*function*(DISCONNECT)) command to disconnect from the current coupling facility structure. Wait for the ARC1502I disconnect complete message, and then issue the SETSYS COMMONQUEUE CONNECT command with the desired coupling facility structure base name.
- 2 Wait for the connection complete message ARC1501I, and then reissue the command:
SETSYS COMMONQUEUE (*function*(DISCONNECT))
- 3 Each DFSMShsm host can only be connected to one common queue per function. Issue QUERY SETSYS and examine message ARC1500I to determine the name of the structure to which this host is currently connected. If it is not the correct structure, issue the SETSYS COMMONQUEUE (*function*(DISCONNECT)) command to disconnect from the current coupling facility structure. Wait for the ARC1502I disconnect complete message, and then reissue the SETSYS COMMONQUEUE CONNECT command with the desired coupling facility structure base name.
- 4 Wait for the disconnect complete message ARC1502I, and then reissue the SETSYS COMMONQUEUE CONNECT command with the desired coupling facility structure base name.

ARC1520I • ARC1522I

- 5 DFSMShsm is in the process of handling a failed connection. Wait momentarily (one or two minutes) and reissue the command.

See *z/OS DFSMShsm Storage Administration* for more information regarding the SETSYS COMMONQUEUE CONNECT and DISCONNECT commands and their associated parameters.

ARC1520I DFSMSHSM UNABLE TO COMMUNICATE THROUGH CROSS-SYSTEM COUPLING FACILITY SERVICES, RC=*return-code*, REASON=*reason-code*

Explanation: DFSMSHsm was not successful in initializing or maintaining the necessary processes to enable DFSMSHsm to communicate through the cross-system coupling facility (XCF). Secondary Host Promotion and CDS Backup CDS serialization notification via XCF services are disabled. The possible values of *return-code* are:

- 2 DFSMSHsm's XCF group user routine could not be loaded. *reason-code* gives the abend code from the load error.
- 4 DFSMSHsm was unable to join the DFSMSHsm XCF application group.
- 6 DFSMSHsm's XCF group user routine had repeated failures. This host will be made ineligible for secondary host promotion functions and CDS Backup serialization notification.

System action: DFSMSHsm continues processing. Secondary host promotion functions are unavailable.

Programmer response: The possible values of *return-code* are:

- 2 Determine the cause of the load failure for the XCF group user routine (ARCJGRPU), and restart DFSMSHsm.
- 4 Verify that XCF is properly enabled on the system. If it is, contact IBM support.
- 6 DFSMSHsm continues processing. Secondary host promotion and CDS Backup CDS serialization notification through XCF Services are unavailable. If CDS Backup is active, long running functions may have to be quiesced to allow CDS Backup to continue.

Source: DFSMSHsm

ARC1521I A SECONDARY SPACE MANAGEMENT HOST IS NOT ELIGIBLE TO BE PROMOTED FOR ANOTHER SECONDARY SPACE MANAGEMENT HOST

Explanation: SETSYS PROMOTE(SSM(YES)) was issued on a host that is itself configured to run secondary space management. Because there can be multiple SSM hosts running at different times of the day, a host that is configured to run secondary space management is not eligible to be promoted for another secondary space management host.

System action: The host will be a secondary space management host, but it cannot be promoted for another secondary space management host. DFSMSHsm continues processing.

Programmer response: Do not issue SETSYS PROMOTE(SSM(YES)) on a host configured to run secondary space management.

Source: DFSMSHsm

ARC1522I THIS HOST HAS TAKEN OVER THE {PRIMARY | SSM} HOST RESPONSIBILITIES FOR HOST *hostid* ON SYSTEM *sysid*

Explanation: Through XCF, this host was notified that host *hostid* was no longer performing its primary or SSM responsibilities. Being eligible to do so, this host took over those responsibilities. This host will perform those responsibilities until the primary or SSM host is once again available, or until this host can no longer perform them.

System action: DFSMSHsm continues processing.

Programmer response: None.

Source: DFSMSHsm

ARC1523I THIS HOST HAS TAKEN BACK ITS {PRIMARY | SSM} HOST RESPONSIBILITIES FOR HOST *hostid* ON SYSTEM *sysid*

Explanation: This host was either restarted or taken out of emergency mode, and is once again eligible to perform its primary or SSM responsibilities. As such, it took back its responsibilities from the promoted host. If *sysid* equals 00000, then the system ID was unavailable.

System action: DFSMShsm continues processing.

Programmer response: None.

Source: DFSMShsm

ARC1524I AN XCF FUNCTION COMPLETED UNSUCCESSFULLY FOR HOST *hostid*, ON SYSTEM *sysid*, RC=*return-code*

Explanation: While performing an XCF function for Secondary Host Promotion or CDS Backup serialization notification, an error occurred during the processing of an DFSMShsm XCF member event. The possible values of *return-code* are:

- 2 This host was attempting to take over the responsibilities for host *hostid*. Host *hostid* may not be able to be demoted.
- 4 This host was attempting to record the host ID of the host for which it had been promoted. See message ARC1522I to determine which host that was. This host will be unable to determine when the demoted host is ready to take back its responsibilities. Thus, it will perform those responsibilities until it is disabled.
- 6 This host was attempting to notify promoted host *hostid* that it has been demoted. If host *hostid* is in emergency mode but changes to noemergency mode without being shutdown, then it will continue to function as a promoted host. Host *hostid* should be restarted.
- 8 This host was attempting to demote itself, but could not. It will continue as a promoted host until it is restarted.
- 10 This host was unable to take back the primary or SSM host responsibilities, or both, for which it was demoted. If the promoted host has already been demoted, then no host will be performing the primary or SSM responsibilities, or both, of this host. This host should be restarted.
- 12 This host was attempting to signal that it is in emergency mode. If it is a primary, SSM, or promoted host, its responsibilities will not be taken over by another host.
- 14 This host was attempting to signal that it is no longer in emergency mode. If it is a primary or SSM host, it may not be able to take back its responsibilities.
- 16 This host was attempting to update its status as an SSM host. This will cause miscellaneous problems.
- 18 This host was attempting to disassociate itself from XCF. If it is a primary or SSM host, then it may be unexpectedly demoted.
- 20 An internal DFSMShsm error occurred while processing DFSMShsm XCF member events. One or more events will be missed.
- 22 An error occurred while querying XCF.
- 24 This host was attempting to indicate that it is no longer promoted for the demoted host *hostid*. Until demoted host *hostid* restarts, no host will be able to take over the functions for which this host had been promoted.
- 26 An XCF failure occurred during CDS Backup as this host was trying to update its XCF User State Field to indicate to other hosts in this HSMplex that CDS backup either needed their functions to release ARCGPA/ARCCAT or to stop releasing ARCGPA/ARCCAT.
- 28 An XCF failure occurred during CDS Backup processing as this host was trying to disassociate from the XCF group. An attempt was made to notify other hosts in the same HSMplex that the CDS Backup host no longer needs their functions to release ARCGPA/ARCCAT by attempting to disassociate from the XCF group. Other DFSMShsm hosts in the same HSMplex will continue to release the ARCGPA/ARCCAT resource unnecessarily and as a result, might experience poor DFSMShsm performance.

System action: DFSMShsm continues processing.

ARC1525I • ARC1541I

Programmer response: Contact IBM support to determine the cause of the unsuccessful completion of the XCF function.

26 No response necessary unless an ARC1524I RC28 is issued.

28 If the poor DFSMSHsm performance is beyond acceptable limits, DFSMSHsm on the CDS backup host must be restarted.

Source: DFSMSHsm

ARC1525I UNABLE TO COMPLETE PROMOTION OF {AUTOBACKUP | SSM} FUNCTIONS FOR HOST *hostid* ON SYSTEM *sysid*

Explanation: During the promotion process, this host was unsuccessful in acquiring the specified function's window, cycle, and user exit setting from the original primary or SSM host *hostid*, or from both. For autobackup and autodump functions, this host acts as the primary host, but will use its own currently defined window, cycle, and exit setting instead of those of the original primary host. If the error occurred for SSM, SSM will not be processed.

System action: DFSMSHsm continues processing.

Programmer response: To temporarily bypass the problem, issue the appropriate SETSYS and DEFINE commands on this host to configure the appropriate window, cycle, and exit settings for the function in error.

Source: DFSMSHsm

ARC1540I COMMON RECALL QUEUE PLACEMENT FACTORS: CONNECTION STATUS={CONNECTING | CONNECTED | DISCONNECTING | UNCONNECTED | RETRY | FAILED}, CRQPLEX HOLD STATUS={NONE | ALL | RECALL(TAPE) | RECALL(TAPE(TSO))}, HOST COMMONQUEUE HOLD STATUS={NONE | CQ | CQ(RECALL) | CQ(RECALL(PLACEMENT))}, STRUCTURE ENTRIES=*ent*% FULL, STRUCTURE ELEMENTS=*elem*% FULL

Explanation: A QUERY command was issued with the ACTIVE parameter. This message reports conditions that affect the placement of requests onto the common recall queue. To be eligible to place requests onto the common recall queue, all of the following must be true:

- The connection status must be CONNECTED
- The CRQplex hold status must not be ALL
- This host must not have PLACEMENT held
- The structure entries (*ent*) and elements (*elem*) must be less than 95% full. (If either the entries or elements recently exceeded 95% full, message ARC1505E is issued. Entry utilization must then drop below 85% before placement continues.)

The types of requests, if any, that are placed on the common recall queue are based on the CRQplex hold status. See *z/OS DFSMSHsm Storage Administration* for more information.

If the connection status is anything other than CONNECTED, then '***' is displayed for indeterminate values.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1541I COMMON RECALL QUEUE SELECTION FACTORS: CONNECTION STATUS={CONNECTING | CONNECTED | DISCONNECTING | UNCONNECTED | RETRY | FAILED}, HOST RECALL HOST STATUS={NONE | ALL | RECALL(TAPE) | RECALL(TAPE(TSO))}, HOST COMMONQUEUE HOLD STATUS={NONE | CQ | CQ(RECALL) | CQ(RECALL(SELECTION))}

Explanation: A QUERY command was issued with the ACTIVE parameter. This message reports conditions that affect the selection of requests from the common recall queue. To be eligible to select requests from the common recall queue, both of the following must be true:

- The connection status must be CONNECTED
- This host must not have SELECTION held

The types of requests that are selected are based on the recall hold status of the host. See the HOLD command in *z/OS DFSMSHsm Storage Administration* for more information.

If the connection status is anything other than CONNECTED, then '***' is displayed for indeterminate values.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1542I WAITING MWES ON COMMON QUEUES: COMMON RECALL QUEUE=*type_mwes*, COMMON DUMP QUEUE=*type_mwes*, TOTAL=*total_mwes*

Explanation: A QUERY command was issued with the WAITING parameter. This message contains the number and type of MWEs that are waiting for processing on the DFSMSHsm common queues. *type_mwes* indicates the MWE count of the specific common queue type. *total_mwes* indicates the MWE count of all the types waiting in the common queues.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1543I *type* MWE FOR DATA SET *name*, FOR USER *userid*, REQUEST *request_number*, WAITING TO BE PROCESSED ON A COMMON QUEUE, *nmwe* MWES AHEAD OF THIS ONE{, REQUEST ORIGINATED ON HOST *hostid*}

Explanation: A QUERY command was issued with the USER, REQUEST, DATASETNAME, or COMMONQUEUE parameter. This message is issued for each MWE that is not selected for processing, resides on a common queue, and matches the information about the QUERY command. When *type* is RECALL, the data set is on the common recall queue.

In the message text:

type Type of MWE that was not selected for processing.

name Data set name.

userid User ID of the initiator of this MWE.

request_number

Request number that is nonzero only for requests that are received by DFSMSHsm through the DFSMSHsm supervisor call.

nmwe Number of MWEs ahead of this MWE on the functional queue.

hostid Host ID number that the recall request originated from. This variable is included in the message text for the QUERY COMMONQUEUE(RECALL) command only.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1544I AUDIT COMMONQUEUE HAS COMPLETED, *errors* ERRORS WERE {DETECTED | CORRECTED} FOR STRUCTURE *structure_name*, RC = *retcode*

Explanation: The AUDIT COMMONQUEUE command has completed processing. If NOFIX was specified, the value *errors* indicates the number of errors that were detected in the structure. If FIX was specified, *errors* indicates the number of errors that were corrected in the structure. *structure_name* is the coupling facility structure name.

AUDIT COMMONQUEUE FIX may report a lower number of corrected errors than the number of reported errors by AUDIT COMMONQUEUE NOFIX. This will occur when the correction of one error actually corrects several related errors. To verify that all errors were corrected, run AUDIT COMMONQUEUE NOFIX again. It should report that zero errors were detected.

If *retcode* is greater than zero, then the AUDIT command did not complete. Examine the preceding messages to determine the cause of the problem.

System action: DFSMSHsm processing continues.

Programmer response: If errors were detected when NOFIX was specified, perform the AUDIT command with the FIX option in order to correct the errors.

ARC1545I COMMON QUEUE STRUCTURE FULLNESS: COMMON RECALL QUEUE: STRUCTURE ENTRIES=*crq_ent*% FULL, STRUCTURE ELEMENTS=*crq_elem*% FULL

Explanation: A QUERY command was issued that specifies the COMMONQUEUE keyword. *crq_ent* specifies the percent full on the common recall queue structure for entries. *crq_elem* specifies the percent full on the common recall queue structure for elements. For a description of entries and elements, see *z/OS MVS Programming: Sysplex Services Guide*.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1546I LOAD OF THE {COMPLETION | EVENT | TRANSITION | NOTIFICATION | ENF35} EXIT FAILED FOR STRUCTURE *structure_name*, ABEND=*abendcode*

Explanation: While preparing to connect to coupling facility structure *structure_name*, DFSMSHsm was unable to load the specified exit. *abendcode* gives the abend code from the load error.

System action: If the completion, event, transition, or notification exit failed to load, DFSMSHsm does not try to connect to the structure. If the ENF 35 failed to load, DFSMSHsm still attempts to connect to the structure, but will be unable to automatically retry an unsuccessful connection.

Programmer response: Examine the abend code. If you are unable to determine the cause of the problem, contact IBM support.

ARC1547I COMMON RECALL QUEUE TAPEDATASETORDER CHANGED. NEW TAPEDATASETORDER= (PRIORITY|FBID)

Explanation: A host connected to the CRQ issued the SETSYS TAPEDATASETORDER command. The specified parameter changes the order in which data sets are recalled from a single tape. The message insert shows the new processing order. When the TAPEDATASETORDER command is issued on one host connected to the CRQ, all hosts connected to the CRQ change their processing.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

| ARC1560I COMMON *type* QUEUE FACTORS: GROUPNAME={*groupname* | *}, CONNECTION
| STATUS={CONNECTING | CONNECTED | DISCONNECTING | UNCONNECTED |
| QUIESCED}, MASTERSCHEDULER HOSTID={*hostid* | NONE | *}, MASTER SCHEDULER
| STATUS={DISABLED | ENABLED | QUIESCED | *}

| **Explanation:** A QUERY command was issued with the ACTIVE parameter. DFSMSHsm issues this message, to
| describe the current group status and related common queue factors of the host issuing the query command.

| In the message text:

| *type* is the following:

| **DUMP** The dump common queue active status is described.

| *groupname*

| is the XCF group name defined to the functional group running in the HSMplex.

| **CONNECTION STATUS**

| describes the current connection state of this host with the *groupname*. NONE is an invalid status and
| should be reported to IBM support.

| When the MASTER SCHEDULER STATUS is set to:

| **DISABLED**

| the master scheduler (*hostid*) of the DFSMSHsm function, *type*, for the XCF functional group in the HSMplex
| that this host is a member of has been disabled. This could be due to the following reasons:

- | • The function is held on all members in the group

- SETSYS MAXDUMPTASKS(0) is specified on all connected hosts.

ENABLED

the master scheduler (*hostid*) of the DFSMSHsm function, *type*, for the XCF functional group in the HSMplex that this host is a member has been enabled to perform work for this host.

QUIESCED

the master scheduler (*hostid*) of the DFSMSHsm function, *type*, for the XCF functional group in the HSMplex that this host is a member has been quiesced. This could be due to the following reasons:

- The SETSYS command COMMONQUEUE(*type*(MSC(NO))) was specified on a system that was the enabled master scheduler for the group. DFSMSHsm is in the process of enabling another host in the group that was defined to be a master scheduler candidate.
- * the system was not defined to perform XCF group processing for DFSMSHsm function, *type*. There is no master scheduler status to report.

When the MASTERSCHEDULER HOSTID is set to:

hostid the master scheduler of the DFSMSHsm function, *type*, for the XCF functional group in the HSMplex that this system is a member, has a master scheduler identifier of *hostid*. This may not be the system that the query command was issued from.

NONE All members of the DFSMSHsm function, *type*, for the XCF functional group in the HSMplex have been defined to not be a master scheduler candidate. This was done with the SETSYS CQUEUE(*type*(MASTERSCHEDULERCANDIDATE(NO))) command.

- * the system was not defined to perform XCF group processing for DFSMSHsm function, *type*. There is no master scheduler ID to report.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1562I VOLUME {*volser* | *volser*, SGROUP=*sg* | *volser*, COPY POOL=*cpname*,} {DUMPING | FRBACKUP DUMP | FRBACKUP DUMPNLY | RESTORING }, FOR USER {*userid* | **AUTO** | * } REQUEST {*request_number* [ON HOST=*hostid*] | NONE }, BEING PROCESSED FROM A COMMON QUEUE, GROUPNAME=*groupname*

Explanation: A QUERY COMMONQUEUE command was issued for a common queue function. The query response with this message provides a snapshot of all active requests across all the connected group members.

In the message text:

volser is specified for full volume dump and recover functions.

If SGROUP= follows the *volser*, the request was for a BACKVOL command, specifying the storage group *sg*.

If COPYPOOL= follows the *volser*, the request was for a dump initiated by a FRBACKUP command, specifying the copy pool, *cpname*.

userid is the user identification of the initiator of the MWE. **AUTO** indicates auto functions initiated the request. '*' is a placeholder if nothing else applies.

request_number

is the DFSMSHsm request number. The request number is nonzero only for requests received by DFSMSHsm through the DFSMSHsm SVC console. 'NONE' indicates automatic dump. '*' is a placeholder if nothing else applies.

hostid is the host ID number from which the type function originated.

groupname

is the HSMplex functional group name that this MWE is running in. This host was connected to this group with the SETSYS COMMONQUEUE(*type*(CONNECT *basename*))) command.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1563I • ARC1564I

| **Source:** DFSMSHsm

| **ARC1563I** VOLUME {*volser* | *volser*, SGROUP=*sg* | *volser*, COPY POOL=*cpname*,} {DUMPING | FRBACKUP
| DUMP | FRBACKUP DUMPONLY | RESTORING }, FOR USER {*userid* | **AUTO** | * }
| REQUEST {*request_number* [FROM HOST=*hostid*] | NONE }, WAITING TO BE PROCESSED ON A
| COMMON QUEUE, *nmwe* MWES AHEAD OF THIS ONE, GROUPNAME=*groupname*

| **Explanation:** A QUERY COMMONQUEUE command was issued for a common queue function. The query response with this message provides a snapshot of all queued function activity across all the connected group members.

| In the message text:

| *volser* is specified for full volume dump and recover functions.

| If SGROUP= follows the *volser*, the request was for a BACKVOL command, specifying the storage group *sg*.

| If COPYPOOL= follows the *volser*, the request was for a dump initiated by a FRBACKUP command, specifying the copy pool, *cpname*.

| *userid* is the user identification of the initiator of the MWE. **AUTO** indicates auto functions initiated the request. '*' is a placeholder if nothing else applies.

| *request_number*
| is the DFSMSHsm request number. The request number is nonzero only for requests received by DFSMSHsm through the DFSMSHsm SVC console. 'NONE' indicates automatic dump. '*' is a placeholder if nothing else applies.

| *nmwe* is the number of MWEs ahead of this MWE on the functional queue.

| *hostid* is the host ID number from which the type function originated.

| *groupname*
| is the HSMplex functional group name that this MWE is running in. This host was connected to this group with the SETSYS COMMONQUEUE(*type*(CONNECT *basename*))) command.

| **System action:** DFSMSHsm processing continues.

| **Programmer response:** None.

| **Source:** DFSMSHsm

| **ARC1564I** DFSMSHsm CANNOT PROCESS THE SETSYS REQUEST TO {CONNECT TO | DISCONNECT
| FROM} THE {DUMP} GROUPNAME *group_name*, REASON = *reason_description*

| **Explanation:** A SETSYS COMMONQUEUE command failed to complete as expected. *group_name* indicates the name of the XCF group that was being connected to or disconnected from. '*' for the *group_name* indicates that the XCF group has yet to be defined to the HSMPLEX.

| The reason description could be one of the following:

| **CONNECTION IN PROGRESS**

| DFSMSHsm cannot connect to the specified structure because the connection is already in progress.

| **ATTEMPTING TO CONNECT**

| DFSMSHsm cannot disconnect from the specified structure until the connection is complete. (DFSMSHsm is currently attempting to connect.)

| **ALREADY CONNECTED**

| DFSMSHsm is already connected to a structure for the specified function.

| **DISCONNECTING IN PROGRESS**

| DFSMSHsm is currently in the process of disconnecting from the specified structure.

| **System action:** DFSMSHsm processing continues.

| **Programmer response:** Consider the reason description and reissue the command, if necessary.

| **Source:** DFSMSHsm

ARC1565E HOST=*hostid* HAS LOST ITS CONNECTION TO ITS DUMP GROUP *group_name* DUE TO A
{CONNECTIVITY LOSS | DFSMSHSM ABEND}

Explanation: This host unexpectedly lost its connection to the specified *group_name*.

System action: In the case of a connectivity loss or abend, DFSMSHsm discontinues on this host its participation in the XCF group listed.

Programmer response: Determine the cause of the failure. The system will attempt to recover from the lost connection while this host is in this FAILED state. A QUERY ACTIVE command can be issued to determine when the connection state changes from this FAILED state to either CONNECTED or UNCONNECTED. The message response will be indicated in ARC1560I.

Once the state is changed by the system from the FAILED state, if needed, reissue the SETSYS COMMONQUEUE CONNECT command for the listed group.

Source: DFSMSHsm

ARC1566I CONNECTION TO THE {DUMP} GROUP *group_name* WAS {SUCCESSFUL | UNSUCCESSFUL,
RC=*retcode*, REASON=*reascode*}

Explanation: DFSMSHsm attempted to connect to the function group (DUMP) that was specified by the SETSYS COMMONQUEUE(*function* (CONNECT(*basename*))) command. For an UNSUCCESSFUL attempt, the return code and reason code are those that were returned by XCF services. For an explanation of the return and reason codes, see the IXCJOIN macro in *z/OS MVS Programming: Sysplex Services Reference*.

System action: The system will participate in the XCF group listed for a SUCCESSFUL connection and otherwise it will not.

Programmer response: Determine the cause of the failure. To continue to use the XCF group after this failure, reissue the SETSYS COMMONQUEUE CONNECT command for the listed group.

Source: DFSMSHsm

ARC1567I DISCONNECTION FROM THE {DUMP} GROUP *group_name* WAS {SUCCESSFUL |
UNSUCCESSFUL, RC=*retcode*, REASON=*reascode*}

Explanation: DFSMSHsm attempted to disconnect to the function group (DUMP) that was previously connected to this system by the SETSYS COMMONQUEUE(*function* (DISCONNECT)) command. For an UNSUCCESSFUL attempt, the return code and reason code are those that were returned by XCF services. For an explanation of the return and reason codes, see the IXCLEAVE macro in *z/OS MVS Programming: Sysplex Services Reference*.

System action: The system will be removed from participation in the XCF group listed for a SUCCESSFUL disconnection and otherwise it will not.

Programmer response: Determine the cause of the failure. To continue to use the XCF group after this failure, reissue the SETSYS COMMONQUEUE DISCONNECT command for the listed group.

Source: DFSMSHsm

ARC1568I HOST=*hostid* HAS LOST ITS MASTER SCHEDULER RESPONSIBILITIES FOR THE COMMON
DUMP QUEUE GROUP *group_name*

Explanation: The HOST identified by *hostid* was the master scheduler host for the DUMP group, *group_name*. This could have been triggered by the issuance of the SETSYS command that set its master scheduler candidate status to NO on a host that was the active master scheduler at the time (for example, SETSYS CQUEUE(DUMP(MSC(NO))). The DFSMSHsm host may have also been disconnected from the common functional group because DFHSMhsm was stopped or the SETSYS DISCONNECT command was issued (for example, SETSYS CQUEUE(DUMP(DISCONNECT))).

System action: The system removed this host as the master scheduler for the common functional group and attempted to assign the master scheduler responsibilities to another candidate host in the group. See message ARC1569I. In the case where there are no other master scheduler candidates, the common queue function is no longer available.

Programmer response: The DFSMSHsm QUERY ACTIVE command can be used to verify if a new host was assigned to be the master scheduler for the functional group.

ARC1569I • ARC1604I

| Source: DFSMShsm

| **ARC1569I** HOST=*hostid* HAS TAKEN OVER THE MASTER SCHEDULER RESPONSIBILITIES FOR THE
| COMMON DUMP QUEUE GROUP *group_name*

| **Explanation:** The HOST identified by *hostid* was assigned by the system to be the master scheduler host for the
| DUMP group, *group_name*. This message is normally issued during the common function queue CONNECT
| processing to indicate who was assigned this responsibilities. However, it could be triggered when the system
| detected that the current master scheduler could no longer perform its responsibilities for the common function
| group. See message ARC1568I.

| **System action:** The system assigned the HOST, *hostid*, to be the master scheduler system from candidate hosts for
| the common functional group.

| **Programmer response:** The DFSMShsm QUERY ACTIVE command can be used to see which host was assigned to
| be the master scheduler for the functional group.

| Source: DFSMShsm

ARC1601I COMMAND HAD SCAN ERROR

Explanation: A DFSMShsm module built an invalid parameter list for the TSO scan routine (IKJSCAN).

System action: The command ends with a SNAP dump. DFSMShsm processing continues.

Programmer response: Be certain the command issued was complete and valid. If no errors are found and the
problem occurs again, notify the storage administrator.

Source: DFSMShsm

ARC1603I INVALID COMMAND NAME

Explanation: Either the TSO scan routine (IKJSCAN) determined that an input line for DFSMShsm contained a
syntactically incorrect command name, or the command name specified is not a valid DFSMShsm command.

System action: The command is rejected. DFSMShsm processing continues.

Programmer response: Verify the command name and syntax. Reissue the corrected command.

Source: DFSMShsm

ARC1604I COMMAND NOT AUTHORIZED FOR USER

Explanation: The DFSMShsm command issued can only be issued by a user with data base authority, the system
operator, or a user defined to the STGADMIN.ARC.BACKUP RACF profile for the ABACKUP command. Message
ARC1001I precedes this message giving the command entered with a return code of 4 and a *reason-code*.

The values for *reason-code* are:

0 The user has not been authorized for the command by the AUTH command.

0392 See message ARC0392I for an explanation of why the command failed for the user.

0396 See message ARC0396I for an explanation of why the command failed for the user.

0397 See message ARC0397I for an explanation of why the command failed for the user.

System action: The command ends. DFSMShsm processing continues.

Programmer response: Determine the correct user command, if any, or see the storage administrator for
authorization. Use the LIST USER command to determine the current authorized users.

Source: DFSMShsm

ARC1605I COMMAND HAD PARSE ERROR

Explanation: The TSO IKJPARS routine was called to check the syntax of a DFSMSHsm request and encountered an error. Message ARC1001I precedes this message giving the operation entered, the *reason-code*, and the parse return code.

The values for *reason-code* are:

- 4 The command parameters were incomplete or invalid, and IKJPARS was unable to prompt.
- 8 IKJPARS did not complete. An attention interruption occurred during IKJPARS processing.
- 12 The parse parameter block contains invalid information.
- 16 IKJPARS issued a GETMAIN, and no space was available.
- 20 A validity checking routine requested to end.
- 24 Conflicting parameters were found on the IKJTERM, IKJOPER, or IKJRSVWD macro instruction.
- 28 The terminal has been disconnected.
- 32 The command is not allowed during automatic migration or backup.
- 36 An ABARS command received a syntax error after the command was successfully parsed.
- 37 A command received a syntax error after the command was successfully parsed.
- 38 Token cannot be greater than 40 characters in length.
- 40 An ONLYIF command failed for one or more of the following reasons:
 - A parse error occurred while trying to parse the command.
 - The required parameter, HSMHOST, was not specified.
 - The required host ID value was not specified.
 - An ONLYIF command was nested within another ONLYIF command.
- 42 The number of RETAINDDAYS is a required parameter that must be an integer in the range of 0 to 50000, or 99999. RETAINDDAYS values between the range of 50001 and 99998 are not accepted. A RETAINDDAYS value of 99999 is managed as a 'never expire' value.
- 44 The ALLOWPPRC keyword was specified on the FRBACKUP command. This keyword is no longer allowed. Set PPRC parameters in the SMS copy pool definition instead.
- 50 A BEGIN operator failed for one or more of the following reasons:
 - A parse error occurred while trying to parse the operator.
 - A BEGIN operator was encountered, but was not immediately following an ONLYIF command.
- 51 An END operator failed for one or more of the following reasons:
 - A parse error occurred while trying to parse the operator.
 - An END operator was encountered, but was not preceded by a corresponding BEGIN operator.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: If *reason-code* is 4, 8, 16, 28, 36, 37, 38, 40, 42, 44, 50 or 51, correct the problem and retry the command. If *reason-code* is 12, 20, or 24, DFSMSHsm encountered a logical error. Notify the storage administrator or the system programmer.

Source: DFSMSHsm

**ARC1606I {BACKUPTYPE | OFFLINECONTROLDATASET | DIRECTORYCONTROLS | MEDIACONTROLS
 | VOLUMECONTROLS} WAS SPECIFIED IN AUDIT BUT NO SUBPARAMETERS WERE GIVEN.
 AUDIT TERMINATES**

Explanation: The AUDIT command was issued specifying one of the parameters listed in the message, but no subparameters were specified.

System action: The AUDIT command ends. DFSMSHsm processing continues.

Programmer response: Reissue the AUDIT command specifying parameters and appropriate subparameters.

ARC1609I • ARC1612I

Source: DFSMSHsm

ARC1609I LONG RUNNING COMMAND TYPE FAILED IN ATTACH

Explanation: DFSMSHsm has attempted to process a long-running command. An MVS ATTACH macro has been issued but returns a nonzero return code. The return code is given in the following ARC1001I message and is explained in *z/OS DFSMS Macro Instructions for Data Sets*.

System action: The function to be processed is ended.

Programmer response: Inform the system programmer or the storage administrator of this error.

Source: DFSMSHsm

ARC1610I LONG RUNNING COMMAND DID NOT FULLY COMPLETE

Explanation: A DFSMSHsm long-running command ended before it completed the full function that was requested. Either DFSMSHsm was shut down or a HOLD command was issued for the particular function that was running. The function being held can be determined from the reason code in the following ARC1001I message.

The values for *reason-code* are:

- 4 The audit function is held.
- 8 The list function is held.
- 12 The report function is held.
- 16 The recycle function is held.

System action: The function to be processed was ended.

Programmer response: After examining the partial output, if the function must be run again, reissue the command when DFSMSHsm is running and the function is not being held.

Source: DFSMSHsm

ARC1611I BACKUP DAY SPECIFIED FOR AUDIT GREATER THAN MAXIMUM BACKUP CYCLE LENGTH ALLOWED. AUDIT TERMINATES

Explanation: An AUDIT command was issued to audit the offline control data set or a backup type, and the DAILY(*day*) parameter was specified. The *day* of the DAILY parameter was greater than the maximum backup cycle length allowed by DFSMSHsm. The maximum backup cycle length allowed is 31 days.

System action: The AUDIT command ends. DFSMSHsm processing continues.

Programmer response: Reissue the AUDIT command specifying a value less than 32 for the *day* of the DAILY parameter.

Source: DFSMSHsm

ARC1612I DELVOL COMMAND REJECTED - DELVOL OF PRIMARY VOLUME NOT ALLOWED DURING AUTO SPACE MANAGEMENT, AUTO BACKUP OR AUTO DUMP

Explanation: A DELVOL command was issued to delete a primary volume from DFSMSHsm control, but the command was rejected because either:

- Automatic space management, automatic backup or automatic dump was active.
- The command was entered and processed before the space management, backup, and dump control tasks were initialized at startup.

System action: Processing of the DELVOL command ends. DFSMSHsm processing continues.

Programmer response: Wait until automatic space management, automatic backup, or automatic dump completes and reenter the DELVOL command.

Source: DFSMSHsm

ARC1613I DELVOL COMMAND REJECTED - DELVOL OF MIGRATION VOLUME NOT ALLOWED DURING AUTO SPACE MANAGEMENT

Explanation: A DELVOL command was issued to delete a migration volume from DFSMSHsm control, but automatic space management was active, or the command was entered immediately after initialization and processed before the space management control tasks were initialized.

System action: Processing of the DELVOL command ends. DFSMSHsm processing continues.

Programmer response: Wait until automatic space management completes and reenter the DELVOL command.

Source: DFSMSHsm

ARC1614I DELVOL COMMAND REJECTED - DELVOL OF BACKUP VOLUME NOT ALLOWED WHEN THE VOLUME IS IN USE

Explanation: A DELVOL command was issued to delete a backup volume, but the volume was in use.

System action: Processing of the DELVOL command ends. DFSMSHsm processing continues.

Programmer response: Wait until the volume is available and reenter the DELVOL command.

Source: DFSMSHsm

ARC1615I FIXCDS COMMAND REJECTED

Explanation: A FIXCDS command was issued with the DISPLAY, PATCH, CREATE, DELETE, ASSIGNEDBIT, EXPAND, NEWKEY, or ADDMIGRATEDDATASET parameter, and the command failed. See the preceding ARC0195I message for the reason the FIXCDS command failed.

System action: The FIXCDS command ends. DFSMSHsm processing continues.

Programmer response: Correct the problem described in the ARC0195I message and reissue the corrected command.

Source: DFSMSHsm

ARC1616I MEMBER NAME NOT ALLOWED IN DSNAME, DELETE COMMAND REJECTED

Explanation: A DELETE command was issued with the member name specified in the data set name. Member names cannot be specified in the data set name because DFSMSHsm does not delete partitioned data set members individually.

System action: The DELETE command ends. The data set is not deleted. DFSMSHsm processing continues.

Programmer response: Reissue the command with the data set name only.

Source: DFSMSHsm

ARC1617I DELVOL COMMAND REJECTED- DELVOL OF DUMP VOLUME NOT ALLOWED DURING AUTO DUMP

Explanation: A DELVOL command was issued to delete a dump volume, but automatic dump was active, or the command was entered and processed before the dump control task was initialized at startup.

System action: Processing of the DELVOL command ends. DFSMSHsm processing continues.

Programmer response: Wait until automatic dump completes and reenter the DELVOL command.

Source: DFSMSHsm

ARC1618I ABARS COMMAND REJECTED, FUNCTION DISABLED OR HELD

Explanation: An ABACKUP or ARECOVER command was entered when the function was disabled or held. Message ARC1001I precedes this message giving the operation entered, the *return-code*, and the *reason-code*. The values for *reason-code* are:

4 A wait-type ABACKUP or ARECOVER command issued when the function is held.

ARC1619I • ARC1622I

8 An ABACKUP or ARECOVER command issued when ABARS is disabled.

System action: DFSMSHsm processing continues.

Programmer response: If the *reason-code* is 4, indicating the function is held, then the function must be released prior to issuing another wait-type request.

If the *reason-code* is 8, the system programmer must determine why ABARS was initially DISABLED and the condition corrected.

Source: DFSMSHsm

ARC1619I DELVOL COMMAND REJECTED-VOLUME IS IN USE

Explanation: A DELVOL command was issued for a volume that is in use by an automatic periodic function. A volume cannot be DELVOLed while it is in use.

System action: DFSMSHsm processing continues.

Programmer response: The volume can be DELVOLed when the automatic periodic function completes on this volume.

Source: DFSMSHsm

ARC1620I MEMBER NAME NOT ALLOWED IN DSNAME OR IN NEWDSNAME, RECOVER COMMAND REJECTED.

Explanation: A RECOVER command was issued with the member name specified in either the data set name or the new data set name. Member names cannot be specified in either the data set name or the new data set name because DFSMSHsm does not recover partitioned data set members individually. The values for *reason-code* are:

4 Member name is specified in the data set name field.

6 Member name is specified in the new data set name field.

System action: The recovery ends. DFSMSHsm processing continues.

Programmer response: Reissue the command with the data set name only.

Source: DFSMSHsm

ARC1621I BACKVOL COMMAND FAILED

Explanation: The BACKVOL command was issued to back up or dump a list of volumes or a list of storage groups. Every volume in the list or every volume in each storage group in the list encountered an error (perhaps in a command parameter), so that DFSMSHsm could not initiate a backup or dump of any volume.

System action: The BACKVOL command ends. DFSMSHsm processing continues.

Programmer response: Review the error messages (in the backup or dump activity log) for each volume or storage group, or in the command parameters. Correct each error condition. Reissue the BACKVOL command, specifying those volumes or storage groups for which the error conditions have been corrected.

Source: DFSMSHsm

ARC1622I VOLUME NOT ELIGIBLE FOR COMMAND BACKUP OR COMMAND MIGRATION

Explanation: A command was issued to backup or migrate a volume. The volume is not eligible for backup or migration because it is contained within a copy pool backup storage group.

System action: DFSMSHsm processing continues.

Programmer response: If a backup of the volume is desired, use DFSMSdss or an equivalent product. If migration of a volume that is in a copy pool backup storage group is desired, do not reissue the command. Volumes contained within copy pool backup storage groups are backup versions of other volumes, and are not eligible for migration.

Source: DFSMSHsm

ARC1624I FAST REPLICATION COMMAND REJECTED — {COPY POOL ERROR | DUMP CLASS ERROR | STORAGE GROUP ERROR}

Explanation: The FAST REPLICATION command failed.

When DUMP CLASS ERROR is specified, see the corresponding ARC06xxI or ARC1846E message to identify the copy pool name and the cause of the failure.

When COPY POOL ERROR is specified, there was an error retrieving the copy pool SMS definition.

When STORAGE GROUP ERROR is specified, there was an error retrieving the storage group SMS definition.

System action: The fast replication operation ends. DFSMSHsm processing continues.

Programmer response: See the corresponding ARC0570I message. Correct the problem with the copy pool definition and reissue the command.

Source: DFSMSHsm

ARC1627I BACKVOL FAILED DUE TO AN ERROR WITH THE COMMON DUMP QUEUE

Explanation: DFSMSHsm attempted to process a BACKVOL operation using its common queue. The volume, command, or operation and its reason for the failure is as described by message ARC10001I. In message ARC1001I, the *reascode* identifies the results. A summary message will also be issued with the same *reascode*.

The *reascode* values are as follows:

100 A SETSYS COMMONQUEUE(DUMP(DISCONNECT FORCE)) command was processed. This return code indicates that active requests from the common queue for this function running in this system were allowed to finish. However, the remote requests submitted to the common queue for this function from this system are failed, but may still complete on another system in the functional group.

102 A SETSYS COMMONQUEUE(DUMP(DISCONNECT FORCE)) command was processed for a host member that is the current master scheduler. This return code indicates that active requests from the common queue for this function running in the group were allowed to finish. However, any request received from the remote members in the group on this master scheduler system and are waiting to be processed will be failed.

105 A host in the common queue group became not defined. This return code indicates that the work was assigned by the master scheduler to run in this host of the common queue, but it cannot determine if it completed.

System action: The system will take the action taken as described by each return code.

Programmer response: Notify the storage administrator.

Source: DFSMSHsm

ARC1635I ERROR OPENING INPUT DATA SET DURING AUDIT

Explanation: DFSMSHsm issued the OPEN macro to open a tape data set for AUDIT. During OPEN processing, the ESTAE routine was invoked. An OPEN error message with component identifier IEC normally precedes this message if this is a true OPEN error. Message ARC1001I also precedes this message giving the command that was being processed.

System action: The AUDIT command has completed. DFSMSHsm processing continues.

Programmer response: Review the AUDIT output. Rerun AUDIT for the tape volumes that failed.

Source: DFSMSHsm

ARC1636I AUDIT HAS ENCOUNTERED A RETAINED BACKUP VERSION. IBM RECOMMENDS RE-RUNNING THIS AUDIT ON A HOST THAT SUPPORTS RETAINED BACKUP VERSIONS

Explanation: While processing an AUDIT command, DFSMSHsm encountered one or more RETAINED backup versions. The level of DFSMSHsm on this system does not support RETAINED backup versions.

System action: DFSMSHsm processing continues.

ARC1652I • ARC1674I

Programmer response: Reissue the AUDIT command on a z/OS V1R11 or later system to ensure that RETAINED backups are properly audited.

Source: DFSMSHsm

ARC1652I GETMAIN ERROR - COMMAND TERMINATED

Explanation: A DFSMSHsm command processor issued a GETMAIN that failed because not enough virtual storage was available.

System action: The command is ended. DFSMSHsm processing continues.

Programmer response: Increase the size of the DFSMSHsm address space and try the command again, or try again when there is less DFSMSHsm activity.

Source: DFSMSHsm

ARC1674I LONG RUNNING COMMAND FAILED - FUNCTION IS HELD AND REQUEST SPECIFIED WAIT

Explanation: A DFSMSHsm long-running command was failed before it could be started. The corresponding function is held, and the initial request specified the WAIT option. The function being held can be determined from the reason code in the preceding ARC1001I message.

The values for the *reason-code* are:

- 4 The audit function is held.
- 8 The list function is held.
- 12 The report function is held.
- 16 The recycle function is held.
- 20 The tape copy function is held.
- 24 The tape replace function is held.
- 28 The expire backup versions function is held.

System action: DFSMSHsm did not start the function. DFSMSHsm processing continues.

Programmer response: If the command must be run immediately, you should issue the RELEASE command with the appropriate parameter to release the desired function. Then the command can be reissued. Otherwise, the command should be reissued when the function is released later on.

Source: DFSMSHsm

ARC1674I LONG RUNNING COMMAND FAILED - FUNCTION IS HELD AND REQUEST SPECIFIED WAIT

Explanation: A DFSMSHsm long-running command was failed before it could be started. The corresponding function is held, and the initial request specified the WAIT option. The function being held can be determined from the reason code in the preceding ARC1001I message.

The values for the *reason-code* are:

- 4 The audit function is held.
- 8 The list function is held.
- 12 The report function is held.
- 16 The recycle function is held.
- 20 The tape copy function is held.
- 24 The tape replace function is held.
- 28 The expire backup versions function is held.

System action: DFSMSHsm did not start the function. DFSMSHsm processing continues.

Programmer response: If the command must be run immediately, you should issue the RELEASE command with

the appropriate parameter to release the desired function. Then the command can be reissued. Otherwise, the command should be reissued when the function is released later on.

Source: DFSMSHsm

ARC1692I TERMINATING DFSMSHSM WAIT REQUEST, DFSMSHSM SHUTTING DOWN

Explanation: DFSMSHsm is shutting down because of an abnormal end, MVS CANCEL, MVS FORCE, or normal shutdown. During shutdown, all wait-type requests not yet processed are purged from the common service area (CSA) queue.

System action: DFSMSHsm ends.

Programmer response: Restart DFSMSHsm and resubmit the request.

Source: DFSMSHsm

ARC1710E USER *userid* NOT AUTHORIZED FOR RESOURCE *resource name*

Explanation: DFSMSHsm processing determined that the user is not authorized to use the command protected through the *resource name* RACF FACILITY class profile. Keywords are defined below:

- *userid* is the ID of the user who issues the command.
- *resource name* represents the command protected by RACF FACILITY class.

System action: Command processing ends. DFSMSHsm processing continues.

Operator response: Contact your security administrator for authorization to the required RACF profile.

Source: DFSMSHsm

ARC1711E DFSMSHSM IS USING FACILITY CLASS PROTECTION. FACILITY CLASS IS CURRENTLY INACTIVE. COMMAND FAILED

Explanation: DFSMSHsm is using FACILITY class protection. RACF processing determines that the FACILITY class is inactive at the moment that the command processes.

System action: Command processing ends. DFSMSHsm processing continues.

System programmer response: None.

Programmer response: Contact your system programmer or security administrator to reactivate FACILITY class.

Source: DFSMSHsm

ARC1800I DFSMSHSM WAIT REQUEST CANCELLED BY ATTENTION

Explanation: A DFSMSHsm command is in process, and the WAIT parameter was specified on the command. The WAIT parameter was canceled by an attention interruption from the TSO terminal.

System action: The command ends. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1801I FAST REPLICATION {BACKUP | BACKUP DUMP | BACKUP DUMPNLY | PREPARE | RECOVERY | RECOVERY FROM DUMP | DATA SET RECOVERY} IS STARTING FOR {COPY POOL *cpname* | VOLUME *volser* | DATA SET *dsname*}, AT *time* ON *date* [, TOKEN=*token*]

Explanation: The DFSMSHsm Fast Replication Backup, Backup Dump, Backup DUMPNLY, Prepare, Recovery, Recovery FROMDUMP, or Data Set Recovery operation for copy pool *cpname*, volume *volser*, or data set *dsname* is starting.

cpname Indicates the name of the copy pool being processed.

volser Indicates the volume being processed.

dsname Indicates the fully or partially qualified data set name to be processed. When a partially qualified data set

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name is specified, every cataloged data set in the standard order of search that matches the filtering criteria will be processed. If multiple data set names were specified on the command, only the first data set will be listed in the message, followed by ', ***'.

time Indicates the time of day the function was started, expressed as *hh:mm:ss* (hours, minutes, and seconds).

date Indicates the date on which the function was started, expressed as *yy/mm/dd* (year, month, and day).

token Indicates the token that was specified with the TOKEN parameter. The *token* is only displayed if the command is FRBACKUP and if the TOKEN parameter was actually specified. If any of the token's characters are non-printable, the token is displayed in hexadecimal format and preceded by an 'X'. (TOKEN=X'*hex_token*').

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1802I FAST REPLICATION {BACKUP | BACKUP DUMP | BACKUP DUMPONLY | PREPARE | RECOVERY | RECOVERY FROM DUMP | RECOVERY RESUME | RECOVERY FROM DUMP RESUME | DATA SET RECOVERY} HAS COMPLETED FOR {COPY POOL *cpname* | VOLUME *volser* | DATASET *dsname*}, AT *time* ON *date*, FUNCTION RC=*retcode*, MAXIMUM {VOLUME | DATA SET} RC=*max retcode* [, CAPTURE CATALOG RC=*capture catalog retcode* |, PARTIALOK SPECIFIED]

Explanation: One of the following DFSMSHsm Fast Replication functions for copy pool *cpname*, volume *volser*, or data set *dsname* has completed:

- Backup
- Backup Dump
- Backup DUMPONLY
- Prepare
- Recovery
- Recovery FROMDUMP
- Recovery Resume
- Recovery FROMDUMP Resume
- Data set Recovery

For Recovery Resume or Recovery FROMDUMP Resume, a previous attempt to recover a copy pool backup version failed, leaving the recovery incomplete. Recovery of the set of volumes that previously failed completed.

If 'PARTIALOK SPECIFIED' appears at the end of the message text, the PARTIALOK keyword was specified on the FRRECOV COPYPOOL FROMDUMP request to allow recovery from a partial dump version.

cpname indicates the name of the copy pool that was processed.

volser indicates the volume that was processed.

dsname indicates the fully or partially qualified data set name that was processed. If multiple data set names were specified on the command, only the first data set will be listed in the message, followed by ', ***'.

time indicates the time of day the function completed, expressed as *hh:mm:ss* (hours, minutes, and seconds).

date indicates the date on which the function completed, expressed as *yy/mm/dd* (year, month, and day).

retcode reflects the highest return code received during fast replication processing.

max retcode reflects the highest return code received for an individual volume or data set during Fast Replication processing.

capture catalog retcode reflects the return code received during the capture catalog function.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: If *retcode* or *max retcode* are not zero, then the operation was not successful. If preceding related messages exist, reference them for details on the failures to determine what caused the errors, and reissue the command. If the request was from an external application, refer to that application's logs for messages and error information relating to this command.

If individual volumes failed during recovery, see Recovering a data set from a fast replication backup in *z/OS DFSMSShsm Storage Administration* for guidance on how to recover the failed volumes.

If individual data sets failed during recovery, then do not reissue a FRRECOV DSNNAME command that specifies a partially qualified data set name. Instead, issue individual FRRECOV DSNNAME commands for each data set that failed.

If *capture catalog retcode* is nonzero, see the preceding message ARC1812I for additional information. If the catalog *retcode* is 0, but the FUNCTION RC is nonzero, the catalog information data set is scratched as there is no corresponding backup data.

If 'PARTIALOK SPECIFIED' appears at the end of the message text, issue the LIST COPYPOOL(*cpname*) DUMPVOLS command and use the output to determine the volumes that were not included in the dump version. Issue individual FRRECOV * TOVOLUME(*volser*) FROMCOPYPOOL commands, specifying a generation, version, or token of the most appropriate backup version that contains the missing volumes.

Source: DFSMSShsm

ARC1803E THE FOLLOWING *numvols* VOLUME(S) FAILED DURING FAST REPLICATION {BACKUP | RECOVERY} OF COPY POOL *cpname*

Explanation: A fast replication backup or recovery command was issued for copy pool *cpname* and has completed. Following this message is a list of all volumes that were not backed up or recovered successfully.

numvols

indicates the number of failing volumes in the list

cpname indicates the name of the copy pool that was processed

The format of the volume information is as follows:

volser, ADR*nnms*

- *volser* indicates the name of the volume that failed.
- ADR*nnms* indicates the first failing DFSMSdss message number. ADR**** indicates that an associated failing message could not be identified.

When an error occurs, all the volumes in the copy pool may not be processed. Of those volumes that are processed, this message lists the ones that failed.

System action: The operation ends. DFSMSShsm processing continues.

Programmer response: For the backup function, if one or more volumes fail, then the entire process is considered unsuccessful and the backup version is invalidated. Reference the failing volume information list for details on the failures, determine what caused the errors, and reissue the command.

For the recover function, if one or more volumes fail, do not reissue the FRRECOV COPYPOOL command. Reference the failing volume information list for details regarding the failures, determine what caused the errors, correct the error conditions, and issue individual FRRECOV TOVOLUME(*volser*) commands for each volume that failed.

See *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for a description of the DFSMSdss messages.

Source: DFSMSShsm

ARC1804I ONE OR MORE DATA SETS ARE NOT CONTAINED WITHIN A COPY POOL

Explanation: A Fast Replication Recovery command has been issued for one or more partially qualified data set names. One or more of the data sets that matched the filtering criteria is cataloged on a volume that does not belong to any copy pool. Optional keyword NOCOPYPOOLBACKUP(RC4) was specified on the command, so the maximum function return code is set to four.

System action: Fast Replication processing ends. DFSMSShsm processing continues.

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Programmer response: If you do not expect this message, refine the partially qualified data set name that was specified so that the system only attempts a recovery for those data sets that belong to a copy pool.

Source: DFSMSHsm

ARC1805I THE FOLLOWING *numvols* VOLUME(S) WERE SUCCESSFULLY PROCESSED BY FAST REPLICATION {BACKUP | RECOVER} OF COPY POOL *cpname*

Explanation: A Fast replication backup or recover operation has completed on copy pool *cpname* on the number of volumes indicated by *numvols*. A list of the volumes follows.

System action: The operation ends. DFSMSHsm processing continues.

Operator response: None.

System programmer response: None.

Programmer response: None.

Source: DFSMSHsm

ARC1806E FAST REPLICATION {BACKUP | RECOVERY | ***} HAS FAILED FOR {COPY POOL *cpname* | VOLUME *volser* | *****}, RC=*retcode***

Explanation: A Fast Replication Backup or Fast Replication Recovery command for copy pool *cpname* or volume *volser* ended before normal completion of the operation. The reason for an early end is explained as determined by the *retcode*. (If ***** appears in the message, see the previous message to determine the command type and copy pool name or *volser*.)

Retcode Meaning

- 2 The system cannot dump or recover the specified backup copy because it does not exist or is not completed successfully.
- 4 If issued for FRBACKUP, this indicates a valid version or BVI entry in the FRB record was not found to complete the backup.
- 4 One or more volumes in the copy pool are in an active FlashCopy® relationship.
- 6 The copy pool name was not specified for this volume and this volume belongs to more than one copy pool.
- 10 An eligible backup storage group target volume could not be found for a storage group source volume in the copy pool.
- 12 A CDS I/O error occurred.
- 14 A backup copy with the specified token could not be found.
- 16 Volume specified as TOVOLUME was not backed up as part of the copy pool version specified.
- 22 An error occurred while retrieving the SMS storage group or copy pool information from SMS.
- 24 No volumes were processed.
- 28 Another DFSMSHsm function was processing the copy pool *cpname*.
- 30 An enqueue error occurred.
- 34 During FRRECOV COPYPOOL processing, DFSMSHsm did not find as many volume records as it expected.
- 36 RACF failure.
- 38 The volume specified in the TOVOLUME parameter does not have a fast replication backup copy.
- 42 The version determined to be the version requested, is not of the format (dump copy/fast replication copy) requested.
- 44 The dump volume does not exist as a copy pool dump volume.
- 46 The dump volume specified is for a different source volume.
- 48 The dump class specified is not associated with the copy pool version being recovered, or DUMPCLASS was

- not specified and all dumpclasses associated with this copy pool were designated as AVAILABLEFORMOUNT(NO) by the dumpclass definition.
- 50 The dump copies are incomplete for the DASD version to be replaced.
- 51 Active dump tasks exist on another host for the backup version to be rolled off.
- For fast replication backup processing, active dump tasks existing on another host prevent the version from being rolled off replaced. The FRBACKUP command failed.
- For Fast replication recovery processing, when a copy pool version is recovered successfully using fast reverse restore, that copy pool backup version is subsequently invalidated and rolled off. Active dump tasks existing on another host will prevent the version from being rolled off and the recovery will fail.
- For fast replication backup processing, active dump tasks existing on another host prevent the version from being rolled off. The FRBACKUP command failed.
- 52 Active dump tasks exist for oldest DASD version.
- 54 Dump volume does not contain valid data.
- 56 Copy pool *cpname* was created or converted for use in a more recent release of z/OS V1R11 or later environment.
- 57 The FRBACKUP command failed because a non-DUMP version existed for the copy pool when the BACKUPSTORAGEGROUP parameter was specified.
- 58 The FRBACKUP command failed because the BACKUPSTORAGEGROUP parameter was specified with a storage group name that does not match the existing alternate copy pool backup storage group name.
- 60 FCINCREMENTAL or FCINCREMENTALLAST cannot be specified for a copy pool defined with DASD backup versions = 0.
- 62 FCINCREMENTAL or FCINCREMENTALLAST was specified in the FRBACKUP command for a version not eligible for FlashCopy incremental.
- 64 The FRBACKUP command failed because the number of versions in the copy pool definition was changed to zero (NOCOPY) and an incremental version exists in the copy pool. An incremental version cannot exist in a NOCOPY environment.
- 66 The number of versions in the copy pool definition was reduced such that an FRBACKUP command would cause the automatic deletion of an incremental version.
- 67 Recovery from a FlashCopy incremental version was specified for the copy pool but one or more volumes failed to meet the reverse restore requirement.
- 68 PARTIALOK was not specified on the FRRECOV command for this partial copy pool backup version.
- 70 Capture catalog was requested as REQUIRED in the copy pool definition. The catalog capture function did not complete successfully.
- 72 DFSMSHsm was unable to determine the SSID or the LSS number of a source volume during FRBACKUP COPYPOOL processing.
- 76 Fast reverse restore was specified for the copy pool but one or more volumes failed to meet the fast reverse restore requirements.
- 78 Fast reverse restore was designated for the copy pool but the VERIFY(N) parameter was specified on the FRRECOV command. VERIFY(Y) must be in effect for fast reverse restore to be used.
- 80 FRRECOV was attempted without FORCE specified on a version that is being dumped.
- 81 Preserve mirror preferred or required is specified for recovering from a fast reverse restore eligible copy pool backup version. Fast reverse restore cannot be used with preserve mirror operation.
- 82 FRRECOV from a NOCOPY DASD version did not meet the following requirements:
- The backup version is eligible for using fast reverse restore.
 - The COPYPOOL(*cpname*) keyword must be specified.
- 84 Fast Replication Backup failed because the copy pool definition indicates Allow Fast Reverse Restore. This feature is not supported on this release of DFSMSHsm.

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- 88 Fast Replication processing failed because the latest version or version to be recovered is either a NOCOPY version where the Allow Fast Reverse Restore option was specified in the copy pool definition at the time of the backup or is a version where a Fast Reverse Restore is partially processed. These types of Fast Replication versions are not supported by this function on this release of DFSMSHsm.
- 89 FlashCopy consistency group setting of Yes was defined for the copy pool but the function is not supported in the host environment where the FRBACKUP command was being processed.
- 90 FlashCopy consistency group was specified for the copy pool but a data consistent backup version could not be created successfully. The FlashCopy consistency group timer might have expired or reset before FRBACKUP finished processing all the volumes in the copy pool.
- 92 Multiple concurrent commands were issued for the same or similarly named copy pool and/or an error occurred while allocating the message data set. The MESSAGEDATASET(DATE TIME) keywords were specified on the FRBACKUP or FRRECOV command. In order for DFSMSHsm to generate a unique message data set name for this request, a unique date and time must be specified for the copy pool on the FRBACKUP or FRRECOV command.
- 98 An internal error occurred.
- 99 An abend has occurred.

System action: This fast replication processing ends. DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the command.

Retcode Response

- 2 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid versions for the copy pool. If necessary, reissue the FRBACKUP DUMPONLY or FRRECOV command specifying a valid existing version, generation date or token. If FRBACKUP failure, collect the FRB record using the FIXCDS DISPLAY command, LIST COPYPOOL output and associated PDA trace information. Then contact IBM support.
- 4 Issue the QUERY COPYPOOL(*cpname*) command to determine which volumes are in a relationship. If the QUERY COPYPOOL command returns message ARC1821I, the FlashCopy relationships were established outside DFSMSHsm. The FlashCopy relationships that the source volumes are in must be completed before the FRRECOV command can be processed. See *z/OS DFSMSHsm Storage Administration* to determine what actions you can take.
- 6 Issue LIST PVOL(source volume) to determine which copy pools the volume is defined to. You can use the LIST COPYPOOL command to see the copy pools of which the volume is a member. From the available copy pools, determine which copy pool backup version should be used for the recovery. Reissue the FRRECOV command with the FROMCOPYPOOL keyword to specify the selected copy pool name.
- 10 See message ARC1807I to determine why you could not select a target volume.
- 12 See the corresponding ARC0184I message for additional information.
- 14 Issue the LIST COPYPOOL(*cpname*) command to view the tokens associated with this copy pool. Reissue the FRBACKUP DUMPONLY or FRRECOV command using an existing TOKEN for a valid backup version for this copy pool.
- 16 Determine the volume that you intend to recover, specify the *volser* for that volume as the TOVOLUME parameter and reissue the command. The LIST COPYPOOL(*cpname*) command can be used to determine which volumes are backed up as part of a copy pool backup version.
- 22 See the corresponding ARC0570I message for additional information.
- 24 No volumes were processed during the Fast Replication Recovery. Issue LIST COPYPOOL(*cpname*) to determine what should have been processed during this Fast Replication Recovery.
- 28 Wait for processing of the COPY POOL identified in the message to complete processing, and reissue the Fast Replication command if necessary.
- 30 Contact IBM support.
- 34 Records indicate that not all of your volumes may have been recovered. Issue the LIST COPYPOOL(*cpname*) to see a list of all volumes that should have been recovered during this process and confirm that they were recovered successfully. The ARC1805I message lists all volumes that were recovered as a part of this copy pool.

- 36 The user that issued the FRRECOV command was not RACF authorized to the command. Determine if the user requires this access and authorize the user to the command. Reissue the command.
- 38 Use the RECOVER command to recover a non-fast replication backup version, if a non-fast replication backup version is available for the volume you are attempting to recover.
- 42 Issue the LIST COPYPOOL(*cpname*) command to view the valid versions and media formats associated with this copy pool. Reissue the FRRECOV command using an existing valid version for this copy pool.
- 44 Issue the LIST PVOL(*volser*) ALLDUMPS to find valid dump volumes for the volume that you are attempting to recover.
- 46 Issue the LIST PVOL(*volser*) ALLDUMPS to find valid dump volumes for the volume that you are attempting to recover.
- 48 Issue the LIST COPYPOOL(*cpname*) command to view the dump classes associated with the copy pool you are attempting to recover from. Determine the dump class you want to recover from and reissue the FRRECOV command using a valid dump class for this copy pool.
- 50 The DASD version being rolled off has an incomplete dump. Options are: Complete the partial dump using the FRBACKUP DUMPONLY command. Delete the DASD version or partial dump using the FRDELETE command. Use the FORCE keyword on the FRBACKUP command to create the new backup. In this case the partial dump will remain partial and cannot be resumed.
- 51 Issue QUERY ACTIVE and LIST COPYPOOL (*cpname*) commands to ensure no active dump tasks exist on other hosts and reissue the failed command.
- 52 The oldest DASD generation can not be rolled off when active dump tasks exist for it. A new version cannot be created until active dump processing completes, dump processing is canceled, or the version is deleted. When dump processing has ceased, if the dump version is marked partial, the FORCE parameter must be used on the FRBACKUP DUMP command.
- 54 Issue the LIST PVOL(*volser*) ALLDUMPS to find valid dump volumes for the volume that you are attempting to recover.
- 56 The Fast Replication command for copy pool *cpname* cannot be processed by a pre z/OS V1R11 host. If the command is FRBACKUP, issue the Fast Replication command for copy pool *cpname* in a z/OS V1R11 or later environment.
- 57 To override the backup storage group when non-dump versions exist, issue the FRDELETE command against the copy pool and specify DASDONLY (or both to also delete dump versions). Then reissue the FRBACKUP command with the alternate backup storage group.
- 58 To change the alternate backup storage group, issue the FRDELETE command against the copy pool and specify DASDONLY (or both to also delete dump versions). Then reissue the FRBACKUP command with the new alternate backup storage group. To use the existing alternate backup storage group, remove the BSG keyword from the FRBACKUP command.
- 60 If a copy pool incremental version is needed, the copy pool definition must be changed so that the number of DASD backup versions is greater than 0.
- 62 FCINCREMENTAL and FCINCREMENTALLAST can only be specified if there is no current copy pool incremental version or the current copy pool incremental version is the next version to be replaced. Use the LIST COPYPOOL(*cpname*) command to verify that the oldest possible disk generation is an incremental version. If the current copy pool incremental version is not the oldest disk generation and the next version is needed as a copy pool incremental version, delete the current copy pool incremental version by using the FRDELETE command.
- 64 Delete the incremental version, if a NOCOPY environment is required. Issue the LIST CP(*cpname*) command to determine the version number of the incremental version and use the FRDELETE command to delete it. Issue the FRBACKUP command again.
- 66 Do one of the following:
- If an incremental version is required in the copy pool and the number of versions is greater than zero, change the number of versions in the copy pool definition when the incremental version is the oldest disk generation possible. Issue the FRBACKUP command again.
 - If multiple incremental versions exist, use the FRDELETE command to delete unwanted copy pool backup versions before reducing the number of versions in the copy pool.

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- Issue LIST CP(*cpname*) to determine which version is the incremental version and delete the incremental version by using the FRDELETE command. Issue the FRBACKUP command again with the FCINCREMENTAL keyword.

- 67 See the corresponding ARC1849I and ARC1850I messages for more information.
- 68 PARTIALOK must be specified on the FRRECOV FROMDUMP command to successfully recover this partial copy pool backup version. You should first confirm you want the partial version recovered before you reissue this command.
- 70 An ARC1812I message is also issued for this failure. Determine the return code in the ARC1812I and see the ARC1812I text for further information.
- 72 Ensure all the volumes in the copy pool are online.
- 76 See the corresponding ARC1848I message for more information.
- 78 Remove the VERIFY(N) parameter from the FRRECOV command and retry the recovery operation.
- 80 Wait for dump to complete or issue the FRRECOV command with FORCE keyword to recover immediately, and stop dumping after the volumes currently being dumped are processed.
- 81 Update the copy pool definition with Allow PPRCP (NO | PMNO), or specify the ALLOWPPRCP(NO | PMNO) keyword on the FRRECOV command and retry the recovery.
- 82 Ensure that fast reverse restore can be used, or recover from a dump version.
- 84 Issue FRBACKUP for this copy pool on a system that supports the Allow Fast Reverse Restore copy pool option.
- 88 Issue the Fast Replication request for this version on a release of DFSMSHsm which supports this backup version type. For a version that is an incomplete fast reverse restore, the command may be re-issued on this host after the incomplete restore is completed or after an FRDELETE command is completed to delete the version in incomplete fast reverse restore status.
- 89 The fast replication backup command for copy pool *cpname* cannot be processed in a z/OS pre-V2R1 environment. Issue the FRBACKUP command for copy pool *cpname* in a z/OS V2R1 or later environment.
- 90 Ensure multiple FlashCopy consistency groups with source volumes in the same were not being created at the same time.
- Use the FlashCopy consistency group option for smaller copy pools that can be backed up within the consistency group timer value set for the logical subsystems.
- 92 See preceding messages to obtain further information regarding the message data set allocation error. If the error occurred because of a duplicate message data set name, reissue the command, specifying values for date and time with MESSAGEDATASET(DATE TIME) that are unique for the copy pool.
- 98 Contact IBM support.
- 99 Resolve the cause of the abend and reissue the command.

Source: DFSMSHsm

ARC1807I NO ELIGIBLE COPY POOL BACKUP STORAGE GROUP VOLUME FOUND FOR VOLUME *volser*, *num1* VOLUMES IN COPY POOL BACKUP STORAGE GROUP, *num2* NON ELIGIBLE VOLUMES FOUND, *num3* NON CANDIDATE VOLUMES, *num4* VOLUMES ALREADY SELECTED

Explanation: During a FRBACKUP command, an insufficient number of copy pool backup storage group volumes were available for the source storage group volumes defined to the copy pool.

System action: The fast replication processing ends. DFSMSHsm processing continues.

Programmer response: Issue the SETSYS FASTREPLICATION(VOLUMEPAIRMESSAGES(YES)) command to enable the ARC1809I message. This will help you determine why each copy pool backup volume was not selected.

The following values are assigned to variables listed in this message:

num1 If *num1* is less than the number of copy pool backup versions multiplied by the number of volumes that are defined in the source storage group, there are not enough target volumes defined in the copy pool storage group.

- num2* *num2* — The number of volumes that were defined in the copy pool backup storage group but were not fast replication compatible with volume *volser*. The following are possible reasons for the incompatibility:
- The volumes might be offline
 - The volumes might be of a different device type
 - The volumes might be in a different LSS (for FlashCopy version 1 devices)
 - The volumes might be in a different ESS
- num3* *num3* — The number of copy pool backup storage group volumes that were rejected because they were not the same size as the source *volser*.
- num4* *num4* — The number of copy pool backup storage group volumes that have been paired with different copy pool storage group source volumes.

Source: DFSMSHsm

ARC1808E ONE OR MORE FAILURES OCCURRED DURING FAST REPLICATION {BACKUP | BACKUP DUMP | BACKUP DUMPNLY | RECOVERY | *****} OF {COPY POOL *cpname* | VOLUME *volser* | DATA SET *dsname* | *****}

Explanation: A Fast Replication Backup, Fast Replication Backup Dump, Fast Replication Backup Dump Only, or Fast Replication Recovery has been issued for copy pool *cpname*, volume *volser* or data set *dsname*, and does not successfully process at least one volume or data set. If multiple data set names are specified on the command, the message lists only the first data set, followed by ', ***'. (If ***** appears in the message, see the previous message to determine the command type and copy pool name, *volser*, or data set name).

System action: The Fast Replication processing ends. DFSMSHsm processing continues.

Programmer response: See preceding messages to determine the failing *volser*s or data sets and the corresponding return codes. Resolve the cause of the problem and reissue the command.

Source: DFSMSHsm

ARC1809I VOLUME *volser1* IS NOT A {FAST REPLICATION | PRESERVE MIRROR} CANDIDATE FOR LO VOLUME *volser2*, VER=*ver*, RC=*retcode*[, RSN=*reascode reastext*]

Explanation: While attempting to find a valid fast replication target volume for *volser2*, it was determined that volume *volser1* was not an eligible fast replication or preserve mirror candidate. *ver* represents the backup version of the copy pool that is being processed. *reascode* and *reastext*, when listed, are the ineligible reason code and text returned by the ANTRQST QFRVOLS request.

If the PREPARE option was specified, a message for the same volume for multiple versions will be issued.

Retcode Meaning

- 2 *volser1* is already paired with another source volume
- 4 *volser1* is not the same size as *volser2*
- 6 *volser1* is not an eligible candidate volume. Possible reasons include the following situations:
- The volume is offline
 - The volume is of a different device type
 - The volume is in a different LSS (for FlashCopy version 1 devices)
 - The volume is in a different storage controller
 - The volume is a PPRC primary and the copy pool setting indicated a PPRC primary volume is not permitted to become a FlashCopy target.
 - The volume is in an existing FlashCopy relationship.
- 8 *volser1* is not an eligible fast replication candidate volume because of the listed QFRVOLS reason code and text. The volume is not selected as a fast replication target.
- 10 Preserve mirror preferred is specified and *volser1* does not meet the requirement for a preserve mirror operation because of the listed QFRVOLS reason code and text. However, the volume is fast replication eligible and is selected as the fast replication target for *volser2*.

System action:

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- For RC=10, the fast replication operation continues.
- For other return codes, the fast replication operation ends.

DFSMSHsm processing continues.

Programmer response: If the FRBACKUP function failed, view the ARC1807E message to find the source volume that failed. Then, view the ARC1809I message for the volume that failed and determine the reason for the failure.

See the ANTRQST section in *z/OS DFSMS Advanced Copy Services* for a list of the QFRVOLS volume reason codes.

Source: DFSMSHsm

ARC1810I THE FOLLOWING VOLUMES WERE NOT DEFINED TO COPY POOL *cpname* WHEN THIS BACKUP VERSION WAS CREATED *volume1* [...*volumen*]

Explanation: Volumes were added to copy pool *cpname* since the creation of the backup version being recovered. Because there were no backup versions, the volumes were not a part of the recovery and might contain residual data.

System action: The fast replication recovery ends. DFSMSHsm processing continues.

Programmer response: If a recovery must be performed from a version that does not contain the new volumes (and data has been placed onto those new volumes), those new volumes will contain residual data after the recovery. Examine the data on each of the volumes to determine the action that should be taken.

Source: DFSMSHsm

ARC1811E RECOVERY OF VOLUME *volser* FAILED — VOLUME IS NO LONGER DEFINED TO COPY POOL *cpname*

Explanation: While processing the recovery of copy pool *cpname*, it was determined that volume *volser* is no longer defined to a storage group within the copy pool. To prevent the accidental loss of data, the recovery of the volume is failed.

System action: The recovery of the individual volume fails. DFSMSHsm processing continues.

Programmer response: See *z/OS DFSMSHsm Storage Administration* for information about how to handle this situation.

Source: DFSMSHsm

ARC1812I OPERATION=*op* FOR CATALOG INFORMATION DATA SET=*dsn* FOR COPY POOL=*cpname* HAS COMPLETED WITH RETURN CODE=*rc* AND REASON CODE=*rsn*

Explanation: Processing on the Catalog Information data set has completed. *op* on a pre V1R11 system will be CAPTURE. It is the operation that was being performed on data set *dsn*. The copy pool name *cpname*, *rc* and *rsn* are the results of the operation.

One of the following operations was the requested *op*:

CAPTURE

catalog information capture to the catalog information data set *dsn* for copy pool *cpname*.

SCAN find a data set entry within catalog information data *dsn* for copy pool *cpname* during an FRRECOV request.

AUDIT-CP

confirm that catalog information data set *dsn* corresponds to copy pool *cpname*.

GETINFO

retrieve copy pool information from catalog information data set *dsn*.

LIST list all data set entries contained in catalog information data set *dsn* for copy pool *cpname*.

FREEVOL

move catalog information data set *dsn* to another ML1 volume. The copy pool name *cpname* is not available for this operation.

DELETE

delete catalog information data set *dsn* for copy pool *cpname*.

CLEANUP

perform error recovery cleanup as a result of an ABEND while catalog information data set *dsn* was being processed for copy pool *cpname*.

If the operation, catalog information data set name, or copy pool name is not available at the time this message is issued, the message indicates "****" in the undetermined field.

The operation has failed with a return code of *rc* and reason code *rsn*.

The return codes indicate the following information:

- 4 Operation completed with a warning. PREFERRED was specified for the catalog capture and a partial catalog capture has occurred. A partial catalog capture can occur if the catalog information data set is full. The following reason codes explain the warning:
 - 0 During an FRRECOV operation of a data set, the data set entry was not found in the catalog information data set.
 - 5 There was an error closing the catalog information data set. For OPERATION=CAPTURED, the copy pool definition indicates that catalog information capture is PREFERRED. Partial information might have been captured.
 - 12 During an FRBACKUP operation the catalog capture function ended early because of an error calling the Catalog Search Interface. A partial catalog information capture might be available. Because mature or highly utilized catalogs often contain logical errors, capturing catalog information from a catalog with errors would fail and cause the catalog search interface to return an error.
 - 16 During an FRBACKUP operation, the catalog capture function ended early because of an error in writing to the catalog information data set. A partial catalog capture may be available.
 - 18 The catalog information was detected to be incomplete. Data returned might be incomplete.
 - 20 Catalog information data set processing is not supported on pre-V1R11 systems. For this return code and reason code, the SMS copy pool setting "CAPTURE CATALOG INFORMATION DATA SETS" is set to "PREFERRED" so DFSMSHsm allows the backup to continue without capturing catalog information. If catalog capture is needed, please issue the FRB command from a V1R11 or later system.
- 8 Operation failed. The following reason codes explain the failure:
 - 1 The catalog information data set was not found.
 - 2 There was an error allocating an existing catalog information data set.
 - 3 There was an error opening the catalog information data set.
 - 4 There was an error reading the catalog information data set.
 - 5 There was an error closing the catalog information data set.
 - 6 There was an error freeing the catalog information data set.
 - 7 There was an error selecting an ML1 volume on which to allocate a new catalog information data set. This has possibly been caused due to there not being enough space on the ML1 volume.
 - 8 There was an error allocating a new catalog information data set. This has possibly been caused due to no ML1 volume being defined.
 - 9 There was an error cataloging the catalog information data set.
 - 10 There was an error uncataloging the catalog information data set.
 - 11 There was an error scratching the catalog information data set.
 - 12 There was a Catalog Search Interface error.
 - 13 There was a locating error.
 - 14 A unique name could not be determined for the catalog information data set.

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- 15 There was an error obtaining the MVT for the catalog information data set.
- 16 There was an error writing to the catalog information data set.
- 17 The copy pool name in the catalog information data set does not match the copy pool name being processed.
- 24 The data set type requested to be recovered from a Fast Replication backup is not supported.
- 52 A getmain or freemain error was encountered during catalog information data set processing.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: If this operation completes with a nonzero return code, investigate the root cause of the error. Check for other messages that might have been issued during this operation.

For reason codes 5 or 16, the root cause might be limited ML1 space or small primary, or second allocation quantities, or both. Check for occurrences of ABEND X'37' during this function.

For ML1 space problems, you can increase ML1 space.

For small allocation quantities, you can patch FRGCB_CATDS_PRIMARY and FRGCB_CATDS_SECONDARY fields as described in the Tuning DFSMSHsm section in the *z/OS DFSMSHsm Implementation and Customization Guide*.

For return code 8 reason 7, there might not be eligible ML1 volumes for selection. Ensure that there are ML1 volumes defined, and there is enough free space for a catalog information data set.

For return code 8 reason 15, the catalog information data set might exist on a volume that is no longer defined to DFSMSHsm as an ML1 volume. Ensure that the volume containing the data set is defined to DFSMSHsm as an ML1 volume.

For reason code 12, all catalog errors must be corrected to allow catalog information capture to succeed. You can use IDCAMS commands LISTCAT ALL CATALOG(catname) and DIAGNOSE to help determine the errors. See *z/OS DFSMSHsm Implementation and Customization Guide* and *z/OS DFSMS Access Method Services Commands* for more information.

For other errors, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center.

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The catalog information data set was not captured. The FRBACKUP command was issued from a pre-V1R11 system. The SMS copy pool setting, CAPTURE CATALOG INFORMATION DATA SETS, is set to preferred. The backup continues.

Source: DFSMSHsm

ARC1813I COPY POOL *cpname* IS NOT ELIGIBLE FOR AUTO DUMP PROCESSING, RC=*retcode*

Explanation: Copy pool *cpname* was determined to be ineligible for processing.

Retcode Meaning

- 2 The generation 0 backup copy does not exist or did not complete successfully.
- 3 Automatic Dump processing failed for this copy pool because the version to be dumped is a NOCOPY version where the Allow Fast Reverse Restore option was specified in the copy pool definition during the backup or is a version where a Fast Reverse Restore is partially processed. These types of Fast Replication backup versions are not supported by this function on this release of DFSMSHsm.
- 4 The generation 0 backup copy has already been successfully dumped.
- 6 Frequency setting not met for any of the dump classes to which copy pool *cpname* should be dumped.
- 8 Another DFSMSHsm function was processing the copy pool identified in the message.
- 10 An enqueue error occurred.

System action: DFSMSHsm Autodump processing continues.

Programmer response: Determine why the copy pool is not eligible for auto dump processing, and if necessary, take the following actions.

Retcode Response

- 2 If necessary, issue a FRBACKUP COPYPOOL(*cpname*) command to create a complete backup of copy pool *cpname*. Specify the DUMP keyword on the command to create a dump immediately after the backup copy is made.
- 3 Issue a dump request for this version on a release of DFSMSHsm which supports this backup version type.
- 4 No action necessary.
- 6 Review the frequency settings of the dump classes assigned to copy pool *cpname*. If necessary, change the frequency setting of one or more dump classes to ensure that copy pool *cpname* is dumped during the auto dump window.
- 8 If necessary, issue the FRBACKUP COPYPOOL (*cpname*) DUMPNLY command to create a dump of the most recent backup version of the copy pool.
- 10 Contact IBM support

Source: DFSMSHsm

ARC1814I FAST REPLICATION BACKUP HAS COMPLETED SUCCESSFULLY AND DUMP IS NOW STARTING FOR COPY POOL *cpname*, VERSION *vernum*

Explanation: The DFSMSHsm Fast Replication Backup has completed and dump is starting for copy pool *cpname*, version *vernum*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1815I {AUTO DUMP | FAST REPLICATION BACKUP DUMP | FAST REPLICATION BACKUP DUMPNLY | FRRECOV | FRDELETE | DELVOL | AUDIT} HAS FAILED FOR COPY POOL *cpname*, VERSION *vernum*. HOST *hostid* IS CURRENTLY PROCESSING A {DUMP | RECOVERY | DELETE | DELVOL | AUDIT} OPERATION INVOLVING THE COPY POOL VERSION.

Explanation: Processing for auto dump, FAST REPLICATION BACKUP DUMP, FAST REPLICATION BACKUP DUMPNLY, FRRECOV, FRDELETE, DELVOL or AUDIT, for copy pool *cpname*, version *vernum* ended before normal completion of the operation. Host *hostid* is currently processing the specified function on the copy pool version.

System action: Processing for the specified command or for auto dump of copy pool *cpname* version *vernum* ends. Auto dump of other copy pools or non-copy pool volumes will continue. DFSMSHsm processing continues.

Programmer response: Once host *hostid* completes copy pool processing for the specified version, reissue the failing command.

Dump of the specified copy pool version may take a considerable amount of time. To stop command dump processing, issue the QUERY WAITING command to obtain the request number of the dumps to be canceled. (The request number will be the same for all volumes in the copy pool version.) Then issue CANCEL REQUEST(*requestnum*) to cancel the volume dumps. After all waiting dump requests have been canceled, wait until all dumps in process complete and then reissue the failing command. Auto dump processing for a copy pool version cannot be stopped.

Source: DFSMSHsm

ARC1816E A FAST REPLICATION TASK ABENDED DURING FAST REPLICATION {BACKUP | RECOVERY | ***}OF {COPY POOL *cpname* | VOLUME *volser* | *****}**

Explanation: A fast replication backup or recover operation has been issued for copy pool *cpname* or volume *volser*, and a fast replication task abended. (If ***** appears in the message, see the previous message to determine the command type and *cpname* or *volser*.)

System action: Fast replication processing ends. DFSMSHsm processing continues.

Programmer response: See preceding abend messages for additional information.

Source: DFSMSHsm

ARC1817I PARTIAL DUMPS EXIST FOR COPY POOL *cpname*.

Explanation: At least one DASD version that is eligible to be expired and rolled off has a partial dump associated with it. For the DASD used by the version to be freed, possibly for a new DASD version to be created, the expired version must be rolled off.

System action: None.

Programmer response: To free the DASD used by the expired versions, the partial dumps must either be completed with the FRBACKUP DUMPONLY command, forced to be rolled off with the FORCE keyword on the FRBACKUP command or the FRDELETE command can be used to delete either the partial dump or DASD version of the copy pool.

Source: DFSMSHsm

ARC1818I AUTO DUMP TERMINATED EARLY, *n* VOLUMES FROM COPY POOL *cpname* WERE NOT PROCESSED

Explanation: Auto dump terminated before completing copy pool *cpname*. *n* volumes in the copy pool were not processed.

System action: DFSMSHsm processing continues. Auto dump will resume processing this version of the copy pool if it is still generation(0) when the auto dump window starts.

Programmer response: If dump processing for the version needs to be completed, issue an FRBACKUP COPYPOOL(*cpname*) DUMPONLY command for the copy pool version. Issue a LIST COPYPOOL(*cpname*) to determine which version.

Source: DFSMSHsm

ARC1819I WITHDRAW PROCESSING FAILED FOR SOURCE DEVICE *<srcdevicenum>* AND TARGET DEVICE *<tgtdevicenum>*, RC=*sdmrc*, REAS=*sdmreas*, RETINFO=*sdmretinfo*

Explanation: An attempt to withdraw the FlashCopy relationship between source and target volume failed. The source and the target volume device numbers are listed in the message text along with the failing return codes and reason codes from SDM. The SDM return codes are in either RC or RETINFO, but not both. RETINFO is in hexadecimal with spaces for readability. It contains the first four words of the SDM/ANTRQST return information.

System action: DFSMSHsm processing continues.

Programmer response: Use the SDM return codes in the RC field and their associated reason codes in the REAS field or use the return code part and other information in the RETINFO field to determine the cause of the withdraw failure. The SDM return codes, reason codes are documented in the *z/OS DFSMS Advanced Copy Services*. After correcting the problem, manually withdraw the FlashCopy relationship. To withdraw the FlashCopy relationship, issue the TSO FCWITHDRAW command. An example of the command syntax is:

```
FCWITHDRAW SDEVN(X'srcdevnum') TDEVN(X'tgtdevnum')
```

Note: If the device numbers are not present in the message, the UCBLOOK or UCB scan failed, and the device information could not be obtained. The RC and REAS codes in the message are from the UCB error and the RETINFO field contains zeros. Message ARC0334I might have been issued containing the failing volser, return code and reason code. One of the volumes might be offline. Correct the problem and manually withdraw the Flashcopy relationship using the command described above.

Source: DFSMSHsm

ARC1820I THE FOLLOWING VOLUMES IN COPY POOL *cpname*, VERSION *ver*, HAVE AN ACTIVE FLASHCOPY BACKGROUND COPY

Explanation: A QUERY command has been issued with the COPYPOOL parameter.

One or more of the source volumes contained within a storage group defined to the specified copy pool have an active FlashCopy background copy or the FlashCopy relationship is in NOCOPY mode. Those volumes that have an active background copy or are in NOCOPY relationships are listed.

In the message text:

cpname The name of the specified copy pool.

ver The version number of a DASD copy that has an active FlashCopy background copy.

The volumes are displayed in the following format:

```
SGNAME  FR-PRIMARY  FR-BACKUP  PCT-COMP
sgname  pri_vols   back_vols  pct_comp
```

sgname The name of the pool storage group that the source volume resides in.

pri_vols The volser of the primary data volume that has an active background copy.

back_vols

The volser of the volume that contains the backup copy.

pct_comp

Percent of background copy completed. This column is displayed when SETSYS FASTREPLICATION(FCRELATION(FULL)) has been specified. The percent-complete value is available for full-volume relationships. '***' is displayed when the value is not available.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1821I NONE OF THE VOLUMES IN COPY POOL *cpname*, VERSION *ver*, HAVE AN ACTIVE FLASHCOPY BACKGROUND COPY

Explanation: A QUERY command was issued with the COPYPOOL parameter.

None of the source volumes contained within the storage groups defined to the specified copy pool have an active FlashCopy background copy with the target volumes defined to the copy pool. The QUERY COPYPOOL command does not report the background copies that are initiated outside DFSMSHsm for the source volumes.

In the message text:

cpname The name of the specified copy pool.

ver The DASD version number that does not have an active FlashCopy background copy. '***' is returned when there are no DASD versions for the copy pool.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1822I {FRBACKUP | FRRECOV | FRBACKUP DUMP OR DUMPONLY | FRRECOV FROMDUMP} OF COPY POOL *cpname* FOR USER *userid*, REQUEST *request-number* ON HOST *host_id* IS IN PROGRESS: NOT PROCESSED = *xx*, TOTAL = *yy*

Explanation: A QUERY command was issued with the ACTIVE, USER, or REQUEST parameter.

When FRBACKUP is listed, either a FRBACKUP COPYPOOL(*cpname*), FRBACKUP COPYPOOL(*cpname*) PREPARE, or FRBACKUP COPYPOOL(*cpname*) WITHDRAW is being processed. When FRBACKUP DUMP OR DUMPONLY is listed, an FRBACKUP COPYPOOL(*cpname*) DUMP, or FRBACKUP COPYPOOL(*cpname*) DUMPONLY command is being processed. When FRRECOV FROMDUMP is listed, an FRRECOV COPYPOOL(*cpname*) FROMDUMP command is being processed.

DFSMSHsm is processing the copy pool specified by *cpname*. *userid* is the user identification of the initiator. *request-number* is the DFSMSHsm request number. *host_id* is the ID of the DFSMSHsm host that is processing the request. *xx* is the number of volumes in copy pool *cpname* that have not been dumped yet and *yy* is the total number of volumes in the copy pool processed by auto dump. *xx* and *yy* will be '****' for functions other than automatic dump.

System action: DFSMSHsm processing continues.

Programmer response: None.

ARC1823I

Source: DFSMSHsm

ARC1823I MAXCOPYPOOL(FRBACKUP TASKS = *backup_tasks*, FRRECOV TASKS = *recover_tasks*, DSS TASKS = *dss_tasks*), FASTREPLICATION (DATASETRECOVERY = {PREFERRED | REQUIRED | NONE } FCRELATION= {EXTENT | FULL} VOLUMEPAIRMESSAGES={YES | NO} MESSAGEDATASET({YES | NO} HLQ=*hlq*))

Explanation: A QUERY command was issued with the SETSYS parameter. DFSMSHsm issues this message to describe the current parameter settings for fast replication processing.

In the message text:

backup_tasks

Maximum number of concurrent DFSMSdss invocations that DFSMSHsm will process for each FRBACKUP COPYPOOL command.

The maximum number of concurrent fast replication backup tasks is the product of *backup_tasks* and *dss_tasks*.

recover_tasks

Maximum number of concurrent DFSMSdss invocations that DFSMSHsm will process for each FRRECOV COPYPOOL command.

The maximum number of concurrent fast replication recover tasks is the product of *recover_tasks* and *dss_tasks*.

dss_tasks

Maximum number of volume pairs that DFSMSHsm will pass to each DFSMSdss invocation to process in parallel for both backup and recover fast replication functions.

When the FASTREPLICATION command:

- DATASETRECOVERY parameter is set to:
 - PREFERRED or not specified, the system will use fast replication to recover data sets when possible. If fast replication cannot be used, the system will recover the data set using traditional copy methods.
 - REQUIRED, data set recovery will fail if fast replication cannot be used.
 - NONE, the system uses only traditional copy methods for data set recovery.
- FCRELATION parameter is set to:
 - EXTENT, DFSMSHsm will establish FlashCopy relationship as extent-level unless the copy pool or backup version is eligible for fast reverse restore or when the requested FlashCopy function requires full volume FlashCopy relationship.
 - FULL, DFSMSHsm will establish FlashCopy relationship as full volume-level which results in a single relationship between the volume pair covering the entire volume.
- VOLUMEPAIRMESSAGES parameter is set to:
 - YES, DFSMSHsm will issue ARC1809I messages.
 - NO, DFSMSHsm will not issue ARC1809I messages.
- MESSAGEDATASET parameter is set to:
 - YES, the fast replication related messages are to be directed to a fast replication message data set and to the function's respective logs.
 - NO, the fast replication related messages are directed only to the function's respective logs.
 - HLQ=*hlq*, indicates that *hlq* is the high level qualifier of all fast replication message data sets allocated by DFSMSHsm.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1824I COPY POOLS RESTRICTED TO PROCESSING BY THIS PROCESSING UNIT: NOT PROCESSED = *uu*, TOTAL = *vv*. COPY POOLS NOT RESTRICTED TO PROCESSING BY THIS PROCESSING UNIT: NOT PROCESSED = *yy*, TOTAL = *zz*

Explanation: A QUERY command has been issued with AUTOPROGRESS parameter, the following is reported:

- An indication of the number of copy pools that have not yet been processed by auto dump.
- The total number of copy pools that are eligible for processing by auto dump.

For each auto dump function that is processing DFSMSHsm-managed volumes of copy pool(s) in the processing unit where the QUERY AUTOPROGRESS command is issued, the following is reported:

- uu* The number of eligible copy pools restricted to this processing unit that have not been processed. Restricted to this processing unit means that the copy pool definition specifies processing for autodump only by the processing unit in which the QUERY AUTOPROGRESS command was issued.
- vv* The total number of eligible copy pools restricted to this processing unit. Restricted to this processing unit means that the copy pool definition specifies processing for this function only by the processing unit in which the QUERY AUTOPROGRESS command was issued.
- yy* The number of eligible copy pools that are not restricted to processing by any processing unit and that have not been processed by auto dump.
- zz* The total number of copy pools that are not restricted to processing by any processing unit and are eligible for processing by this function in this processing unit.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1825I FAST REPLICATION VOLUME BACKUPS=*backup_req* REQUESTED, *backup_fail* FAILED; VOLUME RECOVERIES=*recover_req* REQUESTED, *recover_fail* FAILED

Explanation: A QUERY command was issued with the STATISTICS parameter. This message contains fast replication statistics for the current day.

- *backup_req* indicates the total number of volumes for which a fast replication backup was requested.
- *backup_fail* indicates the number of volumes for which a fast replication backup has failed.
- *recover_req* indicates the number of volumes for which a fast replication recover was requested.
- *recover_fail* indicates the number of volumes for which a fast replication recover has failed.

Note: Fast replication volume backups and recoveries are initiated by means of the FRBACKUP COPYPOOL, and FRRECOV COPYPOOL commands, respectively.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1826I FRBACKUP = {HELD | NOT HELD } AND {ACTIVE | INACTIVE}, FRRECOV={HELD | NOT HELD } AND {ACTIVE | INACTIVE}, FRBACKUP DUMP = {HELD | HELD EOVS | NOT HELD} AND {ACTIVE | INACTIVE}, FRRECOV(TAPE) = { HELD | HELD EOVS | NOT HELD} AND {ACTIVE | INACTIVE}, FRRECOV(DATASET) = {HELD | NOT HELD} AND {ACTIVE | INACTIVE}

Explanation: A QUERY command was issued with the ACTIVE parameter. This message gives the status of the COPYPOOL function and indicates if FRBACKUP COPYPOOL, FRRECOV COPYPOOL, FRBACKUP COPYPOOL DUMP, FRBACKUP COPYPOOL DUMPONLY, or FRRECOV FRDUMP are in progress.

ACTIVE and INACTIVE indicate if the operation is currently in progress. HELD and NOT HELD indicate if the operation is currently in hold status. HELD EOVS indicates that the operation is currently HELD at EOVS level. The default is EOD level.

When FRBACKUP is active, either a FRBACKUP COPYPOOL(*cpname*), FRBACKUP COPYPOOL(*cpname*) PREPARE,

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or FRBACKUP COPYPOOL(*cpname*) WITHDRAW is being processed. When FRBACKUP DUMP is active, either FRBACKUP COPYPOOL(*cpname*) DUMP, FRBACKUP COPYPOOL(*cpname*) DUMPONLY, or copy pool auto dump is being processed. When FRRECOV is active, FRRECOV COPYPOOL(*cpname*) is active. When FRRECOV(TAPE) is active, FRRECOV FROMDUMP is active. If DUMP is held, whether FRBACKUP DUMP or FRBACKUP DUMPONLY is held at EOD or EOVS level depends upon if DUMP is held at EOD or EOVS level, see message ARC0642I.

When FRRECOVER(DATASET) is active, the system is processing FRRECOV DSNAME(*dsname*).

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1827I NONPREFERRED COPY POOL BACKUP STORAGE GROUP VOLUME *volser1* SELECTED FOR VOLUME *volser2*, RC=*retcode*

Explanation: During the FRBACKUP volume pairing processing, DFSMSHsm selected a nonpreferred backup volume *volser1* for the listed source volume *volser2* because of the reason listed in *retcode*.

Retcode Meaning

4 No eligible copy pool backup storage group volumes were found in the same cluster as the source volume.

System action: DFSMSHsm processing continues.

Programmer response: Review and resolve the listed reason for DFSMSHsm to select a non-preferred volume. If needed, rerun the FRBACKUP PREPARE command when adjustments have been made.

To disable the ARC1827I message for the copy pool, issue the following command:

```
FIXCDS F cpname PATCH(X'F' X'FF')
```

To re-enable the ARC1827I message for the copy pool, issue the following command:

```
FIXCDS F cpname PATCH(X'F' X'00')
```

Retcode Response

4 Ensure there are a sufficient number of copy pool backup storage group volumes that reside in the same clusters as the source volumes.

Source: DFSMSHsm

ARC1828I COPY POOL *cpname* { RESTRICTED | NOT RESTRICT } TO PROCESSING BY THIS PROCESSING UNIT: NOT PROCESSED = *uu*, TOTAL = *m*.

Explanation: A QUERY command has been issued with the AUTOPROGRESS parameter, the following is reported:

- An indication of the number of volumes within a specific copy pool that have not yet been processed by auto dump.
- An indication of the number of volumes within a specific copy pool that are eligible for processing by auto dump.

For auto dump that is processing DFSMSHsm-managed volumes of copy pool(s) in the processing unit where the QUERY AUTOPROGRESS command is issued, the following is reported:

uu The number of volumes within the specified copy pool restricted or not restricted to this processing unit that have not been processed. Restricted to this processing unit means that the copy pool specifies processing for this function only by this processing unit in which the QUERY AUTOPROGRESS command was issued.

m The total number of volumes eligible for auto dump processing in the specified copy pool.

cpname The copy pool name.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1829I FAST REPLICATION FAILED DUE TO AN ERROR WITH THE COMMON DUMP QUEUE

Explanation: DFSMSShsm attempted to process a FRBACKUP operation using its common queue. The volume, command, or operation and its reason for the failure is as described by message ARC10001I. In message ARC1001I, the *reascode* identifies the results.

The *reascode* values are as follows:

100 A SETSYS COMMONQUEUE(DUMP(DISCONNECT FORCE)) command was processed. This return code indicates that active requests from the common queue for this function running in this system were allowed to finish. However, the remote requests submitted to the common queue for this function from this system are failed, but may still complete on another system in the functional group.

102 A SETSYS COMMONQUEUE(DUMP(DISCONNECT FORCE)) command was processed for a host member that is the current master scheduler. This return code indicates that active requests from the common queue for this function running in the group were allowed to finish. However, any request received from the remote members in the group on this master scheduler system and are waiting to be processed will be failed.

105 A host in the common queue group became not defined. This return code indicates that the work was assigned by the master scheduler to run in this host of the common queue, but it cannot determine if it completed.

System action: The system will take the action taken as described by each return code.

Programmer response: Notify the storage administrator.

Source: DFSMSShsm

ARC1830I FAST REPLICATION BACKUP VOLUME *frbvol* WAS DUMPED TO TAPE VOLUME *tapevol*, SOURCE VOLUME=*srcvol*

Explanation: This message is issued to the dump activity log when a fast replication backup volume is successfully dumped to tape. Because the volume that was dumped (*frbvol*) is a fast replication backup volume, the dump tape that was produced (*tapevol*) actually represents the source volume (*srcvol*) that the backup volume was a backup for.

Even though DFSMSShsm records will indicate that tape *tapevol* is a dump of volume *frbvol*, the dump tape cannot be used to recover backup volume *frbvol*. Rather, it can be used to recover the source volume *srcvol*.

See *z/OS DFSMSShsm Storage Administration* for more information.

System action: DFSMSShsm processing continues.

Programmer response: None.

Source: DFSMSShsm

ARC1831I {BACKUP | DUMP | DUMP COPY(*dclass*) | EXPIRATION DATE FOR DUMP COPY(*dclass*)} VERSION NUMBER *bvn* OF COPY POOL *cpname* WAS { DELETED SUCCESSFULLY | NOT DELETED | UPDATED SUCCESSFULLY | NOT UPDATED}

Explanation: Either:

- A FRDELETE command has been issued to delete one or more versions for copy pool *cpname*. *bvn* indicates the version number that was processed. Each indicated version may contain BACKUP or DUMP copies. BACKUP indicates the fast replication copy of the indicated version is processed. DUMP indicates the DUMP copy of the indicated version is processed. If BOTH is specified in a FRDELETE command, ARC1831I is issued twice. One is for BACKUP and the another is for DUMP. NOT DELETED may indicate a specific backup or dump version was requested but does not exist.
- An UPDTCDS command has been issued to update the dump expiration date in dump class *dclass*, version *bvn* and copy pool *cpname*.

System action: DFSMSShsm processing continues.

Programmer response: If the version or the specified copy of the version is not deleted or the UPDTCDS command did not update the dump expiration date, issue the LIST COPYPOOL command. From the LIST output, verify the correct copy pool name, version number, and version copies were specified on the FRDELETE or UPDTCDS command. Reissue the command if needed.

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Source: DFSMSHsm

ARC1832I {NO | *nbv*} {VERSION(S) | DCLASS(ES)} DELETED FOR COPY POOL *cpname*

Explanation: A FRDELETE command has been issued to delete backup, dump, or both backup and dump versions of the copy pool identified by *cpname*. If NO is specified, the indicated versions were not found for *cpname*.

Otherwise the number of versions deleted is *nbv*. When DASDONLY is specified in a FRDELETE command, *nbv* is the number of BACKUP *dasd* version deleted. When DUMPONLY is specified in a FRDELETE command, *nbv* is the number of DUMP versions deleted. If both DASD and DUMP is specified in a FRDELETE command, *nbv* indicates the number of both DASD and DUMP versions were deleted successfully.

System action: DFSMSHsm processing continues.

Programmer response: If the message specifies NO, use the LIST COPYPOOL command to ensure that the specified copy pool name and versions exist. If necessary, reissue the command.

Source: DFSMSHsm

ARC1833I WITHDRAW COMPLETED FOR COPY POOL *cpname*, BACKUP VERSION NUMBER *bvn* WAS {UNCHANGED | INVALIDATED}

Explanation: Either a FRBACKUP COPYPOOL(*cpname*) WITHDRAW or FRBACKUP COPYPOOL(*cpname*) FORCE command was issued to withdraw the FlashCopy relationships for the most recent valid backup version. *bvn* is the version number for which the withdraw was attempted. The backup version is only invalidated if one or more FlashCopy relationships are withdrawn.

If the backup version was UNCHANGED, none of the source volumes associated with the backup version were in a FlashCopy relationship. The backup version was unchanged.

If the FRBACKUP WITHDRAW command was issued on a pre-V1R11 system for a copy pool that has been processed by a V1R11 or later system, DFSMSHsm leaves the version unchanged. Issue the command in a V1R11 or later system to process the WITHDRAW.

If the backup version was INVALIDATED, one or more of the source volumes associated with the backup version were in a FlashCopy relationship that was withdrawn. If there are no corresponding dump copies, the backup version is marked as invalid and cannot be used to recover the copy pool. If there are corresponding dump copies, the backup version is marked DUMPVERSIONONLY.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC1834I INCREMENTAL FLASHCOPY RELATIONSHIPS WITHDRAWN FOR COPY POOL *cpname*, VERSION NUMBER *ver*. THE VERSION REMAINS RECOVERABLE.

Explanation: An FRBACKUP WITHDRAW command has been issued for an incremental copy pool version. The persistent incremental relationships were withdrawn. The background copies of the version had completed successfully before the withdraw, and these background copies are available for recover processing. The incremental notation for the version will persist even though none of the copies are currently in a persistent relationship.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1835I NO VALID BACKUP VERSIONS EXIST FOR COPY POOL *cpname*

Explanation: A FRBACKUP COPYPOOL(*cpname*) WITHDRAW command was issued to withdraw the FlashCopy relationships for the most recent valid backup version. No valid backup version for copy pool *cpname* was found.

System action: DFSMSHsm processing continues.

Programmer response: Determine if the correct copy pool name was specified. Reissue the command with the correct name, if needed.

Source: DFSMSHsm

ARC1836I {FAST REPLICATION DELETE | UPDTCDS COMMAND} HAS FAILED FOR COPY POOL *cpname*,
RC=*retcode*

Explanation: A FRDELETE COPYPOOL(*cpname*) command was issued to delete the backup version of copy pool *cpname* represented by the specified token, or a UPDTCDS command was issued to update the dump expiration date. The command failed.

Retcode Meaning

- 2 The specified token represents multiple backup or dump versions of the specified copy pool.
 - 4 The specified token was not found for the specified copy pool.
 - 6 No dump or backup versions of the specified copy pool exist.
 - 8 No dump copies for the specified version for the specified copy pool exist.
 - 10 Partial dump version is not deleted due to an error.
 - 12 Another DFSMSShm function was processing the copy pool identified in the message.
 - 14 Another DFSMSShm function was processing the copy pool dump version.
 - 16 The FRDELETE command will not process copy pool *cpname*. It was created or converted for use in z/OS V1R11 or later environment.
 - 18 An enqueue error occurred.
 - | 20 The UPDTCDS command failed because the COPYPOOL parameter was not specified.
 - | 22 The UPDTCDS command failed because the VERSION parameter was not specified.
 - | 24 The UPDTCDS command failed because the DUMPEXPIRATION parameter was not specified.
 - | 26 The UPDTCDS command failed because the DUMPCLASS parameter was not specified.
 - | 28 The UPDTCDS command failed because the NEWDATE parameter was not specified.
 - | 30 The UPDTCDS command failed because the NEWDATE parameter is incorrect.
 - | 32 The UPDTCDS command failed because the date specified with the NEWDATE parameter is not in the future.
 - | 34 The UPDTCDS command failed because the dump version was not found.
 - | 36 The UPDTCDS command failed because the dump class was not found for the dump version.
 - | 38 The UPDTCDS command failed because the version was not found.
 - | 40 The UPDTCDS command failed due to an error.
- | **System action:** The fast replication processing or updating of the dump expiration date ends. DFSMSShm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the command.

Retcode Response

- 2 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid versions for the copy pool. Reissue the FRDELETE command specifying a valid existing version.
- 4 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid tokens for the copy pool. Reissue the FRDELETE command specifying a valid existing token.
- 6 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of copy pools which have been backed up. If necessary, reissue the FRDELETE command specifying a valid existing version.
- 8 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid dump classes for valid versions for the copy pool. Reissue the FRDELETE command specifying valid existing dump copies.
- 10 See message ARC0184I for additional information.
- 12 Wait for processing of the copy pool identified in the message to complete, then reissue the FRDELETE command if necessary.

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- 14 See message ARC1815I to determine the version number and the function which is currently processing the version. Reissue the FRDELETE command at a later time.
- 16 Issue the Fast Replication Delete command for copy pool *cpname* in a z/OS V1R11 or later environment.
- 18 Contact IBM Support.
- | 20 Issue the UPDTCDS command with the COPYPOOL parameter.
- | 22 Issue the UPDTCDS command with the VERSION parameter.
- | 24 Issue the UPDTCDS command with the DUMPEXPIRATION parameter.
- | 26 Issue the UPDTCDS command with the DUMPCLASS parameter.
- | 28 Issue the UPDTCDS command with the NEWDATE parameter.
- | 30 Issue the UPDTCDS command with a corrected NEWDATE parameter.
- | 32 Issue the UPDTCDS command with a corrected NEWDATE parameter.
- | 34 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid dump versions for the copy pool. Reissue the UPDTCDS command specifying a valid existing dump version.
- | 36 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid dump versions and dump classes for the copy pool. Reissue the UPDTCDS command specifying a valid existing dump version and class.
- | 38 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid versions for the copy pool. Reissue the UPDTCDS command specifying a valid existing version.
- | 40 Refer to message ARC0184I for additional information.

Source: DFSMSHsm

ARC1837I FAST REPLICATION {DUMP | RECOVERY FROM DUMP} PROCESSING FOR {COPY POOL *cpname* | VOLUME *volser*} TERMINATING EARLY, RC = *retcode*

Explanation: DUMP processing for copy pool *cpname* or FRRECOV FROMDUMP processing for volume *volser* terminated early.

Retcode Meaning

- 12 DFSMSHsm is shutting down.
- 14 DFSMSHsm is in Emergency mode.
- 18 BACKUP is disabled.
- 20 FRBACKUP DUMP is held.
- 22 FRRECOV is held.

System action: DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the command.

Retcode Response

- 12 Restart HSM and retry the command.
- 14 Retry the command when DFSMSHsm is taken out of emergency mode.
- 18 Retry the command when backup is enabled.
- 20 Retry copy pool dump once the DUMP function is released.
- 22 Retry FRRECOV command once the FRRECOV function is released.

Source: DFSMSHsm

ARC1838I INITIALIZATION ATTEMPT OF COPY POOL BACKUP STORAGE GROUP VOLUME *volser* HAS COMPLETED, RC= *rc*,RSN = *rsn*

Explanation: The VTOC was in a flash copy relationship when the Flash Copy relationship was withdrawn. To avoid an inaccessible VTOC, a reinitialization of the volume was automatically attempted.

rc Meaning

0 The volume was successfully reinitialized.

12 The volume reinitialization failed. The VTOC of the copy pool backup storage group volume, *volser*, might no longer be usable.

reason code for rc 12**Meaning**

4 SYS data set allocation failed.

8 SYSDS OPEN failed.

10 Volume allocation failed.

12 ICKDSF failed.

14 Could not obtain UCB.

System action: DFSMSHsm processing continues.

Programmer response:**rc Response**

0 If the volume is shared across a sysplex, the volume needs to be varied offline and online again on the other shared systems to recognize the new VTOC.

12 The VTOC of the copy pool backup storage group volume, *volser*, might be corrupt necessitating a reinitialization. See *Device Support Facilities (ICKDSF) User's Guide and Reference* for initialization procedures. If the volume cannot be reinitialized through ICKDSF, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM Support Center.

Source: DFSMSHsm

ARC1839I WITHDRAW PROCESSING FAILED,RC=*rc*,RSN=*rsn*

Explanation: Withdraw processing for a copy pool version was not completed successfully.

RC8 - REAS2

Processing failed for this copy pool because the system in which the command was issued cannot process this copy pool.

Programmer response: RC8 -REAS2

Attempt the Fast Replication command on the most recent level of DFSMSHsm available.

Source: DFSMSHsm

ARC1840I FAST REPLICATION FUNCTIONS ARE DISABLED

Explanation: The fast replication backup and recovery functions are disabled or the installation is not allowing them. The NOBACKUP parameter of the SETSYS command may have been used to disallow the use of these functions.

System action: The requested function ends. DFSMSHsm processing continues.

Programmer response: If the function is disabled, issue the SETSYS BACKUP command to enable it. Then, retry the requested function.

Source: DFSMSHsm

ARC1841I • ARC1845I

ARC1841I AUTOMATIC DUMP STARTING FOR COPYPOOL *cpname*

Explanation: Auto dump has started for copy pool *cpname*. This message is issued only once when auto dump starts processing volumes of a copy pool. If copy pool volumes have been processed, an ARC1842I is issued. If auto dump terminates prior to completing all dumps for the copy pool, an ARC1818I will be issued for each copy pool not completely processed.

System action: Auto Dump processing copy pool volumes.

Programmer response: None.

Source: DFSMSHsm

ARC1842I AUTO DUMP HAS COMPLETED FOR COPY POOL *cpname*, AT time ON date, MAXIMUM VOLUME RC=*max vol retcode*

Explanation: Automatic dump has completed dumping all copy pool volumes for copy pool *cpname*.

- *cpname* indicates the name of the copy pool that was processed.
- *time* indicates the time of day the function completed, expressed as hh:mm:ss (hours, minutes and seconds).
- *date* indicates the date on which the function completed, expressed as yyyy/mm/dd (year, month and day).
- *max vol retcode* reflects the highest return code received for an individual volume during automatic dump.

System action: Automatic Dump continues. DFSMSHsm processing continues.

Programmer response: If *max vol retcode* is not zero, one or more volumes failed. Reference all preceding related messages for details on the failure(s), determine what caused the error(s) and issue the FRBACKUP COPYPOOL(*cpname*) DUMPONLY VERSION(*version*) command to have DFSMSHsm retry the volumes that failed.

Source: DFSMSHsm

ARC1843I FAST REPLICATION BACKUP FUNCTIONS WILL NOT BE PERFORMED. BCDS MAXIMUM RECORD SIZE MUST BE 6544.

Explanation: The fast replication backup functions are not performed because the maximum BCDS record size is too small. The maximum record size must be 6544 if fast replication is used, regardless of the number of data set backup versions.

System action: The requested function ends. DFSMSHsm processing continues.

Programmer response: Reorganize the BCDS specifying RECORDSIZE(334 6544) and CISIZE(12288). Try the requested function again.

Source: DFSMSHsm

ARC1844I FAST REPLICATION COMMAND FAILED FOR COPY POOL *cpname* - {DUMP CLASS ERROR}

Explanation: The Fast Replication command failed. When DUMP CLASS ERROR is specified, see the corresponding ARC06xxI or ARC1846E message to identify the cause of the failure.

System action: DFSMSHsm processing continues.

Programmer response: Take the corrective action according to previous message.

Source: DFSMSHsm

ARC1845I RESUME(NO) SPECIFIED. PREVIOUS INCOMPLETE RECOVERY WILL NOT BE RESUMED

Explanation: The RESUME(NO) keyword was specified on the FRRECOV COPYPOOL FROMDUMP command. Rather than resuming where a previous incomplete recovery left off, DFSMSHsm will restart the recovery operation from the beginning.

System action: DFSMSHsm processing continues.

Operator response: None.

System programmer response: None.

Programmer response: None.

Source: DFSMSHsm

ARC1846E {AUTO DUMP | FAST REPLICATION BACKUP DUMP | FAST REPLICATION BACKUP
DUMPONLY | *****} HAS FAILED FOR {COPY POOL *cpname* | *****}, RC=*retcode*

Explanation: Automatic Dump, Fast Replication Backup Dump, or FAST REPLICATION Backup DUMPONLY for copy pool *cpname* ended before normal completion of the operation. The reason for an early end is explained as determined by the *retcode*. (If ***** appears in the message, see the previous message to determine the command type and copy pool name.)

Retcode Meaning

- 2 The specified backup copy was already successfully dumped.
- 4 A backup copy cannot be dumped to more than five dump classes.
- 6 A CDS I/O error occurred. For fast replication dump, DFSMSHsm was unable to update or write a CDS record.
- 8 The specified dump classes were already successfully dumped.
- 10 A CDS record discrepancy was identified. For fast replication dump, DFSMSHsm was unable to read a CDS record. The associated fast replication volumes might remain in FlashCopy relationship in a NOCOPY environment.
- 12 A dump class was specified more than once on the command.
- 14 A serialization error occurred.
- 16 Dump was previously attempted for this backup version and failed. Only dump classes that previously failed may be specified on subsequent dump attempts for this backup version.
- 18 FRBACKUP DUMPONLY was attempted on a pre V1R8 release copy pool.
- 22 DFSMSHsm was shut down.
- 24 The dump classes to be dumped to do not contain the same encryption or HWCOMPRESS settings.
- | 32 Multiple concurrent commands were issued for the same or similarly named copy pool and/or an error
| occurred while allocating the message data set. The MESSAGEDATASET(DATE TIME) keywords were
| specified on the FRBACKUP or FRRECOV command. In order for DFSMSHsm to generate a unique message
| data set name for this request, a unique date and time must be specified for the copy pool on the
| FRBACKUP or FRRECOV command.
- 84 Fast Replication Backup DUMP failed because the copy pool definition indicates Allow Fast Reverse Restore. This feature is not supported on this release of DFSMSHsm.
- 88 FRBACKUP DUMP failed because the latest version or version to be recovered is either a NOCOPY version where the Allow Fast Reverse Restore option was specified in the copy pool definition at the time of the backup or is a version where a Fast Reverse Restore is partially processed. These types of Fast Replication versions are not supported by this function on this release of DFSMSHsm.
- 98 An internal error occurred.

System action: This Fast Replication processing ends. DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the command.

Retcode Response

- 2 For command dump: Issue the LIST COPYPOOL(*cpname*) command to view all valid versions that have not yet been successfully dumped. If necessary, reissue the FRBACKUP DUMPONLY command using an existing valid version that has not been successfully dumped.
- 4 Issue the LIST COPYPOOL(*cpname*) command to determine if a dump of this backup version was previously attempted. A version can only be dumped to five dump classes. Issue the FRBACKUP DUMPONLY command, specifying dump classes so that a total of no more than five are attempted.
- 6 See the corresponding ARC0184I and other messages additional information.

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- 8 Issue the LIST COPYPOOL(*cpname*) DUMPVOLS command to view all dump classes that have not been successfully dumped to. If necessary, reissue the FRBACKUP DUMPONLY command, specifying one or more dump classes that have not been successfully dumped to.
- 10 For fast replication dump, see the corresponding ARC0184I and other messages for additional information. Contact IBM support to determine the state of the fast replication dump version and whether the CDS records can be corrected by using the FIXCDS command.
- 12 Reissue the command, specifying each dump class once.
- 14 The copy pool version is actively in use by another command. Wait for the other command to complete. Use QUERY ACTIVE to determine which command is processing the copy pool.
- 16 When the number of backup versions to be maintained for a copy pool is set to zero, Fast Replication relationships are withdrawn for volumes that are successfully dumped to all dump classes, even if the dump of the entire copy pool does not complete successfully. Relationships will only be maintained for the volumes that fail dump. Therefore, when attempting to resume an incomplete dump of a backup version, only dump classes that previously failed may be specified.
- Issue a LIST COPYPOOL(*cpname*) command to determine which dump classes did not complete successfully for this version. Issue the FRBACKUP DUMPONLY command specifying names of one or more dump classes that previously failed. See the preceding ARC0650I message(s) to find the invalid dump class names.
- 18 A dump of this copy pool cannot be performed until the copy pool has been converted to a V1R8 or later copy pool. Issue a FRBACKUP command against the copy pool in a V1R8 or later release to convert the copy pool.
- 22 After DFSMSHsm restarts, issue FRBACKUP COPYPOOL(*cpname*) DUMPONLY to dump the volumes that did not complete.
- 24 Modify the dump class definitions so that the encryption and HWCOMPRESS settings are identical for this copy pool, or dump to each dump class separately using the FRB DUMPONLY command.
- 32 See preceding messages to obtain further information regarding the message data set allocation error. If the error occurred because of a duplicate message data set name, reissue the command, specifying values for date and time with MESSAGEDATASET(DATE TIME) that are unique for the copy pool.
- 84 Issue FRBACKUP for this copy pool on a system that supports the Allow Fast Reverse Restore copy pool option.
- 88 Issue the Fast Replication request for this version on a release of DFSMSHsm which supports this backup version type. For a version that is an incomplete fast reverse restore, the command may be re-issued on this host after the incomplete restore is completed or after an FRDELETE command is completed to delete the version in incomplete fast reverse restore status.
- 98 Contact IBM support.

Source: DFSMSHsm

ARC1847I FAST REPLICATION BACKUP USING OVERRIDE BACKUP STORAGE GROUP *sgname*

Explanation: The Fast Replication Backup operation overrides the copy pool backup storage group that is defined in the pool storage group with the copy pool backup storage group *sgname*.

See *z/OS DFSMSHsm Storage Administration* for more information.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC1848I FAST REVERSE RESTORE FAILED FROM VOLUME *volser1* TO VOLUME *volser2*, RC=*retcode*

Explanation: A fast replication recovery command was issued for a copy pool defined with fast reverse restore capability. *volser1* is the expected original FlashCopy target volume. *volser2* is the expected original FlashCopy source volume. Fast reverse restore failed with the listed return code:

Retcode Meaning

- 2 *volser1* and *volser2* are not partners in an active FlashCopy relationship.

- 4 *volser1* and *volser2* were established with Preserve Mirror operation. Fast reverse restore cannot be performed in combination with Preserve Mirror operation.
- 8 Multiple FlashCopy targets exist. The FlashCopy targets are managed by DFSMSHsm.
- 10 Multiple FlashCopy targets exist. One or more of them are not managed by DFSMSHsm.

System action: The fast replication recovery ends. DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem and reissue the command. You might need to recover the failed volume without using fast reverse restore.

Retcode Meaning

- 2 None.
- 4 Specify ALLOWPPRCP(NO|PMNO) on the FRRECOV command and retry the recovery.
- 8 Determine whether the DASD backup version with active FlashCopy targets are needed. You can withdraw them using the FRDELETE command and retry FRRECOV to perform fast reverse restore of the incomplete volumes.
- 10 Determine whether non-DFSMSHsm managed FlashCopy targets are needed. You can withdraw them using the TSO FCWITHDR command and retry FRRECOV to perform fast reverse restore. See *z/OS DFSMS Advanced Copy Services* for information on the TSO FCWITHDR command.

Source: DFSMSHsm

| **ARC1849I REVERSE RESTORE FAILED FROM VOLUME *volser1* TO VOLUME *volser2*, RC= *retcode*.**

| **Explanation:** A fast replication recovery command is issued against an incremental FlashCopy version in a persistent FlashCopy relationship. *Volser1* is the original FlashCopy target (backup) volume. *Volser2* is the original source (LO) volume. The recovery using reverse restore failed with the listed return code.

| Retcode Meaning

- | 8 Multiple FlashCopy targets exist. The FlashCopy targets are managed by DFSMSHsm.
- | 10 The device number of the FlashCopy target volume. This volume is not managed by DFSMSHsm. If this entry is unavailable, '****' is displayed.

| **System action:** The fast replication recovery ends. DFSMSHsm processing continues.

| **Programmer response:** Review and resolve the cause of the problem, then reissue the command.

| Retcode Meaning

- | 8 Determine which DASD backup versions with persistent FlashCopy relationships are needed. Withdraw the most recent (generation 0) version through the FRBACKUP COPYPOOL(*cpname*) WITHDRAW command. Delete the other unneeded versions through the FRDELETE command, then retry the recovery.
- | 10 Determine whether the non-DFSMSHsm managed FlashCopy targets are needed. Withdraw the targets through the TSO FCWITHDR command, then retry FRRECOV to perform the recovery. See *z/OS DFSMS Advanced Copy Services* for information on the TSO FCWITHDR command. .

| **Source:** DFSMSHsm

ARC1850I VOLUME *volser1* IN COPY POOL *cpname* HAS MULTIPLE FLASHCOPY TARGETS, AS FOLLOWS

Explanation: The source volume *volser1* contained within a storage group defined to the specified copy pool has multiple FlashCopy targets in addition to the target volume from which the fast reverse restore was being attempted.

The volumes are displayed in the following format:

```
SGNAME  FR-PRIMARY  FR-BACKUP  FC-TGT
sgname  pri_vols   back_vols  tgt_devn
```

sgname The name of the pool storage group where the source volume resides.

pri_vols The volser of the primary data volume that has multiple FlashCopy targets. This is the original FlashCopy source volume and the intended fast reverse restore target.

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back_vols

The volser of the volume that contains the backup copy. This is the FlashCopy target volume managed by DFSMSHsm. If this entry is unavailable, '*****' will be displayed.

tgt_devn

The device number of the FlashCopy target volume. This volume is not managed by DFSMSHsm. If this entry is unavailable, '****' will be displayed.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1851I **BACKUP VERSION *bvn* FOR COPY POOL *cpname* WAS INVALIDATED, RC=*retcode***

Explanation:

Retcode Meaning

- 2 Fast replication recovery completed successfully for copy pool *cpname*. Fast reverse restore was used to recover one or more volumes within storage groups defined to the specified copy pool. DFSMSHsm has invalidated the copy pool DASD backup version.

System action: DFSMSHsm continues.

Programmer response:

Retcode Meaning

- 2 None.

Source: DFSMSHsm

ARC1852I **GET/FREEMAIN ERROR—FAST REPLICATION PROCESSING TERMINATED**

Explanation: During fast replication processing, a GETMAIN or FREEMAIN macro was issued for virtual storage. The macro failed.

System action: The fast replication processing ends. If the system is issuing this message for a FRRECOV DSNAME(*dsname*) request, and the specified data set name is partially qualified, processing might continue for the command. DFSMSHsm processing continues.

Programmer response: Determine the cause of the storage shortage. After the storage shortage is resolved, you might need to restart DFSMSHsm before it can process other fast replication commands.

Source: DFSMSHsm

| **ARC1853I FAST REPLICATION QUERY HAS FAILED FOR COPY POOL *cpname*, COPY POOL COULD NOT BE SERIALIZED, RC=*retcode***

| **Explanation:** A QUERY COPYPOOL(*cpname*) command was issued to display the status of the FlashCopy relationships of the copy pool *cpname*. The command failed. *retcode* is the return code from the ENQ macro with the RET=USE parameter.

| For return code 4, another DFSMSHsm function was processing the copy pool identified in the message. The QUERY COPYPOOL status can't be reported because an exclusive enqueue on the GRS major (qname) resource ARCENQG and the minor (rname) resource COPYPOOL| | *cpname* could not be obtained. For example, the FlashCopy relationships for this copy pool may still be in the process of being created when the QUERY COPYPOOL command was issued.

| **System action:** The fast replication processing ends. DFSMSHsm processing continues.

| **Programmer response:** Use the return code to determine the appropriate response.

| **Retcode Meaning**

- | 4 Wait for processing of the copy pool identified in the message to complete, then reissue the QUERY command if necessary.

| All others

| Contact IBM support. For a description of the return codes, refer to the discussion of RET=USE in ENQ in
| *z/OS MVS Programming: Assembler Services Reference ABE-HSP*.

| Source: DFSMSHsm

ARC1856I FAST REPLICATION DASD COPY OF SOURCE VOLUME WAS WITHDRAWN BEFORE THE DUMP COMPLETED.

Explanation: During dump processing, an FRBACKUP command was issued that specified either the WITHDRAW or FORCE keyword. Dump processing has been stopped and cannot be restarted.

System action: DFSMSHsm processing continues.

Programmer response: Because the version was manually withdrawn before the dump is completed, the dump for this version cannot be restarted. There may be dumps that were completed prior to the manual withdraw or force that are recoverable. See the ARC1001I message for the source volser name.

Source: DFSMSHsm

ARC1860I THE FOLLOWING *numds* DATA SET(S) FAILED DURING FAST REPLICATION DATA SET RECOVERY:

Explanation: A Fast Replication data set recovery command is completed. Following this message is a list of all data sets selected for processing that failed.

numds indicates the number of failing data sets in the list.

The format of the data set information is as follows:

```
dsname, COPYPOOL=cpname,
DEVTYPE=type,
VOLUME=volser,
ARCxxxx, RC=rc
```

.

dsname indicates the name of the data set that failed. (might be listed more than once for multi-volume data sets)

volser indicates which volser the dataset was being recovered to.

cpname indicates the name of the copy pool used for the recovery.

type indicates the source of the recovery:

- ****: source was not determined.
- DISK: recovery was from disk.
- TAPE: recovery was from tape.

ARCxxxx

indicates the failing message number.

rc indicates the return code associated with the listed message number. RC='*' indicates that there is not an associated return code.

System action: DFSMSHsm processing continues.

Programmer response: Determine the cause of the failure and attempt the recovery again.

To view the text corresponding to a particular message, see the Backup Activity and Dump Activity Logs. In general, if DEVTYPE=**** or DEVTYPE=DISK, the message was written to the Backup Activity Log. If DEVTYPE=TAPE, the message was written to the Dump Activity Log.

Source: DFSMSHsm

ARC1861I THE FOLLOWING *numds* DATA SET(S) WERE SUCCESSFULLY PROCESSED DURING FAST REPLICATION DATA SET RECOVERY:

Explanation: A Fast Replication data set recovery command is completed. Following this message is a list of all data sets that were successfully processed.

numds indicates the number of successful data sets in the list.

The format of the data set information is as follows:

dsname, COPYPOOL=*cpname*, DEVTYPE=*ttype*

dsname indicates the name of the data set that completed successfully.

cpname indicates the name of the copy pool that was used for the recovery.

ttype indicates the source of the recovery:

- DISK: recovery was from disk.
- TAPE: recovery was from tape.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1862I THE FOLLOWING *numds* DATA SET(S) WERE NOT SELECTED FOR FAST REPLICATION DATA SET RECOVERY PROCESSING:

Explanation: A Fast Replication data set recovery command for a partially qualified data set name is completed. Following this message is a list of all data sets that match the filtering criteria but were not processed. The system did not process these data sets because the source volumes that they reside on are not part of any copy pool backup version.

System action: DFSMSHsm processing continues.

Programmer response: When one or more data sets are not processed, the default is to set MAXIMUM DATA SET RC=8 for message ARC1802I. If it is acceptable for one or more data sets to not be selected, you can specify the NOCOPYPOOLBACKUP(RC4) option on the FRRECOV DSNNAME command. This option indicates that the MAXIMUM DATA SET RC should be set to 4 if no data sets failed but one or more data sets were not processed.

Source: DFSMSHsm

ARC1863I MULTIVOLUME DATASET *dsname* WAS SUCCESSFULLY RECOVERED TO THE VOLUMES IT RESIDED ON AT THE TIME OF THE BACKUP

Explanation: The fast replication data set recovery of a multivolume data set was successful. At the time of recovery, the target data set, *dsname*, spanned across more volumes than it resided on at the time the backup copy was created. The data set was scratched from the volumes that it did not reside on at the time of the backup and those volumes were removed from the data set's catalog entry.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC1864I MULTIVOLUME DATASET *dsname* WAS NOT SUCCESSFULLY RECOVERED TO THE VOLUMES IT RESIDED ON AT THE TIME OF THE BACKUP

Explanation: The fast replication data set recovery of a multivolume data set failed. The target data set, *dsname*, does not reside on the volumes that it resided on at the time of backup.

System action: DFSMSHsm processing continues.

Programmer response: DFSMSHsm fast replication data set recovery does not support recovering a data set that does not reside on the same volumes that it did at the time of the backup.

Source: DFSMSHsm

ARC1865I {VSAM | NONVSAM} DATA SET *dsname* COULD NOT BE CATALOGED. RECATALOG THE DATA SET TO THE FOLLOWING VOLUMES: *volser* {DATA | INDEX | DATA/INDEX}

Explanation: A Fast Replication data set recovery of a multivolume data set failed during post processing. DFSMSShsm encountered an error during the multivolume allocation or the re-catalog of the data set. The data set is currently uncataloged and must be cataloged by the user to be used. If a VSAM data set, the component that resided on each of the volumes is listed next to the volume.

System action: DFSMSShsm processing continues.

Programmer response: The data set BCS catalog entry must be redefined. See *z/OS DFSMS Access Method Services Commands* for information about re-cataloging data sets. See *z/OS DFSMSShsm Storage Administration* for information about Fast Replication data set recovery of multivolume data sets.

Source: DFSMSShsm

ARC1866I FAST REPLICATION {RECOVERY} HAS FAILED FOR {DATA SET *dsname*}, RC=*retcode*

Explanation: A FRRECOV DSNNAME command for data set *dsname* ended before normal termination of the function. If the request was initiated from TSO, *dsname* equals '***'. See the corresponding ARC1000I or ARC1001I message for the data set name. The reason for the failure is explained as determined by the *retcode*.

Retcode Meaning

- 2 Invalid data set type. The following data set types are not supported by Fast Replication Data Set Recovery: User catalog, VVDS, VTOC Index, and VSAM Key-ranged.
- 4 Invalid data set. The specified data set is a data, index or path component of a VSAM data set, or is a GDG base.
- 6 No data sets were found that match the fully or partially qualified data set name *dsname*.
- 8 A catalog error occurred.
- 10 The FRRECOV command or an associated data set restore work element was canceled.
- 12 A multi-volume data set was not fully recovered from one or more volumes.
- 14 Data set *dsname* has been migrated.
- 16 Multi-volume VSAM data sets with AIXs cannot be recovered.
- 18 The backup copy does not exist.
- 20 The copy pool name was not specified for this data set and it resides on a volume that belongs to more than one copy pool.
- 22 A CDS I/O error occurred.
- 24 The data set was determined to be on a volume that is not part of a copy pool.
- 28 Another DFSMSShsm function was processing the copy pool *cpname*.
- 30 RACF failure.
- 32 The version determined to be the version requested, is not of the format (dump copy/fast replication copy) requested.
- 34 The dump volume is not a copy pool dump volume.
- 36 The dump volume is not for the source volume that the data set is being recovered to.
- 38 The dump class specified is not associated with the copy pool version being recovered, or DUMPCLASS was not specified and all dump classes associated with this copy pool were designated as 'AVAILABLEFORMOUNT(NO)' by the dump class definition.
- 40 The dump volume does not contain a valid copy.
- 42 While preparing for the recovery of the data set, the state of the version to be recovered changed from valid to invalid.
- 44 Data set is currently in use.

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- 46 Data set is no longer cataloged to the volume it resided on at the time of the backup.
- 48 The REPLACE keyword was not specified on the FRRECOV command.
- 50 The FROMCOPYPOOL keyword was not specified for a data set that is not currently cataloged.
- 54 SMS was not active in the system when DFSMSHsm attempted to retrieve the SMS copy pool definition.
- 56 Copy pool not found.
- 58 An error occurred while retrieving a copy pool definition from SMS.
- 60 The REPLACE keyword was not specified on the FRRECOV command when NEWNAME(*newsname*) was specified.
- 62 An enqueue or dequeue failure occurred.
- 98 An internal error occurred.

System action: The data set recovery ends for data set *dsname*. If a partially qualified data set name was specified on the FRRECOV command, other data set recoveries may continue processing. DFSMSHsm processing continues.

Programmer response: Review and resolve the cause of the problem, and reissue the command for data set *dsname*.

Retcode Meaning

- 2 None.
- 4 For a VSAM data set, determine the cluster name which corresponds to the specified *dsname*. Reissue the command with the base cluster name.
For a GDG data set, determine the GDG generation to be recovered. Reissue the command with the data set name for that generation.
- 6 Uncataloged data sets are not supported.
- 8 If the data set was not currently cataloged at the time of recover and it is a GDS, verify that the GDG base exists. If the GDG base does not exist, allocate it and retry the data set recovery.
- 10 None.
- 12 Determine the cause of the error and reissue the command.
- 14 Migrated data sets are not supported by FRRECOV DSNNAME recovery.
- 16 Delete all existing AIXs for the VSAM data set and re-try the Fast Replication data set recovery. Re-build the AIXs after the recovery has successfully completed. See *z/OS DFSMS Using Data Sets* for information on rebuilding AIXs.
- 18 Issue the LIST COPYPOOL(*cpname*) command to obtain a list of valid versions for the copy pool. If necessary, reissue the FRRECOV DSNNAME command specifying a valid existing version, generation, date, or token. If the data set is not currently cataloged and does not appear in the list of backed up data sets acquired using the LIST COPYPOOL(*cpname*) DATASETS() command, some catalog information might not be captured. Issue LIST COPYPOOL(*cpname*) to determine if the catalog information was partially captured during the creation of the backup.
- 20 Determine which volume(s) the data set resides on. Issue LIST PVOL(*volser*) BCDS for one of the volumes that the data set resides on. LIST PVOL will return which copy pools the data set resides in. From the available copy pools, determine which copy pool backup version should be used for the recovery. Reissue the FRRECOV command with the FROMCOPYPOOL keyword to specify the selected copy pool name.
- 22 See the corresponding ARC0184I message for additional information.
- 24 This data set cannot be recovered using the FRRECOV DSNNAME command. You will need to recover this data set with the RECOVER command.
- 28 Wait for processing of the copy pool identified in the message to complete, then attempt the operation against the copy pool again if necessary.
- 30 The user that issued the FRRECOV command was not RACF authorized to the command. See the associated ARC1710E message for additional information regarding this error. Determine if the user requires this access and authorize the user to the command. Reissue the command.

- 32 Issue the LIST COPYPOOL(*cpname*) command to view the valid versions and media formats associated with this copy pool. Reissue the FRRECOV DSNAMES command using an existing valid version for this copy pool.
- 34 Issue the LIST COPYPOOL(*cpname*) command, to view the dump volumes associated with this copy pool. Reissue the FRRECOV DSNAMES command using the dump volume for the source volume to which the data set is being recovered.
- 36 Issue the LIST COPYPOOL(*cpname*) command, to view the dump volumes associated with this copy pool. Reissue the FRRECOV DSNAMES command using the dump volume for the source volume to which the data set is being recovered.

When recovering a multivolume data set, the DUMPVOLUME keyword can only be specified when all the source volumes that the data set resided on at the time of the backup are stacked onto the same dump tape. Reissue the FRRECOV DSNAMES command using VERSION and DCLASS to select the appropriate dump copy.

- 38 Issue the LIST COPYPOOL(*cpname*) command to view the dump classes associated with the copy pool you are attempting to recover from. Determine the dump class you want to recover from, then reissue the FRRECOV DSNAMES command using a valid dump class for this copy pool.
- 40 Issue the LIST COPYPOOL(*cpname*) command, to view the dump volumes associated with this copy pool. Reissue the FRRECOV DSNAMES command using the dump volume for the source volume to which the data set is being recovered.
- 42 Reissue the FRRECOV DSNAMES command.
- 44 The data set must be closed and unallocated before it can be recovered.

For Generation Data Group data sets, only one generation can be recovered at a time because the GDG base is serialized.

- 46 Determine which version of the data set is required. To recover this data set it will need to be cataloged on the volume(s) that it resided on at the time of the backup before it can be successfully recovered.
- 48 The data set, *dsname*, exists and can be replaced only with the use of the REPLACE keyword on the FRRECOV command.
- 50 A fully qualified data set that was not cataloged was specified on the FRRECOV command. The FROMCOPYPOOL keyword is required to be specified on the FRRECOV command.
- 54 Bring up SMS and run the command again.
- 56 Correct the copy pool name, if needed, and issue the command for this copy pool.
- 58 See the preceding ARC0935I message in the command activity log for the specific failing code from the subsystem interface (SSI) of SMS.

Return code 2 is issued when SMS is installed but not started in the IEFSSNxx member. An SMS lock token error occurs if DFSMSHsm attempts to issue an SMS service when the IGDSSIIN program is not specified to start SMS.

- 60 The new data set name, *newdsname*, exists and can be replaced only with the use of the REPLACE keyword.
- 62 Contact IBM support.
- 98 Contact IBM support.

Source: DFSMSHsm

```
| ARC1870I  MESSAGE DATA SET msgdsname CREATED FOR {FAST REPLICATION {BACKUP | BACKUP
|          DUMP | BACKUP DUMPNLY | PREPARE | RECOVERY | RECOVERY FROM DUMP} | AUTO
|          DUMP} OF {COPY POOL cpname}
```

| **Explanation:** DFSMSHsm created message data set *msgdsname* for the specified function. Messages issued for the specified operation will be written to the message data set.

| When the function completes, DFSMSHsm will rename the data set, indicating the status of the operation in the final qualifier. The message data set naming convention is as follows:

- | • For FRBACKUP requests and copypool auto dump: *msgdsprefix.FB.Ccccccc.ippppppp.Dyyddd.Thhmmss.z*

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| • For FRRECOV COPYPOOL requests: *msgdsprefix.FR.Ccccccc.i.pppppppp.Dyyddd.Thhmmss.z*

| where:

| *msgdsprefix*

| is the value of the HLQ parameter of the SETSYS FASTREPLICATION(MESSAGE DATASET) command, if specified. If the HLQ parameter is not specified, the default prefix of 'HSMMSG' will be used.

| *cccccc* is up to 7 characters identifying the copy pool that was processed. For a non-DB2 copy pool, this will be the first 7 characters of the copy pool name. For a DB2 copy pool, this will be the first 7 characters of the location qualifier in the DB2 copy pool name.

| *i* is an identifier, indicating whether the message data set contains messages for:

| **D** DB2 data

| **L** DB2 log

| **X** non-DB2 copy pool data

| *pppppppp*

| is up to 7 characters identifying the copy pool that was processed. For a non-DB2 copy pool, this will be the next 7 characters of the copy pool name (the characters following *cccccc*). For a DB2 copy pool, this will be the next 7 characters of the location qualifier in the DB2 copy pool name.

| *yyddd* is the year and day when the FRBACKUP, FRRECOV, or copy pool auto dump operation started.

| *hhmmss* is the time in hours, minutes, and seconds when the FRBACKUP, FRRECOV, or copy pool auto dump operation started.

| *z* indicates the status of the FRBACKUP, FRRECOV, or copy pool auto dump operation. This qualifier will appear as '*' in the ARC1870I message, to represent one of the following values:

| **S** Success. The operation completed successfully.

| **F** Fail. One or more errors occurred while processing the operation.

| **I** In progress. DFSMSHsm will allocate the data set with this final qualifier, and rename the data set with one of the qualifiers above once the operation completes.

| FB, FR, C, D, and T are constants.

| **System action:** DFSMSHsm processing continues.

| **Programmer response:** If the last qualifier of the message data set indicates that the operation failed (final qualifier is 'F'), see the message data set contents to determine the cause of the error. If the final qualifier is 'I', DFSMSHsm was unable to rename the data set at the end of the operation. See the activity log for information on the cause of the error."

| **Source:** DFSMSHsm

| **ARC1871I** ONE OR MORE MESSAGES WERE NOT WRITTEN TO MESSAGE DATA SET *dsname*

| **Explanation:** DFSMSHsm is currently processing copy pool data. Messages issued in relation to this process are to be captured in message data set *dsname*. An error occurred when writing a message to this message data set.

| **System action:** DFSMSHsm processing continues.

| **Programmer response:** See preceding messages to determine the reason for the error.

| **Source:** DFSMSHsm

| **ARC1873I** MESSAGES NOT CAPTURED FOR {FAST REPLICATION {BACKUP | BACKUP DUMP |
| BACKUP DUMPNLY | PREPARE | RECOVERY | RECOVERY FROM DUMP} | AUTO DUMP}
| OF {COPY POOL *cpname*}

| **Explanation:** The specified DFSMSHsm function for copy pool *cpname* has started. DFSMSHsm was either unable to allocate a message data set for this request, or the message data set was allocated with incorrect attributes. This message is also issued when DFSMSHsm is unable to generate a unique name for the data set after multiple retry

| attempts. DFSMSHsm will not capture messages issued for the specified function in a message data set.

| **System action:** Messages are not captured in a message data set. The function specified in the message text continues.

| **Programmer response:** To ensure that message data sets can be properly allocated for future fast replication requests, verify that SMS settings are configured such that the message data set will be allocated with the following attributes: DSORG=PS, RECFM=FBA, LRECL=121, BLKSIZE= a multiple of 121.

| Note that message data sets have a default high level qualifier of 'HSMMSG', which can be overwritten by the SETSYS FR(MESSAGEDATASET(YES HLQ(*hlq*))) command.

| If an allocation error occurred, another message that explains the reason for the error precedes this message.

| **Programmer response:**

| **Source:** DFSMSHsm

ARC1874I FAST REPLICATION BACKUP AND/OR FAST REPLICATION RECOVERY IS HELD, RC=*retcode*

Explanation: A Fast Replication Backup or a Fast Replication Recovery command was issued. The request failed because the requested function was held. Message ARC1001I gives the function name.

Retcode Meaning

- 4 FRRECOV is held.
- 8 DUMP or DUMP (FRBACKUP) and Fast Replication Backup are held.
- 12 FRRECOV is held at the DATASET or TAPE level or both levels.

System action: The requested function processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the command after the operator issues the appropriate RELEASE command.

Source: DFSMSHsm

ARC1893I FAST REPLICATION RECOVERY FAILED

Explanation: Fast replication recovery failed. The corresponding ARC1001I message identifies the volume or data set being recovered. The reason code of the ARC1001I message indicates which ARC11nn message to refer to. For example, REAS=0066-0008 indicates that ARC1166 RC8 is the failing message that documents the error.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC1899I {FRBACKUP | FRRECOV} VOLUME PAIR SET *setnum* IS {STARTING | ENDING}

Explanation: For fast replication processing, DFSMSHsm passes sets of volume pairs to DFSMSdss to process in parallel. This message indicates that set *setnum* is either starting or ending.

System action: DFSMSHsm processing continues.

Source: DFSMSHsm

ARC1900I DFSMSHSM ABEND *code* OCCURRED PROCESSING REQUEST

Explanation: A system or user abnormal end (abend) has occurred with an abend code *code* of the form Sxxx or Uxxxx. A dump has been performed automatically and will be a part of the SYSUDUMP or SYSABEND data set for the DFSMSHsm job. If the error has occurred during a DFSMSHsm automatic backup or migration, an associated ARC0734I message is produced. If the error has occurred during the processing of a RECALL, MIGRATION, BACKUP, or DUMP command, message ARC1001I precedes this message giving the data set name or volume serial number and the operation. For information about system abend codes, see *z/OS MVS System Codes*.

System action: The operation ends. DFSMSHsm processing continues.

Programmer response: Notify the storage administrator of the abend.

Source: DFSMSHsm

ARC1901I NUMBER OF VOLUMES ELIGIBLE FOR ON-DEMAND MIGRATION HAS REACHED *nnnnn*

Explanation: DFSMSHsm is processing a large quantity of volumes for on-demand migration. The number of volumes that have exceeded the high threshold has reached *nnnnn*. *nnnnn* is equal or greater than a user specified notification limit that was specified by using the SETSYS ODMNOTIFICATIONLIMIT command.

System action: DFSMSHsm processing continues.

Operator response: Notify the system programmer.

System programmer response: Analyze the threshold and SMS environment settings for DFSMSHsm to determine why DFSMSHsm is processing a large quantity of volumes for on-demand migration.

The notification limit for volumes being processed by on-demand migration can be changed by using the SETSYS ODMNOTIFICATIONLIMIT command. For more information about setting the on-demand migration notification limit, see the SETSYS command in *z/OS DFSMSHsm Storage Administration*.

Source: DFSMSHsm

ARC2001I THE ARCMMSG DD FAILED TO OPEN

Explanation: The ARCPRPDO utility was unable to open the ARCMMSG file.

System action: DFSMSHsm processing continues. All message output bound for ARCMMSG will be lost.

Programmer response: Provide a DD statement for ARCMMSG if informational and error messages are desired for ARCPRPDO.

Source: DFSMSHsm

ARC2002I OPEN OF DDNAME ARCPDO FAILED

Explanation: ARCPRPDO utility was unable to open the ARCPDO file.

System action: DFSMSHsm processing ends with *return-code 8*.

Programmer response: Provide a DD statement for ARCPDO.

Source: DFSMSHsm

ARC2003I OPEN OF DDNAME SYSIN FAILED

Explanation: ARCPRPDO utility was unable to open SYSIN file.

System action: DFSMSHsm processing ends with *return-code 8*.

Programmer response: Provide a DD statement for SYSIN.

Source: DFSMSHsm

ARC2004I OPEN OF DDNAME ARCPRINT FAILED

Explanation: ARCPRPDO utility was unable to open ARCPRINT file.

System action: DFSMSHsm processing ends with *return-code 8*.

Programmer response: Provide a DD statement for ARCPRINT.

Source: DFSMSHsm

ARC2005I OPEN OF DDNAME ARCOU FAILED

Explanation: ARCPRPDO utility was unable to open file ARCOU and copy was specified as an option.

System action: DFSMSHsm processing ends with a *return-code 8*.

Programmer response: Provide a DD statement for ARCOU.

Source: DFSMSHsm

ARC2006I **INCORRECT DATE** *yyddd*

Explanation: The ARCPRPDO program was invoked with a START(*yyddd*) or END(*yyddd*) option. The value *yyddd* is not a valid date.

System action: ARCPRPDO ends.

Programmer response: Correct the *yyddd* value and invoke ARCPRPDO again.

Source: ARCPRPDO

ARC2007I **INCORRECT DATE RANGE**

Explanation: The ARCPRPDO program was invoked with both START(*yyddd*) and END(*yyddd*) options. However, the end date is earlier than the start date.

System action: ARCPRPDO ends.

Programmer response: Correct the start or end date, or both, and invoke ARCPRPDO again.

Source: ARCPRPDO

ARC2008I **INCORRECT TIME** *hhmmss*

Explanation: The ARCPRPDO program was invoked with a START(*yyddd,hhmmss*) or END(*yyddd,hhmmss*) option. The value *hhmmss* is not a valid time.

System action: ARCPRPDO ends.

Programmer response: Correct the *hhmmss* value and invoke ARCPRPDO again.

Source: ARCPRPDO

ARC2009I **INCORRECT TIME RANGE**

Explanation: The ARCPRPDO program was invoked with a START(*yyddd,hhmmss*) and END(*yyddd,hhmmss*) options. The start and end dates are equal, but the end time is earlier than the start time.

System action: ARCPRPDO ends.

Programmer response: Correct the start or end time, or both, and invoke ARCPRPDO again.

Source: ARCPRPDO

ARC2010I **RECORD xxxxxxxx HAS AN UNKNOWN TVTYP**

Explanation: ARCPRPDO utility detected unexpected data in the data read from the ARCPDO file.

System action: DFSMSHsm processing continues.

Programmer response: Ensure the ARCPDO DD points to a valid DFSMSHsm PDO trace data set. If the problem continues, contact the IBM Support Center.

Source: DFSMSHsm

ARC2011I **INVALID CONTROL CARD DETECTED**

Explanation: ARCPRPDO utility detected an unknown formatting control card in the SYSIN data stream.

System action: DFSMSHsm processing ends with *return-code* 8.

Programmer response: Correct control parameters in the SYSIN file.

Source: DFSMSHsm

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ARC2012I RECORD *xxxxxxx* HAS AN UNKNOWN CALLER

Explanation: ARCPRPDO utility detected an unknown caller in an ENTR trace entry.

System action: DFSMSHsm processing ends with *return-code* 8.

Programmer response: Ensure the ARCPDO DD points to a valid DFSMSHsm PDO trace data set. If the problem continues, contact the IBM Support Center.

Source: DFSMSHsm

ARC2013I CONTROL PARAMETER IS GREATER THAN 6 BYTES: *xxxxxx*

Explanation: ARCPRPDO utility detected a parameter that should have been 6-bytes long but was longer.

System action: DFSMSHsm processing ends with *return-code* 8.

Programmer response: Check the control parameters that are contained in SYSIN. If none of the subparameters are greater than 6-characters long, contact the IBM Support Center.

Source: DFSMSHsm

ARC2099I UNKNOWN MESSAGE *xxxx*

Explanation: ARCPRPDO utility had a request to output an error message for number *xxxx*. This message does not exist.

System action: DFSMSHsm processing continues.

Programmer response: Contact the IBM Support Center.

Source: DFSMSHsm

ARC6000I ABARS {ABACKUP | ARECOVER} *command text*

Explanation: The ABACKUP or ARECOVER command that was issued from the primary address space is written in this message.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6001E DFP IS NOT AT THE PROPER LEVEL TO PERFORM AGGREGATE {BACKUP | BACKUP/RECOVERY}. {AGGREGATE BACKUP IS HELD | FUNCTIONS ARE DISABLED}

Explanation: DFSMS/MVS is not at the proper release level to perform the tasks necessary to complete the function.

System action: If the required level of DFSMS/MVS is not installed, aggregate backup is held. Aggregate recovery can run with a lower release level of DFSMS/MVS installed than aggregate backup. If the level of DFSMS/MVS required to run aggregate recovery is not installed, both aggregate backup and recovery are disabled. When aggregate backup and recovery are disabled, subsequent ABACKUP, ARECOVER, and DEFINE ARPOOL commands fail and DFSMSHsm processing continues without ABARS.

Programmer response: If the message reads AGGREGATE BACKUP IS HELD, do not issue any ABACKUP commands until the proper level of DFSMS/MVS is installed. If the message reads FUNCTIONS ARE DISABLED, do not issue any ABACKUP or ARECOVER commands until the proper level of DFSMS/MVS is installed.

Source: DFSMSHsm

ARC6002E EITHER XMIT OR VOLUMES IS REQUIRED ON THE ARECOVER DATASETNAME COMMAND. ARECOVER COMMAND IS REJECTED.

Explanation: An ARECOVER command was issued with DATASETNAME specified, but without either an XMIT or VOLUMES parameter specified. This message can also be issued to indicate that both XMIT and VOLUMES were specified when the ARECOVER command was issued with the DATASETNAME parameter. XMIT and VOLUMES

are mutually exclusive parameters, one of these must be specified when the ARECOVER command is issued with the DATASETNAME parameter, not both.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command specifying XMIT or VOLUMES.

Source: DFSMSHsm

ARC6003E DFSMSDSS IS NOT AT THE PROPER LEVEL TO PERFORM AGGREGATE BACKUP/RECOVERY, FUNCTIONS ARE DISABLED

Explanation: DFSMSDss is not at the proper release level to perform the tasks necessary to complete the function.

System action: The aggregate backup or aggregate recovery function will be disabled. Subsequent ABACKUP, ARECOVER, and DEFINE ARPOOL commands will fail.

Programmer response: Do not issue any more aggregate backup or aggregate recovery commands until the proper level of DFSMSDss is installed.

Source: DFSMSHsm

ARC6004I *function-asid-msgtext*

Explanation: DFSMSHsm has been performing an aggregate backup or aggregate recovery operation. DFSMSDss has been invoked to perform the function. During the process, DFSMSDss issues a message related to the function, and DFSMSHsm intercepts the message for retransmission to the DFSMSHsm user or to the ABARS activity log.

function value is ABACKUP if issued during aggregate backup.

function value is ARECOVER if issued during aggregate recovery.

asid is the address space ID in hexadecimal of the DFSMSHsm secondary address space that is being used to perform the function.

msgtext is the DFSMSDss SYSPRINT record. DFSMSDss messages have a prefix of ADR.

System action: DFSMSHsm processing continues.

Programmer response: See *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for a description of the DFSMSDss messages.

Source: DFSMSHsm

ARC6005E DASD UNIT TYPE INVALID ON {ABACKUP | ARECOVER} COMMAND, COMMAND FAILED

Explanation: An ABACKUP or ARECOVER command has been issued specifying a DASD unit type. DASD is not supported as a unit type for the aggregate backup output or the aggregate recovery input.

- ABACKUP indicates that the invalid unit type has been specified on an ABACKUP command.
- ARECOVER indicates that the invalid unit type has been specified on an ARECOVER command.

System action: Aggregate backup or aggregate recovery is not started.

Programmer response: Specify a tape unit type in the ABACKUP or ARECOVER command.

Source: DFSMSHsm

ARC6006E VOLUME *volser* TO BE ADDED AS DFSMSHSM {PRIMARY | BACKUP | ML1 | ML2 | DUMP} VOLUME ALREADY DEFINED TO AGGREGATE RECOVERY AS {ML1VOL | L0VOL}, ADDVOL FAILED

Explanation: An ADDVOL command has been entered for the specified *volser*. The ADDVOL command has failed because the *volser* has been previously defined to aggregate recovery via the DEFINE ARPOOL command with a volume type that is incompatible with the volume type on the ADDVOL command.

System action: The ADDVOL command fails. DFSMSHsm processing continues.

Programmer response: If this volume is to be ADDVOLed to DFSMSHsm, the volume type must be compatible. If

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the volume should not be in the pool, the DEFINE ARPOOL command can be reissued specifying only those volumes that should be in the pool.

Source: DFSMSHsm

ARC6007E {ABACKUP | ARECOVER} COMMAND REJECTED - REQUIRED PARAMETER = *parm*, NOT SPECIFIED

Explanation: An ABACKUP or ARECOVER command has been issued without specifying one of the required parameters.

- ABACKUP indicates the command is an ABACKUP command.
- ARECOVER indicates the command is an ARECOVER command.
- *parm* indicates the required parameter that has not been specified on the command.
 - VERIFY|EXECUTE is displayed if VERIFY or EXECUTE is not specified on the ABACKUP command. VERIFY and EXECUTE are mutually exclusive parameters. The ABACKUP command requires that either VERIFY or EXECUTE is specified.
 - PREPARE|VERIFY|EXECUTE is displayed if PREPARE, VERIFY, or EXECUTE is not specified on the ARECOVER command. PREPARE, VERIFY, and EXECUTE are mutually exclusive parameters. The ARECOVER command requires that either PREPARE, VERIFY, or EXECUTE is specified.

System action: The command fails. DFSMSHsm processing continues.

Programmer response: Reissue the command using all the required parameters.

Source: DFSMSHsm

ARC6008I AGGREGATE BACKUP/RECOVERY PROCNAME = *procname*

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the name of the procedure to be used to start the ABARS secondary address space.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6009I AGGREGATE BACKUP/RECOVERY MAXADDRESSSPACE = *number*

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the maximum number of secondary address spaces that DFSMSHsm allows to be in concurrent existence, as represented by *number*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6010E VOLUME *volser* TO BE DEFINED TO AGGREGATE RECOVERY AS {ML1VOL | L0VOL} VOLUME, ALREADY ADDED AS {PRIMARY | BACKUP | MIGRATION | ML2 | DUMP} VOLUME, DEFINE FAILED

Explanation: A DEFINE ARPOOL command has been entered with the *volser* specified. The DEFINE has failed because the *volser* has previously been ADDVOLed to DFSMSHsm with a volume type that is incompatible with the volume type on the DEFINE command.

System action: The DEFINE command fails. DFSMSHsm processing continues.

Programmer response: Reissue the DEFINE command without this volume or DELVOL and then ADDVOL the volume with a compatible volume type.

Source: DFSMSHsm

ARC6011I {ARECOVERREPLACE | NOARECOVERREPLACE} ISSUED FOR AGGREGATE RECOVERY

Explanation: A QUERY command has been issued with the SETSYS or ABARS parameter. This message indicates if the ARECOVERREPLACE or NOARECOVERREPLACE option has been specified on the SETSYS command.

- ARECOVERREPLACE indicates that the REPLACE parameter can be specified on the ARECOVER command.
- NOARECOVERREPLACE indicates that the REPLACE parameter cannot be specified on the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6012I STOP COMMAND ISSUED AND DFSMSHSM SECONDARY ADDRESS SPACE(S) ACTIVE. STOP WILL TAKE EFFECT WHEN SECONDARY ADDRESS SPACE(S) COMPLETE PROCESSING.

Explanation: A STOP command has been issued and there is at least one ABARS secondary address space that is actively processing an ABACKUP or ARECOVER command. The STOP command takes effect as soon as all ABARS secondary address space processing has been completed.

System action: DFSMSHsm will accept no new commands and will end processing as soon as all ABARS secondary address spaces have completed processing.

Programmer response: None.

Source: DFSMSHsm

ARC6013I DEFINE ARPOOL FOR AGGREGATE GROUP = *agname*, SUCCESSFUL

Explanation: A DEFINE ARPOOL command has been issued to define a pool of volumes to be used as target volumes for data sets being recovered during aggregate recovery. The command has been completed successfully.

- *agname* indicates the aggregate group for which the volumes have been defined.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6014E DEFINE ARPOOL FOR AGGREGATE GROUP = *agname*, FAILED

Explanation: A DEFINE ARPOOL command has been issued to define a pool of volumes to be used as target volumes for data sets being recovered during aggregate recovery. The command has failed, and the volumes specified in the DEFINE ARPOOL command will not be included in the volume pool.

- The *agname* indicates the aggregate group for which the volumes have been defined.

System action: DFSMSHsm processing continues.

Programmer response: See previous messages to determine the cause of the failure. Reissue the DEFINE ARPOOL command when the problem is resolved.

Source: DFSMSHsm

ARC6015I

Explanation:

ARC6015I

ARPOOL NAME = *agname*,

ARC6015I

(CONT.) ML1VOLS= *volser1...volsern*,

ARC6015I

(CONT.) L0VOLS = *volser1...volsern*

ARC6016I • ARC6019I

A QUERY ARPOOL(*agname*) command has been issued to determine the volumes assigned to one aggregate recovery volume pool or to all aggregate recovery volume pools. If the *agname* has been specified, the pool for the specified *agname* and the associated volume serials are listed. If the *agname* has not been specified, this message is issued once for each aggregate recovery pool defined to DFSMSHsm. All pools and the associated volumes for each pool are listed.

- *agname* indicates the aggregate group for which the pool has been defined. This is also the name of the pool. If a general pool of volumes has been defined, *agname* is an asterisk (*).
- *volser* indicates the volume serials that are defined to the pool.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6016I *function* REJECTED, FUNCTIONS ARE DISABLED

Explanation: An ABACKUP or ARECOVER command has been issued. The command has failed because (1) the minimum system requirements have not been met for aggregate backup or recovery, or (2) the command was directed to a host started with HOSTMODE=AUX. *function* indicates if the ABACKUP or ARECOVER command has been specified.

System action: DFSMSHsm fails the command. Aggregate backup and aggregate recovery support are disabled, or not supported in a host started with HOSTMODE=AUX. DFSMSHsm processing continues without aggregate backup and aggregate recovery support.

Programmer response: Check the command activity log for messages ARC6001E, ARC6002E, and ARC6003E to determine which system levels have not been met. See *z/OS DFSMSHsm Implementation and Customization Guide* to determine the system levels required for aggregate backup and aggregate recovery support.

Do not issue any aggregate backup or recovery commands until the system is at the proper level or levels. If the system is at the proper level, then aggregate backup and recovery commands can only be directed to a host started with HOSTMODE=MAIN.

Source: DFSMSHsm

ARC6018I AGGREGATE BACKUP/RECOVERY = {ACTIVE | INACTIVE | DISABLED}

Explanation: A QUERY command has been issued with the ACTIVE parameter. This message indicates the status of the aggregate backup and aggregate recovery functions.

ACTIVE indicates the function is processing a request.

INACTIVE indicates the function is not processing a request.

DISABLED indicates the function has been disabled due to insufficient level of supporting software or incorrect system environment.

System action: DFSMSHsm processing continues.

Programmer response: Check the DFSMSHsm command activity log for messages ARC6001E, ARC6002E, and ARC6003E to determine which system levels are not met. See *z/OS DFSMSHsm Implementation and Customization Guide* to determine the system levels required for aggregate backup and aggregate recovery support.

Source: DFSMSHsm

ARC6019I AGGREGATE BACKUP = {HELD | HELD EOD | NOT HELD}, AGGREGATE RECOVERY = {HELD | HELD EOD | NOT HELD}

Explanation: A QUERY command has been issued with the ACTIVE parameter. This message indicates the status of the aggregate backup and aggregate recovery functions.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6020I {BACKING UP | RECOVERING} {AGGREGATE GROUP *agname* | CONTROL FILE *dsname*} FOR USER *userid* REQUEST *request number* SASINDEX=*sasindex*

Explanation: A QUERY command has been issued with the ACTIVE parameter. The aggregate backup or aggregate recovery function is processing the aggregate group or the control file specified in the message.

When the ARECOVER command is issued with the DATASETNAME parameter, the aggregate group name is not known to DFSMSHsm until the ARECOVER command has processed for a period of time. The data set name of the control file is displayed if the aggregate group name is not known.

The user initiating the request is identified by *userid*. The request number assigned by DFSMSHsm is identified by *request number*. If the TCBADDRESS subparameter was used with the ACTIVE parameter, the SASINDEX value is a number between 1 and 64 representing the particular active secondary address space. The SASINDEX value can be used with the CANCEL command to end the active task.

See the DFSMSHsm CANCEL command for usage information.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6021E *function* FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*} FAILED BECAUSE *function* HAS BEEN HELD

Explanation: A wait-type ABACKUP or ARECOVER command has failed because the requested function has been held. If ABACKUP processing has been held because an insufficient level of DFSMSdfp is installed on the system, both wait-type and nonwait-type ABACKUP requests fail.

AGGREGATE GROUP is displayed when *function* is ABACKUP or ARECOVER when the ARECOVER command has been issued with the *agname* parameter.

CONTROL FILE DATA SET is displayed when *function* is ARECOVER and the ARECOVER command has been issued with the *data-set-name* parameter.

- *agname* is the aggregate group that has been specified in the ABACKUP or ARECOVER command.
- *data-set-name* is the name of the data set that has been specified for the control file in the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: Determine why the requested function has been held. When the function no longer needs to be held, release the function and reissue the ABACKUP or ARECOVER command.

Source: DFSMSHsm

ARC6022I DFSMSHSM ADDRESS SPACE HAS BEEN SET TO {NON-SWAPPABLE | SWAPPABLE}

Explanation: If NON-SWAPPABLE is displayed, an ABACKUP or ARECOVER command has been issued while the DFSMSHsm address space is swappable. DFSMSHsm sets the DFSMSHsm address space to NON-SWAPPABLE so that it can support interaddress space communication.

If SWAPPABLE is displayed, DFSMSHsm is reset to its original swappable configuration when ABACKUP or ARECOVER commands are no longer processing or queued.

System action: The DFSMSHsm address space remains nonswappable while ABACKUP or ARECOVER commands are processing or queued. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6023E INCORRECT DFSMSHSM SECONDARY ADDRESS SPACE INVOCATION

Explanation: An ABARS secondary address space has been incorrectly started with the MVS START command issued from the system console.

System action: The ABARS secondary address space ends without establishing communications with the DFSMSHsm primary address space.

ARC6024I • ARC6026I

Issued By: ABARS secondary address space to the operator console.

Operator response: If DFSMSHsm is not active, it must be started. If DFSMSHsm is active, issue the appropriate DFSMSHsm command, which is either ABACKUP or ARECOVER.

Programmer response: None.

Source: DFSMSHsm

ARC6024I ADDRESS SPACE *asid* STARTED USING PROCNAME = *procedurename.identifier*

Explanation: An ABARS secondary address space has been started.

- *asid* is the address space ID in hexadecimal of the started DFSMSHsm secondary address space.
- *procedurename.identifier* is the started task name under which the secondary address space is running.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6025E {ALLOCATION | OPEN | I/O} ERROR OCCURRED IN WRITING THE ACTIVITY LOG DATA SET *data-set-name1* - AGGREGATE {BACKUP | RECOVERY} FAILED FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name2*}

Explanation: A DASD data set has been requested for the activity log, and either the allocation or open routine has failed, or an I/O error condition has been detected while writing to the data set. A SYSOUT data set could not be allocated for the activity log to recover from the error.

If a SYSOUT data set has been requested for the activity log, the SYSOUT data set could not be allocated or opened.

The message is issued to the operator console and the task ends.

- ALLOCATION indicates that the activity log could not be allocated.
- OPEN indicates that the activity log could not be opened.
- I/O indicates that the activity log received an I/O error while writing the data set.
- *data-set-name1* is the name of the activity log data set that received the error if DASD, or SYSOUT is the name if a SYSOUT activity log has been requested.
- BACKUP indicates that the error has occurred during aggregate backup processing.
- RECOVERY indicates that the error has occurred during aggregate recovery processing.
- AGGREGATE GROUP *agname* is the name of the aggregate group being processed.
- CONTROL FILE DATA SET *data-set-name2* is the name of the control file used in the ARECOVER command.

System action: Aggregate backup or aggregate recovery fails. This message is issued by the ABARS secondary address space to the operator console.

Operator response: Notify your system programmer.

Programmer response: A programming or system problem is indicated.

Source: DFSMSHsm

ARC6026I {ALLOCATION | OPEN | I/O} ERROR OCCURRED IN WRITING THE ACTIVITY LOG DATA SET *data-set-name1* DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name2*}

Explanation: A DASD data set has been requested for the activity log and either the allocation or open routine has failed, or an I/O error has been detected while writing to the data set. A new activity log has been allocated as a SYSOUT data set. The message is issued to the operator console and is written to the SYSOUT data set allocated for the new activity log.

- ALLOCATION indicates that the DASD activity log could not be allocated.
- OPEN indicates that the DASD activity log could not be opened.
- I/O indicates that the DASD activity log has received an I/O error while writing the data set.

- *data-set-name1* is the name of the activity log data set that has received the error.
- BACKUP indicates that the error has occurred during aggregate backup processing.
- RECOVERY indicates that the error has occurred during aggregate recovery processing.
- AGGREGATE GROUP *agname* is the name of the aggregate group being processed.
- CONTROL FILE DATA SET *data-set-name2* is the name of the control file being used in the ARECOVER command.

System action: Aggregate backup or aggregate recovery continues. The activity log is allocated to SYSOUT. This message is issued by the ABARS secondary address space to the operator console and to the activity log.

Operator response: Notify your system programmer.

Programmer response: None.

Source: DFSMShsm

ARC6027I DFSMSHSM PRIMARY ADDRESS SPACE ISSUED '*command*' TO CANCEL A SECONDARY ADDRESS SPACE. [AGGREGATE {BACKUP | RECOVERY} IS HELD.]

Explanation: The DFSMSHsm primary address space has issued an MVS CANCEL command to cancel a secondary address space. The time allotted for an address space to start has been exceeded, the ABARS control task has abnormally ended (abend) when secondary address spaces are active, or a recursive abend has occurred in the ABARS subtasks when the secondary address spaces are active.

command indicates which ABARS secondary address space has been cancelled. An example is as follows:

```
"C ABARnntt,A=asid"
```

where:

C MVS CANCEL command

ABAR DFSMSHsm aggregate backup and aggregate recovery function

nn task number from 01 to 15

tt individual time stamp

A address space ID

asid address space number

System action: The aggregate backup or aggregate recovery function is held if the CANCEL is a result of a secondary address space not starting within an allotted time interval. This is dependent upon which command has been processing. In this case the command that has been processing will *not* be purged from DFSMSHsm's work queue. If the cancel is issued as a result of an abnormal end, the affected function is not held, but the command being processed *will* be purged from DFSMSHsm's work queue. DFSMSHsm processing continues.

Operator response: Ensure that the address space for which the MVS CANCEL command has been issued is cancelled. If the task is still active in the system, issue an MVS FORCE command to cancel the address space.

Programmer response: In the case of a timing failure, verify that the procedure name used by DFSMSHsm to start a secondary address space exists. In this case, the aggregate backup or aggregate recovery command remains on the queue. When the problem is corrected, release the function that has been held. If the message has been issued as a result of a timing problem, verify that the maximum amount of time allowed for an ABARS secondary address space to start is sufficient. (This is verified by using the DFSMSHsm DISPLAY command for .ARCBRCB.+494.)

This full word contains the hexadecimal equivalent of 300 (X'12C'), which signifies that 5 minutes are allowed for the ABARS secondary address space to start. This field is patchable by the DFSMSHsm PATCH command: PATCH .ABRCB.+494 x'nnnnnnnn', where 'nnnnnnnn' is the hexadecimal time value in seconds that you are allowing for ABARS' secondary address spaces to start.

Source: DFSMSHsm

ARC6028E VOLUME *volser* TO BE DEFINED TO AGGREGATE RECOVERY AS {ML1VOL | L0VOL} VOLUME ALREADY DEFINED TO AGGREGATE RECOVERY AS {ML1VOL | L0VOL}; DEFINE FAILED.

Explanation: A DEFINE ARPOOL command has been entered with the *volser* specified. The DEFINE command has failed because the *volser* has been previously DEFINED to DFSMSHsm with a volume type that is incompatible with the volume type on this DEFINE command or the DEFINE command has used the same *volser* with both the ML1VOLS and L0VOLS parameters.

System action: The DEFINE command fails. DFSMSHsm processing continues.

Programmer response: Correct conflicts and reissue this command.

Source: DFSMSHsm

ARC6029E VOLUME *volser* TO BE DEFINED TO AGGREGATE RECOVERY AS {ML1VOL | L0VOL} VOLUME IS AN SMS MANAGED VOLUME; DEFINE FAILED.

Explanation: A DEFINE ARPOOL command has been entered with the *volser* specified. The DEFINE command has failed because the *volser* is an SMS-managed volume.

System action: The DEFINE command fails. DFSMSHsm processing continues.

Programmer response: Reissue the DEFINE command without this volume.

Source: DFSMSHsm

ARC6030I ACTIVITY LOG FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name1*} WILL BE ROUTED TO {*datasetname2* | SYSOUT=*class*}

Explanation: An activity log has been allocated to either DASD or SYSOUT. This message informs the issuer of the ABACKUP or ARECOVER command of the activity log data set name or SYSOUT class.

- *agname* is the name of the aggregate group that is being processed by aggregate backup.
- *data-set-name1* is the name of the control file data set that is being processed by aggregate recovery.
- *data-set-name2* is the name of the activity log data set when allocated to DASD.
- SYSOUT=*class* indicates that the activity log has been allocated to SYSOUT in the specified class *class*.

System action: DFSMSHsm processing continues. This message is issued to the user that has entered the ABACKUP or ARECOVER command.

Programmer response: None.

Source: DFSMSHsm

ARC6031E SECONDARY ADDRESS SPACE START COMMAND FAILED. AGGREGATE BACKUP/RECOVERY IS HELD

Explanation: DFSMSHsm has attempted to start a secondary address space as a result of an ABACKUP or ARECOVER command being issued. The internally generated MVS START command has failed.

System action: Aggregate backup and aggregate recovery are held. Other DFSMSHsm functions are not affected.

Programmer response: Do not issue any new ABACKUP or ARECOVER commands until the problem is resolved. Once the problem is corrected, release aggregate backup and aggregate recovery and then reissue the commands.

This error will most likely occur if adequate system storage is not available or the system has exceeded the maximum number of address spaces allowed by MVS.

Source: DFSMSHsm

ARC6032E FAILURE IN CANCELLING A DFSMSHSM SECONDARY ADDRESS SPACE USING '*command*'. AGGREGATE {BACKUP | RECOVERY} IS HELD

Explanation: A failure has occurred in issuing a command to cancel a secondary address space during aggregate backup or aggregate recovery processing.

- *command* indicates the command being issued. This will give the *taskname.identifier* that is associated with the secondary address space being cancelled. *command* also gives the hexadecimal address space ID of the address space it has been attempting to cancel.

System action: Aggregate backup or aggregate recovery is held. Other DFSMSHsm processing continues.

Operator response: If the address space is still active, use either the MVS CANCEL or FORCE command, using the identifier displayed in the error message. This should cause the address space to be cancelled.

Programmer response: This error is most likely a timing problem. The address space is probably in a state where it cannot be cancelled at this time. Manually issuing the MVS CANCEL or FORCE command should allow the address space to be cancelled.

Once the failure is corrected, release the affected function and reissue the command.

Source: DFSMSHsm

ARC6033I AGGREGATE RECOVERY UNIT NAME = *unittype*

Explanation: A QUERY command has been issued with the SETSYS or ABARS parameter. The unit type that has been used to recover nonmigrated data sets to tape during an aggregate recovery is indicated by *unittype*.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6034E DFSMSDSS {DUMP | RESTORE} RETURN CODE *return-code* RECEIVED DURING AGGREGATE {BACKUP | RECOVERY}

Explanation: DFSMSdss has returned a nonzero return code during aggregate backup or aggregate recovery processing.

- DUMP indicates DFSMSdss has been invoked by aggregate backup to dump data sets.
- RESTORE indicates DFSMSdss has been invoked by aggregate recovery to restore data sets.
- *return-code* is the return code received from DFSMSdss.

System action: Return code 4 indicates that the DFSMSdss operation has completed, but a warning (W) message has been issued during processing. In this case, aggregate backup or aggregate recovery continues but completes with a nonzero return code.

Issued By: ABARS secondary address space.

Programmer response: See message ARC6004I to determine the cause of the DFSMSdss nonzero return code. Message ARC6004I contains the text of the messages issued by DFSMSdss that describe the error.

Resolve the problem and reissue the ABACKUP or ARECOVER command if it is deemed necessary based on the associated DFSMSdss messages.

Source: DFSMSHsm

ARC6035E *taskname* TASK ABENDED, CODE *ffssuuu* IN MODULE *modname* AT OFFSET *offset*, STORAGE LOCATION *location*

Explanation: A DFSMSHsm task has abnormally ended (abend).

- *taskname* is the name of the failing task. If the abend occurs during the processing of an ABACKUP, the taskname will be ABACKUP. If the abend occurs during the processing of an ARECOVER, the taskname is ARECOVER. If the abend occurs after the completion of an ABACKUP or an ARECOVER, before the (ABARS) secondary address space terminates, the taskname is ABARS.
- *ffssuuu* is the abend code.
 - *ff* is the name of the indicator flags.
 - *sss* is the system completion code.
 - *uuu* is the user completion code.
- *modname* is the name of the abend module.

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- *offset* is the abend module offset.
- *location* is the address where the abend has occurred.

This message is not issued when ABARS secondary address space is cancelled via an MVS CANCEL command.

System action: Aggregate backup or aggregate recovery fails.

Programmer response: Reissue the ABACKUP or ARECOVER command after the error is resolved.

Source: DFSMSHsm

ARC6036I AGGREGATE {BACKUP | RECOVERY | BACKUP/RECOVERY} *parmname* = *parmvalue*

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued.

- BACKUP indicates that the parameter applies to aggregate backup.
- RECOVERY indicates that the parameter applies to aggregate recovery.
- BACKUP/RECOVERY indicates that the value applies to both aggregate backup and aggregate recovery.
- *parmname* = indicates the SETSYS parameter that applies to ABARS that is being displayed.
 - PERCENTUTILIZED indicates the percent of the DASD that is allowed to be filled by DFSMSdss during ARECOVER processing. This can be anywhere from 1 to 100 percent of the DASD.
 - ABARSVOLCOUNT indicates the method for determining volume count for SMS target data set allocations performed by DFSMSdss. This parameter affects only the ARECOVER of data sets dumped from primary volumes (L0 data sets).
 - ABARSOPTIMIZE allows an installation to adjust performance when it backs up level 0 DASD data sets specified in the INCLUDE list.
 - ABARSTGTGDS indicates to ARECOVER processing how to set the TGTGDS parameter that is passed to DFSMSdss when restoring SMS-managed generation data sets.
 - ABARSDELETEACTIVITY indicates that DFSMSHsm automatically deletes the ABARS activity log during ABARS roll off processing or during EXPIREBV ABARSVERSIONS processing when the log resides on DASD.
 - ABARSTAPES specifies whether ABACKUP stacks the output files onto a minimum number of tape volumes and that ARECOVER continue processing as if the ABACKUP output files are stacked. ARECOVER fails if it determines that the files are not stacked.
 - ABARSKIP specifies whether data sets protected by Peer-to-Peer Remote Copy (PPRC) or eXtended Remote Copy (XRC) should be skipped by ABACKUP.
- *parmvalue* = indicates the value assigned to the SETSYS parameter specified in *parmname*.
 - *percent* indicates the value assigned by the PERCENTUTILIZED parameter of the ARECOVER command, or the SETSYS ARECOVERPERCENTUTILIZED default value of 80%.
 - The following ABARSVOLCOUNT values are valid:
 - *NONE* indicates that the ABARSVOLCOUNT parameter is not passed to DFSMSdss.
 - ANY indicates that the ABARSVOLCOUNT parameter is passed to DFSMSdss.
 - The following ABARSOPTIMIZE values are valid:
 - If 1, then DFSMSdss reads one track at a time.
 - If 2, then DFSMSdss reads two tracks at a time.
 - If 3, then DFSMSdss reads five tracks at a time.
 - If 4, then DFSMSdss reads one cylinder at a time.
 - The following ABARSTGTGDS values are valid:
 - ACTIVE indicates that SMS-managed generation data sets are assigned the active status; for example, rolled into the GDG base.
 - DEFERRED indicates that SMS-managed generation data sets are assigned the deferred status.
 - ROLLEDOFF indicates that SMS-managed generation data sets are assigned the rolled off status.
 - SOURCE indicates that SMS-managed generation data sets are assigned the same status as the source data set.
 - The following ABARSDELETEACTIVITY values are valid:
 - YES indicates whether the ABARS activity log will be deleted during ABARS roll off processing or during EXPIREBV ABARSVERSIONS processing.

- NO indicates that no automatic deletion is performed. NO is the default.
- The following ABARSTAPE values are valid:
 - STACK indicates to ABACKUP to stack the ABACKUP output files on a minimum number of tape volumes.
 - NOSTACK indicates to ABACKUP not to stack the ABACKUP output files to DASD.
- The following ABARSKIP values are valid:
 - PPRC, XRC, directs ABACKUP to skip data sets protected by either PPRC or XRC.
 - PPRC, NOXRC directs ABACKUP to skip only data sets protected by PPRC.
 - NOPPRC, XRC directs ABACKUP to skip only data sets protected by XRC.
 - NOPPRC, NOXRC directs ABACKUP not to skip data sets protected by either PPRC or XRC.

System action: None.

Programmer response: None.

Source: DFSMShsm

ARC6040E CATALOG SEARCH INTERFACE CANNOT BE LOADED, ABEND CODE IS *xxx*, REASON CODE IS *xxx*

Explanation: During preparation to process an aggregate backup or aggregate recovery request, DFSMShsm attempted to load the Catalog Search Interface module IGGCSI00 but the load failed. The abnormal end (abend) and reason codes from the attempted load are indicated in the message.

System action: Aggregate backup or aggregate recovery fails.

System programmer response: Use the explanations of the abend and reason codes, which are found in *z/OS MVS System Codes*, to determine the reason for the load failure. Correct the error and reissue the ABACKUP/ARECOVER command.

Programmer response: None.

Source: DFSMShsm

ARC6051I AN INSTRUCTION DATA SET WAS NOT SPECIFIED FOR AGGREGATE GROUP *agname*

Explanation: An instruction data set name has not been specified for the aggregate group.

- *agname* is the name of the aggregate group.

System action: Aggregate backup processing continues.

Programmer response: If an instruction data set is desired for the aggregate group, redefine the aggregate group with an instruction data set name included. The instruction data set specified must be allocated and have any instructions to the recovery site edited into it. Reissue the ABACKUP command. Aggregate backup defines a dummy instruction data set if one is not specified. If an instruction data set is not desired, no action is required and the aggregate backup processing can continue.

Source: DFSMShsm

ARC6052E SELECTION DATA SET *data-set-name*[(*membername*)] IN AGGREGATE GROUP *agname* NOT FOUND - AGGREGATE BACKUP FAILED

Explanation: A data set in the aggregate group has been specified as a selection data set and could not be found. Either the name of the selection data set has been misspelled or it has not been created prior to issuing the ABACKUP command.

- *data-set-name* is the name of the selection data set that has not been found.
- *membername* is the member of the selection data set that has not been found if the selection data set is a partitioned data set.
- *agname* is the name of the aggregate group being processed.

System action: DFSMShsm ends ABACKUP processing for the specified aggregate group.

Programmer response: Determine if the name of the selection data set is spelled incorrectly or if the data set actually exists. If the name of the selection data set is spelled incorrectly, use the ISMF panels to correct the aggregate

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group. This change will require that the SMS configuration be reactivated via the SETSMS command. Reissue the ABACKUP command after correcting the aggregate group. If the selection data set does not exist, it must be allocated and the data sets to be backed up must be entered into the selection data set. Reissue the ABACKUP command.

Source: DFSMSHsm

ARC6053E {AGGREGATE GROUP | MANAGEMENT CLASS} *name* NOT FOUND OR INVALID -
AGGREGATE BACKUP FAILED

Explanation: During an aggregate backup, an attempt has been made to read the required SMS construct.

- AGGREGATE GROUP indicates the aggregate group specified in the ABACKUP command does not exist. Either the aggregate group name has been misspelled or it has not been defined prior to issuing the ABACKUP command.
- MANAGEMENT CLASS indicates the management class specified in the aggregate group does not exist. Either the management class name has been misspelled or it has not been defined prior to issuing the ABACKUP command or VIRTUALREQUIRED (VR) is specified as the ABACKUP COPY TECHNIQUE.
- *name* is the name of the SMS construct being processed.

System action: DFSMSHsm ends ABACKUP processing for the specified aggregate group.

Programmer response: Determine if the construct name is misspelled or if the specified construct is defined or not.

- Use the ISMF panels to determine the correct name of the construct. If the name is spelled incorrectly on the ABACKUP command, reissue the ABACKUP command using the correct name of the aggregate group. If the name is spelled incorrectly for one of the constructs, correct the name of the construct.
- If the SMS construct is not defined at all, use the appropriate ISMF panels to define the SMS construct. Reissue the ABACKUP command.
- If the Management Class has defined ACPYTECH=VR, reissue the ABACKUP command on the host with DFSMSHsm version V1R10 or higher.

Source: DFSMSHsm

ARC6054I AGGREGATE BACKUP STARTING FOR AGGREGATE GROUP *agname*, AT *time*, STARTED TASK
= *procedurename.identifier*

Explanation: An aggregate backup function has been started to process the aggregate group.

- *agname* is the name of the aggregate group being processed.
- *time* is the time of day the aggregate backup has been started. It is expressed as hh:mm:ss (hours, minutes, seconds).

Note: The time stamp in this message may not be the same from the ABARS secondary address space and the DFSMSHsm primary address space.

- *procedurename.identifier* is the started task name that the secondary address space is running under.

System action: DFSMSHsm processing continues.

Issued By: This message is issued by both the DFSMSHsm primary address space and the ABARS secondary address space so that it will be entered into their respective activity logs. For the DFSMSHsm primary address space this message is issued only to the command activity log. For the ABARS secondary address space this message is issued to the activity log and to the user that entered the ABACKUP command.

Programmer response: None.

Source: DFSMSHsm

ARC6055I AGGREGATE BACKUP HAS COMPLETED FOR AGGREGATE GROUP *agname*, AT *time*,
RETCODE = *nnn*

Explanation: DFSMSHsm completed an aggregate backup function.

If the RETCODE is zero, the aggregate backup completed successfully. If the RETCODE is nonzero, an error condition occurred and RETCODE is set to *nnn*. See message ARC6*nnn* for an explanation of the error condition.

Note: The message referred to indicates the first error encountered that causes aggregate backup to fail. Other error conditions encountered afterward would also cause aggregate backup to fail. The ABARS secondary address space activity log indicates all error occurrences.

- *aname* is the name of the aggregate group processed.
- *time* is the time of day aggregate backup ended. It is expressed as hh:mm:ss (hours, minutes, seconds).

Note: The time stamp in this message may not be the same from the ABARS secondary address space and the DFSMSHsm primary address space.

- *nnn* indicates the first error condition encountered by the aggregate backup function.

System action: DFSMSHsm processing continues.

Issued By: This message is issued by both the DFSMSHsm primary address space and the ABARS secondary address space, so it is entered into their respective activity logs. For the DFSMSHsm primary address space this message is issued to the command activity log. The message is also routed to the console in order to facilitate automatic operations usage.

Programmer response: If the RETCODE value is nonzero, see message ARC6nnn in the ABARS secondary address space activity log for this aggregate backup task to determine the specific error condition that caused the failure.

Source: DFSMSHsm

ARC6056E SPECIFIED INSTRUCTION DATA SET *data-set-name* NOT FOUND FOR AGGREGATE GROUP *aname* - AGGREGATE BACKUP FAILED

Explanation: The instruction data set that has been specified in the aggregate group could not be found. Either the data set name has been misspelled or the data set has not been allocated before issuing the ABACKUP command.

- *data-set-name* is the name of the instruction data set specified in the aggregate group.
- *aname* is the name of the aggregate group being processed.

System action: DFSMSHsm ends ABACKUP processing for the specified aggregate group.

Programmer response: Determine if the instruction data set name is spelled incorrectly or if it is not allocated.

- Use the aggregate group ISMF panel to determine the name of the instruction data set as it is defined to the aggregate group. If the name of the instruction data set is different, change the name of the instruction data set in the aggregate group. This will require that the SMS configuration be reactivated via the SETSMS command. Reissue the ABACKUP command.
- If the instruction data set is not allocated, allocate the instruction data set, insert the desired information and instructions in the instruction data set, and reissue the ABACKUP command. This does *not* require reactivation of the SMS configuration.

Source: DFSMSHsm

ARC6057E {ALLOCATION | OPEN | I/O} ERROR OCCURRED IN READING SELECTION DATA SET *data-set-name*(*membername*) FOR AGGREGATE GROUP *aname* - AGGREGATE BACKUP FAILED

Explanation: An allocation, OPEN, or I/O error has occurred in attempting to read a selection data set.

- ALLOCATION indicates that the data set has received an allocation error.
- OPEN indicates that the data set has received an open error.
- I/O indicates that the data set has received an I/O error in reading the data set.
- *data-set-name* is the name of the selection data set that received the error.
- *membername* is the member of the selection data set that has received the error when the selection data set is a partitioned data set.
- *aname* is the name of the aggregate group being processed.

System action: Aggregate backup fails.

Programmer response: For specific error return codes and reason codes associated with the failure, see previous message ARC0645I or ARC6164E in the ABARS secondary address space activity log for this aggregate group.

Reissue the ABACKUP command after the error is corrected.

ARC6058E • ARC6060I

Source: DFSMSHsm

ARC6058E {ALLOCATION | OPEN | I/O} ERROR OCCURRED IN WRITING THE {CONTROL FILE | DATA FILE} DATA SET *data-set-name*, FOR AGGREGATE GROUP *agname* - AGGREGATE BACKUP FAILED

Explanation: An allocation, open, or I/O error has occurred in attempting to write to one of the ABACKUP output data sets.

- ALLOCATION indicates that the data set has received an allocation error.
- OPEN indicates that the data set has received an open error.
- I/O indicates that the data set has received an I/O error while writing to the data set.
- CONTROL FILE indicates that the output control file has received the error.
- DATA FILE indicates that the output data file has received the error.
- *data-set-name* is the name of the data set that has received the error.
- *agname* is the name of the aggregate group being processed.

System action: Aggregate backup fails.

Programmer response: For specific error return codes and reason codes associated with the failure, see previous message ARC0645I or ARC6164E in the ABARS secondary address space activity log for this aggregate group.

Reissue the ABACKUP command after the error is corrected.

Source: DFSMSHsm

ARC6059E ERROR OCCURRED IN OBTAINING DFSMSHSM CONTROL DATA SET RECORDS FOR DATA SET *data-set-name* BEING PROCESSED FOR AGGREGATE GROUP *agname* - RECORD TYPE THAT FAILED IS {MCA | MCD | MCO | MCV}

Explanation: An error has occurred in attempting to read the DFSMSHsm migration control data set during aggregate backup.

- *data-set-name* is the name of the data set whose DFSMSHsm CDS records have received the error.
- *agname* is the name of the aggregate group being processed by this ABACKUP command.
- MCA indicates the DFSMSHsm control data set record that has received the error is an MCA control data set record.
- MCD indicates the DFSMSHsm control data set record that has received the error is an MCD control data set record.
- MCO indicates the DFSMSHsm control data set record that has received the error is an MCO control data set record.
- MCV insert indicates the DFSMSHsm control data set record that received the error is an MCV control data set record.

System action: If installation-wide exit ARCBEXT is active and indicates that the data set should be bypassed, aggregate backup continues, bypassing this data set. If installation-wide exit ARCBEXT is not active or it does not indicate that the data set should be skipped, aggregate backup fails after the completion of the verification process.

Issued By: ABARS secondary address space.

Programmer response: Reissue the aggregate backup command after the error is corrected. If the record type is MCV, ensure that the volume the data set resides on is ADDVOled to DFSMSHsm. See message ARC0184I, issued by the DFSMSHsm primary address space. The DFSMSHsm primary address space command activity log can be used for further information.

Source: DFSMSHsm

ARC6060I VOLUMES USED FOR DATA FILE *data-set-name* DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname* ARE: *volser1* [...*volsern*]

Explanation: The volumes that have been used by aggregate backup to contain the data file information are listed.

- *data-set-name* is the data set name of the data file.

- *agname* is the aggregate group that has been processed.
- *volser,...volsern* are the volume serials of the volumes used to contain the data file information.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6061I VOLUMES USED FOR CONTROL FILE *data-set-name* DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname* ARE: *volser1* [...*volsern*]

Explanation: The volumes that have been used by aggregate backup to contain the control file information are listed.

- *data-set-name* is the data set name of the control file.
- *agname* is the aggregate group that has been processed.
- *volser,...volsern* are the volume serials of the volumes used to contain the control file information.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6062I VOLUMES USED FOR ACCOMPANY DATA SETS DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname* ARE: *volser1* [...*volsern*]

Explanation: The message lists the volumes that have been used by aggregate backup for accompany data sets. These volumes are to be transported with the aggregate backup package.

- *agname* is the aggregate group that was being processed.
- *volser,...volsern* are the volume serials of the volumes used for the accompany data sets.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6063I INSTRUCTION DATA SET NAME FOR AGGREGATE GROUP *agname* IS *data-set-name*

Explanation: An instruction data set has been specified for the aggregate group. The name of the aggregate group and the instruction data set are listed.

- *agname* is the aggregate group that has been processed.
- *data-set-name* is the name of the instruction data set that has been specified by the installation in the aggregate group.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6064I DATA SET *data-set-name* HAS BEEN SUCCESSFULLY BACKED UP DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: A data set has been successfully backed up by the aggregate backup function.

- *data-set-name* is the name of the data set that has been backed up.
- *agname* is the aggregate group that has been processed.

This message is only issued for migrated or tape data sets. Data sets processed by DFSMSDss will be listed under message ARC6004I.

System action: DFSMSHsm processing continues.

ARC6065E • ARC6068I

Programmer response: None.

Source: DFSMSHsm

ARC6065E AGGREGATE GROUP *aname* CURRENTLY PROCESSING - ABACKUP COMMAND FAILED

Explanation: A wait-type ABACKUP command has been issued to process an aggregate group that is already processing on the system. Aggregate backup cannot process the same aggregate group simultaneously in multiple address spaces.

- *aname* is the aggregate group that has been processed.

System action: DFSMSHsm processing continues.

Programmer response: Wait until the current processing of the aggregate group is complete. If the aggregate group is to be processed again, reissue the ABACKUP command.

Source: DFSMSHsm

ARC6066E CATALOG DATA SET *data-set-name1* HAS BEEN INCLUDED IN SELECTION DATA SET *data-set-name2* FOR AGGREGATE GROUP *aname* - AGGREGATE BACKUP FAILED

Explanation: An integrated catalog facility (ICF) catalog has been specified in the include or accompany list, or a catalog not supported by the ABACKUP command has been included in the selection data set being processed. Only ICF user catalogs in the allocate list are supported during the aggregate backup process. The aggregate backup fails.

- *data-set-name1* is the name of the catalog that is listed in the selection data set.
- *data-set-name2* is the name of the selection data set that contains the catalog name.
- *aname* is the aggregate group that is being processed.

System action: DFSMSHsm processing continues.

Programmer response: Edit the selection data set that contains the catalog name and delete the catalog name from the list of data sets. Reissue the ABACKUP command.

Source: DFSMSHsm

ARC6067E SDSP *sdspname* COULD NOT BE ALLOCATED FOR DATA SET *data-set-name* FOR AGGREGATE GROUP *aname*

Explanation: An attempt has been made to allocate an SDSP data set for aggregate backup processing. The allocation has been unsuccessfully tried every 5 seconds for 15 minutes. In addition, the DFSMSHsm primary address space has been called to have migration relinquish the SDSP every minute.

- *sdspname* is the name of the SDSP data set that could not be allocated.
- *data-set-name* is the name of the data set that resides in the SDSP that could not be allocated. This is the data set that is to have been backed up by the aggregate backup processing.
- *aname* is the name of the aggregate group being processed.

System action: After the final unsuccessful attempt, if an installation-wide exit ARCBEEEXT is not active or indicates that processing is to continue normally, aggregate backup fails. If installation-wide exit ARCBEEEXT is active and indicates that the data set should be bypassed, aggregate backup continues, bypassing this data set.

Programmer response: Determine why the SDSP could not be allocated. The most common reason is that the DFSMSHsm primary address space has the SDSP allocated for migration or recall. See message ARC6164E for return codes and information codes to determine the cause of the failure. When the situation that caused the allocation failure is corrected, reissue the ABACKUP command.

Source: DFSMSHsm

ARC6068I SELECTION DATA SET *data-set-name[(membername)]* IS EMPTY FOR AGGREGATE BACKUP OF AGGREGATE GROUP *aname*

Explanation: During aggregate backup, the specified selection data set has been found to be empty. The data set has been ignored.

- *data-set-name* is the name of the selection data set that has received the attention message.

- *membername* is the member of the selection data set that has received the attention message when the selection data set is a partitioned data set.
- *agname* is the name of the aggregate group being processed.

System action: Aggregate backup continues.

Programmer response: None.

Source: DFSMSHsm

ARC6069E ALL SPECIFIED SELECTION DATA SETS ARE EMPTY FOR AGGREGATE GROUP *agname*

Explanation: All selection data sets that have been specified for the aggregate group are empty.

- *agname* is the name of the aggregate group being processed.

System action: Aggregate backup fails.

Programmer response: Define the selection data sets properly, ensuring that each contains the INCLUDE keyword and a valid parameter list. Then reissue the ABACKUP command.

Source: DFSMSHsm

ARC6070E DATA SET *data-set-name* **WAS SPECIFIED IN BOTH THE {INCLUDE | ACCOMPANY | ALLOCATE} and {ACCOMPANY | ALLOCATE} LISTS. AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP** *agname*.

Explanation: The data set name has been specified in more than one of the following data set lists: INCLUDE, ACCOMPANY, ALLOCATE. Aggregate backup processing will fail.

- *data-set-name* is the name of the data set that has been specified in more than one of the above-mentioned data set lists.
- *agname* is the name of the aggregate group being processed.

System action: DFSMSHsm processing continues.

Programmer response: Edit the selection data set so that the same data set name is not specified in more than one of the following data set lists: INCLUDE, ACCOMPANY, ALLOCATE. Reissue the ABACKUP command.

Source: DFSMSHsm

ARC6071I VOLUMES USED FOR INSTRUCTION/ACTIVITY LOG FILE *data-set-name* **DURING AGGREGATE BACKUP FOR AGGREGATE GROUP** *agname* **ARE:** *volser1* [,...*volsern*]

Explanation: The volumes that have been used by aggregate backup to contain either the instruction data set information or the ABACKUP activity log information, or both, are listed.

- *data-set-name* is the name of the instruction/activity log file.
- *agname* is the aggregate group that has been processed.
- *volser*,...*volsern* are the volume serials of the volumes used to contain either or both the instruction data set information and ABACKUP activity log information.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6072I THE MIGRATED DATA SET *data-set-name* **SPECIFIED IN THE ALLOCATE LIST WILL BE RECALLED**

Explanation: A data set that has been specified in the ALLOCATE list is migrated. This data set will be recalled to enable the aggregate backup function to obtain the information needed for allocation.

- *data-set-name* is the name of the data set that will be recalled.

System action: Aggregate backup continues.

Programmer response: None.

ARC6073E • ARC6075I

Source: DFSMSHsm

**ARC6073E ERROR OCCURRED IN ATTEMPTING TO {ENQUEUE | DEQUEUE} ON DATA SET *data-set-name*,
AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*. RETURN CODE=*return-code***

Explanation: All DASD data sets belonging to an aggregate to be backed up must be ENQUEUED and then DEQUEUED to prevent DFSMSHsm from processing them while ABACKUP is processing. The ENQUEUE or DEQUEUE has failed for a data set.

- *data-set-name* is the data set that fails the ENQUEUE or DEQUEUE.
- *agname* is the name of the aggregate group being processed.
- *return-code* is the ENQ or DEQ macro return code.

System action: Aggregate backup fails.

Programmer response: If an ENQUEUE fails, the DFSMSHsm primary address space has been processing a data set that belongs to this aggregate. Ensure that DFSMSHsm space maintenance is not active for data sets belonging to this aggregate and reissue the ABACKUP command. If a DEQUEUE fails, see your system programmer.

Source: DFSMSHsm

**ARC6074E ERROR IN ADDING TAPE VOLUME *volser* TO ABARS RACF TAPE VOLUME SET, RETURN
CODE = *rc*, REASON CODE = *reas***

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. DFSMSHsm makes an attempt to add the tape volume serial number of *volser* to the ABARS tape volume set of HSMABR and fails.

- If the return code is 24, DFSMSHsm has intercepted a 585 abnormal end (abend).
- If the return code is 20, RACF has failed the request or the issuance of the RACDEF SVC has resulted in a nonzero return code.
- If DFSMSHsm has intercepted an abend, ABEND is indicated instead of a reason code.

System action: DFSMSHsm processing continues.

Programmer response: This message informs you of an error that has occurred when DFSMSHsm has attempted to add a tape volume to the ABARS RACF tape volume set.

- If the return code is 24, an ICH409I message will also be issued. The RACF reason code is *xx*. For a description of the RACF abend and reason codes, see *z/OS Security Server RACF Messages and Codes*.
- If the return code is 20 and an abend did not occur, the reason code is one of the possible return codes from the RACDEF SVC in *z/OS MVS Programming: Authorized Assembler Services Guide*

Source: DFSMSHsm

ARC6075I TAPE VOLUME *volser* SUCCESSFULLY ADDED TO ABARS RACF TAPE VOLUME SET

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. The volume serial number of *volser* has been successfully added to the ABARS RACF tape volume set of HSMABR.

System action: DFSMSHsm processing continues.

Programmer response: This message informs you that DFSMSHsm is RACF protecting one of its tape volumes. An authorized user can determine what is currently in the ABARS RACF tape volume set by issuing the following RACF command:

```
RLIST TAPEVOL HSMABR ALL
```

Source: DFSMSHsm

ARC6076E TAPE VOLUME *volser* REJECTED, VOLUME IS PROTECTED BUT DOES NOT APPEAR IN ABARS RACF TAPE VOLUME SET

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. DFSMSHsm has selected the volume *volser* for use during aggregate backup or recovery processing and the tape is RACF protected, but does not appear in the ABARS RACF tape volume set.

System action: DFSMSHsm processing continues. A new tape mount will be requested.

Programmer response: The system programmer or storage administrator responsible for DFSMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFSMSHsm

ARC6077E TAPE VOLUME *volser* REJECTED, VOLUME ALREADY IN ABARS RACF TAPE VOLUME SET

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. DFSMSHsm has selected the volume *volser* for use during aggregate backup or recovery processing and the tape is RACF protected in the ABARS RACF tape volume set. ABARS will reject the tape volume if it is already in the ABARS RACF tape volume set. In this case it is assumed that it has been added to RACF during a previous aggregate backup or aggregate recovery process.

System action: DFSMSHsm processing continues. A new tape mount will be requested.

Programmer response: The system programmer or storage administrator responsible for DFSMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFSMSHsm

ARC6078I {DEFINITION | DELETION} OF RACF PROFILE FAILED FOR DATA SET *data-set-name1* USING CONTROL FILE DATA SET *datasetname2*, RACF RETURN CODE = *return-code*, REASON CODE = *reason-code*

Explanation: During aggregate recovery, DFSMSHsm has attempted to either define or delete a RACF profile for a RACF-indicated migrated data set. The definition or deletion of the RACF profile has failed.

- DEFINITION indicates that an attempt to define a RACF profile has failed for a RACF-indicated migrated data set.
- DELETION indicates that a RACF profile has been defined for a RACF-indicated migrated data set, but subsequent recovery of the data set has failed. An attempt to delete the RACF profile has failed.
- *data-set-name1* is the name of the migrated data set being recovered.
- *data-set-name2* is the name of the control file that has been specified in the ARECOVER command.
- *return-code* is the RACF return code.
- *reason-code* is the RACF reason code.

System action: DFSMSHsm processing continues.

Programmer response: If the failure has occurred in defining a RACF profile and the data set has been recovered, you must define a RACF profile to allow access to this data set. If the failure has occurred in deleting a RACF profile, a RACF profile has been defined; however, the data set has not been recovered. This RACF profile should be deleted before attempting another ARECOVER.

Source: DFSMSHsm

ARC6079E DELETE OF (CONTROL | DATA | INSTRUCTION/ACTIVITY LOG) FILE *data-set-name* FOR AGGREGATE GROUP *agname* FAILED, DELETE RETURN CODE = *return-code*

Explanation: The ABACKUP command processing failed due to an error or HOLD was specified. The ABACKUP command processing attempted to delete the associated control, data, or instruction activity log file for this version, but the delete has failed.

- *control file* indicates that the output control file received the error.
- *data file* indicates that the output data file received the error.
- *instruction activity log file* indicates that the output instruction activity log file received the error.
- *data-set-name* is the name of the ABACKUP output file.

ARC6080E • ARC6082E

- *agname* is the name of the aggregate group being processed.
- *return-code* is the SVC 26 return code.

System action: DFSMSHsm processing continues.

Programmer response: The deletion of the ABACKUP output file has failed and the ABR record for this copy has not been written. You must manually delete the ABACKUP output file *data-set-name*.

Source: DFSMSHsm

ARC6080E {SPECIFIED INSTRUCTION DATASET *data-set-name* | DASD ACTIVITY LOG} WAS NOT BACKED UP DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: ABACKUP has failed to include the specified instruction data set or a DASD activity log in the ABACKUP output tapes. The ABACKUP output tapes can be used as input for ARECOVER, but the instruction data set and the activity log cannot be recovered at the recovery site.

- *data-set-name* is the name of the specified instruction data set.
- *agname* is the name of the aggregate group being processed.

System action: DFSMSHsm processing continues.

Programmer response: See previous error messages in the ABACKUP activity log to determine the cause of the error.

Source: DFSMSHsm

ARC6081E ALLOCATION FAILED FOR {*dsname*} DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*}. A NON-TAPE DEVICE WAS ALLOCATED INSTEAD OF A TAPE DEVICE

Explanation: An allocation has been requested for dataset name *dsname* and a nontape device has been allocated when a tape device is expected.

System action: Aggregate backup fails. Aggregate recovery proceeds to recover as much as possible.

Programmer response: If the allocation results are not what the installation desires, modify the ACS routines accordingly and reissue the command.

Source: DFSMSHsm

ARC6082E LIBRARY CONSISTENCY CHECK FAILED DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name1*} FOR DATA SET {*datasetname2*}. RETURN CODE = {*return-code*}

Explanation: A library inconsistency has been found prior to allocating data set *data-set-name2*. The tape volumes for data set *datasetname2* are not stored in the same library, or all volumes are not stored outside of a library, or a failure has occurred in determining the library status of a set of volumes.

- Return code 8 indicates that all volumes are not contained within one library or all volumes are not stored outside a library.
- Return code 16 indicates a failure in determining library status.

An associated ARC0960I message is issued for each volume on which data set *data-set-name2* resides, indicating the name of the library containing the volume.

System action: Aggregate backup fails. Aggregate recovery fails.

Programmer response: None

Source: DFSMSHsm

ARC6083A ALLOCATION REQUEST FAILED FOR {*volser* | *data-set-name*} DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*} REPLY WAIT OR CANCEL

Explanation: An aggregate backup or recovery command attempted an allocation on the volume *volser* or data set name *dsname* in use by another task for the past 30 minutes. The operator is asked for direction.

- *agname* is the name of the aggregate group processing.
- *data-set-name* is the name of the control file specified in the ARECOVER command.

System action: The DFSMSHsm task waits for a reply. If the reply is WAIT, the task continues to wait for the volume or data set to become available, checking in no less than 20-second intervals for its availability. If the reply is CANCEL, the aggregate backup or recovery request fails because the volume or data set is not available.

Operator response: If the volume or data set really is still in use by another task, reply WAIT or CANCEL. If the tape volume cannot be found, reply CANCEL.

Source: DFSMSHsm

ARC6084E DURING ARECOVER PROCESSING, THE ATTRIBUTES OF VSAM DATA SET *data-set-name* MAY CHANGE

Explanation: A VSAM data set has been encountered in the ABACKUP ALLOCATE list during ABACKUP processing. The possibility exists that the attributes of this data set may change as a result of ARECOVER command processing. The ABACKUP RETURN CODE, appearing in message ARC6055I, is set to 084.

System action: DFSMSHsm processing continues. **Issued By:** ABARS secondary address space.

Programmer response: This message is intended to warn that the attributes of the VSAM data set could change during ARECOVER processing. This potential problem can be avoided by including all VSAM data sets in the ABACKUP INCLUDE list instead of the ALLOCATE list.

A patchable bit in the ABRCB, when set ON, prevents the ABACKUP RETURN CODE from being set to 084 when VSAM data sets are encountered in the ABACKUP ALLOCATE list. For example,

```
PATCH .ABRCB.+81 BITS(.....1)
```

Source: DFSMSHsm

ARC6085I ICF CATALOG *catalogname* SPECIFIED IN THE ALLOCATE LIST WAS NOT SELECTED DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: ABACKUP processing did not select the specified ICF catalog from the ALLOCATE/ALLOCATEEXCLUDE filtering. The ICF catalog was not specified as a fully qualified data set name in the ALLOCATE list, and was found to be unavailable during processing. There is a catalog entry in the standard search order for the specified ICF catalog, but the actual ICF catalog does not exist on the cataloged volume. The ICF catalog is not backed up.

- The *catalogname* is the name of the ICF catalog that was not selected during aggregate backup processing.
- The *agname* is the name of the aggregate group being processed.

System action: DFSMSHsm processing continues.

Programmer response: This message informs you that an error was intercepted during catalog filtering and the ICF catalog was not selected. Previous messages in the SYSLOG further describe the error. See the explanation of messages IDC3009I RC4 REAS108, IEC331I RC4 REAS38, IEC331I RC4 REAS86, and IEC161I RC4 REAS80.

Source: DFSMSHsm

ARC6086I RETURN CODE *return-code* RECEIVED FROM INSTALLATION-WIDE EXIT *installation-wide exit name*, EXIT MARKED INOPERATIVE DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: The specified installation-wide exit *installation-wide exitname* returned a nonzero return code during aggregate backup processing for aggregate group *agname*. The return code *return-code* indicates an abnormal condition.

ARC6087I • ARC6088E

System action: The specified exit is disabled for the currently active ABARS secondary address space, which is processing the specified aggregate group *agname*. DFSMSHsm processing continues.

Programmer response: Determine the reason for the specified return code from exit. If you determine that it is an unusual circumstance, reactivate the exit. If the exit has an error, correct it and reactivate it.

Source: DFSMSHsm

ARC6087I GDG BASE *gdgbasename* HAS BEEN SUCCESSFULLY DEFINED FOR (CONTROL | DFSMSDSS DATA | INTERNAL I/O DATA | INSTRUCTION) FILE *data-set-name2* USING DFSMSHSM DEFAULT ATTRIBUTES DURING AGGREGATE RECOVERY

Explanation: During aggregate recovery of DFSMSHsm ABACKUP output, it was found that the GDG base for the indicated ABACKUP output file did not exist. A GDG base was defined using the following DFSMSHsm default attributes to allow the indicated file to be cataloged.

- LIMIT(255)
 - Attributes
 - NOEMPTY
 - SCRATCH
- OWNER(*authid*) where *authid* is the DFSMSHsm authorized userid
- T0(99365)
- *gdgbasename1* is the name of the GDG base that was defined.
- CONTROL indicates that the GDG base was defined for the ABACKUP output control file data set.
- DFSMSDSS DATA indicates that the GDG base was defined for the ABACKUP output DFSMSDSS data file data set.
- INTERNAL I/O DATA indicates that the GDG base was defined for the ABACKUP output INTERNAL I/O data file data set.
- INSTRUCTION indicates that the GDG base was defined for the ABACKUP output instruction file data set.
- *data-set-name2* is the name of the related ABACKUP output file.

System action: The named GDG base is defined. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6088E DEFINED FAILED FOR GDG BASE *gdgbasename1* FOR CONTROL | DFSMSDSS DATA | INTERNAL I/O DATA | INSTRUCTION FILE *data-set-name2* - AGGREGATE RECOVERY FAILED

Explanation: During aggregate recovery of DFSMSHsm ABACKUP output, it was found that the GDG base for the indicated ABACKUP output file did not exist. An error occurred attempting to define the GDG base.

- *gdgbasename1* is the name of the GDG base that could not be defined.
- CONTROL indicates that the GDG base was required for the ABACKUP output control file data set.
- DFSMSDSS DATA indicates that the GDG base was required for the ABACKUP output DFSMSDSS data file data set.
- INTERNAL I/O DATA indicates that the GDG base was required for the ABACKUP output INTERNAL I/O data file data set.
- INSTRUCTION indicates that the GDG base was required for the ABACKUP output instruction file data set.
- *data-set-name2* is the name of the related ABACKUP output file.

System action: The named GDG base is not defined. Aggregate recovery processing fails. DFSMSHsm processing continues.

Programmer response: See previous message ARC6158E in the aggregate recovery activity log for the specific details concerning the error. Resolve the error and retry the ARECOVER command.

Source: DFSMSHsm

ARC6089I *function-amsmsgtext*

Explanation: DFSMSHsm is in the process of performing an aggregate backup or aggregate recovery operation. Access Method Services (AMS) has been invoked to perform the function. During the process, AMS issues a message related to the function, and DFSMSHsm intercepts the message for re-transmission to the ABARS activity log. This message is output if SETSYS ABARSACTLOGMSGLVL(FULL) had been issued, or if an error occurs during AMS processing.

- *function* is set to ABACKUP if issued during an aggregate backup operation.
- *function* is set to ARECOVER if issued during an aggregate recovery operation.
- *amsmsgtext* is the AMS SYSPRINT record. AMS messages have a prefix of IDC.

System action: DFSMSHsm processing continues.

Programmer response: See "IDC Messages in z/OS MVS System Messages, Vol 6 (GOS-IEA) for a complete explanation of AMS messages.

Source: DFSMSHsm

ARC6090E AN ERROR OCCURRED DURING AMS *amsfunction* PROCESSING FOR DATA SET *data-set-name1*, RETURN CODE IS *return-code* - AGGREGATE *abarsfunction* FAILED

Explanation: Access Method Services (AMS) was invoked during aggregate backup or recovery processing and encountered errors during processing. The return code *return-code* has been returned by the AMS function as a result of the error or exception condition.

- *amsfunction* is the name of the AMS function being performed.
- *data-set-name1* is the name of the data set that received the AMS error.
- *return-code* is the return code associated with the AMS error.
- *abarsfunction* is set to the ABARS function being performed; BACKUP for aggregate backup processing, or RECOVERY for recovery processing.

System action: Aggregate backup or recovery processing fails. DFSMSHsm processing continues.

Programmer response: See previous messages ARC6089I in the aggregate backup or recovery activity log for the specific details concerning the error. Resolve the error and retry the aggregate backup or recovery operation.

Source: DFSMSHsm

ARC6091E VSAM DATA SET *data-set-name1* FROM THE ALLOCATE LIST CANNOT BE RECOVERED AS SMS-MANAGED, DATA SET WILL NOT BE RECOVERED

Explanation: During aggregate recovery, verification processing determined that a VSAM data set from the allocate list cannot be recovered as an SMS-managed data set. The data set is not recovered.

- *data-set-name1* is the name of the data set that received the verification failure.

System action: DFSMSHsm processing continues. Aggregate recovery continues. The remaining data sets are verified. If the EXECUTE parameter is specified for the ARECOVER command, data sets that are not receiving verification errors are recovered.

Programmer response: See previous messages ARC6151E, ARC6153E, and/or ARC6192E in the aggregate recovery activity log for the specific details concerning the error. The error can be resolved by causing the data set to be SMS managed. This can be done by modifying the SMS ACS routines or defining the necessary SMS construct(s), or both. The data set can then be recovered during an aggregate recovery restart operation.

Note: These previous messages (ARC6151E, ARC6153E, and ARC6192E) are issued if there were previous errors invoking various SMS services. However, there may be a situation where the ACS routines are coded so that the data set is not SMS-managed. In this case, there may be no errors accessing these SMS services; therefore, there are no other messages issued.

Source: DFSMSHsm

ARC6092I • ARC6096E

ARC6092I DELETE OF {CONTROL | DATA | INSTRUCTION/ACTIVITY LOG} FILE *filename* FOR AGGREGATE GROUP *agname* WAS SUCCESSFUL

Explanation: The aggregate backup output file for the version currently being created already existed and was successfully deleted in order to allow this aggregate backup to continue processing. See the programmer response for instructions on how to prevent the files from being deleted by aggregate backup.

- CONTROL indicates the file name for the control file was deleted.
- DATA indicates the file name for the data file was deleted.
- INSTRUCTION/ACTIVITY LOG indicates the file name for the instruction/activity log was deleted.
- *filename* is the name for the file deleted.
- *agname* is the name of the aggregate group processed.

System action: DFSMSHsm deletes the file and processing continues.

Programmer response: Issue the following DFSMSHsm patch command to prevent aggregate backup from deleting the output file:

```
PATCH .ABRCB.+82 BITS(.1.....).
```

This patch results in the issuance of message ARC6165E, and the user needs to manually rename or delete the file.

ARC6093I {STACK | NOSTACK} PARAMETER INVALID ON ARECOVER COMMAND WHEN AGGREGATE SPECIFIED. ARECOVER {*agname*} CONTINUES.

Explanation: The installation requested the STACK or NOSTACK option on an ARECOVER AGGREGATE request, which is an invalid combination.

System action: DFSMSHsm processing continues. ARECOVER processing continues using the STACK/NOSTACK setting from the ABR record associated with this AGGREGATE group.

Programmer response: If you want to specify the STACK option, then use the ARECOVER command with the DATASETNAME option.

ARC6094E STACK PARAMETER INVALID ON ABACKUP COMMAND IF OUTPUT IS REDIRECTED TO DASD. ABACKUP FAILED FOR AGGREGATE GROUP {*agname*}.

Explanation: The installation requested the STACK option on the ABACKUP command but attempted to redirect the ABACKUP output files to DASD via ACS routines. *agname* is the name of the failing aggregate.

System action: DFSMSHsm processing continues. The ABACKUP request fails.

Programmer response: If you want to STACK the ABACKUP output files, then do *not* redirect any ABACKUP output file to DASD via ACS routines. See *z/OS DFSMSHsm Storage Administration* under the topic "Aggregate Backup Output" for further information about the filenames that ABACKUP output creates.

ARC6095I SKIPPED {PPRC | XRC} DATA SET *dsname*

Explanation: Either by a SETSYS parameter or by the ABACKUP command, ABACKUP was directed to skip backing up data sets protected by Peer-to-Peer Remote Copy (PPRC) or eXtended Remote Copy (XRC). The LIST(SKIPPED) parameter was specified for the ABACKUP command. *dsname* identifies a skipped data set.

System action: None.

Programmer response: None.

Source: DFSMSHsm

ARC6096E ERROR FROM MACRO UCBLLOOK FOR VOLUME *volser* DURING ABACKUP OF AGGREGATE GROUP *agname*. RETURN CODE IS *retcode*. REASON CODE IS *reascode*.

Explanation: The ABACKUP command was directed to skip processing of data sets protected by PPRC or XRC. While trying to determine whether <volume> is protected by PPRC or XRC, an error was encountered from UCBLLOOK function.

System action: DFSMSHsm fails the ABACKUP command.

Programmer response: Volume *volser* is probably offline. If not, determine the problem by checking the return code in the message against those defined for the UCBLLOOK macro in *z/OS MVS Programming: Authorized Assembler Services Reference SET-WTO*.

If the problem with *volser* can be corrected, do so. Otherwise, remove data sets on *volser* from *agname*. Then reissue the ABACKUP command.

Source: DFSMSHsm

ARC6100E SPECIFIED MODEL ENTITY *mentity* IS NOT DEFINED - AGGREGATE RECOVERY FAILED FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *data-set-name*

Explanation: The model entity has been specified by the *mentity* parameter of the ARECOVER command does not exist. It must be defined prior to issuing the ARECOVER command.

- *mentity* is the model entity that has been specified on the ARECOVER command.
- *agname* is the name of the aggregate group being processed.
- *data-set-name* is the name of the control file data set associated with the aggregate group being processed.

System action: Aggregate recovery processing ends. DFSMSHsm processing continues.

Programmer response: Create the data set to be used for a model and define the model entity to RACF as a model profile. Reissue the ARECOVER command.

Source: DFSMSHsm

ARC6101E *entryname* CURRENTLY CATALOGED ON THE SYSTEM AND THE CONFLICT WAS NOT RESOLVED

Explanation: A data set (or, if VSAM, a related VSAM component) to be recovered currently has a catalog entry on the recovery site's system. The conflict resolution options of the ARECOVER command did not resolve the conflict. Either no conflict resolution action has been specified, or the action that has been specified is invalid and could not be taken. In this case, see previous message ARC6296I for an indication of the reason the action could not be taken.

- *entryname* is the duplicate catalog entry (or if VSAM, is the cluster whose related component encountered a duplicate catalog entry). If *entryname* is a generation data set name, the related GDG definition (GDG base) may have received the error. In this case, previous message ARC6110E will have been issued.

System action: DFSMSHsm adds an entry into the conflict resolution data set and bypasses further processing of the data set. The remaining data sets are verified. If EXECUTE has been specified, data sets not receiving verification errors are recovered.

Programmer response: Decide on what action to take to resolve the conflict. Update the conflict resolution data set entry for the data set to indicate the desired action; BYPASS, REPLACE, RENAMESOURCE(level), or RENAMETARGET(level). After all the data set conflicts are resolved, reissue the ARECOVER command.

Source: DFSMSHsm

ARC6102I AGGREGATE RECOVERY STARTING USING CONTROL FILE DATA SET *data-set-name*, AT *time*, STARTED TASK = *procedurename.identifier*

Explanation: An aggregate recovery function has been started.

- *data-set-name* is the name of the control file data set to be processed by the ARECOVER command. The control file data set name has been either specified as the subparameter of *data-set-name* in the ARECOVER command, or has been obtained from the aggregate version (ABR) record for use during ARECOVER processing.
- *time* is the time of day that the aggregate recovery started. It is expressed as hh:mm:ss (hours, minutes, seconds).

Note: The time stamp in this message may not be the same from the ABARS secondary address space and the DFSMSHsm primary address space.

- *procedurename.identifier* is the started task name that the secondary address space is running under.

System action: DFSMSHsm processing continues.

Issued By: This message is issued by both the DFSMSHsm primary address space and the ABARS secondary address space so that it will be entered into their respective activity logs. For the DFSMSHsm primary address space this

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message is issued only to the command activity log. For the ABARS secondary address space this message is issued to the activity log and to the user that entered the ARECOVER command.

Programmer response: None.

Source: DFSMSHsm

ARC6103I AGGREGATE RECOVERY HAS COMPLETED FOR AGGREGATE GROUP *agname*, USING CONTROL FILE DATA SET *data-set-name*, AT *time*, RETCODE = *nnn*

Explanation: DFSMSHsm completed an aggregate recovery function.

If the RETCODE is zero, the aggregate recovery completed successfully. If the RETCODE is nonzero, an error condition occurred and RETCODE is set to *nnn*. See message ARC6*nnn* for an explanation of the error condition.

Note: The message referred to indicates the first error encountered causing aggregate recovery to fail; other error conditions encountered afterward would also cause aggregate recovery to fail. The ABARS secondary address space activity log indicates all error conditions.

- *agname* is the name of the aggregate group that was processed.
- *data-set-name* is the name of the control file data set processed by the ARECOVER command.
- *time* is the time of day that the aggregate recovery ended. It is expressed as hh:mm:ss (hours, minutes, seconds).

Note: The time stamp in this message may not be the same from the DFSMSHsm secondary address space and the DFSMSHsm primary address space.

System action: DFSMSHsm processing continues.

Issued By: This message is issued by both the DFSMSHsm primary address space and the ABARS secondary address space, so it is entered into their respective activity logs. For the DFSMSHsm primary address space this message is issued to the command activity log. The message is also routed to the console in order to facilitate automatic operations usage.

Programmer response: If the RETCODE value is nonzero, see message ARC6*nnn* in the ABARS secondary address space activity log for this aggregate recovery task, to determine the specific error condition that caused the failure.

Source: DFSMSHsm

ARC6104E INSUFFICIENT SPACE ON LEVEL 0 VOLUMES TO RECOVER DATA SET *data-set-name1*, FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *data-set-name2*

Explanation: There is not sufficient space on level 0 volumes to allocate this data set. Aggregate recovery continues processing.

- *data-set-name1* is the name of the data set being recovered.
- *agname* is the name of the aggregate group being processed.
- *data-set-name2* is the name of the data set that has been specified for the control file in the ARECOVER command.

System action: Aggregate recovery continues.

Programmer response: Use the DEFINE ARPOOL command with the L0VOLS parameter to redefine the volume pool to be used for the aggregate recovery, adding level 0 volumes to the pool to make available sufficient space for the aggregate recovery to complete. Reissue the ARECOVER command to restart processing using the restart data set.

Source: DFSMSHsm

ARC6105E INSUFFICIENT SPACE ON MIGRATION LEVEL 1 VOLUMES TO RECOVER DATA SET *data-set-name*, FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *C-file-name* THIS DATA SET ORIGINALLY RESIDED ON {ML1 | ML2} {DASD | TAPE} WHEN BACKED UP.

Explanation: There is not sufficient space on migration level 1 volumes for aggregate recovery to recover the migrated data set. Aggregate recovery function continues.

- *data-set-name* is the name of the data set that has failed allocation.
- *agname* is the name of the aggregate group being processed.
- *C-file-name* is the name of the data set that has been specified for the control file in the ARECOVER command.

System action: Aggregate recovery continues.

Programmer response: Redefine the volume pool to be used for the aggregate recovery, adding migration level 1 volumes to the pool to make available sufficient space for the aggregate recovery to complete. Reissue the ARECOVER command to restart processing using the restart data set.

Source: DFSMSHsm

ARC6106E NO LEVEL 0 VOLUMES AVAILABLE FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *data-set-name* - RECOVERY CONTINUES

Explanation: No level 0 volumes are available for this recovery. Data sets exist on the aggregate backup output data file which must be recovered to level 0 volumes.

SMS is inactive and either no volumes are defined for the recovery, the volumes defined for the recovery are not available to the system, or the volumes defined for the recovery are all full.

- *agname* is the name of the aggregate group being processed.
- *data-set-name* is the name of the data set specified as the control file in the ARECOVER command.

System action: The aggregate recovery function continues; DFSMSHsm processing continues.

Programmer response: Define more level 0 volumes to the recovery, using the DEFINE ARPOOL command, or make available any volumes that are defined but unavailable to the system.

Source: DFSMSHsm

ARC6107E NO MIGRATION LEVEL 1 VOLUMES AVAILABLE FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *data-set-name* - RECOVERY FAILED

Explanation: No migration level 1 volumes are available for this recovery. Data sets exist on the aggregate backup output data file which must be recovered to migration level 1 volumes.

Either no volumes are defined for the recovery, the volumes defined for the recovery are not available to the system, or the volumes defined for the recovery are all full.

- *agname* is the name of the aggregate group being processed.
- *data-set-name* is the name of the control file data set being processed by the ARECOVER command.

System action: The aggregate recovery function continues; DFSMSHsm processing continues.

Programmer response: Define more migration level 1 volumes to the recovery, using the DEFINE ARPOOL command, or make available any volumes that are defined but unavailable to the system.

Source: DFSMSHsm

ARC6108I DATA SET *data-set-name1* HAS BEEN {DELETED | UNCATALOGED} DURING AGGREGATE RECOVERY

Explanation: During aggregate recovery, a data set to be recovered was found to have a duplicate data set name already existing at the recovery site. The conflict resolution processing selected the REPLACE option to resolve the conflict. The duplicate data set has been deleted or uncataloged.

- *data-set-name1* is the name of the like-named data set that has been deleted or uncataloged.
- DELETED indicates that the data set has been deleted.
- UNCATALOGED indicates that the data set has been uncataloged.

System action: DFSMSHsm processing continues.

Issued By: ABARS secondary address space. This message will go only to the activity log.

Programmer response: None.

Source: DFSMSHsm

ARC6109I REPLACE OPTION SPECIFIED, GDG DATA SET *data-set-name1* HAS BEEN RESTORED USING EXISTING GDG ATTRIBUTES

Explanation: The ARECOVER command has been issued with the DSCONFLICT(REPLACE) option specified. A generation data group (GDG) is already defined for a GDG data set that is being recovered. The data set will be restored using the attributes of the GDG that was existing on the system before the ARECOVER was issued.

- *data-set-name1* is the name of the data set being restored under the existing GDG attributes.

System action: DFSMSHsm processing continues.

Issued By: ABARS secondary address space. This message will only go to the activity log.

Programmer response: None.

Source: DFSMSHsm

ARC6110E GDG DEFINITION FOR *gdgdefinition* CURRENTLY EXISTS ON THE SYSTEM AND THE CONFLICT WAS NOT RESOLVED

Explanation: The generation data group (GDG) associated with generation data sets being recovered exist on the system and the conflict resolution options of the ARECOVER command did not resolve the conflict. Either no conflict resolution action was specified, or the action specified was invalid and could not be taken. In this case, see previous message ARC6296I for an indication of the reason the action could not be taken.

- *gdgdefinition* is the name of the GDG that is already defined on the system.

System action: DFSMSHsm adds an entry into the conflict resolution data set (for the generation data sets) and bypasses further processing of the generation data sets associated with the GDG that received the error. The remaining data sets are verified. If EXECUTE was specified, data sets not receiving verification errors are recovered.

Programmer response: Decide on what action to take to resolve the conflict. Update the conflict resolution data set entry for the generation data sets to indicate the desired action; BYPASS, REPLACE, RENAMESOURCE(level), or RENAMETARGET(level). After all the data set conflicts have been resolved, reissue the ARECOVER command.

Source: DFSMSHsm

ARC6111I AGGREGATE RECOVERY RESTART DATA SET IS *data-set-name1* FOR CONTROL FILE DATA SET *data-set-name2*

Explanation: An ARECOVER command completed and one or more datasets were not successfully recovered. A restart data set was retained. The names of all the data sets that have been successfully recovered have been placed in the restart data set. This message precedes ARC6103I.

- *data-set-name1* is the name of the restart data set that contains the names of the successfully recovered data sets.
- *data-set-name2* is the name of the control file specified in the ARECOVER command.

System action: Aggregate recovery continues.

Programmer response: Correct the error condition that occurred and determine if a restart of the aggregate recovery is desired. When a restart data set is used, only those data sets in the control file that are not in the restart data set will be processed.

If a restart is desired:

- Reissue the ARECOVER command.

If a restart is not desired:

- Scratch the existing restart data set indicated in the message.
- Reissue the ARECOVER command.

When a restart is not desired, the data sets indicated in the restart data set as successfully processed must be deleted manually, or they cause the subsequent ARECOVER command to fail (unless the conflict is resolved through the conflict resolution data set, the DATASETCONFLICT parameter or the conflict resolution installation-wide exit ARCCREXT).

Source: DFSMSHsm

ARC6112E {ALLOCATION | OPEN | I/O | LOCATE} ERROR OCCURRED IN READING THE {CONTROL FILE | DATA FILE} DATA SET *data-set-name* - AGGREGATE RECOVERY FAILED

Explanation: An allocation, OPEN, I/O, or LOCATE error occurred while attempting to read one of the aggregate recovery input data sets. The aggregate recovery function ends.

- ALLOCATION indicates that aggregate recovery received an error while allocating the data set.
- OPEN indicates that aggregate recovery received an error while opening the data set.
- I/O indicates that aggregate recovery received an I/O error while reading the data set.
- LOCATE indicates that aggregate recovery received a LOCATE error while attempting to locate the data set.
- CONTROL FILE indicates that the control file received the error.
- DATA FILE indicates that the data file received the error.
- *data-set-name* is the name of the data set that received the error.

System action: Aggregate recovery fails.

Programmer response: For specific error return codes and reason codes associated with the failure, see previous message ARC0645I or ARC6164E in the ABARS secondary address space activity log for this aggregate recovery task. Correct the error and reissue the ARECOVER command.

Source: DFSMSHsm

ARC6113E ERROR OCCURRED IN WRITING A DFSMSHSM CONTROL DATA SET RECORD FOR DATA SET *data-set-name1* USING CONTROL FILE DATA SET *datasetname2* - RECORD TYPE THAT FAILED IS {MCA | MCD | MCO}

Explanation: An error occurred in attempting to write to the DFSMSHsm migration control data set during aggregate recovery. The indicated data set is not recovered, but aggregate recovery continues with the next data set.

- *data-set-name1* is the name of the data set whose DFSMSHsm CDS records received the error.
- *data-set-name2* is the name of the control file specified in the ARECOVER command.
- MCA indicates that the DFSMSHsm control data set record that received the error is an MCA control data set record.
- MCD indicates that the DFSMSHsm control data set record that received the error is an MCD control data set record.
- MCO indicates that the DFSMSHsm control data set record that received the error is an MCO control data set record.

System action: The indicated data set is not recovered. If any DFSMSHsm MCDS records were written, they are deleted along with the recovered data set. The aggregate recovery task continues to process the remaining data sets to recover as many data sets as possible.

Issued By: ABARS secondary address space.

Programmer response: See message ARC0184I, issued by the DFSMSHsm primary address space. Reissue the ARECOVER command after the error has been corrected.

Source: DFSMSHsm

ARC6115I AGGREGATE RECOVERY USING CONTROL FILE DATA SET *data-set-name* WILL USE VOLUMES *volser1* [,...*volsern*]

Explanation: An ARECOVER command was issued and the verification step produced a list of the volumes that contains the data required to perform the recovery. This list includes the volume serial numbers for all data file, instruction file, and accompany data sets required for the aggregate recovery.

- *data-set-name* is the name of the data set specified for the control file in the ARECOVER command.
- *volser1*,...*volsern* are the volume serial numbers of the volumes used to perform the aggregate recovery.

System action: DFSMSHsm processing continues.

Programmer response: Verify that all the volumes listed are available and, if so, proceed with the aggregate recovery. If the volumes listed are not available, the aggregate recovery cannot proceed until the volumes are made available.

ARC6116I • ARC6119I

Source: DFSMSHsm

ARC6116I THE FOLLOWING DATA SETS WERE {SUCCESSFULLY | NOT SUCCESSFULLY} {RECOVERED | CATALOGED | ALLOCATED} USING {CONTROL FILE DATA SET *data-set-name* | AGGREGATE GROUP *agname*} *data-set-name1* [,...*data-set-namen*]

Explanation: An ARECOVER command was issued with the EXECUTE parameter. Following this message, is a list of all data sets that were successfully or unsuccessfully recovered, cataloged, or allocated.

- RECOVERED — lists the data sets in the include list during ABACKUP that were processed during ARECOVER.
- CATALOGED — lists the tape data sets in the accompany list during ABACKUP that were or were not cataloged during ARECOVER.
- ALLOCATED — lists the data sets that were or were not allocated and cataloged during ARECOVER.
- *data-set-name* is the name of the data set name specified for the control file in the ARECOVER command.
- *agname* is the name of the aggregate group that was specified in the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6118E AGGREGATE RECOVERY USING {CONTROL FILE DATA SET *data-set-name* | AGGREGATE GROUP *agname*} IS CURRENTLY PROCESSING - ARECOVER COMMAND FAILED

Explanation: A wait-type ARECOVER command was issued and a like-named ARECOVER request is already processing on the system. Aggregate recovery cannot process the same control file data set or the same aggregate group simultaneously in multiple address spaces.

- *data-set-name* is the name of the data set specified for the DATASETNAME subparameter in the ARECOVER command.
- *agname* is the name of the aggregate group specified for the AGGREGATE subparameter in the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: Wait until the current processing of the ARECOVER request is complete. If the control file or aggregate group version is to be processed again, reissue the ARECOVER command.

Source: DFSMSHsm

ARC6119I {DATA | STORAGE | MANAGEMENT} CLASS NAMES EXISTED DURING AGGREGATE BACKUP OF AGGREGATE GROUP *agname* FOR CONTROL FILE DATA SET *data-set-name name1* [,...*namen*]

Explanation: The list of names indicates the specified SMS class names that existed at the backup site.

- DATA indicates the names are associated with a data class.
- STORAGE indicates the names are associated with a storage class.
- MANAGEMENT indicates the names are associated with a management class.
- *agname* is the name of the aggregate group that was processed.
- *data-set-name* is the name of the control file data set specified in the ARECOVER command.
- *name1,...namen* are the names of the SMS classes.

System action: Aggregate recovery continues.

Programmer response: The listed classes should be defined at the aggregate recovery site with the same attributes as those at the aggregate backup site. If the names and attributes are not the same, unpredictable results may occur during the aggregate recovery. The proper names and attributes should be included in the instruction data set or otherwise communicated to the aggregate recovery site.

Source: DFSMSHsm

ARC6120I CONFLICT RESOLUTION ACTION *action* WILL BE USED FOR DATA SET *data-set-name* DURING AGGREGATE RECOVERY

Explanation: During aggregate recovery, a data set being recovered *data-set-name*, had the same name as a data set already existing at the recovery site.

The like-named conflict will be resolved during the actual data movement phase of aggregate recovery, using the *action* described by the message text:

- BYPASS indicates that the source data set will be bypassed.
- REPLACE indicates that the target data set will be deleted and replaced by the source data set.
- RENAMESOURCE(*level* | *dsname*) indicates that the source data set will be renamed using the new high level qualifier or data set name specified.
- RENAMETARGET(*level*) indicates that target data sets causing a conflict will be renamed using the new high level qualifier.

System action: DFSMSHsm recovery continues.

Programmer response: None.

Source: DFSMSHsm

ARC6122I GDG ENTRY *entryname* HAS BEEN DEFINED FOR AGGREGATE RECOVERY USING CONTROL FILE DATA SET *data-set-name*

Explanation: A generation data group (GDG) entry has been defined.

- *entryname* is the name of the GDG.
- *data-set-name* is the name of the control file data set being processed by the ARECOVER command.

System action: Aggregate recovery continues.

Programmer response: None.

Source: DFSMSHsm

ARC6123E DATA SET *data-set-name* IS NOT SUPPORTED ON THIS SYSTEM LEVEL

Explanation: During aggregate recovery, a preallocated target with record level sharing (RLS) attributes was found. DFSMSHsm 1.3.0 or higher must be used to process this data set.

System action: Aggregate recovery for this data set fails. DFSMSHsm processing continues.

Programmer response: To maintain the RLS information in the target data set, use DFSMSHsm 1.3.0 or higher. To perform the recovery using a down-level system, delete the preallocated target or delete the RLS attributes. Recovering the data set using a down-level system will cause the RLS attributes to be lost.

Source: DFSMSHsm

ARC6124E CONTROL FILE HAS EXCEEDED 15 VOLUME LIMIT - AGGREGATE BACKUP FAILED

Explanation: The control file created during aggregate backup has exceeded the limit of 15 volumes.

System action: Aggregate backup fails. DFSMSHsm processing continues.

Programmer response: The most likely reason that the control file exceeded 15 volumes is because the selection data sets for this aggregate group defined an extremely large quantity of data to be backed up. The definition of this aggregate group should be changed so it does not attempt to back up such a large amount of data. Split this aggregate into 2 or more aggregate groups and reissue the ABACKUP command for each of the new aggregate groups.

Source: DFSMSHsm

ARC6125E USER *userid* NOT AUTHORIZED TO DATA SET *data-set-name1*, AGGREGATE BACKUP WILL FAIL AFTER VERIFICATION FOR AGGREGATE GROUP *agname*.

Explanation: If the user only has authority to issue the ABACKUP command for specified aggregate groups (RESTRICTED COMMAND AUTHORITY), then the ABACKUP command issuer must be authorized by RACF to use *data-set-name1*. RACF determined that the user was not authorized to use *data-set-name1*.

- *userid* is the ID of the user who issued the ABACKUP command.
- *data-set-name1* is the name of the data set that the user is *not* authorized to by RACF.
- *agname* is the name of the aggregate group that failed during ABACKUP.

System action: The aggregate backup verification processing continues. Aggregate backup will fail after the completion of the verification process.

Programmer response: Contact your security administrator for granting at least read access to the data set and reissue the command.

Source: DFSMSHsm

ARC6126E ERROR CREATING A USER ACEE FOR *userid*, DURING AGGREGATE BACKUP. AGGREGATE BACKUP WILL FAIL AFTER VERIFICATION FOR AGGREGATE GROUP *agname*, RACF RETURN CODE IS *return-code*

Explanation: Aggregate backup invoked RACF to create a USER ACEE for the ABACKUP command issuer, *userid*. The user has RESTRICTED COMMAND AUTHORITY. RACF was unable to create the USER ACEE for *userid*.

- *userid* is the user's ID who issued the ABACKUP command.
- *agname* is the name of the aggregate group that failed during ABACKUP.
- *return-code* is the return code from RACF. For return code values, see Table 8 on page 559.

System action: The aggregate backup verification processing continues. Aggregate backup will fail after the completion of the verification process.

Programmer response: The system programmer or storage administrator responsible for DFSMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFSMSHsm

ARC6127E DATA SET(*dsname*) IS IN INCOMPLETE RECALL STATUS, AGGREGATE BACKUP FAILS AFTER VERIFICATION FOR AGGREGATE GROUP(*group*).

Explanation: A data set in incomplete status means the data set is cataloged on a primary volume, but the complete data set remains uncataloged on a migration volume. This can only occur for VSAM data sets.

System action: Aggregate backup fails after verification.

Programmer response: Recall the data set. Then reissue the ABACKUP command.

Source: DFSMSHsm

ARC6128E ENQ FAILED ON VOLUME | DATA SET *volser* | *datasetname1* DURING AGGREGATE BACKUP OF AGGREGATE GROUP *aggregate* FOR DSN *datasetname2* - RETURN CODE IS *return-code*

Explanation: An error has occurred attempting to issue the ENQ macro.

- VOLUME indicates an ENG was requested for rname SYSZVOLS.
- DATA SET indicates an ENQ was requested for rname SYSDSN.
- *volser* is the rname associated with failing ENQ.
- *datasetname1* is the rname associated with the failing ENQ.
- AGGREGATE GROUP *agname* is the name of the aggregate group being processed.
- *datasetname2* is the rname associated with the failing ENQ.
- *return-code* is the return code from the macro

System action: Aggregate backup fails.

Programmer response: See *z/OS MVS Programming: Authorized Assembler Services Reference EDT-IXG* for an explanation of macro return codes. Correct the error and reissue the ABACKUP command.

Source: DFSMSHsm

ARC6131I INACTIVE SMS GDS *data-set-name* WAS NOT CATALOGED DURING ARECOVER, GDS RECOVERED AS NONSMS

Explanation: An SMS-managed, generation data set (GDS) at the backup site with a status of ROLLED OFF or DEFERRED (directed by ACS to be recovered as non-SMS or because SMS is not active at the recovery site) was recovered as an uncataloged generation data set. The data set was recovered as uncataloged to prevent current ACTIVE generation data sets from rolling off. This occurs for migrated GDSs in the INCLUDE list only.

- *data-set-name* is the name of the data set that was recovered as an uncataloged non-SMS-managed GDS.

System action: Aggregate recovery continues.

Programmer response: To catalog the data set, issue the IDCAMS command: DEFINE NONVSAM (NAME(*data-set-name*) VOLUMES(MIGRAT) DEVICETYPES(*device*) - NORECATALOG). This will catalog the data set as an active generation data set.

Source: DFSMSHsm

ARC6136E THE PERCENTUTILIZED VALUE {*value*} SPECIFIED ON THE ARECOVER COMMAND IS NOT AN ACCEPTABLE VALUE (1-100)

Explanation: The ARECOVER command was issued specifying the PERCENTUTILIZED parameter. The associated value for PERCENTUTILIZED was not an integer in the range of 1 to 100.

System action: The ARECOVER command fails. DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command specifying PERCENTUTILIZED parameter with the associated *value* of 1 to 100 enclosed in parentheses.

Source: DFSMSHsm

ARC6140E ERROR OCCURRED WHILE PROCESSING A VSAM SPHERE FOR WHICH THE BASE CLUSTER NAME IS *cluster name*

Explanation: During aggregate recovery function, an error was encountered while DFSMSHsm was processing a VSAM sphere. One or more of the components of the sphere could not be successfully processed. *cluster name* is the base cluster name of the failing component.

System action: Aggregate recovery continues.

Issued By: ABARS secondary address space.

Programmer response: If your installation procedure specifies DFSMSHsm rerun the aggregate recovery and request ABARS reprocess the base cluster name, then you must use the following steps:

1. Correct the error condition that caused the component to fail.
2. Edit the associated RESTART data set.
3. Delete the entry for the base cluster name indicated in the message text.

Source: DFSMSHsm

ARC6141E NO BASE CLUSTER FOUND FOR VSAM COMPONENT *dsname*

Explanation: A VSAM component, appearing in the ALLOCATE list, did not have a base cluster associated with it.

System action: The aggregate backup fails.

Programmer response: Ensure there is a base cluster associated with the VSAM component, *dsname*, appearing in this message text. If no base cluster exists, remove the data set from the ALLOCATE list.

Source: DFSMSHsm

ARC6149E DATA SET *data-set-name* SPECIFIED IN THE {INCLUDE | ALLOCATE | ACCOMPANY} SELECTION DATA SET LIST FOR AGGREGATE GROUP *agname* HAS ENCOUNTERED AN ERROR DURING LOCATE PROCESSING.

Explanation: A partially qualified data set name specified in an INCLUDE, ALLOCATE, or ACCOMPANY list in one of the selection data sets for this aggregate group encountered an error during LOCATE processing. This partially qualified data set name resolves to at least one data set name that belongs to a catalog that is no longer available.

data-set-name

Specifies the partially qualified data set name from the selection data set which resulted in the failure.

INCLUDE

Indicates that the data set name is specified in the INCLUDE keyword of a selection data set.

ALLOCATE

Indicates that the data set name is specified in the ALLOCATE keyword of a selection data set.

ACCOMPANY

Indicates that the data set is specified in the ACCOMPANY keyword of a selection data set.

agname Specifies the name of the aggregate group processing.

System action: Aggregate backup fails.

Programmer response: Ensure that all required catalogs are available and online, or more clearly define the data sets for inclusion as part of this aggregate. This error generally occurs with overuse of wildcards and or placeholders in the high-level qualifier of the data set names contained in your selection data sets. See the message ARC6158E for additional information.

Source: DFSMSHsm

ARC6150E {GETMAIN | FREEMAIN} FAILURE IN MODULE *modname*, RETURN CODE IS *return-code*

Explanation: The DFSMSHsm module *modname* has attempted to obtain or free storage, but the MVS function has been unsuccessful. *return-code* is the return code from the GETMAIN or FREEMAIN macro.

System action: If the error is a GETMAIN error, the module ends processing. If the error is a FREEMAIN error, the module continues processing.

Programmer response: See *z/OS DFSMS Macro Instructions for Data Sets*, for an explanation of GETMAIN/FREEMAIN return codes. If the function fails, reissue the ABACKUP or ARECOVER command after the error is corrected.

Source: DFSMSHsm

ARC6151E ERROR OCCURRED IN ATTEMPTING TO {RETRIEVE | INVOKE} {AGGREGATE GROUP *agname* | SMS CONSTRUCT *constructname* | ACS FILTERING FOR DATA SET *data-set-name1* | SMS VTOC DATA SET SERVICES TO DEFINE DATA SET *data-set-name2*} AGGREGATE {BACKUP | RECOVERY} FAILED - SMS RETURN CODE IS *return-code*, REASON CODE IS *reason-code*

Explanation: An SMS request described by the message inserts has failed. The request may be one of the following:

- *agname* indicates a request to RETRIEVE the aggregate group.
- *constructname* indicates a request to RETRIEVE the SMS construct.
- *data-set-name1* indicates a request to INVOKE SMS ACS filtering for the data set.
- *data-set-name2* indicates a request to INVOKE SMS VTOC data set services to define the the data set.
- *return-code* indicates the return code passed back by the SMS request.
- *reason-code* indicates the reason code passed back by the SMS request.

System action: Aggregate backup ends. Aggregate recovery ends unless invoking ACS filtering for a data set, in which case aggregate recovery recovers the *data-set-name1* as non-SMS managed. DFSMSHsm processing continues.

Programmer response: See *z/OS DFSMSdfp Diagnosis* for diagnostic information about SMS. Reissue the ABACKUP or ARECOVER command after the error is corrected.

Source: DFSMSHsm

ARC6152I THE FOLLOWING DATA SETS WERE SUCCESSFULLY PROCESSED FROM THE {ACCOMPANY | ALLOCATE} LIST DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname* *data-set-name1* [...*datasetnamen*]

Explanation: The listed data sets have been included in the backup package.

- ACCOMPANY indicates that the data set names listed were specified with the ACCOMPANY keyword in the selection data sets for this aggregate group.
- ALLOCATE indicates that the data set names listed were specified with the ALLOCATE keyword in the selection data sets for this aggregate group.
- *agname* is the name of the aggregate group being processed by aggregate backup.
- *data-set-name1*,...*datasetnamen* are the names of the data sets selected.

System action: Aggregate backup continues.

Programmer response: None.

Source: DFSMSHsm

ARC6153E ERROR OCCURRED IN THE MVS SUBSYSTEM INTERFACE - AGGREGATE {BACKUP | RECOVERY} FAILED, SSI RETURN CODE IS *return-code*

Explanation: An error occurred in the MVS subsystem interface during processing of a request to SMS.

- BACKUP indicates that the failure occurred during an aggregate backup request.
- RECOVERY indicates that the failure occurred during an aggregate recovery request.
- *return-code* is the return code associated with the MVS subsystem interface error:

- 04 Subsystem does not support this function.
- 08 Subsystem exists, but is not active.
- 12 Subsystem does not exist.
- 16 Function not completed. Severe error.
- 20 Logical error (such as an incorrect SSOB format or length).

System action: Aggregate backup fails. Aggregate recovery fails unless SMS is invoked for a particular data set and fails. In this case, aggregate recovery continues.

Programmer response: None.

Source: DFSMSHsm

ARC6154E SDSP *sdspname* CANNOT BE {OPENED | CLOSED} TO BACK UP DATA SET *data-set-name* FOR AGGREGATE GROUP *agname*, VSAM RETURN CODE IS *return-code*, REASON CODE IS *reason-code*

Explanation: The specified SDSP data set cannot be opened or closed for backing up a migrated data set in an SDSP.

- *sdspname* indicates the name of the SDSP data set that received the error.
- OPENED indicates that the specified SDSP data set could not be opened.
- CLOSED indicates that the specified SDSP data set could not be closed.
- *data-set-name* indicates the name of the migrated data set being backed up.
- *agname* indicates the name of the aggregate group being processed.
- *return-code* indicates the return code associated with the VSAM OPEN or CLOSE error.
- *reason-code* indicates the reason code associated with the VSAM OPEN or CLOSE error.

System action: If an OPEN error occurs and installation-wide exit ARCBEEEXT is active, the exit is called to determine whether the data set should be bypassed or if aggregate backup should fail. If a CLOSE error occurs, aggregate backup continues.

Programmer response: See z/OS DFSMSdfp *Diagnosis* to identify the problems indicated by the return code and the reason code. Reissue the ABACKUP command after the error is corrected.

Source: DFSMSHsm

ARC6155E I/O ERROR OCCURRED IN READING SDSPP *sdspname* FOR DATA SET *data-set-name* WHILE PROCESSING AGGREGATE GROUP *agname*, VSAM RETURN CODE IS *return-code*, REASON CODE IS *reason-code*

Explanation: An I/O error has occurred in reading an SDSPP data set for the indicated migrated data set. If installation-wide exit ARCBEEEXT is active, the exit is called to determine whether the data set should be bypassed or if aggregate backup should fail.

- *sdspname* is the name of the SDSPP data set that could not be read.
- *data-set-name* is the name of the migrated data set being backed up.
- *agname* is the name of the aggregate group being processed.
- *return-code* is the return code associated with the VSAM I/O read error.
- *reason-code* is the reason code associated with the VSAM I/O read error.

System action: If installation-wide exit ARCBEEEXT indicates that the data set should be bypassed, aggregate backup continues. If installation-wide exit ARCBEEEXT is not active or indicates that the data set should be processed, aggregate backup fails.

Programmer response: See *z/OS DFSMS Macro Instructions for Data Sets* to identify the problems indicated by the return code and the reason code. Reissue the ABACKUP command after the error is corrected.

Source: DFSMSHsm

ARC6156E OBTAIN ERROR OCCURRED IN READING THE DATA SET VTOC ENTRY FOR *data-set-name* ON VOLUME *volser* FOR AGGREGATE GROUP *agname* - OBTAIN RETURN CODE IS *return-code*

Explanation: An error has been encountered in reading the data set VTOC entry for the specified data set on the indicated volume. If installation-wide exit ARCBEEEXT is active, the exit is called to determine whether the data set should be bypassed or if aggregate backup should fail.

- *data-set-name* is the name of the data set that received the error.
- *volser* is the volume serial number of the volume containing the data set that received the error.
- *agname* is the name of the aggregate group being processed.
- *return-code* is the return code associated with the OBTAIN macro instruction.

System action: If installation-wide exit ARCBEEEXT indicates that the data set should be bypassed, aggregate backup continues. If installation-wide exit ARCBEEEXT is not active or indicates that the data set should be processed, aggregate backup fails.

Programmer response: See "ARC return codes and reason codes" on page 552 for an explanation of OBTAIN return codes. Reissue the ABACKUP command after the error is corrected.

Source: DFSMSHsm

ARC6157E UNABLE TO ESTABLISH ESTAE EXIT - AGGREGATE {BACKUP | RECOVERY} FAILED FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*} ESTAE RETURN CODE IS *return-code*

Explanation: The ABARS secondary address space could not establish an ESTAE exit and, therefore, could not process abnormal ends.

- BACKUP indicates that processing has failed during aggregate backup.
- RECOVERY indicates that processing has failed during aggregate recovery.
- AGGREGATE GROUP *agname* is the name of the aggregate group being processed (aggregate backup only).
- CONTROL FILE DATA SET *data-set-name* is the name of the control file specified in the ARECOVER command (aggregate recovery only).
- *return-code* is the return code associated with the error executing the ESTAE macro instruction.

System action: Aggregate backup or aggregate recovery fails.

Programmer response: See *z/OS MVS Programming: Authorized Assembler Services Guide* for an explanation of the ESTAE macro instruction.

Source: DFSMSHsm

ARC6158E CATALOG ERROR OCCURRED DURING *functionname* FUNCTION FOR DATA SET *datasetname1* FOR {AGGREGATE GROUP *aname* | CONTROL FILE DATA SET *datasetname2*}, CATALOG RETURN CODE IS *retcode*, REASON CODE IS *nn-reascode*

Explanation: The return code *retcode* and reason code *reascode* have been returned by catalog management module IGGOCLnn as a result of a catalog error or exception condition.

- *functionname* is the name of the catalog function.
- *datasetname1* is the name of the data set that has received the catalog error.
- AGGREGATE GROUP *aname* is the name of the aggregate group being processed.
- CONTROL FILE DATA SET *datasetname2* is the name of the control file specified in the ARECOVER command.
- *retcode* is the return code associated with the catalog error.
- *nn* represents the last two characters of the catalog management module IGGOCLnn.
- *reascode* is the reason code associated with the catalog error.

System action: Aggregate backup or aggregate recovery fails.

Programmer response: See message IDC3009I in *z/OS MVS System Messages, Vol 6 (GOS-IEA)* for specific catalog management return code and reason code definitions. Be sure the data sets to be processed occur in the standard catalog search order. Reissue the ABACKUP or ARECOVER command after the error is corrected.

Source: DFSMSHsm

ARC6159E {POINT | NOTE | SYNCDEV} MACRO FAILED FOR DATA SET *data-set-name1* DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *aname* | CONTROL FILE DATA SET *data-set-name2*} [- RETURN CODE IS *return-code*, REASON CODE IS *reason-code*]

Explanation: An error has occurred in an input/output device control macro.

- POINT indicates the error has occurred in the POINT macro.
- NOTE indicates the error has occurred in the NOTE macro.
- SYNCDEV indicates the error has occurred in the SYNCDEV macro.
- *data-set-name1* is the name of the data set that has encountered the error.
- BACKUP indicates that the error has occurred during aggregate backup.
- RECOVERY indicates that the error has occurred during aggregate recovery.
- AGGREGATE GROUP *aname* is the name of the aggregate group being processed (aggregate backup only).
- CONTROL FILE DATA SET *data-set-name2* is the name of the control file specified in the ARECOVER command (aggregate recovery only).
- *return-code* is the return code from the macro.
- *reason-code* is the reason code from the macro.

System action: Aggregate backup fails. Aggregate recovery proceeds to recover as much as possible.

Programmer response: See *z/OS DFSMS Macro Instructions for Data Sets* for an explanation of macro return and reason codes. Correct the error and reissue the ABACKUP or ARECOVER command.

Source: DFSMSHsm

ARC6160E I/O ERROR OCCURRED IN {READING | WRITING} DATA SET *data-set-name1* DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *aname* | CONTROL FILE DATA SET *data-set-name2*}

Explanation: An I/O error has occurred while processing the specified data set.

- READING indicates that the I/O error has occurred while backing up the data set from the source volume during aggregate backup processing.
- WRITING indicates that the I/O error occurred while recovering the data to a target volume during aggregate recovery processing, or while writing data to the output files needed during aggregate backup processing.
- *data-set-name1* is the name of the data set that received the error.
- BACKUP indicates that the error has occurred during aggregate backup processing.
- RECOVERY indicates that the error has occurred during aggregate recovery processing.

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- AGGREGATE GROUP *agname* is the name of the aggregate group being processed (aggregate backup only).
- CONTROL FILE DATA SET *data-set-name2* is the name of the control file specified in the ARECOVER command (aggregate recovery only).

System action: For aggregate backup, the function ends. For aggregate recovery, the data set is bypassed and aggregate recovery continues. The data set name is *not* written to the restart data set.

Programmer response: For an ABACKUP failure, see the *z/OS DFSMS Macro Instructions for Data Sets* to identify the problem. You may not be able to recall the migration version. In this case, if a backup copy exists, issue a DFSMSHsm DELETE command for the data set, followed by a DFSMSHsm RECOVER command. Reissue the ABACKUP command after the error is corrected.

For an ARECOVER failure, see the *z/OS DFSMS Macro Instructions for Data Sets* to identify the problem. Reissue the ARECOVER command after the error is corrected.

For specific error return codes and reason codes associated with the failure, see previous message ARC0645I in the DFSMSHsm secondary address space activity log for this aggregate group.

Source: DFSMSHsm

ARC6161E {OPEN | CLOSE} ERROR OCCURRED FOR DATA SET *data-set-name1* DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name2*}, COMPLETION CODE = *abcode*, RETURN CODE = *return-code*

Explanation: An OPEN or CLOSE error has occurred for the specified data set.

- OPEN indicates that the error has occurred during OPEN processing.
- CLOSE indicates that the error has occurred during CLOSE processing.
- *data-set-name1* is the name of the data set that has received the error.
- BACKUP indicates that the error has occurred during aggregate backup processing.
- RECOVERY indicates that the error has occurred during aggregate recovery processing.
- AGGREGATE GROUP *agname* is the name of the aggregate group being processed.
- CONTROL FILE DATA SET *data-set-name2* is the name of the control file specified in the ARECOVER command.
- *abcode* is the system completion code that has been passed to the DCB ABEND exit during OPEN or CLOSE processing.
- *return-code* is the return code passed to the DCB ABEND exit during OPEN or CLOSE.

System action: If the error has occurred during OPEN or CLOSE of the data file or control file, aggregate backup or aggregate recovery fails. If the error has occurred during OPEN or CLOSE of a data set to be backed up or recovered, the following action is taken:

- For aggregate backup, if an OPEN error has occurred and installation-wide exit ARCBEXT is active, the exit is called to determine whether the data set should be bypassed or aggregate backup should fail. If a CLOSE error has occurred, aggregate backup continues.
- For aggregate recovery, the data set is bypassed and aggregate recovery continues. The data set name is *not* written to the restart data set.

Programmer response: See *z/OS MVS System Codes* to identify the problem. Correct the error and reissue the ABACKUP or ARECOVER command. If *data-set-name1* is a migrated data set, you can find the original user data set name by issuing the command HSEND FIXCDS A *data-set-name1*.

Source: DFSMSHsm

ARC6162I ARPOOL NOT FOUND FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *data-set-name* - ARECOVER WILL CONTINUE

Explanation: An ARPOOL was not defined for the specified aggregate group prior to issuing the ARECOVER command and no general ARPOOL was defined. Also, no temporary ARPOOL was created because there were no ADDVOLed volumes to use. SMS is active on the system and no migrated data sets are being recovered. Aggregate recovery allows existing ACS routines to direct the allocation of data sets to volumes. If there are no ACS routines or existing ACS routines do not direct the data set to a specific volume, then DFSMSHsm attempts to recover the data set to the *volser* where the data set resided when it was backed up.

Note: An installation must ensure that ACS routines are in place to direct data set allocation to existing volumes or that *volser*s matching those at the backup site exist at the recovery site.

- *aname* is the name of the aggregate group being processed.
- *data-set-name* is the name of the data set specified for the control file in the ARECOVER command.

System action: Aggregate recovery will continue.

Programmer response: Define an ARPOOL for the specified aggregate group, or a general ARPOOL using the DEFINE ARPOOL command. This will allow data sets which are not SMS-managed to be successfully processed by aggregate recovery.

Source: DFSMSHsm

ARC6163E {ALLOCATION | OPEN | I/O} ERROR OCCURRED IN WRITING THE {SYSIN | FILTER | INSTRUCTION} DATA SET *data-set-name1*, AGGREGATE {BACKUP | RECOVERY} FAILED FOR {AGGREGATE GROUP *aname* | CONTROL FILE DATA SET *data-set-name2*}

Explanation: An allocation, OPEN, or I/O error occurred in writing to the indicated data set used during aggregate backup or aggregate recovery.

- ALLOCATION indicates the data set received an allocation error.
- OPEN indicates the data set received an open error.
- I/O indicates an error occurred in writing output to the data set.
- SYSIN indicates that the SYSIN data set containing DFSMSdss control cards received the error.
- FILTER indicates that the FILTER data set containing the list of data set names to be processed by DFSMSdss received the error.

Note: This is not the data set specified in the FILTEROUTPUTDATASET parameter of the ABACKUP command.

- INSTRUCTION indicates that the dummy instruction data set created (because none was specified in the aggregate group definition) received the error.
- *data-set-name1* is the name of the data set that received the error.
- BACKUP indicates that the error occurred during aggregate backup processing.
- RECOVERY indicates that the error occurred during aggregate recovery processing.
- AGGREGATE GROUP *aname* is the name of the aggregate group being processed (aggregate backup only).
- CONTROL FILE DATA SET *data-set-name2* is the name of the control file specified in the ARECOVER command (aggregate recovery only).

System action: Aggregate backup or aggregate recovery fails.

Programmer response: For allocation errors, ensure that public or storage DASD volumes are available on the system.

For specific error return codes or reason codes associated with the failure, see previous message ARC0645I or ARC6164E in the ABARS secondary address space activity log for this aggregate group.

Correct the error and reissue the ABACKUP or ARECOVER command.

Source: DFSMSHsm

ARC6164E DYNAMIC {ALLOCATION | DEALLOCATION | RETRIEVAL} FAILED FOR {*dsname* | *volser* | *ddname*} DURING AGGREGATE {BACKUP | RECOVERY} - SVC 99 REASON CODE IS *reason-code*, INFORMATION CODE IS *infocode*, EXTENDED REASON CODE IS *extreas*

Explanation: The reason code and information code were returned by SVC 99. An error occurred in attempting to perform dynamic allocation or deallocation.

- ALLOCATION indicates the error occurred during an SVC 99 allocation attempt.
- DEALLOCATION indicates the error occurred during an SVC 99 deallocation attempt.
- RETRIEVAL indicates the error occurred during an SVC retrieval attempt.
- *dsname* is the name of the data set that could not be allocated. If backing up or recovering a migrated data set, this is the DFSMSHsm migration version data set name, unless the MCDMCANM field of the MCD record contains zeroes or blanks. In this case, the true name of the data set is used.

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- *volser* is the volume serial number of the volume that could not be allocated.
- *ddname* is the DD name of the data set that could not be deallocated.
- BACKUP indicates the error occurred during aggregate backup.
- RECOVERY indicates the error occurred during aggregate recovery.
- AGGREGATE GROUP *agname* is the name of the aggregate group processing.
- CONTROL FILE DATA SET *data-set-name* is the name of the control file specified in the ARECOVER command.
- *reason-code* is the SVC 99 reason code.
- *infocode* is the SVC 99 information code.
- *extreas* is the SVC 99 extended reason code.

System action: Aggregate backup fails. Aggregate recovery proceeds to recover as much as possible.

Issued By: ABARS secondary address space.

Programmer response: See *z/OS MVS Programming: Authorized Assembler Services Guide* for an explanation of SVC 99 reason and information codes. Correct the error and reissue the ABACKUP or ARECOVER command.

See *z/OS DFSMSdfp Diagnosis* for an explanation of SVC 99 extended reason codes.

Source: DFSMSHsm

ARC6165E {CONTROL | DATA | INSTRUCTION/ACTIVITY LOG} FILE NAME *filename* CURRENTLY EXISTS FOR THE AGGREGATE BACKUP OF AGGREGATE GROUP *agname*

Explanation: The file name for one of the aggregate backup output files currently exists.

- *filename* is the name of the file in conflict.
- CONTROL indicates that the file name for the control file is in conflict.
- DATA indicates that the file name for the data file is in conflict.
- INSTRUCTION/ACTIVITY LOG indicates that the file name for the instruction/activity log is in conflict.
- *agname* is the name of the aggregate group being processed.

System action: If the file name in conflict is the control file or the data file, then the aggregate backup fails. If the file name in conflict is the instruction/activity log then the aggregate backup continues.

Programmer response: Rename or delete the data set whose name conflicts with the backup file name and reissue the ABACKUP command.

Source: DFSMSHsm

ARC6166I THE FOLLOWING DATA SETS WERE SELECTED TO BE PROCESSED BY AGGREGATE BACKUP FOR AGGREGATE GROUP *agname* FOR THE {INCLUDE/EXCLUDE | ACCOMPANY/ACCOMPANYEXCLUDE | ALLOCATE/ALLOCATEEXCLUDE} SPECIFICATION *data-set-name1[,...datasetnamen]*

Explanation: The VERIFY option was specified on the ABACKUP command. The list of data sets that follows this message represents those data sets that would have been included in the backup package.

- *agname* is the name of the aggregate group being processed by aggregate backup.
- INCLUDE/EXCLUDE indicates that the data set names listed are a result of filtering the data set names and masks that were specified with the INCLUDE and EXCLUDE keywords in the selection data sets for this aggregate group.
- ACCOMPANY/ACCOMPANYEXCLUDE indicates that the data set names listed are a result of filtering the data set names and masks that were specified with the ACCOMPANY and ACCOMPANYEXCLUDE keywords in the selection data sets for this aggregate group.
- ALLOCATE/ALLOCATEEXCLUDE indicates that the data set names listed are a result of filtering the data set names and masks that were specified with the ALLOCATE and ALLOCATEEXCLUDE keywords in the selection data sets for this aggregate group.
- *data-set-name1[,...datasetnamen]* are the names of the data sets selected.

System action: The aggregate backup function ends after listing the selected data sets.

Programmer response: Ensure that VERIFY processing generated the desired list of data sets. If the list is acceptable,

reissue the ABACKUP command using the EXECUTE keyword to perform the aggregate backup. If the list of data sets generated by VERIFY processing is not acceptable, update the applicable INCLUDE, EXCLUDE, ACCOMPANY, ACCOMPANYEXCLUDE, ALLOCATE, or ALLOCATEEXCLUDE criteria in the selection data sets for the aggregate group being processed. Reissue the ABACKUP command after the corrections have been made.

Source: DFSMSHsm

ARC6167E DATA SET *data-set-name* SPECIFIED IN THE {INCLUDE | ALLOCATE | ACCOMPANY} SELECTION DATA SET LIST FOR AGGREGATE GROUP *aname* WAS NOT FOUND

Explanation: A fully or partially qualified data set name specified in an INCLUDE, ALLOCATE, or ACCOMPANY list in one of the selection data sets for this aggregate group was not found. For partially qualified data sets, this condition can occur between the time that data set filtering completes and the time that the ABACKUP control file is being built.

- *data-set-name* is the name of a data set that was not found.
- INCLUDE indicates that the data set name was specified in the INCLUDE keyword of a selection data set.
- ALLOCATE indicates that the data set name was specified in the ALLOCATE keyword of a selection data set.
- ACCOMPANY indicates that the data set name was specified in the ACCOMPANY keyword of a selection data set.
- *aname* is the name of the aggregate group being processed.

System action: Aggregate backup fails.

Programmer response: Ensure that all data sets that are specified as fully qualified in INCLUDE, ALLOCATE or ACCOMPANY lists exist and are cataloged on the system. For data sets that are partially qualified in the INCLUDE, ALLOCATE, or ACCOMPANY lists, ensure that no jobs are running simultaneously with the ABACKUP, which may cause the data sets that are needed by the ABACKUP to be uncataloged or deleted.

If neither one of these conditions can be avoided, the ABARS Backup Error Installation Exit (ARCBEEEXT) can be used to skip the data set in error and continue with the ABACKUP. See *z/OS DFSMS Installation Exits* for more details on this subject.

Source: DFSMSHsm

ARC6168E CROSS MEMORY ERROR OCCURRED. REQUEST TYPE WAS {DISCONNECT | CDS I/O | PDA I/O} - AGGREGATE {BACKUP | RECOVERY} FAILED FOR {AGGREGATE GROUP *aname* | CONTROL FILE DATA SET *data-set-name*} RETURN CODE = *return-code*, REASON CODE = *reason-code*

Explanation: An error occurred in attempting cross memory communication.

- DISCONNECT indicates that the request type was DISCONNECT.
- CDS I/O indicates that the request type was CDS I/O.
- PDA I/O indicates that the request type was PDA I/O.
- BACKUP indicates that the request failed during aggregate backup.
- RECOVERY indicates that the request failed during aggregate recovery.
- AGGREGATE GROUP *aname* is the name of the aggregate group being processed.
- CONTROL FILE DATA SET *data-set-name* is the name of the control file specified in the ARECOVER command.
- *return-code* is the cross memory module return code:
 - 10 Invalid parameter list address.
 - 12 Invalid control block address.
 - 14 Error occurred in obtaining storage in extended private area. The *reason-code* is the return code from the GETMAIN macro.
 - 16 An abnormal end (abend) occurred. The *reason-code* is the system completion code.
- The *reason-code* is the cross memory module reason code. The values for the *reason-code* are:
 - 04 Error occurred in obtaining storage in extended private area.
 - 08 Error occurred during cross-memory POST of the DFSMSHsm primary address space.

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12 Invalid token in MASIP.

System action: Aggregate backup or aggregate recovery fails.

Programmer response: None.

Source: DFSMSHsm

ARC6169E VOLUME *volser* WAS INCLUDED IN THE AGGREGATE RECOVERY POOL, BUT WAS NOT ONLINE AND MOUNTED - AGGREGATE RECOVERY CONTINUES USING CONTROL FILE DATA SET *data-set-name*

Explanation: A volume specified in the aggregate recovery pool was not online and mounted.

- *volser* is the name of the volume.
- *data-set-name* is the name of the control file used during ARECOVER processing.

System action: Aggregate recovery continues to recover as many data sets as possible. The ARECOVER return code will be nonzero.

Programmer response: If any data sets were not recovered due to the volume not being online and mounted, ensure that the specified volume is mounted and online and reissue the ARECOVER command.

Source: DFSMSHsm

ARC6170E CATALOG SEARCH INTERFACE ERROR OCCURRED FOR FILTER KEY *filterkey* FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *cdatasetname*}, GPR15 IS *gpr15*, CSI RETURN CODE IS *retcode*, REASON CODE IS *reascode*

Explanation: A non-zero return code *retcode* and reason code *reascode* have been returned by Catalog Search Interface (CSI) routine as a result of a CSI routine error.

- *filterkey* is the name of filter key that received the CSI error
- AGGREGATE GROUP *agname* is the name of the aggregate group being processed
- CONTROL FILE DATA SET *cdsname* is the name of the control file specified in the ARECOVER command
- *gpr15* is the value in general-purpose register 15 on return from CSI
- *retcode* is the hexadecimal return code associated with the CSI routine error
- *reascode* is the hexadecimal reason code associated with the CSI routine error

The list of return codes and reason codes follows:

GPR15 Value

Explanation

X'8' Failure in the CSI routine. The return code *retcode* is set to 8 for all of the following reason codes *reascode*:

- 1 Insufficient storage for GETMAIN
- 2 Invalid entry type in CSIDTYP
- 3 Invalid data/index option in CSICLDI (should be 'Y' or blank (X'40'))
- 4 Invalid resume option in CSIRESUM (should be 'Y' or blank (X'40'))
- 5 Invalid "Search one catalog" option in CSIS1CAT (should be 'Y' or blank (X'40'))
- 6 Invalid number of fields value in CSINUMEN (should be between 0 and 100)
- 7 Invalid user-provided work area size in CSIUSRLN (should be between 1024 and 1048575 bytes)
- 8 The CSIOPTNS value is not "F" or blank (X'40')

X'C' Error in the CSI routine parameter list — zero entries have been found. The CSI routine return and reason codes are zero.

X'10' Parameter list pointer in general-purpose register 1 is zero. The CSI routine return and reason codes are zero.

System action: Aggregate backup or aggregate recovery fails.

System programmer response: If the error recurs and the program is not in error, look at the messages in the job log for more information. Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the JCL, the SYSOUT output, and PDA trace for the job.

Programmer response: Notify the system programmer.

Source: DFSMSdfp Catalog Search Interface

ARC6171E INSTALLATION-WIDE EXIT ARCCREXT ATTEMPTED TO RENAME DATA SET *data-set-name1* TO *datasetname2* FOR CONTROL FILE DATA SET *data-set-name3*. REPLACEMENT NAME ALREADY EXISTS

Explanation: The installation-wide exit module ARCCREXT was called because a like-named data set was found at the aggregate recovery site. (The exit module indicated to rename a data set to a new data set name but the new name specified also already exists at the recovery site.) The data set will not be renamed. An IDCAMS DELETE command for the existing data set with the new name is written to the IDCAMS command file and the data set will be bypassed.

- *data-set-name1* is the old name of the data set that received the error.
- *data-set-name2* is the new name of the data set that received the error.
- *data-set-name3* is the name of the control file specified in the ARECOVER command.

System action: Aggregate recovery fails. Processing ends when verification is complete.

Programmer response: Issue the IDCAMS DELETE command in the editable command file or resolve the name conflict by other means. Reissue the ARECOVER command.

Source: DFSMSShsm

ARC6172E DATA SET *data-set-name* IS NOT SUPPORTED IN AN {INCLUDE | ALLOCATE | ACCOMPANY} LIST FOR AGGREGATE GROUP *agname*

Explanation: A data set name specified in an INCLUDE, ALLOCATE, or ACCOMPANY list from a selection data set for this aggregate group is not supported by ABACKUP; or during ARECOVER, the data set is not supported at the release level being executed.

- *data-set-name* is the name of the data set that is not supported.
- INCLUDE indicates that the data set is in an INCLUDE list.
- ALLOCATE indicates that the data set is in an ALLOCATE list.
- ACCOMPANY indicates that the data set is in an ACCOMPANY list.
- *agname* is the name of the aggregate group being processed.

System action: ABACKUP fails. ARECOVER fails for the specified data set.

Programmer response: For ABACKUP, ensure that all data sets specified in the INCLUDE, ALLOCATE, or ACCOMPANY lists are acceptable for processing. Some examples of unsupported situations are:

- *data-set-name* represents a GDG base.
- The data set organization is unsupported.
- The data set BLOCKSIZE or LRECL is invalid or larger than supported by the ABARS release being executed.
- *data-set-name* does not reside on a supported device.
- *data-set-name* is in the ACCOMPANY list, but is migrated.
- *data-set-name* is a z/FS data set.
- Non-VSAM *data-set-name* data set (with the exception of Extended Format Sequential data set) has a format-8 DSCB.
- User catalog *data-set name* has a format-8 DSCB. Migrated data set *data-set-name* has a format-8 DSCB.
- *data-set-name* is an SMS-managed PDSE defined as a generation data set. Use DFSMSHsm V2R1 or higher to process the data set
- The size of *data-set-name* data set specified in the ALLOCATE list exceeds 2 Terabytes. Use DFSMSHsm V1R13 or higher to perform an ABACKUP for this data set.
- Non-SMS VSAM linear data set which has the Extended Addressable(EA) attribute specified. Use DFSMSHsm V2R1 or higher to perform ABACKUP for this data set if it is not a zFS data set.

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For ARECOVER, ensure that all data sets specified in the INCLUDE, ALLOCATE, or ACCOMPANY lists are acceptable for processing:

- Ensure that the data set BLOCKSIZE is supported by executing ABARS release.
- Non-VSAM *data-set-name* data set has a Format 8 DSCB.
- Ensure that the pre-allocated target non-VSAM *data-set-name* data set (with the exception of Extended Format Sequential data sets) does not have a format-8 DSCB.
- The size of *data-set-name* data set specified in the ALLOCATE list exceeds 2 Terabytes. Use DFSMSHsm V1R13 or higher to perform an ARECOVER for this data set.
- The MCD indicates the data set is greater than 2 Terabytes. Use DFSMSHsm V1R13 for aggregate recovery of this data set.
- *data-set-name* specified in the ALLOCATE list is an SMS-managed PDSE defined as a generation data set. Use DFSMSHsm V2R1 or higher to process the data set
- Ensure that the size of the *data-set-name* data set that was aggregate backed up in V1R13 or later is not greater than the architectural limit for this release (2 Terabytes). Otherwise, use DFSMSHsm V1R13 or higher for aggregate recovery of this data set.
- SAM data set which has the Extended Format of version 2 specified. Use DFSMSHsm V2R1 or higher to perform ARECOVER for this data set.

Source: DFSMSHsm

ARC6173E {ALLOCATION | OPEN | I/O | LOCATE | OBTAIN} ERROR OCCURRED IN {READING | WRITING} THE {RESTART DATA SET | CONFLICT RESOLUTION DATA SET | LISTOFNAMES DATA SET} *data-set-name* - AGGREGATE RECOVERY FAILED

Explanation: An I/O, OPEN, or ALLOCATION error occurred in reading or writing to one of the files used for aggregate recovery.

- ALLOCATION indicates the data set received an allocation error.
- OPEN indicates the data set received an open error.
- I/O indicates the data set received a read or write error.
- LOCATE indicates the data set is not cataloged.
- OBTAIN indicates the data set received an obtain error.
- READING indicates an error in reading the data set.
- WRITING indicates an error in writing to the data set.
- RESTART DATA SET indicates that the restart data set received the error.
- CONFLICT RESOLUTION DATA SET indicates that the conflict resolution data set received the error.
- LISTOFNAMES indicates that the data set specified by ONLYDATASET with the LISTOFNAMES subparameter received the error.
- *data-set-name* is the name of the data set that received the error.

System action: Aggregate recovery fails. DFSMSHsm processing continues.

Operator response: None.

System programmer response: None.

Programmer response: Determine if the content of the data set is invalid. Reissue the ARECOVER command after the error has been corrected.

For specific error return codes and reason codes associated with the failure, see previous message ARC0645I or ARC6164E in the ABARS secondary address space activity log for this aggregate group.

Source: DFSMSHsm

ARC6175I DATA SET *data-set-name* WILL BE BYPASSED DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: Installation-wide exit ARCM2EXT was called during aggregate backup because a data set residing on a MIGRATIONLEVEL2 volume was encountered. The exit indicated that the specified data set should be bypassed.

- *data-set-name* is the name of the data set that will be bypassed.

- *agname* is the name of the aggregate group being processed.

System action: Aggregate backup continues.

Programmer response: None.

Source: DFSMSHsm

ARC6176E SYNTAX ERROR IN SELECTION DATA SET *data-set-name*[(*membername*)] ON LINE *linenumber* FOR AGGREGATE GROUP *agname*, ERROR CODE = *nn*

Explanation: A syntax error was encountered in parsing a selection data set for the aggregate group being processed by aggregate backup.

- *data-set-name* indicates the name of the selection data set that contains the syntax error.
- *membername* indicates the member of the selection data set that contains the syntax error when the selection data set is a partitioned data set.
- *linenumber* indicates the line number in the selection data set where the syntax error was encountered.
- *agname* indicates the name of the aggregate group being processed.
- *nn* indicates the type of syntax error:

Code	Meaning
01	Invalid character.
02	Invalid use of continuation character.
03	Invalid data set name mask.
04	Member names are not allowed.
05	Data set qualifier is greater than eight characters.
06	Data set name is longer than 44 characters.
07	Data set name must begin with alpha or national character.
08	End of comment missing.
09	An INCLUDE, ACCOMPANY or ALLOCATE keyword is required.
10	Invalid keyword.
11	DSN masks can only be specified as INCLUDE and EXCLUDE parameters.
12	Invalid parameter list.
13	Keywords can only be specified once.
14	Missing left parenthesis.
15	Missing right parenthesis.
16	Data set name cannot end with a period.
17	Relative generation data group (GDG) data set name has an invalid generation number.

System action: Aggregate backup will fail.

Programmer response: Edit the specified selection data set to correct the indicated error. Reissue the ABACKUP command.

Source: DFSMSHsm

ARC6177E INSTALLATION-WIDE EXIT MODULE *modname* {DOES NOT EXIST | EXISTS BUT WAS NOT SUCCESSFULLY LOADED}, AGGREGATE {BACKUP | RECOVERY} FAILED FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*} - LOAD ABEND CODE IS *abcode*, REASON CODE *reason-code*

Explanation: An installation-wide exit module either does not exist or exists but an error has occurred when attempting to load the module.

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- *modname* indicates the name of the installation-wide exit module that has received the error.
- DOES NOT EXIST indicates the abnormal end (abend) has occurred because the installation-wide exit module is not available.
- EXISTS BUT WAS NOT SUCCESSFULLY LOADED indicates the abend has occurred because the installation-wide exit module is available but could not be loaded.
- BACKUP indicates the error has been encountered during aggregate backup.
- RECOVERY indicates the error has been encountered during aggregate recovery.
- AGGREGATE GROUP *agname* indicates the name of the aggregate group being processed during aggregate backup or aggregate recovery (when ARECOVER AGGREGATE is specified).
- CONTROL FILE DATA SET *data-set-name* indicates the name of the control file data set specified in the ARECOVER command, if ARECOVER DATASETNAME has been specified.
- *abcode* indicates the abend code associated with the LOAD attempt.
- *reason-code* indicates the reason code associated with the LOAD abend code.

System action: Aggregate backup or aggregate recovery fails. DFSMSHsm processing continues.

Programmer response: See *z/OS MVS System Codes* for a description of abend and associated reason codes. Reissue the ABACKUP or ARECOVER command after the error is corrected.

Source: DFSMSHsm

ARC6178I INSTALLATION-WIDE EXIT MODULE *modname* WAS SUCCESSFULLY LOADED DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*}

Explanation: An installation-wide exit module was loaded for use during aggregate backup or aggregate recovery processing.

- *modname* indicates the name of the installation-wide exit module that was loaded.
- BACKUP indicates the installation-wide exit module was loaded for use during aggregate backup processing.
- RECOVERY indicates the installation-wide exit module was loaded for use during aggregate recovery processing.
- AGGREGATE GROUP *agname* indicates the name of the aggregate group being processed during aggregate backup or aggregate recovery (when ARECOVER AGGREGATE is specified).
- CONTROL FILE DATA SET *data-set-name* indicates the name of the control file specified in the ARECOVER command, in the ARECOVER command, if ARECOVER DATASETNAME was specified.

System action: Aggregate backup or aggregate recovery processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6179E ERROR OCCURRED WHILE UPDATING THE MCV RECORD FOR MIGRATION LEVEL 2 VOLUME *volser*. THE AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*

Explanation: During the ABACKUP of a migration level 2 (ML2) data set, an attempt was made to update the MCV_FABACKUP flag (volume in use by ABACKUP) of the MCV record associated with the ML2 volume on which the data set resides. The update of the MCV failed.

volser indicates the ML2 volume on which the data resides.

agname indicates the name of the aggregate group being processed.

System action: Aggregate backup fails.

Programmer response: When the cause of the MCV update error is corrected, reissue the ABACKUP command.

Source: DFSMSHsm

ARC6181I ERRORS ENCOUNTERED IN PROCESSING DATA SET *data-set-name*, DATA SET WILL BE BYPASSED DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: During aggregate backup, an error occurred in processing a data set. Installation-wide exit ARCBEEEXT was called to resolve the error. The exit indicated that the data set should be bypassed.

- *data-set-name* is the name of the data set that received the error.
- *agname* is the name of the aggregate group being processed.

System action: Aggregate backup continues.

Programmer response: For specific error return and/or reason codes associated with the error that caused the data set to be bypassed, see previous messages in the ABARS secondary address space activity log for this aggregate group.

Source: DFSMSHsm

ARC6182I DATA SET *data-set-name1* WILL BE BYPASSED DURING AGGREGATE RECOVERY USING CONTROL FILE DATA SET *data-set-name2*

Explanation: Installation-wide exit ARCSKEXT was called and indicated that the data set should be bypassed.

- *data-set-name1* is the name of the data set that will be bypassed.
- *data-set-name2* is the name of the control file data set.

System action: Aggregate recovery continues.

Programmer response: None.

Source: DFSMSHsm

ARC6183E DATA SET *data-set-name* SPECIFIED IN THE {ALLOCATE | ACCOMPANY} LIST FOR AGGREGATE GROUP *agname* CURRENTLY EXISTS

Explanation: During verification processing for aggregate recovery, a data set specified in the ALLOCATE or ACCOMPANY keyword list was found to exist on the system. The conflict resolution options of the ARECOVER command did not resolve the conflict. Either no conflict resolution action was specified, or the action specified was invalid and could not be taken. In this case, see previous message ARC6296I for an indication of the reason the action could not be taken. The data set will not be recovered.

- *data-set-name* is the name of the data set that received the error.
- ALLOCATE indicates that the data set was specified in an ALLOCATE list at the aggregate backup site.
- ACCOMPANY indicates that the data set was specified in an ACCOMPANY list at the aggregate backup site.
- *agname* is the name of the aggregate group definition that contained the data set in error at the aggregate backup site.

System action: DFSMSHsm adds an entry into the conflict resolution data set and bypasses further processing of the data set. The remaining data sets are verified. If EXECUTE was specified, data sets not receiving verification errors are recovered.

Programmer response: Decide on what action to take to resolve the conflict. Update the conflict resolution data set entry for the data set to indicate the desired action; BYPASS, REPLACE, RENAMESOURCE(*level*), or RENAMETARGET(*level*). After all the data set conflicts have been resolved, reissue the ARECOVER command.

Source: DFSMSHsm

ARC6185E RENAME LIMIT EXCEEDED. *data-set-name1* COULD NOT BE RENAMED TO *data-set-name2* FOR CONTROL FILE DATA SET *datasetname3*. DATA SET WILL NOT BE PROCESSED.

Explanation: The installation-wide exit module ARCCREXT was called because a like-named data set was found at the aggregate recovery site. The exit module indicated that the data set should be renamed to resolve this conflict, but the rename limit of 255 for level 0 data sets has been reached. More than 255 level 0 data sets may not be renamed in one invocation of the ARECOVER command due to DFSMSdss command syntax restrictions. The data set will not be processed. Aggregate recovery processing will continue for the remaining data sets but will not complete successfully.

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- *data-set-name1* is the old name of the data set that received the error.
- *data-set-name2* is the new name of the data set that received the error.
- *data-set-name3* is the name of the control file being processed.

System action: Aggregate recovery fails. The aggregate recovery will continue to process the remaining data sets in order to recover as many data sets as possible.

Programmer response: Reissue the ARECOVER command. A restart data set exists to allow aggregate recovery to identify those data sets that have not been successfully processed for this aggregate group. Optionally, modify the rename processing in the installation-wide exit module ARCCREXT before reissuing the ARECOVER command.

Source: DFSMSHsm

ARC6186E NO DATA SETS SELECTED FROM INCLUDE PARAMETER LIST - AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*

Explanation: No data sets were found cataloged on the system that satisfy the data set names or masks specified in the INCLUDE and EXCLUDE lists in the selection data sets for this aggregate group. Aggregate backup requires at least one data set to be selected for the INCLUDE parameter list.

- *agname* is the name of the aggregate group being processed by aggregate backup.

System action: Aggregate backup will fail. Processing ends following completion of verification processing.

Programmer response: Edit the selection data sets for the specified aggregate group to modify the INCLUDE and EXCLUDE parameter lists. Supply fully or partially qualified data set names that are cataloged on the system and are to be included in the aggregate backup. Reissue the ABACKUP command after the error has been resolved.

Source: DFSMSHsm

ARC6187E INSTALLATION-WIDE EXIT, MODULE *modname* ABENDED, ABEND CODE IS *abendcode*

Explanation: An abnormal end (abend) occurred during processing of a given installation-wide exit. The failure was detected by the ESTAE routine in the module which called the installation-wide exit.

- *modname* is the name of the installation-wide exit module in which the abend occurred.
- *abendcode* is the return code passed from the ESTAE routine for the abend.

System action: Aggregate backup or aggregate recovery fails.

Issued By: ABARS secondary address space.

Programmer response: See *z/OS MVS System Codes* for a description of abend and associated reason codes. Reissue the ABACKUP or ARECOVER command after the error is corrected.

Source: DFSMSHsm

ARC6188E AN ABEND OCCURRED WHILE PROCESSING *data-set-name1*. AGGREGATE RECOVERY FOR CONTROL FILE DATA SET *data-set-name2* WILL CONTINUE. ABEND CODE WAS *abcode*

Explanation: A data set has experienced an abnormal end (abend) from which aggregate recovery is able to recover. The data set is not successfully recovered.

- *data-set-name1* is the name of the data set that experienced the abend.
- *data-set-name2* is the name of the control file specified in the ARECOVER command.
- *abcode* is the code of the abend that has occurred.

System action: Aggregate recovery continues processing with the next data set.

Programmer response: See the *z/OS MVS System Codes* for a description of abend codes. Evaluate the abend and reissue the ARECOVER command after the error has been corrected.

Source: DFSMSHsm

ARC6189E SMS IS INACTIVE, THE FOLLOWING VSAM DATA SETS FROM THE ALLOCATE LIST WILL NOT BE RECOVERED

Explanation: Aggregate recovery attempted to process a VSAM data set specified in an ALLOCATE list at the aggregate backup site. VSAM data sets from the ALLOCATE list must be recovered as SMS-managed, and SMS was found to be inactive. A list of VSAM data sets from the ALLOCATE follows this message. The listed VSAM data sets are not recovered.

System action: DFSMSHsm processing continues. Aggregate recovery continues to process the remaining data sets, but does not complete successfully.

Programmer response: Activate SMS and reissue the ARECOVER command, or allocate the VSAM data set by other means.

Source: DFSMSHsm

ARC6191E SELECTION DATA SET *data-set-name[(membername)]* FOR AGGREGATE GROUP *agname* DOES NOT ADHERE TO FILE FORMAT RESTRICTIONS

Explanation: The specified selection data set does not follow the required file format restrictions. The RECFM of the file must be fixed-blocked format, the LRECL must be 80, and the DSORG must be PO or PS. Any SMS aggregate definition must indicate a member name whenever the selection data set is a partitioned data set.

- *data-set-name* is the name of the selection data set that could not be processed.
- *membername* is the name of the selection data set that could not be processed when the selection data set is a member of a partitioned data set.
- *agname* is the name of the aggregate group.

System action: DFSMSHsm processing ends after attempting to process all selection data sets.

Issued By: ABARS secondary address space.

Programmer response: Redefine the specified selection data set to follow the required format specifications and reissue the ABACKUP command.

Source: DFSMSHsm

ARC6192E *smsmsgtext*

Explanation: DFSMSHsm has been performing an aggregate backup operation. SMS has been invoked to retrieve the aggregate group. During the process, SMS issues a message related to the function, and DFSMSHsm intercepts the message for retransmission to the ABARS secondary address space activity log.

- *smsmsgtext* is the message passed back from SMS services. SMS messages have a prefix of IGD.

System action: Aggregate backup fails.

Programmer response: Reissue the ABACKUP command after the error is resolved.

See message ARC6151E, issued by the ABARS secondary address space. You can also use the z/OS *DFSMSdfp Diagnosis* for a description of the SMS messages.

Source: DFSMSHsm

ARC6193E NO SELECTION DATA SETS WERE SPECIFIED FOR AGGREGATE GROUP *agname* - AGGREGATE BACKUP FAILED

Explanation: No selection data sets were specified in the definition for the named aggregate group. At least one selection data set must be specified to provide input for the aggregate backup task.

- *agname* is the name of the aggregate group which did not include any selection data sets.

System action: Aggregate backup fails.

Programmer response: Redefine the specified aggregate group to include one or more selection data sets.

Source: DFSMSHsm

ARC6194E SEQUENCE ERROR OCCURRED IN READING THE CONTROL FILE DATA SET *data-set-name* - AGGREGATE RECOVERY FAILED

Explanation: During the reading of the named control file data set, an unexpected record was encountered.

- *data-set-name* is the name of the control file that received the error.

This error may occur for the following reasons:

- The first volume serial number passed in the VOLUMES parameter of the ARECOVER command is not the first volume serial number of the control file data set name specified in the data set name parameter of the ARECOVER command.
- The volume serial numbers passed in the VOLUMES parameter of the ARECOVER command were not specified in the correct order.

System action: Aggregate recovery fails.

Programmer response: See message ARC6061I in the activity log for the aggregate backup that created this control file for the proper volume serial numbers and the proper order. Reissue the ARECOVER command after the error has been resolved.

Source: DFSMSHsm

ARC6195E UNEXPECTED END OF FILE OCCURRED IN READING THE CONTROL FILE DATA SET *data-set-name* - AGGREGATE RECOVERY FAILED

Explanation: During the reading of the named control file data set, an end-of-file condition was detected before it was expected. This error can occur when all the volume serial numbers for this control file data set were not specified in the VOLUMES parameter of the ARECOVER command.

- *data-set-name* is the name of the control file that received the error.

System action: Aggregate recovery fails.

Programmer response: See message ARC6061I in the activity log for the aggregate backup that created this control file for the proper volume serial numbers and the proper order. Reissue the ARECOVER command after the error has been resolved.

Source: DFSMSHsm

ARC6196W SMS CONSTRUCT *construct_name* WAS UNABLE TO BE RETRIEVED. AGGREGATE {BACKUP | RECOVERY} WILL CONTINUE PROCESSING. SMS RC=*return-code*, REASON=*reason-code*.

Explanation: SMS is trying to retrieve a construct a DATA, MANAGEMENT, or STORAGE CLASS, but is unable to do so due to either an undefined construct, or a construct redefined with a different name.

System action: If the missing construct is DATACLASS, then the process continues normally. Otherwise, an error may occur in the RECOVERY process

Issued By: ABARS secondary address space.

Programmer response: If the construct missing is management or storage class, redefine the construct with the same attributes as the original to prevent unpredictable results.

Source: DFSMSHsm

ARC6197I MULTI-VOLUME BDAM DATA SET *dsname* WAS BYPASSED DURING AGGREGATE BACKUP FOR AGGREGATE GROUP *agname*

Explanation: The aggregate backup bypassed the data set specified because the ABRCB bit (PATCH .ABRCB.+A8 BITS(.....1..)) was set to ON to bypass multivolume BDAM data sets.

System action: Aggregate backup continues.

Programmer response: No response, unless the installation prefers to have ABACKUP process the multivolume BDAM data sets. To prevent ABACKUP from bypassing multivolume BDAM data sets, issue the following patch command: PATCH .ABRCB.+A8 BITS(.....0..)

Note: If the patch is set to OFF, ABACKUP successfully processes the multivolume BDAM data sets, but ARECOVER fails to recover the multivolume BDAM data sets if they are SMS-managed.

Source: DFSMSHsm

ARC6198E ERROR OCCURRED WHILE CHECKING THE MCV RECORD FOR MIGRATION LEVEL 2 VOLUME *volser*. THE AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*.

Explanation: DFSMSHsm attempted to read an MCV record during an ABACKUP operation from an ML2 volume. The read failed.

System action: ABACKUP of the aggregate group fails.

System programmer response: See associated messages to determine why the MCV record was not read.

Source: DFSMSHsm

ARC6199E VOLUME *volser* IN CAPACITYMODE(EXTENDED), UNIT *unitname* NOT CAPABLE OF USING CAPACITYMODE(EXTENDED). THE AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*.

Explanation: DFSMSHsm attempted to allocate a unit during an ABACKUP operation from an ML2 volume. The ML2 volume is in CAPACITYMODE(EXTENDED), but the input unit for the tape is not capable of CAPACITYMODE(EXTENDED) operation.

System action: ABACKUP of the aggregate group fails.

System programmer response: Determine why the unit is not capable of CAPACITYMODE(EXTENDED) operation. To be capable, the unit should be a user-defined esoteric that contains all 3590 devices that emulate 3490 devices with microcode support for CAPACITYMODE switching.

Source: DFSMSHsm

ARC6200E ERROR OCCURRED WHILE CHECKING THE USER UNIT TABLE FOR CAPACITYMODE(EXTENDED). THE ARECOVER FAILED FOR {AGGREGATE GROUP *agname* | CONTROL FILE *data-set-name*}.

Explanation: DFSMSHsm attempted to read the user unit table for esoteric definitions during an ARECOVER operation to an ML2 volume. An error prevented this operation.

System programmer response: See any previously displayed messages to determine why the failure occurred.

Source: DFSMSHsm

ARC6201E ML2 TAPE VOLUME *volser* NEEDED BY ABACKUP IS IN CAPACITYMODE(EXTENDED). THIS LEVEL OF DFSMSHSM DOES NOT SUPPORT CAPACITYMODE SWITCHABLE DRIVES. THE ABACKUP FAILED FOR AGGREGATE GROUP *agname*.

Explanation: DFSMSHsm discovered the volume that is needed for input was in CAPACITYMODE(EXTENDED) during an ABACKUP operation from an ML2 volume. CAPACITYMODE switchable drives are not supported by this level of DFSMSHsm.

System programmer response: Perform the ABACKUP operation with DFSMSHsm MVS V1R5 or higher. An alternative is to recall the needed data sets and rerun ABACKUP.

Source: DFSMSHsm

ARC6202E CAPACITYMODE ERROR AT END OF VOLUME FOR VOLUME *volser* DURING AGGREGATE {BACKUP | RECOVERY} FOR {AGGREGATE GROUP *agname* | CONTROL FILE *data-set-name*}.

Explanation: An end of volume condition occurred during an ARECOVER or ABACKUP operation. The drive was not in the required CAPACITYMODE after the new tape was mounted.

System programmer response: See any previous messages that were displayed on your console to determine why the failure occurred.

Source: DFSMSHsm

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ARC6250I {NO | THE FOLLOWING} TAPE VOLSERS WILL BE REQUIRED DURING ABACKUP FOR AGGREGATE GROUP *agname* *volser* [...*volsern*]

Explanation: An ABACKUP command has been issued with the VERIFY parameter. No verification errors have been found. The message indicates the tape volumes that are required when a subsequent ABACKUP command with the EXECUTE parameter is issued. If no tapes are required, the message indicates this.

- NO indicates that no tape volume serial numbers are required.
- THE FOLLOWING indicates that a list of required tape volume serial numbers follows.
- *agname* is the name of the aggregate group being processed.
- *volser* is the volume serial number of each required tape volume.
- Issuing the ABACKUP and ARECOVER commands while SETSYS DEBUG is in effect causes the commands to be processed as if the VERIFY parameter was in effect.

System action: DFSMSHsm processing continues.

Operator response: Collect the required tapes in the order listed. Reissue the ABACKUP command with the EXECUTE parameter to back up the aggregate group.

Programmer response: None.

Source: DFSMSHsm

ARC6251E NO VERSION NUMBER AVAILABLE FOR AGGREGATE GROUP *agname*

Explanation: An ABACKUP command has been issued with the EXECUTE parameter. No version number is available for use in the key of the aggregate version record.

- *agname* is the name of the aggregate group being processed.

System action: DFSMSHsm processing continues. Aggregate backup fails.

Programmer response: Issue an EXPIREBV ABARSVERSIONS command to roll off expired aggregate group versions. Reissue the ABACKUP command.

Source: DFSMSHsm

ARC6252E {DELETION | ALLOCATION }OF DATA SET *dsname* FAILED DURING MOVE FUNCTION - UNABLE TO DELETE DATA SET

Explanation: An error has been encountered while attempting to delete a data set for the MOVE function.

- DELETION indicates that a catalog delete error has occurred.
- ALLOCATION indicates that an error has occurred while attempting to allocate a data set.
- *dsname* is the name of the data set that has not been deleted.

System action: DFSMSHsm processing continues. ABACKUP processing continues.

Programmer response: See one of the following error messages for further information and the appropriate action to be taken.

- For a CATALOG error see message ARC6158E.
- For an ALLOCATION error see message ARC6164E.

Source: DFSMSHsm

ARC6253I MOVE FUNCTION HAS COMPLETED {WITH | WITHOUT} ERRORS

Explanation: The MOVE function has completed. It may or may not have deleted all the data sets.

- WITH indicates that one or more data sets have not been deleted.
- WITHOUT indicates that all the data sets have been deleted successfully.

System action: DFSMSHsm processing continues. ABACKUP processing continues.

Programmer response: If one or more errors is indicated, consult the activity log for any ARC6252E messages.

Source: DFSMSHsm

ARC6254A ABACKUP CANNOT ALLOCATE TAPE VOLUME *volser* BECAUSE ANOTHER DFSMSHSM FUNCTION HAS IT IN USE. RETRY ? REPLY Y OR N

Explanation: An ABACKUP command has been issued and the tape volume *volser* is being used by another DFSMSHsm function. Reply Y if it is requested that ABACKUP retry the allocation. If the reply is N, the mount request ends and ABACKUP processing fails.

System action: If the reply is Y, ABACKUP continues trying to allocate the tape volume. If the reply is N, the mount request ends and ABACKUP processing fails. DFSMSHsm processing continues.

Issued By: ABARS secondary address space.

Operator response: Reply to the prompt.

Programmer response: None.

Source: DFSMSHsm

ARC6255I THE OPERATOR HAS REPLIED YES TO A REQUEST TO RETRY ALLOCATION FOR A TAPE VOLUME THAT IS BUSY

Explanation: An ABACKUP command has been issued and the tape volume is being used by another DFSMSHsm function. The operator's response is displayed in this message. The operator has responded Y, therefore, the allocation is retried.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6256E {ALLOCATION | OPEN | I/O} ERROR OCCURRED IN WRITING THE FILTEROUTPUTDATASET *data-set-name* - ABACKUP PROCESSING CONTINUES FOR AGGREGATE GROUP *agname*

Explanation: The user has specified the FILTEROUTPUTDATASET (FODS) parameter on the ABACKUP command to list the filtered fully qualified data set names from the INCLUDE/EXCLUDE, ALLOCATE/ALLOCATEEXCLUDE, and ACCOMPANY/ACCOMPANYEXCLUDE lists into an output data set. During processing, the allocation or open has failed, or an I/O error condition has been detected while writing to the data set.

- ALLOCATION indicates that the FODS data set could not be allocated.
- OPEN indicates that the FODS data set could not be opened.
- I/O indicates that an I/O error has occurred while writing the FODS data set.
- *data-set-name* is the name of the specified FILTEROUTPUTDATASET data set.
- *agname* is the name of the aggregate group being processed.

System action: ABACKUP processing continues. DFSMSHsm processing continues.

Operator response: Notify your system programmer.

Programmer response: A programming or system problem is indicated. See one of the following error messages for further information and the appropriate action to be taken:

- For an ALLOCATION/DEALLOCATION error see message ARC6164E.
- For an OPEN/CLOSE error see message ARC6161E.
- For an I/O error see messages ARC6160E, ARC0645I.

Source: DFSMSHsm

ARC6257E SPECIFIED FILTEROUTPUTDATASET *data-set-name* DOES NOT ADHERE TO FILE FORMAT RESTRICTIONS - ABACKUP PROCESSING CONTINUES

Explanation: The user has requested to list the filtered fully-qualified data set names from the INCLUDE/EXCLUDE, ALLOCATE/ALLOCATEEXCLUDE, and ACCOMPANY/ACCOMPANYEXCLUDE lists into an output data set by specifying the FILTEROUTPUTDATASET parameter on the ABACKUP command. The specified data set could not be used since it already exists with invalid attributes and is not empty, or is empty with invalid DSORG or RECFM. A valid data set must be DASD, with DSORG=PS, RECFM=FB or F, LRECL=121, and BLKSIZE=121*n.

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- *data-set-name* is the name of the specified FILTEROUTPUTDATASET data set.

System action: ABACKUP processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6258I THE FOLLOWING CATALOG AND ASSOCIATED ALIASES WERE SUCCESSFULLY VERIFIED BY AGGREGATE {BACKUP | RECOVERY}; CATALOG = *catname* ALIASES = {*aliasname1* [...*aliasnamen*] | NONE }

Explanation: This message is issued for each integrated catalog facility (ICF) user catalog that has been successfully verified by aggregate backup or aggregate recovery. The associated aliases have also been verified for like-named conflicts during aggregate recovery.

- *catname* is the name of the ICF user catalog.
- *aliasname1,...aliasnamen* are the alias names for the listed catalog.
- NONE is specified if no aliases are found.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6259E THE OPERATOR HAS REPLIED NO TO A REQUEST TO RETRY ALLOCATION FOR A TAPE VOLUME THAT IS BUSY

Explanation: An ABACKUP command has been issued and the tape volume is being used by another DFSMSHsm function. The operator's response is displayed in this message. The operator has responded N, therefore ABACKUP fails.

System action: DFSMSHsm processing continues.

Programmer response: See the previous message ARC6254A in the command activity log or to the ABARS activity log for the volume serial number of the tape volume that is busy.

Source: DFSMSHsm

ARC6260E ABACKUP FILE *filename* MUST BE BACKED UP TO TAPE WHEN ARECOVER XMIT IS SPECIFIED AND ALL ABACKUP FILES ARE NOT CATALOGED

Explanation: The ARECOVER command was issued with the XMIT parameter specified. All ABACKUP files must be cataloged, prior to the ARECOVER, if any of the ABACKUP files were backed up to DASD. When all of the ABACKUP files are backed up to tape, ARECOVER XMIT is allowed with only the C (Control) file cataloged.

System action: DFSMSHsm processing continues. Aggregate recovery fails.

Programmer response: Catalog all of the ABACKUP output files, then reissue the ARECOVER XMIT command.

Source: DFSMSHsm

ARC6261E ML2 VOLUME STILL NOT AVAILABLE AFTER SECOND RETRY ATTEMPT. AGGREGATE BACKUP FAILED.

Explanation: The aggregate backup has failed because an ML2 tape volume containing one or more data sets required by the ABACKUP was not available after two attempts. For a detailed explanation concerning how aggregate backup waits for ML2 volumes to become available and how to modify these conditions, see Tuning DFSMSHsm, under the heading Changing the Amount of Time ABACKUP Waits for an ML2 Volume to Become Available in *z/OS DFSMSHsm Implementation and Customization Guide*.

System action: DFSMSHsm processing continues.

Programmer response: See the previous "ARC6254A" on page 519ARC6254A message in the command activity log or the ABARS activity log for the volume serial number of the tape volume that is busy.

Source: ABARS secondary address space.

ARC6280E {INSTRUCTION | ACTIVITY LOG} DATASET CANNOT BE RECOVERED FROM OUTPUT CREATED PRIOR TO DFSMSHSM RELEASE 1.1.0, AGGREGATE RECOVERY WILL CONTINUE

Explanation: An ARECOVER command has been issued with the INSTRUCTION or ACTIVITY parameter specified. The ABACKUP tapes have been created prior to DFSMSHsm Version 1 Release 1.0, and either or both the activity log data set and instruction data set cannot be automatically recovered.

- *INSTRUCTION* indicates that the INSTRUCTION parameter has been used on the ARECOVER command.
- *ACTIVITY LOG* indicates that the ACTIVITY parameter has been used on the ARECOVER command.

System action: Aggregate recovery continues. DFSMSHsm processing continues.

Issued By: ABARS secondary address space.

Programmer response: If the INSTRUCTION/ACTIVITY LOG is needed, it may be retrieved manually by invoking DFSMSdss using JCL.

Source: DFSMSHsm

ARC6281I ARECOVER INPUT FILE *filename* HAS BEEN SUCCESSFULLY CATALOGED DURING AGGREGATE RECOVERY

Explanation: An ARECOVER input file has been successfully cataloged during aggregate recovery with DATASETNAME specified as the subparameter.

- *filename* indicates the file (control, DFSMSdss, internal I/O, or instruction/activity log) that has been successfully cataloged.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6282E {INSTRUCTION | ACTIVITY} SPECIFIED ON ARECOVER COMMAND. {INSTRUCTION DATA SET | ACTIVITY LOG} DOES NOT EXIST ON TAPE

Explanation: An ARECOVER command has been issued with the INSTRUCTION or ACTIVITY parameter, and the corresponding file does not exist on the tape

- *INSTRUCTION DATA SET* indicates the instruction data set does not exist on the tape.
- *ACTIVITY LOG* indicates the activity log does not exist on the tape.

System action: DFSMSHsm processing continues. No attempt is made to recover these data sets.

Programmer response: If the activity log and instruction data set exist on the ABACKUP output tapes, see the preceding DFSMSdss messages to determine why DFSMSdss failed to find the activity log or instruction data set.

Source: DFSMSHsm

ARC6283E RECOVERY TO ML2 VOLUMES IS DISABLED. AGGREGATE RECOVERY OF *data-set-name1* FAILED USING {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name2* }

Explanation: MIGRATEDDATA(SOURCELEVEL) or MIGRATEDDATA(ML2) has been specified on the ARECOVER command. Attempts to internally ADDVOL tapes to perform aggregate recovery have failed.

- *data-set-name1* specifies the data set that has failed to be recovered.
- *AGGREGATE GROUP* indicates that the AGGREGATE parameter has been specified in the ARECOVER command, with the specified *agname* as the subparameter.
- *CONTROL FILE DATA SET* indicates that the DATASETNAME parameter has been specified in the ARECOVER command, with the specified *data-set-name2* as the subparameter.

System action: DFSMSHsm processing continues. Aggregate recovery continues with recovery to ML2 volumes disabled.

Programmer response: See the preceding ARC0113I and ARC0127I messages and their programmer response.

Source: DFSMSHsm

ARC6284E CONFLICT RESOLUTION ACTION *action* FAILED FOR DATA SET *data-set-name*, DATA SET WILL BE BYPASSED DURING AGGREGATE RECOVERY

Explanation: A like-named conflict has been found during ARECOVER processing. The conflict resolution processing has selected the indicated *action* to resolve the conflict. An error has been encountered when attempting to perform the requested action. As a result, the data set is not recovered.

- *data-set-name* indicates the data set name in conflict.

System action: ARECOVER processing continues. Data sets not receiving errors are recovered. If there is no entry, an entry is added to the conflict resolution data set indicating a conflict resolution action of BYPASS.

Programmer response: See previous messages in the ABARS activity log for details regarding the nature of the error. After correcting the error, reissue the ARECOVER command to complete the aggregate recovery for the data sets not already recovered. The user may wish to modify the action in the conflict resolution data set entry for the bypassed data set.

Source: DFSMSHsm

ARC6285E VALID AGGREGATE VERSION RECORD ALREADY EXISTS FOR DATASETNAME *data-set-name*, PREPARE FUNCTION FAILED

Explanation: An ARECOVER has been issued with the DATASETNAME(*data-set-name*) and PREPARE parameters. An existing aggregate version record has been found in the BCDS for the associated aggregate group with all the ARECOVER input files cataloged. The PREPARE function fails.

- *data-set-name* is the name of the control file data set specified in the DATASETNAME(*data-set-name*) subparameter of the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command with the VERIFY or EXECUTE parameters, or issue the ARECOVER command with the AGGREGATE(*agname*) subparameter to continue the aggregate recovery process.

Source: DFSMSHsm

ARC6286E NO VALID AGGREGATE VERSION RECORD FOUND FOR [AGGREGATE GROUP(*agname*) {, VERSION(*vvvv*) | DATE(*yyyy/mm/dd*) } | DATASETNAME(*data-set-name*)], ARECOVER COMMAND FAILED

Explanation: An ARECOVER command has been issued. If the AGGREGATE parameter has been specified, no aggregate version record have been found in the BCDS for the indicated aggregate group name, or an aggregate version record has been found but one or more associated ARECOVER input files are not cataloged.

If the DATASETNAME parameter has been specified along with VERIFY or EXECUTE, an aggregate version record has been found but one or more associated ARECOVER input files are not cataloged.

- AGGREGATE(*agname*) indicates that AGGREGATE has been specified on the ARECOVER command. *agname* is the aggregate group name that has been specified.
- VERSION(*vvvv*) indicates that VERSION has been specified on the ARECOVER command. *vvvv* is the version number that has been specified.
- DATE(*yyyy/mm/dd*) indicates that DATE has been specified on the ARECOVER command. *yyyy/mm/dd* is the date that has been specified.
- DATASETNAME(*data-set-name*) indicates that DATASETNAME has been specified on the ARECOVER command. *data-set-name* is the control file data set name that has been specified.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command with the DATASETNAME and PREPARE parameters to cause the aggregate group version record to be created. If the PREPARE function has been performed, correct the subparameters to reflect the proper aggregate group name, version, date, or control file data set name, and reissue the ARECOVER command.

To determine if an aggregate version record has been found but one or more associated ARECOVER input files are not cataloged, you can issue the LIST AGGREGATE(*agname*) command to determine if an ABR record exists. If it exists, then the LIST command will indicate if there are uncataloged files. If an associated ARECOVER input file is not cataloged, then two options are available. Delete the ABR record and reissue the ARECOVER command with the

DATASETNAME parameter, or catalog the control, data, instruction/activity log files and reissue the ARECOVER command with the DATASETNAME or AGGREGATE parameter.

Source: DFSMSHsm

ARC6289I ALL ELIGIBLE DATA SETS WILL BE RENAMED FOR RECOVERNEWNAMEALL DURING AGGREGATE RECOVERY USING THE SPECIFIED LEVEL *level*

Explanation: An ARECOVER command has been issued with the RECOVERNEWNAMEALL parameter. The specified *level* subparameter is used to rename all eligible data sets during aggregate recovery.

Data sets that are *not* eligible for rename include:

- Tape data sets from the ACCOMPANY list
- Migrated VSAM data sets
- Integrated catalog facility user catalogs from the ALLOCATE list

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6290I ELIGIBLE DATA SETS WILL BE RENAMED FOR RECOVERNEWNAMELEVEL DURING AGGREGATE RECOVERY USING THE FOLLOWING RENAME LEVEL PAIRS: *oldlevel* [...*newlevel*]

Explanation: An ARECOVER command has been issued with the RECOVERNEWNAMELEVEL parameter. The listed level pairs are used to rename all eligible data sets during aggregate recovery. Data sets matching the *oldlevel* qualifier are renamed using the corresponding *newlevel*.

Data sets that are *not* eligible for rename include:

- Tape data sets from the ACCOMPANY list
- Migrated VSAM data sets
- Integrated catalog facility user catalogs from the ALLOCATE list

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6291I SOURCE DATA SET *data-set-name* WILL NOT BE RENAMED FOR RECOVERNEWNAMEALL/LEVEL DURING AGGREGATE RECOVERY

Explanation: An ARECOVER command has been issued with the RECOVERNEWNAMEALL or RECOVERNEWNAMELEVEL parameter. The specified data set *data-set-name* has matched the rename filtering criteria but may not be renamed due to restrictions. The data set is recovered with the original name.

Restrictions that cause a data set to be ineligible for rename include:

- Tape data sets from the ACCOMPANY list
- Migrated VSAM data sets
- Integrated catalog facility user catalogs from the ALLOCATE list

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6293E ARECOVER REPLACE PARAMETER IS NO LONGER SUPPORTED. THE PROPER PARAMETER IS DATASETCONFLICT(REPLACE). ARECOVER COMMAND IS REJECTED

Explanation: An ARECOVER command has been issued with the REPLACE parameter. This parameter has been replaced by DATASETCONFLICT(REPLACE), which may be specified regardless of the specification of SETSYS ARECOVERREPLACE | NOARECOVERREPLACE.

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System action: DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command with the DATASETCONFLICT parameter.

Source: DFSMSHsm

ARC6294I TRUNCATION WILL OCCUR DURING RENAME FOR DATA SET *data-set-name1* DURING AGGREGATE RECOVERY, NEW DATA SET NAME WILL BE *data-set-name2*

Explanation: An ARECOVER command has been issued with one of the following parameters, causing the specified data set *data-set-name1* to be selected for rename.

- RECOVERNEWNAMEALL(*level*)
- RECOVERNEWNAMELEVEL(*olevel*,*nlevel*)
- DATASETCONFLICT(RENAMESOURCE(*level*))
- DATASETCONFLICT(RENAMETARGET(*level*))

During rename processing, the new data set name would have been greater than 44 characters. The new name is truncated to *data-set-name2*.

- *data-set-name1* indicates the original data set name.
- *data-set-name2* indicates the resulting new data set name after truncation.

System action: Processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6295E INSTALLATION-WIDE EXIT ARCCREXT RETURNED INVALID {DATA SET NAME *data-set-name1* | LEVEL *level*}, {SOURCE | TARGET} DATA SET *data-set-name2* COULD NOT BE RENAMED, SOURCE DATA SET WILL BE BYPASSED DURING AGGREGATE RECOVERY

Explanation: A like-named conflict has been found during ARECOVER processing. The installation-wide exit ARCCREXT has been called and has passed back an exit return code. Exit return code 12 indicates to rename the source data set to the specified data set name *data-set-name1*. The specified data set name returned by the exit is invalid. Exit return code 16 indicates to rename the target data set to the specified level *level*. The specified level returned by the exit is invalid. As a result, the conflicting data set is recovered.

- *data-set-name1* indicates the new (invalid) data set name that has been returned by ARCCREXT.
- *level* indicates the new (invalid) level that has been returned by ARCCREXT.
- SOURCE indicates that ARCCREXT has attempted to rename a source data set.
- TARGET indicates that ARCCREXT has attempted to rename a target data set.
- *data-set-name2* indicates the conflicting data set name.

System action: Processing continues. The remaining data sets to be recovered are verified. An entry for the data set is added into the conflict resolution data set with an action of BYPASS. If EXECUTE has been specified, data sets not receiving verification errors are recovered.

Programmer response: None.

Source: DFSMSHsm

ARC6296I CONFLICT RESOLUTION ACTION *action* FROM THE {CONFLICT RESOLUTION DATA SET | DATASETCONFLICT PARAMETER | INSTALLATION-WIDE EXIT ARCCREXT} {IS INVALID | DID NOT RESOLVE THE CONFLICT | IS NOT AUTHORIZED} FOR DATA SET *data-set-name* FROM *listtype* LIST DURING AGGREGATE RECOVERY

Explanation: A like-named conflict has been found during ARECOVER processing. The requested *action* has been either invalid, not RACF-authorized, or did not resolve the like-named conflict for the data set.

- *action* indicates the requested conflict resolution action for the data set.
- CONFLICT RESOLUTION DATA SET indicates that the *action* is from the conflict resolution data set.
- DATASETCONFLICT PARAMETER indicates that the *action* is from the DATASETCONFLICT parameter.

- INSTALLATION-WIDE EXIT ARCCREXT indicates that the *action* is from the installation-wide exit ARCCREXT.
- IS INVALID indicates that the *action* is invalid for the data set.
- IS NOT AUTHORIZED indicates that the *action* is not RACF-authorized.
- DID NOT RESOLVE THE CONFLICT indicates that the *action* did not resolve the like-named conflict for the data set.
- *data-set-name* indicates the data set name in conflict.
- *listtype* indicates the data set came from the INCLUDE, ACCOMPANY, or ALLOCATE list.

If IS INVALID is indicated, the *action* is invalid because:

- If the *action* is RENAME SOURCE:
 - RENAME SOURCE is not supported for migrated VSAM data sets, or for ACCOMPANY (tape) data sets.
- If the *action* is RENAME TARGET:
 - RENAME TARGET is not supported for existing catalogs, generation data group (GDG) or generation data set (GDS) data sets, or tape data sets, and is only supported for the following catalog entry types:
 - non-VSAM DASD
 - VSAM cluster (not a catalog)
 - VSAM alternate index (AIX)
 - Data or index component, or path, related to a VSAM cluster (not a catalog) or AIX
- If the *action* is REPLACE:
 - REPLACE is not supported for ALLOCATE or ACCOMPANY data sets, or existing catalogs, and is only supported for the following catalog entry types:
 - Non-VSAM.
 - VSAM cluster (not a catalog).
 - VSAM AIX.
 - If a conflict is detected for a data component, index component, or path related to a VSAM cluster (not a catalog) or a VSAM AIX, the entire related VSAM base cluster is replaced.

If IS NOT AUTHORIZED is indicated, the user did not have RACF facility class authorization to the STGADMIN.ARC.ARECOVER command profile. RACF authority to resolve the conflict has been denied for one of the following reasons:

- If the *action* is REPLACE:
 - The user does not have RACF FACILITY class authorization to the:
STGADMIN.ARC.ARECOVER.*aname*.REPLACE

command profile.
 - The user has the proper FACILITY class authorization, but does not have RACF ALTER access authority to the indicated data set.
- If the *action* is RENAME TARGET:
 - The user does not have RACF FACILITY class authorization to the:
STGADMIN.ARC.ARECOVER.*aname*.RENTGT

command profile.
 - The user has the proper FACILITY class authorization, but does not have RACF ALTER access authority to the indicated data set.

If DID NOT RESOLVE THE CONFLICT is indicated, the following are possible reasons why the action did not resolve the like-named conflict:

- If the *action* is RENAME SOURCE:
 - The new name of the data set already exists at the ARECOVER site.
 - If the data set is VSAM, all components of the source data set must be renamed and checked for existing duplicates. Either the cluster or components are not renamed because of existing duplicates.

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- If the data set is a GDS, both the GDS and the GDG base must be renamed and checked for existing duplicates. Either the GDS or the GDG base are not renamed because of existing duplicates.
- If the data set is an integrated catalog facility (ICF) user catalog, another ICF user catalog to be recovered may include an alias that would cause the catalog to fail the DEFINE. ICF user catalogs cannot have their alias defined in another ICF user catalog.
- If the *action* is RENAMETARGET:
 - The new name of the data set already exists at the ARECOVER site.
 - If the data set is VSAM, all components of the target data set must be renamed and checked for existing duplicates. Either the cluster or components are not renamed because of existing duplicates.
 - Another data set being recovered is already being renamed to the new target data set name selected for the data set.
- If the *action* is REPLACE:
 - ARECOVER has detected this multivolume data set which is cataloged at the ARECOVER site. ARECOVER is unable to resolve the conflict because one or more of the indicated volumes are offline and an F1DSCB has been detected on at least one of the online volumes.

System action: DFSMSHsm processing continues.

Programmer response: Change the requested conflict resolution action, or provide the required RACF authority. The order of priority for conflict resolution is:

- If a conflict resolution data set exists and there is an entry for the data set in conflict, the requested action is taken. The action may be changed (prior to issuing the ARECOVER command) from BYPASS to the desired action, or the entry in the conflict resolution data set may be deleted.
- If the DATASETCONFLICT parameter has been specified on the ARECOVER command, and the conflict is not resolved, the action indicated by the subparameter is taken if it is valid. If required, change the subparameter to the desired action.
- If the conflict is not resolved, and the installation-wide exit ARCCREXT is active, the exit is called to resolve the conflict. In this case, the exit must be changed to specify the desired action.

Once the conflict resolution action is requested, or the conflict is resolved through external means, reissue the ARECOVER command to recover the remaining data sets.

Source: DFSMSHsm

ARC6297E DATA SET *data-set-name1* COULD NOT BE RENAMED TO NEW NAME *data-set-name2*, DATA SET WILL BE BYPASSED DURING AGGREGATE RECOVERY

Explanation: An attempt has been made to rename a data set as a result of the RECOVERNEWNAMEALL, RECOVERNEWNAMELEVEL, or DATASETCONFLICT(RENAMESOURCE | RENAMETARGET) parameter on the ARECOVER command, or a conflict resolution data set entry, or installation-wide exit ARCCREXT processing. The data set to be recovered could not be renamed, because the new name matches the name of another data set to be recovered, or because another data set to be recovered has already been renamed to the same new name. The data set is not recovered.

- *data-set-name1* indicates the name of the data set that could not be renamed. This data set is bypassed.
- *data-set-name2* indicates the new data set name that has caused the error.

System action: Processing continues. The remaining data sets to be recovered are verified. If EXECUTE was specified, data sets not receiving verification errors are recovered.

Programmer response: Correct the source of the rename error and reissue the ARECOVER command.

Source: DFSMSHsm

ARC6298E CATALOG DATA SET *catalogname* FAILED VERIFICATION DURING AGGREGATE RECOVERY

Explanation: A catalog data set cannot be recovered because an error has been encountered during ARECOVER verification processing.

- *catalogname* indicates the name of the catalog that has failed the ARECOVER verification process.

The following condition may be the cause of the verification error:

- A like-named catalog entry already exists on the system. Either no conflict resolution action has been indicated, or a conflict resolution action has been specified that is invalid.

System action: ARECOVER processing ends when verification is complete. DFSMSShsm processing continues.

Programmer response: Resolve the rename or like-named conflict error and reissue the ARECOVER command.

Source: DFSMSShsm

ARC6299E THE {DATE | VERSION | XMIT | VOLUMES | UNIT} PARAMETER IS INVALID WITH THE {DATASETNAME | AGGREGATE} PARAMETER. ARECOVER COMMAND IS REJECTED

Explanation: An invalid combination of parameters has been specified on the ARECOVER command.

- The DATE and VERSION parameters are not valid with the DATASETNAME parameter on the ARECOVER command. DATE or VERSION may be specified on the ARECOVER command only if AGGREGATE is also specified.
- The XMIT, VOLUMES, and UNIT parameters are not valid with the AGGREGATE parameter on the ARECOVER command. XMIT, VOLUMES, or UNIT may be specified only if DATASETNAME is also specified.

System action: DFSMSShsm processing continues.

Programmer response: Reissue the ARECOVER command.

Source: DFSMSShsm

ARC6300E THE ACTIVITY AND/OR INSTRUCTION PARAMETER IS REQUIRED WHEN THE PREPARE AND AGGREGATE PARAMETERS ARE SPECIFIED ON THE ARECOVER COMMAND. ARECOVER COMMAND IS REJECTED

Explanation: When the ARECOVER command has been issued with the AGGREGATE and PREPARE parameters specified, either or both the INSTRUCTION or ACTIVITY parameters must also be specified.

System action: ARECOVER processing ends. DFSMSShsm processing continues.

Programmer response: Reissue the ARECOVER command using proper command syntax.

Source: DFSMSShsm

ARC6302E INVALID LEVEL *level* SPECIFIED FOR RECOVERNEWNAMELEVEL. ARECOVER COMMAND IS REJECTED

Explanation: A high level qualifier specified as a RECOVERNEWNAMELEVEL subparameter is invalid when:

- The new high level qualifier is the same as the old high level qualifier.
- The same old high level qualifier has been listed more than once.

This message has been issued only for the first occurrence of the error.

System action: ARECOVER processing ends. DFSMSShsm processing continues.

Programmer response: Reissue the command with a valid high level qualifier name.

Source: DFSMSShsm

ARC6303E (ODD NUMBER | MORE THAN 30 PAIRS) OF LEVELS SPECIFIED FOR RECOVERNEWNAMELEVEL. ARECOVER COMMAND IS REJECTED

Explanation: An even number of high level qualifiers, consisting of no more than 30 pairs, may be specified in the RECOVERNEWNAMELEVEL subparameter list.

System action: ARECOVER processing ends. DFSMSShsm processing continues.

Programmer response: Reissue the command with an even number of high level qualifiers consisting of no more than 30 pairs.

Source: DFSMSShsm

ARC6304E THE VOLUMES PARAMETER IS REQUIRED WHEN UNIT IS SPECIFIED ON THE ARECOVER DATASETNAME COMMAND. ARECOVER COMMAND IS REJECTED

Explanation: The UNIT parameter may not be specified with the AGGREGATE parameter on the ARECOVER command. This is optional when the DATASETNAME parameter has been specified. When the UNIT parameter has been specified, the VOLUMES parameter must also be specified.

System action: ARECOVER processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command using proper command syntax.

Source: DFSMSHsm

ARC6305I A TARGET DATA SET HAS BEEN RENAMED FOR AGGREGATE RECOVERY OF DATA SET *data-set-name1*, NEW DATA SET NAME IS:

Explanation: *cat_entry_type data-set-name2 cat_entry_typen data-set-namen*

During aggregate recovery, a data set to be recovered has been found to have a duplicate data set name already existing on the remote site's system. The conflict resolution processing has selected the RENAMETARGET option to resolve the conflict. The duplicate data set has been renamed. If the data set is VSAM, all related components existing on the remote site's system are renamed and listed.

Multiple target data sets may have to be renamed to resolve the conflict if the source data set being recovered is VSAM and has components that have a like-named conflict with different target objects. In this case, this message is issued for each occurrence of a different target object that has been renamed.

- *data-set-name1* is the name of the data set to be recovered.
- *cat_entry_type* is a description of the catalog entry type of the conflicting target data set that has been renamed. It will indicate NONVSAM, CLUSTER, COMPONENT, AIX, or PATH.
- *data-set-name2* is the new name of the conflicting target data set (or component) that has been renamed.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6306I RESTART DATA SET *data-set-name* NOT DELETED DURING AGGREGATE RECOVERY

Explanation: Aggregate recovery processing has been successfully completed, but one or more data sets has been bypassed as a result of an entry in the conflict resolution data set. The restart data set is not automatically deleted.

- *data-set-name* is the name of the restart data set that has been retained.

System action: DFSMSHsm processing continues.

Programmer response: Determine if any of the data sets listed in the conflict resolution data set should not be bypassed. If necessary correct the conflict resolution for these data sets and reissue the ARECOVER command. Otherwise, delete the restart data set manually. If the aggregate recovery is found to be complete, the conflict resolution data set may also be deleted.

Source: DFSMSHsm

ARC6307E CONFLICT RESOLUTION ACTION *action* FAILED FOR CATALOG DATA SET *catalogname* DURING AGGREGATE RECOVERY

Explanation: During aggregate recovery, an integrated catalog facility (ICF) catalog in the ALLOCATE list to be recovered has been found to have a duplicate catalog entry existing on the remote site's system. The conflict resolution processing has selected the indicated *action* to resolve the conflict. An error has occurred while attempting the indicated conflict resolution action.

- *action* indicates the selected conflict resolution action. selected.
- *catalogname* indicates the name of the catalog that cannot be recovered.

System action: ARECOVER processing ends following the completion of remaining verification processing. No further ABARS processing takes place even if the EXECUTE parameter has been specified. DFSMSHsm processing continues.

Programmer response: See previous messages in the ARECOVER activity log for details regarding the nature of the error. After correcting the error, reissue the ARECOVER command to complete the aggregate recovery.

Source: DFSMSHsm

ARC6308I CONFLICT RESOLUTION DATA SET *data-set-name* {WILL BE USED | WAS CREATED | WAS MODIFIED} DURING AGGREGATE RECOVERY

Explanation: During aggregate recovery, a conflict resolution data set has been created to contain a list of data set names and conflict resolution actions. The data set may be edited by the user to add, modify, or delete data set names and resolutions. Conflict resolution utilizes the conflict resolution data set to resolve conflicts during the next aggregate recovery.

- *data-set-name* is the name of the conflict resolution data set that contains the data set names and resolutions for conflict resolution.
- WILL BE USED indicates that the conflict resolution data set previously existed and will be used during the current ARECOVER invocation.
- WAS CREATED indicates that the conflict resolution data set did not previously exist and has been created as a result of verification errors.
- WAS MODIFIED indicates that the conflict resolution data set previously existed and has been modified because some conflicts have been resolved, or new conflicts have been found, or both.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6309E {CONFLICT RESOLUTION DATA SET | LISTOFNAMES DATA SET} *data-set-name1* FOR {AGGREGATE GROUP *aname* | CONTROL FILE DATA SET *data-set-name2*} DOES NOT ADHERE TO FILE FORMAT RESTRICTIONS

Explanation: The identified CONFLICT RESOLUTION data set or LISTOFNAMES data set does not follow the required file format restrictions. The RECFM of the file must be fixed or fixed-blocked format, the LRECL must be 80, and the DSORG must be PS. If RECFM=FB, BLKSIZE must be 80 or a multiple of 80.

- *data-set-name1* is the name of the conflict resolution data set or the LISTOFNAMES data set.
- AGGREGATE GROUP indicates that the AGGREGATE parameter has been specified in the ARECOVER command, with *aname* specified as the subparameter.
- CONTROL FILE DATA SET indicates that the DATASETNAME parameter has been specified in the ARECOVER command, with the *data-set-name2* specified as the subparameter.

System action: DFSMSHsm processing continues.

For the conflict resolution data set: ARECOVER processing continues and ends following verification processing. The conflict resolution data set is ignored during the verification process.

For the LISTOFNAMES data set, ARECOVER processing fails.

Operator response: None.

System programmer response: None.

Programmer response: For the conflict resolution data set: If conflicts are found during the verification process, the existing conflict resolution data set is deleted by ABARS processing and rewritten in the proper format. See message ARC6308I in the ARECOVER activity log indicating that the conflict resolution data set has been modified. If no conflicts are found, the invalid conflict resolution data set is retained. Either delete the data set (and allow subsequent ARECOVER verification processing to create it internally if needed), or delete the invalid data set and redefine it with the proper attributes. Reissue the ARECOVER command.

For the LISTOFNAMES data set: Delete the invalid data set and redefine it with the proper attributes. Reissue the ARECOVER command.

Source: DFSMSHsm

ARC6310E {CONFLICT RESOLUTION DATA SET | LISTOFNAMES DATA SET} *data-set-name* CONTAINS PARSE ERROR ON LINE *line-num*, LINE='*line-text*'

Explanation: The system encountered a parse error while parsing the contents of the conflict resolution data set or the LISTOFNAMES data set. Either the data set name or conflict resolution action, or both, is invalid or not specified. The following is the format of an entry in the conflict resolution data set:

```
entryname          conflict_resolution_action
```

The following is the format of an entry in the LISTOFNAMES data set:

```
entryname
```

Valid entry names are fully qualified 1-44 character data set names (member names are not allowed). Valid conflict resolution actions are RENAMESOURCE(level), RENAMETARGET(level), REPLACE, and BYPASS.

- *data-set-name* is the name of the conflict resolution data set that contains the data set names and resolutions for conflict resolution or the name of the LISTOFNAMES data set.
- *line_num* is the line number in the conflict resolution data set or LISTOFNAMES data set that contains a parse error.
- *line_text* is the line in the conflict resolution data set or LISTOFNAMES data set that contains a parse error.

System action: DFSMSHsm processing continues.

For the conflict resolution data set: ARECOVER processing continues and ends following verification processing. The conflict resolution data set is ignored during the verification process.

For the LISTOFNAMES data set: ARECOVER processing fails.

Operator response: None.

System programmer response: None.

Programmer response: Correct the parse error indicated in the conflict resolution data set or LISTOFNAMES data set and reissue the ARECOVER command.

If the conflict resolution data set is modified during aggregate recovery processing (because conflicts were resolved, or new conflicts were found; see the ARECOVER activity log for message ARC6308I), the erroneous entry is not rewritten in the modified conflict resolution data set.

Source: DFSMSHsm

ARC6311I { CONFLICT RESOLUTION DATA SET | LISTOFNAMES DATA SET} *data-set-name1* CONTAINS AN ENTRY FOR DATA SET *data-set-name2* THAT DOES NOT EXIST IN CONTROL FILE DATA SET *data-set-name3*

Explanation: The specified conflict resolution data set or LISTOFNAMES data set contains a data set name that is not part of the aggregate recovery.

- *data-set-name1* is the name of the conflict resolution data set or LISTOFNAMES data set that is being processed.
- *data-set-name2* is the name of the data set that is not part of the aggregate recovery.
- *data-set-name3* indicates the control file name being processed.

System action: DFSMSHsm processing continues. ARECOVER processing continues. The extraneous entry is ignored during the conflict resolution or ONLYDATASET processing.

Operator response: None.

System programmer response: None.

Programmer response: Correct or remove the data set name from the conflict resolution data set or LISTOFNAMES data set.

If the conflict resolution data set is modified during aggregate recovery processing (because conflicts were resolved, or new conflicts were found; see the ARECOVER activity log for message ARC6308I), the erroneous entry is not rewritten in the modified conflict resolution data set.

Source: DFSMSHsm

ARC6312I {CONFLICT RESOLUTION DATA SET | LISTOFNAMES DATA SET} *data-set-name* CONTAINS DUPLICATE ENTRIES FOR DATA SET *entry*

Explanation: The specified conflict resolution data set or LISTOFNAMES data set contains duplicate entries.

- *data-set-name* is the name of the conflict resolution data set or LISTOFNAMES data set that is processed.
- *entry* is the name of the duplicate entry in the conflict resolution data set or LISTOFNAMES data set.

System action: DFSMSHsm processing continues. ARECOVER processing continues. The duplicate entries are ignored during the conflict resolution or ONLYDATASET processing.

Operator response: None.

System programmer response: None.

Programmer response: Correct or remove the duplicate data set name from the conflict resolution data set or LISTOFNAMES data set.

If the conflict resolution data set is modified during aggregate recovery processing (because conflicts were resolved, or new conflicts were found; see the ARECOVER activity log for message ARC6308I), the erroneous entry is not rewritten in the modified conflict resolution data set.

Source: DFSMSHsm

ARC6313I DUPLICATE ALIAS WAS FOUND AND WILL NOT BE DEFINED BY ARECOVER. ALIAS *aliasname* OF CATALOG *catalogname1* IS ASSOCIATED WITH CATALOG *catalogname2* AT TARGET SITE

Explanation: During ARECOVER verification processing, the integrated catalog facility (ICF) user catalog *catalogname1* to be recovered has been found to have an associated alias *aliasname* that is in conflict with an alias of the existing ICF user catalog *catalogname2* at the target site. The alias *aliasname* will not be defined.

Any data sets recovered that begin with *aliasname* will be cataloged in the existing ICF user catalog *catalogname2* during aggregate recovery processing.

- *aliasname* is the name of the alias which could not be defined due to a conflict with an existing catalog entry.
- *catalogname1* is the name of the ICF user catalog being recovered.
- *catalogname2* is the name of the ICF user catalog already existing at the target site, with which alias *aliasname* is already associated.

System action: ARECOVER processing continues. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6314I ALIAS NAME WILL NOT BE DEFINED BY ARECOVER. ALIAS *aliasname* OF CATALOG *catalogname* IS IN CONFLICT WITH AN EXISTING CATALOG ENTRY AT THE TARGET SITE

Explanation: During ARECOVER verification processing, the integrated catalog facility (ICF) user catalog *catalogname* to be recovered has been found to have an associated alias *aliasname* that is in conflict with a catalog entry already in place at the target site.

The alias *aliasname* could not be defined.

- *aliasname* is the name of the alias which could not be defined due to a conflict with an existing catalog entry.
- *catalogname* is the name of the ICF user catalog being recovered.

System action: ARECOVER processing continues. DFSMSHsm processing continues.

Programmer response: The alias could not be defined. This message is issued when the alias *aliasname* is in conflict with a catalog entry at the target set that is *not* an existing alias or ICF user catalog. In this case, there is a data set name already existing on the target system that begins with the high level qualifier *aliasname*.

Source: DFSMSHsm

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ARC6315E DASD UNIT IS INVALID FOR THE SETSYS (ARECOVERML2UNIT | ARECOVERUNITNAME | ABARSUNITNAME) PARAMETER

Explanation: A SETSYS command was issued specifying a DASD unit. Only a valid tape unit name may be specified as the subparameter for ARECOVERML2UNIT, ARECOVERUNITNAME, or ABARSUNITNAME.

System action: Processing of other SETSYS command parameters continues. DFSMSHsm processing continues.

Programmer response: Reissue the SETSYS command with a valid tape unit name subparameter.

Source: DFSMSHsm

ARC6316E MEMBER NAMES ARE NOT ALLOWED IN THE CONTROL FILE DATA SET NAME. ARECOVER COMMAND IS REJECTED

Explanation: An ARECOVER command was issued with DATASETNAME specified, but the control file data set name contained parentheses.

System action: ARECOVER processing is discontinued. DFSMSHsm processing continues.

Programmer response: Reissue the ARECOVER command with a valid data set name for the DATASETNAME parameter.

Source: DFSMSHsm

ARC6317E VERSION 0000 SPECIFIED FOR (*command*) COMMAND IS INVALID

Explanation: An ARECOVER or LIST command was issued with the VERSION parameter. The specified VERSION(0000) is not valid for an ABR record.

- *command* indicates the command being processed.

System action: The specified command processing fails. DFSMSHsm processing continues.

Programmer response: Reissue the command with a valid VERSION.

Source: DFSMSHsm

ARC6318E INSUFFICIENT SPACE ON LEVEL 0 VOLUMES TO RECOVER ICF USER CATALOG *catalogname* FOR AGGREGATE GROUP *agname* USING CONTROL FILE DATA SET *data-set-name*. AGGREGATE RECOVERY FAILED

Explanation: There is insufficient space on level 0 volumes to recover the integrated catalog facility (ICF) user catalog.

- *catalogname* indicates the ICF user catalog being processed.
- *agname* indicates the aggregate group being processed.
- *data-set-name* indicates the control file name being processed.

System action: ARECOVER processing ends. DFSMSHsm processing continues.

Programmer response: Use the DEFINE ARPOOL command with the L0VOLS parameter to redefine the volume pool to be used for the aggregate recovery, adding level 0 volumes to the pool to make available sufficient space for the aggregate recovery to complete. Reissue the ARECOVER command.

Source: DFSMSHsm

ARC6319E CATALOG DATA SET *catalogname1* COULD NOT BE RENAMED TO NEW NAME *catalogname2*, AGGREGATE RECOVERY WILL FAIL FOLLOWING VERIFICATION.

Explanation: An attempt has been made to rename a catalog data set as a result of the:
DATASETCONFLICT(RENAMESOURCE|RENAMETARGET)

parameter on the ARECOVER command, a conflict resolution data set entry, or user exit ARCCREXT processing. The catalog data set to be recovered could not be renamed because the new name matches the name of another data set to be recovered, or because another data set to be recovered has already been renamed to the same new name. The catalog data set will not be recovered and verification will fail.

- *catalogname1* indicates the name of the catalog data set that could not be renamed.
- *catalogname2* indicates the new data set name that caused the error.

System action: ARECOVER processing ends following the completion of remaining verification processing. No further ABARS processing takes place even if the EXECUTE parameter is specified. DFSMSHsm processing continues.

Programmer response: Correct the source of the rename error and reissue the ARECOVER command.

Source: DFSMSHsm

ARC6320E ERROR OCCURRED DURING DEFINE OF ALIAS *aliasname* RELATED TO ICF USER CATALOG *catalogname*

Explanation: An error has occurred while attempting to define an alias.

- *aliasname* is the name of the alias that has received the error.
- *catalogname* is the name of the integrated catalog facility (ICF) user catalog to which the alias is related.

System action: Aggregate recovery processing continues if the alias could not be defined because a duplicate entry exists at the aggregate recovery site. Aggregate recovery processing ends if any other error is encountered.

Programmer response: For specific error return codes and reason codes associated with the failure, see the previous message ARC6158E in the DFSMSHsm secondary address space activity log for this aggregate recovery task. Correct the error and reissue the ARECOVER command.

Source: DFSMSHsm

ARC6321E AN ADDVOL FOR TAPE VOLUME *volser* WAS REJECTED BY THE DFSMSHSM PRIMARY ADDRESS SPACE

Explanation:

- *volser* is the name of the volume that has been rejected.

System action: An attempt was made to ADDVOL the tape as a migration (ML2) volume; however, the ADDVOL was rejected. Recovery to ML2 tape volumes is disabled and the ARECOVER continues. A different scratch tape should be mounted to satisfy the ML2 volume mount request, whenever the ARECOVER is attempted again.

Operator response: Mount a different scratch tape whenever ARECOVER is attempted again.

Programmer response: None.

Source: DFSMSHsm

ARC6322E USER {*userid* | *consoleid*} NOT AUTHORIZED FOR {*command* | *command parameter*} COMMAND/PARAMETER

Explanation: RACF processing has determined that the user or console operator is not authorized to use the COMMAND/PARAMETER through the RACF FACILITY class profile defined for the COMMAND/PARAMETER.

- *userid* is the ID of the user who has issued the COMMAND/PARAMETER.
- *consoleid* is the console ID of the operator who has issued the COMMAND/PARAMETER.

System action: Aggregate recovery processing ends. DFSMSHsm processing continues.

Operator response: To use the command/parameter, contact your security administrator for authorization to the required RACF profile (restricted or comprehensive). Reissue the command or parameter.

Programmer response: To use the command/parameter, contact your security administrator for authorization to the required RACF profile (restricted or comprehensive). Reissue the command or parameter.

Source: DFSMSHsm

ARC6323E CREATION OF THE USER ACEE FAILED FOR *userid* DURING *command* authorization, RACF RC= *return-code*, RACF REAS= *reason-code*.

Explanation: A USER ACEE is needed for the *command* authorization, but RACF has been unable to create the USER ACEE for *userid*.

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- *userid* is the user's ID who has issued the command.
- *command* is the command that has been issued by the *userid*
- *return-code* is the return code from RACF.
- *reason-code* is the reason code from RACF.

For return code and reason code values, see the *z/OS Security Server RACF Macros and Interfaces*.

System action: The *command* fails and DFSMSHsm processing continues.

Programmer response: The system programmer or storage administrator responsible for DFSMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFSMSHsm

ARC6324I RESOLUTION ACTION REPLACE SPECIFIED, GDG DATA SET *dsname* WILL BE RECOVERED USING EXISTING GDG ATTRIBUTES

Explanation: The ARECOVER command was issued with the DATASETCONFLICT(REPLACE) option. A generation data set is being recovered, and only the GDG base name is in conflict. The data set is restored using the attributes of the existing GDG base.

In the message text, *dsname* is the name of the data set being recovered.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6325E DATA SET *old-dsname* WAS INCORRECTLY RENAMED TO *new-dsname* BY THE ABARS CONFLICT RESOLUTION EXIT

Explanation: An attempt was made to rename a migrated, non-VSAM data set using the ABARS conflict resolution exit (ARCCREXT) to change more than just the data set's high level qualifier.

- *old-dsname* is the name of the data set passed to the conflict resolution exit.
- *new-dsname* is the new name for the data set returned by the ARCCREXT installation-wide exit.

System action: This data set is skipped and Aggregate Recovery continues.

Programmer response: When using the ABARS conflict resolution exit to rename a migrated, non-VSAM data set, only the data set's high level qualifier can be changed.

Source: DFSMSHsm

ARC6326I OPEN WILL BE RETRIED USING {STACK | NOSTACK} OPTION. ARECOVER PROCESSING WILL CONTINUE.

Explanation: The ARECOVER command has been specified with either the STACK or NOSTACK option, but the ABACKUP output format conflicts, which causes an OPEN failure to occur.

- **STACK** indicates that the ARECOVER command will retry processing as if the STACK option had been requested.
- **NOSTACK** indicates that the ARECOVER command will retry processing as if the NOSTACK option had been requested.

System action: DFSMSHsm processing continues.

Programmer response: ARECOVER will switch options and continue processing. If you want to reissue the ARECOVER command, make sure that you use the correct STACK or NOSTACK option.

ARC6327E CATALOG LOCATE ERROR OCCURRED FOR DATA SET *data-set-name* DURING ABACKUP PROCESSING

Explanation: An ABACKUP command issued a catalog locate for the data set *data-set-name*. The catalog locate function failed or the data set was not found.

System action: Aggregate backup processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the ABACKUP command. The data set was most likely deleted or was being rolled off during backup processing.

Source: DFSMSHsm

ARC6328E AN ERROR OCCURRED PROCESSING DATA SET *dsname* DURING ABACKUP OF AGGREGATE *agname*, RC=*returncode*

Explanation: During ABACKUP processing of a migrated data set an error was detected in the data.

- *dsname* is the name of the migrated data set which caused the failure.
- *agname* is the name of the aggregate group that failed processing.
- *returncode* is the return code from the module that detected the failure.

The return codes that can be expected are:

- 8 - terminate.
- 12 - getmain error, terminate.
- 41 - blks written not what was expected.
- 42 - crdlen>max_crdval.
- 43 - blks written not what was expected.

System action: Aggregate backup processing ends. DFSMSHsm processing continues.

Programmer response: Recall the data set and reissue the ABACKUP command.

Source: DFSMSHsm

ARC6360E DISPLAY {ABACKUP | ARECOVER} COMMAND REJECTED - REQUIRED PARAMETER {AGNAME | AGNAME/CONTROLFILEDSN}, NOT SPECIFIED

Explanation: A DISPLAY ABACKUP or ARECOVER command has been issued without specifying one of the required parameters.

- ABACKUP indicates the command is a DISPLAY ABACKUP command.
- ARECOVER indicates the command is a DISPLAY ARECOVER command.
- AGNAME indicates the name of an aggregate group has not been specified on the DISPLAY ABACKUP command.
- AGNAME/CONTROLFILEDSN indicates that the name of an aggregate group or control file data set name has not been specified on the DISPLAY ARECOVER command.

System action: DISPLAY processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the command using all the required parameters.

Source: DFSMSHsm

ARC6361E {ABACKUP | ARECOVER} {AGNAME | AGNAME/CONTROLFILEDSN} SELECTED FOR DISPLAY IS NOT ACTIVE

Explanation: A DISPLAY command has been issued with the ABACKUP or ARECOVER parameter. This message indicates that the selected aggregate backup or aggregate recovery is not currently active and cannot be displayed.

- ABACKUP indicates the command is a DISPLAY ABACKUP command.
- ARECOVER indicates the command is a DISPLAY ARECOVER command.
- AGNAME indicates the name of an aggregate group has been specified on the DISPLAY ABACKUP command.
- AGNAME/CONTROLFILEDSN indicates that the name of an aggregate group or control file data set name has been specified on the DISPLAY ARECOVER command.

System action: DISPLAY processing ends. DFSMSHsm processing continues.

Programmer response: Verify that the ABARS function is active before attempting to display the memory associated with it.

Source: DFSMSHsm

ARC6362E ALL CANNOT BE USED WITH ML1VOLS AND/OR L0VOLS IN THE DEFINE ARPOOL COMMAND

Explanation: A DEFINE ARPOOL command has been issued using the ALL parameter with either the ML1VOLS parameter, the L0VOLS parameter, or both.

System action: DEFINE ARPOOL processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the command using the correct parameters.

Source: DFSMSHsm

ARC6363I {ALL | ML1VOLS(*) | L0VOLS(*)} USED IN DEFINE ARPOOL COMMAND

Explanation: A QUERY ARPOOL command has been issued and the ARPOOL parameter has been defined using the DEFINE ARPOOL command with the ALL parameter, or either or both the ML1VOLS(*) and L0VOLS(*) parameters. This message is followed by message ARC6015I displaying volsers associated with the ARPOOL.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6364I A HOLD WAS ISSUED FOR {AGGREGATE GROUP *agname* | CONTROL FILE DATA SET *data-set-name*}, BUT THE COMMAND IS CURRENTLY RUNNING. THE COMMAND IS NOT HELD

Explanation: A HOLD command has been issued for an ABACKUP or ARECOVER command that is currently running. The command is not held.

AGGREGATE GROUP is displayed when *function* is ABACKUP.

AGGREGATE GROUP or CONTROL FILE DATA SET is displayed when *function* is ARECOVER.

- *agname* is the aggregate group that has been specified in the ABACKUP or ARECOVER command.
- *data-set-name* is the name of the data set that has been specified for the control file in the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the HOLD command with the EOD (end of data set) option to stop a currently running command.

Source: DFSMSHsm

ARC6365E INVALID DATE(*yyyy/mm/dd*) SPECIFIED IN THE *command* COMMAND

Explanation: An ARECOVER or LIST command has been issued with the DATE parameter. The specified DATE(*yyyy/mm/dd*), is invalid. Either the *yyyy*, *mm*, or *dd* is invalid, or the date could not be resolved to a valid Julian date.

- (*yyyy/mm/dd*) indicates the date specified in the DATE parameter on the command.
- *command* indicates the command being processed.

System action: The specified command processing fails. DFSMSHsm processing continues.

Programmer response: Reissue the command with a valid date.

Source: DFSMSHsm

ARC6366I AGGREGATE BACKUP/RECOVERY UNIT NAME = *unitname*

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the unit name to be allocated for the control file, instruction/activity log file and data file.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6367I AGGREGATE BACKUP/RECOVERY EXITS = {NONE | *exitname*}

Explanation: A QUERY ABARS command has been issued. If EXITS = NONE, no ABARS installation-wide exits are active. If EXITS = *exitname*, two character abbreviations appear specifying the installation-wide exits that are currently active. The exits are: BE - ARCBEXT, CR - ARCCREXT, ED - ARCEDEXT, M2 - ARCM2EXT, SK - ARCSKEXT, TV - ARCTVEXT.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6368I AGGREGATE BACKUP/RECOVERY ACTIVITY LOG MESSAGE LEVEL IS {FULL | REDUCED}

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the level of the aggregate backup or aggregate recovery activity log as either full (all DFSMSdss messages written) or reduced (only DFSMSdss attention and error messages are written).

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6369I STORAGE REQUIREMENTS FOR AGGREGATE GROUP *agname*, ARE: L0=*number* {K|M|G|T}, ML1=*number* {K|M|G|T}, ML2=*number*{K|M|G|T}, TOTAL=*number* {K|M|G|T}

Explanation: An ABACKUP EXECUTE command has been issued and the storage requirements used by ABACKUP and to be used in the subsequent ARECOVER are displayed.

An ARECOVER {VERIFY | PREPARE} command has been issued and the storage requirements for a successful ARECOVER are displayed.

An ARECOVER VERIFY command has been issued and a restart data set exists. The unrecovered data set storage requirements are displayed.

An ARECOVER EXECUTE command has been issued and has failed. The unrecovered data set storage requirements are displayed. The values will include any data set not successfully recovered.

- *agname* specifies the aggregate group name.
- *number* {K|M|G|T} specifies the estimated storage requirement for the specified storage hierarchy level and the estimated total in kilobytes (K), megabytes (M), gigabytes (G), or terabytes (T).

System action: DFSMSHsm processing continues.

Programmer response: None

Source: DFSMSHsm

ARC6370I ERROR OCCURRED ATTEMPTING TO ROLL OFF AN EXPIRED VERSION FOR AGGREGATE GROUP *agname*, KEY *aggregate key*

Explanation: A rolloff error occurred for aggregate group *agname* when an ABACKUP or ARECOVER command was issued. See the primary address space command activity log for associated messages.

- *agname* indicates the aggregate group processing.
- *aggregate key* indicates the key of the ABR record which could not be rolled off.

System action: DFSMSHsm processing continues. The expired version for the aggregate group still exists in the backup control data set.

Issued By: ABARS secondary address space.

Programmer response: An ARC0184I message may be issued by the DFSMSHsm primary address space if the error relates to reading or writing to a DFSMSHsm control data set. The DFSMSHsm primary address space command

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activity log can also be used for further information. Correct error and issue EXPIREBV ABARSVERSIONS command to expire the version.

Source: DFSMSHsm

ARC6371I AGGREGATE RECOVERY ML2 TAPE UNIT NAME = *unitname*

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the tape unit name to use when mounting a nonspecific volume to recover data sets to MIGRATIONLEVEL2 tape.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6372I NUMBER OF ABARS I/O BUFFERS = *number*

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the number of ABARS I/O buffers specified in the SETSYS command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6373I ABARS ACTIVITY LOG OUTPUT TYPE = {SYSOUT(class) | DASD}

Explanation: A QUERY command with the SETSYS or ABARS parameter has been issued. This message displays the ABARS activity log output data set type.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6374E BCDS IS NOT DEFINED, AGGREGATE BACKUP AND RECOVERY FUNCTIONS ARE DISABLED

Explanation: A backup control data set (BCDS) is required to maintain an inventory of aggregate backup and recovery activity.

System action: The aggregate backup and aggregate recovery functions are disabled. DFSMSHsm processing continues.

Programmer response: To support the ABARS functions, the DFSMSHsm BCDS must be defined. See the *z/OS DFSMSHsm Implementation and Customization Guide* for information about defining and referencing the BCDS. Once these changes are made, issue the STOP command and restart DFSMSHsm to enable the ABARS functions.

Source: DFSMSHsm

ARC6375E I/O ERROR READING AGGREGATE VERSION RECORD IN BCDS, AGGREGATE BACKUP AND RECOVERY FUNCTIONS ARE HELD

Explanation: An I/O error has occurred while reading an aggregate version record from the BCDS.

System action: The aggregate backup and aggregate recovery functions are held. DFSMSHsm processing continues.

Programmer response: When the cause of the I/O error is corrected, release either the ABACKUP or ARECOVER, or both, and reissue the request. See ARC0184I in the DFSMSHsm command activity log for further information concerning the nature of the I/O error.

Source: DFSMSHsm

ARC6376I ABARS VERSION *vvvv*, FOR AGGREGATE GROUP *agname*, KEY *aggregate key* WAS {DELETED | NOT DELETED} BY EXPIREBV ABARSVERSIONS COMMAND, RC=*return-code*

Explanation: This message is issued for each ABR record processed as a result of the EXPIREBV ABARSVERSIONS command. The aggregate group *agname* with a key of *aggregate key* is the ABR record which has been processed. The possible values of *return-code* are:

- 0 The ABARS version has been successfully scratched or scheduled to be scratched.
- 8 An error has occurred trying to obtain memory for the volume lists of the control, DFSMSdss data, internal I/O, and the instruction/activity log files.
- 12 An error has occurred in processing one of the files associated with the ABR record.
- 16 An I/O error has occurred trying to delete the BCDS ABR record.

System action: The command continues processing. DFSMSShsm processing continues.

Programmer response: See the previous messages in the backup activity log for details regarding the nature of the error. After correcting the error, reissue the EXPIREBV command.

Source: DFSMSShsm

ARC6377I ABARS FILE *data-set-name* {SUCCESSFULLY | UNSUCCESSFULLY} PROCESSED BY EXPIREBV ABARSVERSIONS COMMAND, RC=*return-code*

Explanation: This message is issued for each aggregate file in the ABR record when the EXPIREBV ABARSVERSIONS EXECUTE command has been issued. The aggregate file *data-set-name* is the control file, DFSMSdss data file, internal I/O data file or the instruction and activity log file associated with the ABR record. The possible values of *return-code* are:

- 0 The file has been successfully uncataloged.
- 4 The file does not exist in the catalog.
- 8 DFSMSShsm has not been able to determine whether the file has been cataloged.
- 12 A RACF error has occurred when trying to remove the file volumes from the RACF HSMABR tape volume set.
- 16 A catalog error has occurred when trying to uncatalog the file.

System action: The command continues processing. DFSMSShsm processing continues.

Programmer response: See the previous messages in the backup activity log for details regarding the nature of the error. After correcting the error, reissue the EXPIREBV command.

Source: DFSMSShsm

ARC6379I THE {DATA | STORAGE | MANAGEMENT} CLASS CONSTRUCTS USED IN THE AGGREGATE GROUP, *agname*, ARE: *constructdefinition1* [...*constructdefinitionn*]

Explanation: An ABACKUP or ARECOVER command was issued and the list of SMS construct definitions associated with the aggregate group is listed.

- *agname* indicates the aggregate group being processed by the aggregate backup or aggregate recovery.
- *constructdefinition1*...*constructdefinitionn* are the construct definitions associated with the data sets being processed by the aggregate backup or aggregate recovery.

System action: DFSMSShsm processing continues.

Issued By: ABARS secondary address space.

Programmer response: None.

Source: DFSMSShsm

ARC6380I AGGREGATE {BACKUP(*agname*) = {HELD | HELD EOD}} | {AGGREGATE RECOVERY (DATASETNAME *data-set-name* | AGGREGATE *agname*) = {HELD | HELD EOD}}

Explanation: A QUERY command has been issued with the ACTIVE parameter. This message indicates the specific aggregate backup and aggregate recovery functions that have been held.

- *agname* is the aggregate group name specified for the ABACKUP or ARECOVER command.
- *data-set-name* is the name of the control file data set specified for the ARECOVER command.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6381E THE VERSION PARAMETER IS INVALID WITH THE AGGREGATE(*) PARAMETER. LIST COMMAND IS REJECTED

Explanation: VERSION is not a valid parameter when LIST AGGREGATE(*) has been specified. DATE is valid for both LIST AGGREGATE(*) and LIST AGGREGATE(*agname*). VERSION is only valid for LIST AGGREGATE(*agname*).

System action: DFSMSHsm processing continues.

Programmer response: Reissue the LIST command.

Source: DFSMSHsm

ARC6382I {INSTRUCTION DATA SET | ACTIVITY LOG *data-set-name*} HAS BEEN SUCCESSFULLY {BACKED UP | RECOVERED}

Explanation: An ABACKUP or ARECOVER command has been issued and the either the instruction data set or the activity log, or both, have been successfully backed up or recovered.

- INSTRUCTION DATA SET indicates the instruction data set has been processed.
- ACTIVITY LOG indicates the activity log has been processed.
- *data-set-name* indicates the name of the instruction data set or activity log that has been processed.
- BACKED UP indicates an ABACKUP command has been issued.
- RECOVERED indicates an ARECOVER command has been issued.

System action: DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6383E AN ERROR OCCURRED {BACKING UP | RECOVERING} THE {INSTRUCTION DATA SET *data-set-name* | ACTIVITY LOG *datasetname*}

Explanation: An ABACKUP or ARECOVER command has been issued and either the instruction data set or the activity log, or both, have failed to be successfully backed up or recovered.

- BACKING UP indicates an ABACKUP command has been issued.
- RECOVERING indicates an ARECOVER command has been issued.
- INSTRUCTION DATA SET indicates the instruction data set has failed to be processed.
- ACTIVITY LOG indicates the activity log has failed to be processed.
- *data-set-name* indicates the name of the instruction data set or activity log that has failed to be processed.

System action: ABACKUP or ARECOVER processing continues. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6384I {INSTRUCTION | ACTIVITY} SPECIFIED ON ARECOVER COMMAND, BUT NO LEVEL 0 VOLUMES ARE AVAILABLE

Explanation: An ARECOVER command has been issued with the INSTRUCTION or ACTIVITY parameter, but no level 0 volumes are available.

- INSTRUCTION — indicates the INSTRUCTION parameter has been specified.
- ACTIVITY — indicates the ACTIVITY parameter has been specified.

System action: The activity log or instruction data set is not recovered. DFSMSHsm processing continues.

Programmer response: ADDVOL L0 volumes and resubmit the ARECOVER command.

Source: DFSMSHsm

ARC6388E INVALID USE OF * IN THE DEFINE ARPOOL COMMAND

Explanation: A DEFINE ARPOOL command has been issued using either the L0VOLS or ML1VOLS parameters, or both, with the * as one of many subparameters. The * should be the first and only subparameter used for the L0VOLS and ML1VOLS.

System action: DFSMSHsm DEFINE ARPOOL processing ends. DFSMSHsm processing continues.

Programmer response: Reissue the command using the correct parameters.

Source: DFSMSHsm

ARC6389E GETMAIN ERROR - COMMAND PROCESSING FAILED - AGGREGATE BACKUP AND RECOVERY FUNCTIONS ARE HELD

Explanation: An ABACKUP or ARECOVER command has issued a GETMAIN request that has failed because not enough virtual storage is available.

System action: The command being processed fails. The aggregate backup and aggregate recovery functions are held. DFSMSHsm processing continues.

Programmer response: Increase the region size of the DFSMSHsm primary address space, release the held functions, and reissue the command, or release the held functions and reissue the command when there is less DFSMSHsm activity. See message ARC0307I in the DFSMSHsm command activity log for additional information regarding the nature of the GETMAIN error.

Source: DFSMSHsm

ARC6390E CATALOG LOCATE ERROR OCCURRED FOR DATA SET *data-set-name* DURING *functionname* PROCESSING - COMMAND PROCESSING FAILED. AGGREGATE BACKUP AND RECOVERY FUNCTIONS ARE HELD

Explanation: An ABACKUP or ARECOVER command issued a catalog locate for the data set *data-set-name*. The catalog locate function failed.

System action: The command processing is ended. Aggregate backup and recovery are held. DFSMSHsm processing continues.

Programmer response: See message ARC0377I in the DFSMSHsm command activity log for additional information regarding the nature of the catalog locate error. Once the error has been corrected, release the functions and reissue the command.

Source: DFSMSHsm

ARC6391E ERROR DELETING DFSMSHSM CONTROL DATA SET *type* RECORD, KEY=*key*, RC=*return-code*

Explanation: An ARECOVER command has attempted to delete a DFSMSHsm CDS record. The delete attempt fails.

System action: ARECOVER processing is discontinued. DFSMSHsm processing continues.

Programmer response: See the *z/OS DFSMSHsm Storage Administration*, in the section "Maintaining DFSMSHsm Control Data Sets" for information to aid in problem resolution.

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Source: DFSMSHsm

ARC6392I ALLOCATION ERROR OCCURRED DURING {ABACKUP | ARECOVER } FOR THE INSTRUCTION/ACTIVITY LOG FILE *data-set-name*, {ABACKUP | ARECOVER } PROCESSING CONTINUES

Explanation: An allocation error has occurred while attempting to process the instruction/activity log file.

- ABACKUP indicates that aggregate backup has received an error while allocating the data set.
- ARECOVER indicates that aggregate recovery has received an error while allocating the data set.
- *data-set-name* indicates the name of the instruction/activity log file being allocated.

System action: Aggregate backup or aggregate recovery continues. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6393I {ALLOCATION | OPEN | OUTPUT} ERROR OCCURRED WRITING THE SYSIN DATA SET FOR THE INSTRUCTION/ACTIVITY LOG FILE *data-set-name*

Explanation: An ALLOCATION, OPEN, or OUTPUT error has occurred while attempting to write the SYSIN data set for an ABACKUP or ARECOVER command. ABACKUP or ARECOVER processing continues.

- *data-set-name* is the name of the instruction or activity log file.

System action: Aggregate backup or aggregate recovery continues. The instruction or activity log is either not backed up when processing an aggregate backup or not recovered when processing an aggregate recovery. DFSMSHsm processing continues.

Programmer response: None.

Source: DFSMSHsm

ARC6394E ERROR OCCURRED IN WRITING AGGREGATE VERSION RECORD *aggregate key* TO THE DFSMSHSM BACKUP CONTROL DATA SET

Explanation: A error has occurred writing an aggregate version record to the backup control data set (BCDS). If the record is a copy record, the write to the BCDS may have been bypassed due to a previous write error in another copy record.

- *aggregate key* indicates the key of the ABR record which could not be written to the BCDS.

System action: DFSMSHsm processing continues. The aggregate version record is not written to the BCDS.

Issued By:ABARS secondary address space.

Programmer response: See message ARC0184I, issued by the DFSMSHsm primary address space. The DFSMSHsm primary address space command activity log and the output from the problem determination aid can be used for further information.

Source: DFSMSHsm

ARC6395I ROLLOFF PROCESSING FOR AGGREGATE GROUP *agname* DID NOT TAKE PLACE, THE ASSOCIATED MANAGEMENT CLASS *mgmt-class-name* WAS NOT FOUND

Explanation: The management class associated with aggregate group (*agname*) has not been found, therefore no aggregate backup records have been rolled off.

- *agname* indicates the aggregate group name.
- *mgmt-class-name* indicates the management class name.

System action: DFSMSHsm processing continues. Excess aggregate version records are not deleted from the backup control data set.

Programmer response: None.

Source: DFSMSHsm

ARC6396E THE VERSION AND DATE PARAMETERS ARE ONLY VALID WITH THE AGGREGATE PARAMETER. LIST COMMAND IS REJECTED

Explanation: The VERSION and DATE parameters apply only to the LIST command with the AGGREGATE parameter. VERSION and DATE parameters are not valid with any command parameters except LIST AGGREGATE.

System action: DFSMSHsm processing continues.

Programmer response: Reissue the LIST command.

Source: DFSMSHsm

ARC6397E ERROR OCCURRED IN {READING | WRITING} THE {MCV | TTOC} RECORD KEY *key*

Explanation: An error has occurred reading or writing an MCV or TTOC record to its associated control data set.

- *key* indicates the key of the MCV or TTOC record which could not be read from or written to its associated control data set.

System action: DFSMSHsm processing continues.

Programmer response: See message ARC0184I, issued by the DFSMSHsm primary address space. The DFSMSHsm primary address space command activity log can be used for further information. Issue an AUDIT DIRECTORYCONTROLS VOLUMES command to cross-check the control records.

Source: DFSMSHsm

ARC6398E {ABACKUP | ARECOVER} PROCESSING HAS BEEN STOPPED BY A HOLD EOD COMMAND

Explanation: A HOLD EOD command has been issued to stop the processing of an ABACKUP or ARECOVER command.

System action: ABACKUP or ARECOVER command processing is discontinued. DFSMSHsm processing continues.

Programmer response: The programmer should issue the RELEASE ABACKUP or ARECOVER command with the appropriate parameters to remove the HOLD.

If this message is issued during ABACKUP processing, the programmer needs to decide whether to reissue the ABACKUP command. If it is determined that the output tapes have been written, the ABACKUP processing is considered complete and no further action is necessary.

If this message is issued during ARECOVER processing, reissue the ARECOVER command at a later time to complete the aggregate recovery processing.

Source: DFSMSHsm

ARC6399E ERROR OCCURRED DURING TSO TERMINAL MONITOR PROGRAM INITIALIZATION, STACK RC=*stackrc*, AGGREGATE RECOVERY FAILED

Explanation: An error occurred during the initialization of the Terminal Monitor Program (TSO), required for TSO communications. The STACK macro returned a nonzero return code indicated by the *stackrc* value.

System action: DFSMSHsm processing continues. ARECOVER processing ends.

Issued By: ABARS secondary address space.

Programmer response: Correct the error indicated by the *stackrc*. If the *stackrc* is X'00000008', verify that MSYSIN and MSYSOUT DD statements are in the DFSMSHsm ABARS startup JCL. This procname is either DFHSMABR or what is specified in the SETSYS ABARSPROCNAM command. Reissue the ARECOVER command. See *z/OS TSO/E Programming Guide* for more information about the STACK macro and associated return codes.

Source: DFSMSHsm

ARC6400E THE {AGGREGATE | DATASETNAME} PARAMETER MAY ONLY BE USED WITH THE {HOLD | RELEASE} ARECOVER COMMAND

Explanation: The AGGREGATE or DATASETNAME parameter has been specified for the HOLD or RELEASE command. These parameters are only valid when performing a HOLD or RELEASE for an ARECOVER command.

System action: HOLD or RELEASE processing is discontinued. DFSMShsm processing continues.

Programmer response: Reissue the HOLD or RELEASE command using proper command syntax.

Source: DFSMShsm

ARC6401I TAPE VOLUME *volser* SUCCESSFULLY DELETED FROM THE ABARS RACF TAPE VOLUME SET

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. The volume serial number of *volser* has been successfully deleted from the ABARS RACF tape volume set of HSMABR.

System action: DFSMShsm processing continues.

Operator response: This message informs you that DFSMShsm is removing RACF protection from a tape volume.

Programmer response: None.

Source: DFSMShsm

ARC6402I CONCURRENT COPY INITIALIZATION IS COMPLETE FOR AGGREGATE *agname*. ANY SERIALIZATION HAS BEEN RELEASED. JOB = *jobname*.

Explanation: The initialization of the concurrent copy session completed. Therefore, serialization of the data being dumped with concurrent copy is no longer necessary and it was released. The data is now available for update activity without affecting the dump operation already in progress.

- *agname* is the name of the aggregate group processing.
- *jobname* is the name of the job submitted by the ABACKUP command if issued by a batch job, a batch TMP, or a TSO terminal.

Note: If the ABACKUP command was issued from the console, then *jobname* is CONSOLE.

System action: Aggregate backup processing continues. **Issued By:** ABARS secondary address space.

Operator response: Serialization was released for all data sets processed by the concurrent copy function in ABARS aggregate backup. This message can be used by the console operator to submit a follow-on job, initiate a data base application, or request another backup. This message can also be used as input for console automation products to invoke similar activities.

Programmer response: This message informs you the level 0 DASD data sets dumped with concurrent copy, are now available for update activity. See the DFSMSdss message ADR734I for the number of data sets successfully established into the concurrent copy session, and the total number of data sets selected for concurrent copy. If the number of concurrent copy data sets is less than the number of selected data sets, one or more ADR735W messages are issued indicating what data sets were not successfully established into the concurrent copy session and why.

Source: DFSMShsm

ARC6403I THE ELAPSED CPU TIME FOR THIS {ABACKUP | ARECOVER} IS NOT RELIABLE DUE TO A TIMEUSED MACRO FAILURE.

Explanation: Due to a TIMEUSED macro failure, the CPU time in the WWFSR and ABR records for this ABACKUP or ARECOVER is not reliable.

System action: Aggregate backup or aggregate recovery continues. DFSMShsm processing continues.

Programmer response: None.

Source: DFSMShsm

ARC6404E NOTHING WAS BACKED UP DURING THE BACKUP OF AGGREGATE GROUP *agname* - AGGREGATE BACKUP FAILED.

Explanation: No data sets or data set attributes were backed up as a result of the aggregate backup. This situation can occur if the ABARS backup error installation exit (ARCBEEEXT) is invoked for every data set in the aggregate and is coded to skip the data sets in error.

agname is the name of the aggregate group which did not contain any data as a result of the aggregate backup.

System action: Aggregate backup fails. DFSMSHsm processing continues.

Programmer response: Correct the problem that resulted in the error condition for which the ARCBEEEXT was invoked. Then, reissue the ABACKUP command.

Source: DFSMSHsm

ARC6405E MIGRATED DATA SET *data-set-name1* COULD NOT BE RENAMED TO *data-set-name2*, THIS DATA SET WILL BE BYPASSED DURING AGGREGATE RECOVERY

Explanation: An ARECOVER command has been issued with the RECOVERNEWNAMEALL, RECOVERNEWNAMELEVEL, or DATASETCONFLICT (RENAMESOURCE) parameter. The result of the rename has caused the data set name to be truncated. The data set was backed up as a migrated (ML1 or ML2) data set. Recovering this migrated data set with a truncated name would eventually result in a RECALL failure. The data set will be BYPASSED during this aggregate recovery.

- *data-set-name1* is the data set's original name
- *data-set-name2* is the data set's name after renaming

System action: DFSMSHsm processing continues. ARECOVER processing continues.

Programmer response: The result of the data set rename caused the data set to exceed the 44 character limit. As a result, 1 or more characters were eliminated from the end of the data set name, causing the name to be truncated. This data set must be BYPASSED during the recovery because it is migrated. If this data set were to be recovered with its new, truncated name, an error would result when an attempt to RECALL it is made.

If you still wish to recover this data set with a new name, you must specify a high level qualifier, with the RECOVERNEWNAMEALL, RECOVERNEWNAMELEVEL, or DATASETCONFLICT (RENAMESOURCE) parameter, that is equal to or less than the length of the original, thus avoiding the truncation. Rerun the ARECOVER command with the newly specified high level qualifier to recover those migrated data sets that were BYPASSED during the initial ARECOVER.

Source: DFSMSHsm

ARC6410E CANNOT ARECOVER TO ML2 WORM TAPE. THE ARECOVER FAILED FOR {AGGREGATE GROUP *aggregate* | CONTROL FILE *controlfile*}.

Explanation: ARECOVER processing tried to mount a WORM tape for the recovery of an ML2 tape. ML2 tapes cannot be WORM.

System action: ARECOVER processing for ML2 ends.

Operator response: Notify the system programmer.

System programmer response: Change the system setup to not mount WORM ML2 tapes for ARECOVER processing. This could involve changing your tape pooling support in a non SMS tape environment or ACS/data class routines for SMS tape.

Source: DFSMSHsm

ARC6411E DATA SET *data-set-name1* SPECIFIED FOR ONLYDATASET WITH NAME PARAMETER DOES NOT EXIST IN CONTROL FILE DATA SET *data-set-name2*

Explanation: Data set *data-set-name1* specified on the ONLYDATASET with the NAME parameter on ARECOVER command is not identified as being part of the aggregate group being recovered.

- *data-set-name1* — fully qualified name of data set to be recovered
- *data-set-name2* — name of control file data set

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System action: ARECOVER processing fails.

DFSMSHsm processing continues.

Operator response: None.

System programmer response: None.

Programmer response: Determine if the name of the *data-set-name1* is spelled correctly. Correct the error and reissue the ARECOVER command.

Source: DFSMSHsm

ARC6412E NO DATA SETS FROM LISTOFNAMES DATA SET *data-set-name1* EXIST IN CONTROL FILE DATA SET *data-set-name2*

Explanation: No data set names from the specified LISTOFNAMES data set are part of the aggregate recovery.

- *data-set-name1* — fully qualified name of the LISTOFNAMES data set that is being processed.
- *data-set-name2* — name of control file data set.

System action: ARECOVER processing fails.

DFSMSHsm processing continues.

Operator response: None.

System programmer response: None.

Programmer response: None.

Source: DFSMSHsm

ARC9000–ARC9299

Explanation: Message numbers ARC9000 through ARC9299 have been set aside for use by DFSMSHsm installation-wide exits, either as samples supplied by DFSMSHsm or messages written by customers. For an explanation of these messages, customers have to locate the issuing exit or any user-created documentation for that exit. Message numbers ARC9000I through ARC9099I are intended for installation messages pertaining to RECALL commands. Message numbers ARC9100I through ARC9199I are intended for installation messages pertaining to RECOVER commands.

ARC9997I TPUT REQUEST TO USER *userid* COULD NOT BE PROCESSED. AFTER RETRYING TPUT, DATA WAS DISCARDED

Explanation: DFSMSHsm has received a buffer full condition attempting to TPUT a message to TSO user *userid*. After 20 TPUT attempts, DFSMSHsm has discarded the message.

System action: DFSMSHsm processing continues.

Programmer response: The buffer full condition has been caused by a TSO user's failure to clear the screen. Either increase the number of buffers available to TSO or do not let messages accumulate on the screen.

Source: DFSMSHsm

ARC9998I INTERNAL DFSMSHSM FAILURE, PARAMETER LIST ERROR

Explanation: An internal call from one module to another has an error in the parameter list. The function could not be performed, and the modules involved have been recorded in the command log (message ARC0200I/ARC0208I). The return code generated was 400–499.

System action: The task currently running fails the request. DFSMSHsm processing continues.

Programmer response: Notify the system programmer to take appropriate action.

Source: DFSMSHsm

ARC9999I MESSAGE NOT FOUND

Explanation: DFSMSHsm has attempted to write a message to the user or the operator. The message could not be found among DFSMSHsm messages.

System action: DFSMSHsm processing continues.

Operator response: Notify the system programmer for assistance.

Programmer response: This is a programming error.

Source: DFSMSHsm

Status messages on the DATA SPACE ADMINISTRATION LIST panel

This appendix contains a list of the messages that can appear on the DATA SPACE ADMINISTRATION LIST panel when you use space maintenance. The messages are listed in alphabetical order.

Messages appear on the DATA SPACE ADMINISTRATION LIST panel if you do not supply correct information to continue. The messages that are generated by a specific data set name are logged in the ISPF log. You also receive TSO line I/O messages for any errors that occur from TSO functions. If DFSMSHsm is not operational, TSO rejects the command.

The messages follow the format of ISPF messages. The 24-character message appears in the upper right hand corner. If you press the HELP key, the optional 72-character extended message appears on the third line. If you press the HELP key again, the panel HELP tutorial is displayed.

The following messages are arranged in alphabetical order by the short message. The DFQxxx message number is not displayed on the panel; however, it is documented here with the message for future reference in *z/OS DFSMSHsm Diagnosis*.

• CAMLST LOCATE ERROR (DFQ031)

Explanation: A LOCATE ERROR USING A CAMLST OCCURRED, R0=r0, RC=*return-code*

User response: Request assistance from the system programmer. Register 0 error code and the register 15 return code *return-code* from CAMLST are reported in hexadecimal numbers. For the meaning of these codes, see *z/OS DFSMS Using Data Sets*.

• CAMLST OBTAIN ERROR (DFQ035)

Explanation: AN I/O ERROR OCCURRED READING THE VTOC, RC=*return-code*, VOLUME=*volume*

User response: Request assistance from the system programmer. The register 15 return code *return-code* from CAMLST is reported in hexadecimal numbers. For the meaning of these codes, see *z/OS DFSMS Using Data Sets*.

• CANNOT CONDENSE DATASET (DFQ052)

Explanation: CANNOT CONDENSE A DATASET WITH A VOLUME SERIAL OF MIGRAT

User response: Specify CONDENSE only with data sets that are not migrated.

• CHARACTERS NOT FOUND (DFQ028)

Explanation: THE DATA SET SPECIFIED WITH LOCATE WAS NOT FOUND IN THE DATA SPACE ADMINISTRATION LIST

User response: The DATA SPACE ADMINISTRATION LIST was obtained with at least one sort parameter. Here the

LOCATE command requires that the list have an exact match to the LOCATE operand. The LOCATE argument is left in the command area if a misspelling was the cause.

• **CLIST NAME MISSING (DFQ036)**

Explanation: A CLIST NAME MUST BE PRESENT TO ALLOW THE CLIST OPTION

User response: Use the CLIST maintenance option after specifying a CLIST name. This message appears on the CLIST OPERAND screen.

• **DATA SET NAME TOO LONG (DFQ023)**

Explanation: THE DATA SET NAME WITH YOUR PREFIX APPENDED EXCEEDS 44 CHARACTERS

User response: Enter the correct name or put the name in quotes if the PREFIX should not be added. This message appears on the DATA SPACE ADMINISTRATION SELECTION ENTRY panel or the DATA SPACE ADMINISTRATION FILTER ENTRY panel.

• **DATA SET SIZE INVALID (DFQ032)**

Explanation: DATA SET SIZE ZERO OR NOT NUMERIC

User response: Do not specify zero or a non-numeric value for DATA SET SIZE. This message appears on the DATA SPACE ADMINISTRATION FILTER ENTRY panel.

• **DFSMSHsm MCDS READ ERROR (DFQ039)**

Explanation: AN MCDS READ FOR A D RECORD PRODUCED AN MWE ERROR=*return-code*

User response: The register 15 MWE ERROR *return-code* is reported in hexadecimal numbers. Consult the error codes for DFSMSHsm I/O in "ARC return codes and reason codes" on page 552.

For an error code of 0, the catalog indicates that the data set is migrated but the control data set indicates that it is not migrated. If this problem persists, the catalog and the control data set MCD record must be synchronized through a FIXCDS command. This can also be a problem of short duration and can be resolved by simply retrying the command which generated the message.

• **DFSMSHsm NOT OPERATIONAL (DFQ038)**

Explanation: THE DFSMSHsm SUBSYSTEM IS NOT OPERATIONAL

User response: Contact the system program programmer to find out why DFSMSHsm is not in operation.

• **DSN NOT IN CATALOG(s) (DFQ011)**

Explanation: THE DSN SPECIFIED IS NOT LOCATED IN ANY AVAILABLE CATALOG

User response: On the DATA SPACE ADMINISTRATION SELECTION ENTRY panel, specify a DATA SET NAME that exists.

• **DSORG MUST BE PS/PO (DFQ019)**

Explanation: DATA SET ORG FOR A CONDENSE MUST BE PARTITIONED (PO) OR SEQUENTIAL (PS)

User response: Specify the CONDENSE operator only with partitioned or sequential data sets.

• **FIELD NOT NUMERIC (DFQ042)**

Explanation: THE FIELD WHERE THE CURSOR IS LOCATED MUST BE NUMERIC

User response: The field values must be digits 0 through 9.

- **FREEMAIN ERROR (DFQ034)**

Explanation: A RETURN CODE FROM A FREEMAIN AT ADDRESS WAS RC=*return-code*

User response: Request assistance from the system programmer. The register 15 return code *return-code* from the FREEMAIN is reported in HEX. The storage was originally obtained from subpool 0. For the return code meanings, see *z/OS DFSMS Macro Instructions for Data Sets*.

- **INSUFFICIENT STORAGE (DFQ027)**

Explanation: THE RETURN CODE FROM A GETMAIN FOR *byte* BYTES WAS RC=*return-code*

User response: Contact the system programmer for problem determination. The amount of storage requested from the ISPF address space and the register 15 return code *return-code* are reported in hexadecimal numbers. The storage was attempted to be obtained from subpool 0. For the return code meanings, see *z/OS MVS Programming: Authorized Assembler Services Guide* or *z/OS DFSMS Macro Instructions for Data Sets*.

- **INVALID BACKUP VERSIONS (DFQ040)**

Explanation: BACKUP VERSIONS MUST BE A 1 TO 2 DIGIT NUMBER, 0 TO 13

User response: Enter versions that follow the rules of a one or two digit number and supply a number no larger than 13.

Space maintenance messages

- **CATALOG DOES NOT EXIST (DFQ026)**

Explanation: A CAMLIST LOCATE GAVE A RETURN CODE OF 4

- **INVALID CONDENSE FUNC (DFQ024)**

Explanation: CONDENSE CANNOT BE ISSUED FOR A TAPE ONLY MIGRATE SYSTEM

- **INVALID DATA SET NAME (DFQ014)**

Explanation: DSN IS 1 OR MORE 1-TO-8 ALPHAMERIC QUALIFIERS OR A * OR A ** BETWEEN .S

User response: Specify a DATA SET NAME on the DATA SPACE ADMINISTRATION SELECTION ENTRY panel or the DATA SPACE ADMINISTRATION FILTER ENTRY panel as one to eight character alphameric qualifiers or a * or a ** separated by periods. If the DATA SET NAME is not entered in quotes, the TSO prefix is placed at the beginning of the entered name.

- **INVALID DATE/DAYS (DFQ016)**

Explanation: FIELD MUST BE NUMERIC, DATE MUST BE YYDDD OR YYMMDD FORMAT

User response: For EXPIRATION, CREATION, or LASTUSE, specify a numeric field. For EXPIRATION DATE, CREATION DATE, and LAST REFER DATE, specify a numeric field in the form *yyddd* or *yymmdd*. If *yyddd* is used, *ddd* must be 1 to 366. If *yymmdd* is used, *mm* must be 01 to 12, and *dd* must be 01 to 31. This message appears on the DATA SPACE ADMINISTRATION FILTER ENTRY panel.

- **INVALID INPUT COMMAND (DFQ021)**

Explanation: THE INPUT COMMAND MUST BE L, LO, LOC, LOCA, LOCAT, LOCATE

User response: Specify the input command as L, LO, LOC, LOCA, LOCAT, or LOCATE. ISPF commands are also valid in this field. This message appears on the DATA SPACE ADMINISTRATION LIST.

• **INVALID INPUT COMMAND (DFQ053)**

Explanation: An error occurred when scanning the command field.

User response: Correct the input and resubmit.

• **INVALID LINE POSITION (DFQ037)**

Explanation: ENTER A MAINTENANCE FUNCTION IN THE FIRST LINE OPERATOR FIELD FOR THIS DATA SET

User response: When the data set name length causes the entry to take two lines on the selection list, enter an operator in only the first of the possible fields. This message appears on the DATA SPACE ADMINISTRATION LIST panel.

• **INVALID MAINT FUNCTION (DFQ025)**

Explanation: THE MAINT FUNCTION MUST BE VALID OR A VALID ABBREVIATION

User response: The maintenance option must be one of the supported operators. These are BROWSE, DELETE, CLIST, HMIGRATE, HRECALL, HBACKDS, HRECOVER, HBDELETE, HALTERDS, or CONDENSE. This message appears on the DATA SPACE ADMINISTRATION LIST.

• **INVALID SCROLL AMOUNT (DFQ022)**

Explanation: SCROLL AMOUNT MUST BE MAX, M, HALF, PAGE, OR A 1 TO 4 DIGIT NUMBER

User response: Specify the scroll amount as 1 to 9999 (data sets) or MAX, M, HALF, or PAGE. This message appears on the DATA SPACE ADMINISTRATION LIST.

• **INVALID SORT OPTIONS (DFQ013)**

Explanation: UP TO 3 SORT FIELDS...1,2,3 MAY BE SPECIFIED BUT NOT DUPLICATED

User response: Specify sort fields as 1..or..1,2..or..1,2,3. Do not duplicate or leave out any of the numbers. This message appears on the DATA SPACE ADMINISTRATION SORT ENTRY panel.

• **INVALID VERSION DATE (DFQ048)**

Explanation: THE DATE MUST BE YY/MM/DD OR MM/DD/YY OR MM/DD - LEADING 0S NOT REQD

User response: The date must be one of three valid formats, YY/MM/DD or MM/DD/YY or MM/DD. In the last format, the year is the current year.

• **INVALID VERSION LIST (DFQ046)**

Explanation: SPECIFY UP TO 13, 1 TO 3 DIGIT VERSION NUMBERS, SEPARATED BY COMMAS

User response: Specify no more than 13 numeric values no more than 3 digits each.

• **LEADING * OR ** INVALID (DFQ010)**

Explanation: DO NOT START DATA SET NAME WITH * OR ** IF ENTERED WITH QUOTES

User response: When specifying a DATA SET NAME on the DATA SPACE ADMINISTRATION SELECTION ENTRY panel, if the data set name is entered in quotes, do not start the field with an * or an **.

• **MISSING LOCATE OPERAND (DFQ020)**

Explanation: THE LOCATE COMMAND MUST BE FOLLOWED BY AN OPERAND

User response: Specify an operand for locate on the DATA SPACE ADMINISTRATION LIST.

• **MUST BE Y OR BLANK (DFQ015)**

Explanation: THE FIELD WHERE THE CURSOR IS LOCATED MUST BE Y OR BLANK

User response: Specify either Y or blank.

• **MUST BE Y, N, OR BLANK (DFQ017)**

Explanation: THE FIELD WHERE THE CURSOR IS LOCATED MUST BE Y, N, OR BLANK

User response: Specify either Y, N, or blank.

• **MUST BE Y OR N (DFQ018)**

Explanation: THE FIELD WHERE THE CURSOR IS LOCATED MUST BE Y OR N

User response: Specify either Y or N.

• **MUTUALLY EXCLUSIVE FIELD (DFQ044)**

Explanation: THIS FIELD IS MUTUALLY EXCLUSIVE WITH THE PRECEDING FIELD

User response: Specify this field only when the preceding field is blank.

• **NEWNAME REQUIRED (DFQ049)**

Explanation: NEWNAME IS REQUIRED WITH NEW PASSWORD

User response: Specify NEWNAME if a NEW PASSWORD is given.

• **NO DATA SETS FOUND (DFQ012)**

Explanation: NO DATA SETS MEET THE FILTER CRITERIA SPECIFIED

User response: Broaden or change the selection criteria for this selection. This message appears on the DATA SPACE ADMINISTRATION FILTER ENTRY panel.

• **PCNT SP USED NOT NUMERIC (DFQ033)**

Explanation: PERCENT SPACE USED NOT NUMERIC

User response: Do not specify a non-numeric value for PERCENT SPACE USED. This message appears on the DATA SPACE ADMINISTRATION FILTER ENTRY panel.

• **REQUIRED INPUT FIELD (DFQ045)**

Explanation: WHEN VOLUME OR UNIT IS SPECIFIED, SPECIFY BOTH

User response: Specify both unit and volume when required. Do not specify only one.

• **RETIRED VERSION NUMBER INVALID (DFQ050)**

Explanation: RETIRED VERSION NUMBER CANNOT BE IN THE VERSION INPUT FIELD

User response: Specify a Y in the DELETE RETIRED VERSION field. This is the only way that you can delete the retired version.

• **SVC 26 LOCATE ERROR (DFQ030)**

Explanation: SVC 26 LOCATE, RC=*return-code*

User response: Request assistance from the system programmer. The register 15 return code *return-code* for an SVC 26 LOCATE request error is reported in hexadecimal numbers. For a detailed list of these codes, see *z/OS MVS System Messages, Vol 6 (GOS-IEA)* under message IDC3009.

• **TSO COMMAND ERROR (DFQ041)**

Explanation: A TSO COMMAND WAS ISSUED AND PRODUCED AN ERROR, RC=*return-code*

User response: The register 15 return code *return-code* for a TSO command request error is reported in hexadecimal numbers. Follow the action indicated by the associated TSO message.

• **VERSIONS INVALID (DFQ043)**

Explanation: EACH VERSION MUST BE 1, 2, OR 3 DIGITS, ONLY 13 ARE ALLOWED

• **WILL NOT DISPLAY ALIAS (DFQ051)**

Explanation: WILL NOT ALLOW YOUR ALIAS TO BE DISPLAYED

User response: On the DATA SPACE ADMINISTRATION SELECTION ENTRY panel, you cannot display the data set (alias) the same as the TSO prefix.

ARC return codes and reason codes

The tables below contain error return codes and reason codes from DFSMSHsm.

Table 4. Return Codes for RECALL/RECOVER Functions for ARC11nnl Error Messages

Retcode	Meaning
1	Error reading a control data set record.
2	The data set is not backed up or migrated.
3	The MVT or MCV record is not found for the migration volume.
4	No primary volume is available for RECALL.
5	Volume setup list does not include the volume requested.
6	Error in allocating the output data set.
7	Error renaming the primary copy of the data set.
8	Error in cataloging or recataloging the recovered data set.
9	Error in updating the MCB or MCD records.
10	Delete failed due to a JES3 setup expiration data or a data set expiration date.
11	Premature end-of-file.
12	I/O error in reading the input data set.
13	I/O writing primary copy data set.
14	Catalog locate error.
15	Delete failed due to specification of cluster or component name, migration copy name.
16	Data set in use.
17	Error in reading the JFCB.
19	Error in updating the data set VTOC entry.
20	Unsupported device type.
21	The requested volume is unavailable.
22	A failed password check.
23	Alter NEWNAME request failed.
24	Not enough space on the target volume.
25	Bad values returned from the RECALL installation-wide exit.
26	Undirected recall after prior recall installation-wide exit failed.

Table 4. Return Codes for RECALL/RECOVER Functions for ARC11nnI Error Messages (continued)

Retcode	Meaning
28	BACKUP/DUMP copy does not exist.
29	NEWNAME data set exists on target volume.
31	Operator cancelled the mount for input volume.
33	The old copy exists but REPLACE was not specified.
34	Error in scratching the old copy of the data set.
35	Error in opening the input data set.
36	Error in opening the output data set.
37	Invalid unit type specified.
38	I/O error reading from a backup version or migration copy data set.
39	Authorization failed.
40	RECOVERY function is disabled.
41	Error during cleanup of VSAM during recall.
42	"A" entries for the VSAM sphere were not cataloged.
43	Error retrieving catalog information during RECOVER.
45	The data set is migrated or the target volume is a migrated volume.
46	OBTAIN failed for data set VTOC entry.
47	Partitioned data set has more than 1 NOTE list.
49	Device type and data set are incompatible.
50	There are no units available for mount.
51	Another DFSMSHsm process is using this data set.
52	There is a GETMAIN or FREEMAIN error.
53	MSS is inactive.
54	Error in installation-wide exit.
55	Error during IDCAMS IMPORT of VSAM data set.
56	Catalog locate error.
57	Cannot recover with the new name.
58	Recovery failed due to data integrity problem.
59	Delete of the existing VSAM failed.
60	Error in establishing the ESTAE environment.
62	DFSMSDss not at sufficient level.
63	Volume deallocation error.
64	Volume allocation error.
66	Data set RESTORE from dump volume failed.
67	Data set referenced after start of RECOVER command processing with the APPLYINCREMENTAL parameter.
68	Error in positioning to input data set.
69	An error occurred in DSS. See DSS messages and message ARC1169I.
70	Error while processing an SMS-managed data set.
71	User not authorized to recover an OS CVOL.
72	SMS-related error while selecting a target volume.

Table 4. Return Codes for RECALL/RECOVER Functions for ARC11nnl Error Messages (continued)

Retcode	Meaning
73	VSAM component specified for recovery.
74	The request function was held.
75	RECALL of a data set was changed to NOWAIT.
80	The tape migration volume is in use by recycle.
81	Error in allocating the tape data set.
82	The tape volume is in use by migration.
86	A shutdown was encountered during OPEN.
88	RESTORE of a data set failed.
90	Cluster can be recalled but not deleted.
91	Error uncataloging data set.
92	DFSMSHsm is shutting down.
95	Tape unavailable or unable to be mounted.
97	There was an internal error during allocation.
99	VBS data set RECOVER/RECALL attempted to incompatible device.

Table 5. Return Codes for MIGRATION Functions for ARC12nnl Error Messages

Retcode	Meaning
2	Catalog locate error during migration.
3	Obtain error in reading data set VTOC entry.
5	No migration volume available.
6	The data set is already migrated, or duplicate data set name in MCDS.
7	OBTAIN error on data set extension VTOC entry.
8	Error in allocating the output data set.
9	Unique migration name is not created. I/O cannot migrate VSAM data set with outstanding migration control record.
10	Cannot migrate VSAM data sets with outstanding migration control record.
11	Error in creating or updating the MCDS record.
13	Error in cataloging the data set from the source volume to migrate.
14	Error in scratching the data set from the source volume during migration.
15	More than one note list in PDS, target volume is DASD.
16	An I/O error in reading of a data set.
17	An I/O error in reading input of a directory of a PDS.
18	An I/O error in writing the output data.
19	Data set is in use by another job or user, migration rejected.
20	Data set not eligible for migration.
21	Missing or unsupported device type for space management.
22	Error processing password-protected data set.
23	The input volume is not mounted.
24	Data set not available for migration.
25	Error in reading the CDS record during migration.

Table 5. Return Codes for MIGRATION Functions for ARC12nnl Error Messages (continued)

Retcode	Meaning
26	CDS control interval is in use.
27	Data set has no extents.
30	Data set not cataloged.
32	Volume not eligible for command space management.
33	Data set not on Level 1 or Level 2.
34	Level 2 not defined for migration.
35	Error in opening the input data set.
36	Error in opening the output data set.
37	No space on the migration volume.
38	Password protected data set is not allowed on a non-password protected tape.
39	A RACF check failed to obtain ERASE status.
42	Error reading JFCB.
44	VTOC error during data set allocation on target volume.
45	The data set is not eligible for migration.
46	Offline control data set not found.
47	Tape label error.
48	Data set exceeds 254 tape limitation.
49	Failure attempting to remove RACF protection from tape migration volume.
50	No units are available to mount a migration volume.
51	The data set is in use by another DFSMSHsm function, migration rejected.
52	GETMAIN or FREEMAIN error, migration terminated.
54	Abnormal end in the tape data set installation-wide exit.
55	Error in EXPORT during VSAM data set migration.
56	Invalid data set name when reading VTOC.
57	An I/O error in updating DSCB.
58	Migration failed for data set.
59	DBA/DBU failed ...error deleting data set.
60	Failure to establish an ESTAE environment during migration.
61	Error during internal ADDVOL of tape migration volume.
62	CDS record is in use by another processing unit.
64	Failure in closing the input data set.
65	Error closing output data set.
66	Specified I/O volume not available for Space Management.
67	Error obtaining block ID.
69	SYNCDEV error.
70	Error while processing an SMS-managed data set.
72	SMS-related error allocating a target volume.
74	Migration requested, but HOLD MIGRATION was in effect.
80	Data set is in need of BACKUP.
81	Error allocating tape volume.

Table 5. Return Codes for MIGRATION Functions for ARC12nnl Error Messages (continued)

Retcode	Meaning
82	Migration of data from a tape volume is not supported.
83	Cannot move VTOC COPY data set.
84	CONVERT option in a Direct-to-Tape environment is not allowed.
85	VSAM data set is migrated to tape; not TTOC entry exists.
86	DFSMSHsm shutdown occurred while waiting for a tape mount.
92	Termination of DFSMSHsm MIGRATION WAIT request.
94	Unable to open VTOC.
95	Tape volume could not be mounted.
96	Error in reading JFCB to update VTOC.
97	An internal DFSMSHsm error during allocation of a source data set.
99	Unsupported data set organization.

Table 6. Return Codes for BACKUP Functions for ARC13nnl Error Messages

Retcode	Meaning
2	A catalog locate error.
3	OBTAIN error reading data set VTOC entry.
4	Required migration volume not available.
5	No volume available for backup.
6	An error occurred reading JFCB for the VTOC copy data set.
7	OBTAIN error in reading data set extension VTOC entry.
8	Error in allocating target backup version of DASD backup volumes.
9	Failed to generate a unique backup version name.
11	Error in creating or updating the backup control data set record.
12	Failure to create BCDS MCM record.
15	A partitioned data set cannot be backed up with more than one note list in the member.
16	I/O error in reading or opening the source data set.
17	I/O error in reading the PDS directory.
18	I/O error writing the backup copy.
19	Error in allocating a backup version on source volume because the backup version is in use.
20	Data set not eligible for backup.
21	Missing or unsupported device type requested.
22	Error processing password-protected data set.
23	Error in allocating a backup version on source volume because the volume cannot be mounted.
24	Error in reading or updating a record in the MCDS.
25	Error in reading the MCB record backup.
28	No alias name in the master catalog for the data set high level qualifier, and the data set is not cataloged in the master catalog.
30	Data set not cataloged, and the volume was not specified.
32	Request for an uncataloged data set failed. Only a cataloged data set was found on the specified volume.
33	Cannot backup an ML2 data set.

Table 6. Return Codes for BACKUP Functions for ARC13nnl Error Messages (continued)

Retcode	Meaning
34	Backup version not created.
35	Error in opening the input data set.
36	Error in opening the output data set.
37	Out of space on target DASD daily backup volume.
38	Attempt to place a backup version of a password-protected data set on a non-password-protected tape backup volume in a tape security environment that is not expiration-include RACF-INCLUDE.
39	Attempt to create backup profile for a RACF-indicated data set failed, or RACF check failed to obtain an erase status of a backup version.
40	Backup or dump function is disabled.
41	Wrong DSCB found when module attempted to turn off the data-set-update bit and reset the date last referenced.
42	Error in reading the job file control block.
43	Error in updating data set VTOC entry.
44	Tape volume cannot be added for BACKUP; volume already contains valid DFSMSHsm data.
45	Error deleting a DFSMSHsm CDS record.
46	No offline CDS found.
47	Tape end-of-volume error.
48	Backup version of data set exceeds maximum number of allowable tape volumes.
49	Failure while attempting to remove RACF protection from a backup tape volume.
50	Error in allocating a backup version on a source volume because no units are available to mount the volume.
51	Data set is in use by another DFSMSHsm function.
52	GETMAIN or FREEMAIN error.
53	ENQ failed on VSAM open resource.
54	Error in moving a backup version to a tape backup volume due to an abnormal end in the tape data set exit.
55	An export I/O error.
56	VSAM backup failed.
57	Failed to obtain a catalog password.
60	Error in establishing an ESTAE environment.
61	Internal ADDVOL failed.
63	Volume deallocation error.
64	Error closing input data set.
65	Error in closing the out data set during backup.
66	Data set has a retired version.
67	Error obtaining block ID.
69	SYNCDEV error.
70	Error while processing an SMS-managed data set.
71	User not authorized to backup OS CVOL.
72	SMS-related error obtaining an MVT entry.
74	Data set, volume backup, or volume dump was requested, but HOLD BACKUP was in effect.

Table 6. Return Codes for BACKUP Functions for ARC13nnI Error Messages (continued)

Retcode	Meaning
80	The backup control data set record is not found.
84	Failure during BACKVOL DUMP processing (ARCDRDSS).
92	DFSMSHsm is shutting down.
96	Failure during BACKVOL DUMP processing (ARCDVOL).
97	An internal DFSMSHsm allocation error.
99	Unsupported data set organization.

Table 7. Return Codes for ARC0570I Error Messages

Retcode	Meaning
1	SMS is not installed.
2	SMS lock token not retrieved.
3	VTOC/catalog entry load module (IGDCSP00) was not loaded into DFSMSHsm address space.
4	SMS is not active in the configuration that DFSMSHsm is running in.
5	Error reading the volume VTOC entry of the volumes.
6	Error retrieving SMS volume definition list.
7	Error retrieving a storage group definition.
8	Error retrieving all the storage group definition.
9	Volume is in initial status.
10	There is a conflict in the SMS status recorded in the MVT and the data set extension VTOC entry.
11	SMS volume definition and volume VTOC entry indicate conflicting SMS status.
12	Error retrieving a list of all SMS-managed volumes.
13	Device type of volume retrieved from SMS storage group is not supported by DFSMSHsm.
14	Error retrieving data set list from VTOC catalog entry services.
15	Error reading/writing MCV record for an SMS-managed volume.
16	No eligible SMS-managed volumes could be processed by an internal ADDVOL.
17	No eligible storage groups to process.
18	No eligible SMS volumes to process.
19	Volume not mounted.
25	Space management request on an SMS-managed volume with DBA or DBU specified, or a nonzero value of days on MIGRATE(<i>days</i>), or DAYS(<i>days</i>) was specified on a MIGRATE command.
26	Space management request on an SMS-managed volume with neither days specified on MIGRATE(<i>days</i>) nor DAYS(<i>days</i>) specified on the MIGRATE command.
27	Space management request on an SMS-managed volume which does not have low and high thresholds defined and MIGRATE VOLUME (<i>valid</i>) command was issued.
30	The version of DFSMSdss is not at a sufficient level to support SMS-managed volumes.
31	The volume to be restored is an SMS-managed volume, but the dump copy was made when the volume was a non-SMS-managed volume.
32	The volume to be restored is a non-SMS-managed volume, but the copy was made when the volume was an SMS-managed volume.
52	GETMAIN error.

Table 8. Return Codes for ABARS Functions for ARC6nnn Error Messages

Retcode	Meaning
1	MVS/DFP not at proper level to allow ABARS processing to continue.
2	MVS/XA not at proper level to allow ABARS processing to continue.
3	DFSMSdss not at proper level to allow ABARS processing to continue.

Table 9. Error Codes from Control Data Set Reads, Writes or Deletes

Code	Meaning
0	An error occurred and was reported previously. Commands related to space usage cannot be performed.
4 (read) (write)	The record was not found. The record is a duplicate record.
8 (read) (write)	The record is in use. The record is too large.
10 (delete)	The read of the record to be deleted failed.
11	Failure to update the offline control data set T record for the output volume.
12 (read) (write)	The work area is too small. The control data set is full.
16	A physical I/O error occurred.
19	An internal parameter error occurred while accessing a CDS record for a retained backup version.
20	A logical I/O error occurred.
21	An internal error occurred while accessing a CDS record for a retained backup version.
22	The offline control data set is not defined.
24	Backup control data set or journal is not being used by DFSMSHsm.
25	Inconsistency reading MCDS MCD record. The data set is cataloged as MIGRAT indicating the data set is migrated. An error occurred in reading the MCD record, or the MCD record indicated that no migration copy exists. In the latter case, the reason code is zero. In other cases, the reason code is the return code from ARCZREAD. For details, see message ARC1325I.
26	Access to the control data sets has been lost due to an SMSVSAM server error. This error is only issued if the CDSs are accessed using RLS.
28	The catalog locate failed while reading a catalog record for the indicated data set.

Table 10. Return Codes for Message ARC0734I When the Action is EXBACKV

Code	Meaning	System Action	Programmer Response
0	The backup version was successfully scratched or scheduled to be scratched.	DFSMSHsm processing continues.	None.
4	An I/O error occurred reading a BCDS C record.	The backup version remains. DFSMSHsm processing continues.	See the previous ARC0184I message in the backup activity log.

Table 10. Return Codes for Message ARC0734I When the Action is EXBACKV (continued)

Code	Meaning	System Action	Programmer Response
8	An I/O error occurred reading an OCDS T record.	The backup version remains. The EXPIREBV command continues.	See the previous ARC0184I message in the backup activity log.
12	An I/O error occurred trying to update the BCDS B record.	The backup version remains. The EXPIREBV command continues.	See the previous ARC0184I message in the backup activity log.
16	An I/O error occurred trying to delete the BCDS B record.	The backup version remains. The EXPIREBV command continues.	See the previous ARC0188I message in the backup activity log.
20	DFSMSHsm was not able to determine whether the backed up data set was cataloged.	The backup version remains. The EXPIREBV command continues.	See the previous ARC0950I message in the command activity log.
24	For an SMS-managed data set, DFSMSHsm was unable to access the management class definition.	The backup version remains. The EXPIREBV command continues.	See the previous ARC0686I message in the backup activity log.
28	The date in the version entry in a BCDS B record is binary zeroes, making date comparisons impossible.	No backup versions are expired for the data set. The EXPIREBV command continues.	In this case, the <i>dsname</i> in this message does not identify a version, but the data set that was backed up. You need to decide if you still need a backup copy of the data set.

Table 11. Return Codes for Message ARC0734I When the Action is RECYCLE

Code	Meaning	System Action	Programmer Response
0	The data set was successfully moved.	DFSMSHsm processing continues.	None.
2	DFSMSHsm was in emergency mode.	Recycle processing ends.	None.
11	An I/O error occurred in writing the BCDS C record or MCDS D record for the data set.	Recycle processing continues with the next eligible connected set.	See the previous ARC0184I message in the recycle command log.
12	An abnormal end occurred closing the input or output data set.	Recycle processing continues with the next eligible connected set.	Respond to preceding messages describing the close error.
16	An I/O error occurred on the input tape volume.	See the system action for the specific reason code in Table 12 on page 562. Recycle of the current data set ends.	Respond to the preceding access method or hardware error message. If necessary, create another backup version to replace this one.
18	An I/O error occurred on the output tape volume.	Movement of this data set is retried on a different volume.	Respond to the preceding access method or hardware error message.
20	Failure to update the offline control data set T record for the output volume.	Recycle of this data set fails. Processing continues with the next eligible connected set.	See the previous ARC0184I or ARC0378I message in the recycle command log.
21	Failure to update the MVC or MCT record after successfully opening the output data set.	Recycle of this data set fails. Processing continues with the next eligible connected set.	See the previous ARC0184I message in the recycle command log.
25	An I/O error occurred in reading a BCDS C record or MCDS D record for the data set.	Recycle processing continues with the next eligible connected set.	See the previous ARC0184I message in the recycle command log.
31	Failure to mount an input volume.	Recycle of the current connected set ends. Recycle continues with the next eligible connected set.	See the tape librarian.

Table 11. Return Codes for Message ARC0734I When the Action is RECYCLE (continued)

Code	Meaning	System Action	Programmer Response
32	Failure to mount an output volume.	Recycle of the current connected set ends. Recycle processing ends for this task.	See the tape librarian.
33	DFSMSHsm was shut down.	Recycle processing ends.	None.
35	The OPEN macro was issued by DFSMSHsm to open the data set for input. OPEN processing was not successful.	Recycle of the current connected set ends. Recycle continues with the next eligible connected set.	See the preceding IEC message and take the action indicated.
36	The OPEN macro was issued by DFSMSHsm to open the data set for output. OPEN processing was not successful.	See the system action for the specific reason code in Table 13 on page 564. Recycle processing ends for this task.	See the response for the specific reason code. in Table 13 on page 564.
41	NEOV occurred on the original tape while duplexing ERRORALTERNATE(MARKFULL) mode.	Recycle of the connected set fails. Recycle processing ends for this task.	None.
46	An error occurred in closing the output data set.	Recycle processing ends for this task.	See the preceding IEC message and take the corrective action given.
48	The number of tape volumes required for this data set exceeded the maximum allowable.	Recycle processing continues with the next valid data set on the volume.	None.
50	There was a failure to attach a subtask.	Recycle of the current connected set ends. Recycle processing ends for this task.	See message ARC0090I earlier in this manual.
52	There was a GETMAIN error.	Recycle processing ends for this task.	Attempt to recycle this volume again.
54	Tape data set installation-wide exit abnormal end.	Recycle processing ends.	Turn off the exit if possible or release recycle and rerun. If the exit is in error, correct it and turn the exit back on.
55	The input tape has been released to RECOVER.	Recycle processing continues with the next eligible volume in the connected set or continues with the next eligible connected set.	None.
60	Failure to establish ESTAE protection.	Recycle processing ends for this task.	Examine the return code from the previous ARC0304I message, and take the appropriate action based on that return code explanation.
61	During an attempt to add a new volume to DFSMSHsm control, an I/O error occurred in reading or writing a control data set record, or the OCDS was not defined.	Recycle of the current connected set ends. Recycle processing continues with the next eligible connected set.	See the preceding ARC0184I or ARC0133I message in the recycle command log.
67	An error in obtaining the volume block ID occurred.	The recycle fails for the current connected set. Recycle processing continues.	See message ARC01267I in this manual.
68	An error in positioning to data occurred.	The recycle fails for the current data set. Recycle processing continues.	See message ARC01168I in this manual.
69	An error on SYNCDEV occurred.	The recycle fails for the current connected set. Recycle processing continues.	See message ARC01269I in this manual.
70	The CAPACITYMODE for the input or output tape could not be maintained at EOV.	The recycle task ends.	Investigate associated messages to determine why the requested CAPACITYMODE could not be maintained.

Table 11. Return Codes for Message ARC0734I When the Action is RECYCLE (continued)

Code	Meaning	System Action	Programmer Response
71	MCD record was not found. The data set was deleted on recycle.	Recycle of this data set fails. Recycle processing continues with the next valid data set.	See message ARC0184I in the recycle command log.

Table 12. Reason Codes for Message ARC0734I when the Action is RECYCLE and Return Code is 16

Code	Meaning	System Action	Programmer Response
0	Read error on input volume.	Recycle of the data set fails. If you are processing with multibuffer data movement, recycle of the connected set fails. The next time the connect set is recycled, single-buffer data movement will be used. If RC16 occurs when processing with single-buffer, processing continues with the next valid data set on the volume. In all cases, the volume being recycled is marked as FAILED RECYCLE and can only be recycled by specific volume command.	<ul style="list-style-type: none"> • Issue a RECYCLE VOLUME command to recycle valid data sets following the RC16 failure. The volume has been marked FAILED RECYCLE and will now be processed in single buffer mode. • Recall or recover data sets that recycle was not able to move from the volume. You can create a list by issuing: LIST TT0C(volser) ODS(dsn) • Use RECYCLE with FORCE option to remove all references to any data that is still inaccessible and to delete the tape volume.
4	Extra CDD record before end of file.	Recycle of the data set fails. If you are processing with multibuffer data movement, recycle of the connected set fails. The next time the connect set is recycled, single-buffer data movement will be used. If RC16 occurs when processing with single-buffer, processing continues with the next valid data set on the volume. In all cases, the volume being recycled is marked as FAILED RECYCLE and can only be recycled by specific volume command.	<ul style="list-style-type: none"> • Issue a RECYCLE VOLUME command to recycle valid data sets following the RC16 failure. The volume has been marked FAILED RECYCLE and will now be processed in single buffer mode. • Recall or recover data sets that recycle was not able to move from the volume. You can create a list by issuing: LIST TT0C(volser) ODS(dsn) • Use RECYCLE with FORCE option to remove all references to any data that is still inaccessible and to delete the tape volume.

Table 12. Reason Codes for Message ARC0734I when the Action is RECYCLE and Return Code is 16 (continued)

Code	Meaning	System Action	Programmer Response
5	End of file reached and more data blocks need to be copied.	Recycle of the data set fails. If you are processing with multibuffer data movement, recycle of the connected set fails. The next time the connect set is recycled, single-buffer data movement will be used. If RC16 occurs when processing with single-buffer, processing continues with the next valid data set on the volume. In all cases, the volume being recycled is marked as FAILED RECYCLE and can only be recycled by specific volume command.	<ul style="list-style-type: none"> • Issue a RECYCLE VOLUME command to recycle valid data sets following the RC16 failure. The volume has been marked FAILED RECYCLE and will now be processed in single buffer mode. • Recall or recover data sets that recycle was not able to move from the volume. You can create a list by issuing: LIST TT0C(volser) ODS(dsn) • Use RECYCLE with FORCE option to remove all references to any data that is still inaccessible and to delete the tape volume.
6	Correct number of blocks moved and end of file not detected.	Recycle of the data set fails. If you are processing with multibuffer data movement, recycle of the connected set fails. The next time the connect set is recycled, single-buffer data movement will be used. If RC16 occurs when processing with single-buffer, processing continues with the next valid data set on the volume. In all cases, the volume being recycled is marked as FAILED RECYCLE and can only be recycled by specific volume command.	<ul style="list-style-type: none"> • Issue a RECYCLE VOLUME command to recycle valid data sets following the RC16 failure. The volume has been marked FAILED RECYCLE and will now be processed in single buffer mode. • Recall or recover data sets that recycle was not able to move from the volume. You can create a list by issuing: LIST TT0C(volser) ODS(dsn) • Use RECYCLE with FORCE option to remove all references to any data that is still inaccessible and to delete the tape volume.
12	ABEND237-0C or ABEND 237-04 occurred during EOVS or FEOVS processing.	Recycle of the data set fails. If you are processing with multibuffer data movement, recycle of the connected set fails. The next time the connect set is recycled, single-buffer data movement will be used. If RC16 occurs when processing with single-buffer, processing continues with the next valid data set on the volume. In all cases, the volume being recycled is marked as FAILED RECYCLE and can only be recycled by specific volume command.	<ul style="list-style-type: none"> • Issue a RECYCLE VOLUME command to recycle valid data sets following the RC16 failure. The volume has been marked FAILED RECYCLE and will now be processed in single buffer mode. • Recall or recover data sets that recycle was not able to move from the volume. You can create a list by issuing: LIST TT0C(volser) ODS(dsn) • Use RECYCLE with FORCE option to remove all references to any data that is still inaccessible and to delete the tape volume.

Table 13. Reason Codes for Message ARC0734I when the Action is RECYCLE and Return Code is 36

Code	Meaning	System Action	Programmer Response
0	Open processing completed, but the DCB indicated that the data set was not open.	Recycle of the current data set fails. Recycle processing ends for this task.	None.
1	Worm tape is not supported for this function.	Recycle processing fails for this task and Recycle is held.	Do not mount WORM tapes for Recycle output processing. You may need to change the tape pooling setup or to modify ACS logic and Data Class values. After ensuring a non-WORM tape mount, release Recycle.
4	An I/O error occurred in reading or writing the backup control data set R record.	Recycle of the current data set fails. Recycle processing ends for this task.	See the previous ARC0184I message in the recycle command log.
8	An I/O error occurred in reading or writing some other backup control data set record.	Recycle of the current data set fails. Recycle processing ends for this task.	See the previous ARC0184I message in the recycle command log.
12	There was a failure to deallocate or allocate a volume.	Recycle of the current data set fails. Recycle processing ends for this task.	See the previous ARC0200I or ARC0208I message in the command activity log.
16	A GETMAIN or FREEMAIN failure occurred.	Recycle of the current data set fails. Recycle processing ends for this task.	Try again to recycle the volume this data set is on.
20	The backup control data set R record was in use by another processing unit.	Recycle of the current data set fails. Recycle processing ends for this task.	See the ARC0371I message that precedes this message in the recycle command log.
24	No backup volume was available.	Recycle of the current data set fails. Recycle processing ends for this task.	See the previous ARC0500I message on allocation failures or see the tape librarian.
28	DFSMSHsm shutdown or DFSMSHsm is in emergency mode.	Recycle processing ends.	None.

Table 14. Return Codes for Message ARC0528I during Scratch Processing

Retcode	Meaning
0	Successful data set deletion.
4	No volumes containing any part of the data set were mounted, nor did register 0 contain the address of a unit that was available for mounting a volume of the data set.
8	An unusual condition was encountered on one or more volumes.
12	One of the following conditions occurred: <ul style="list-style-type: none"> • The DADSM SCRATCH parameter list is invalid. • The volume list is invalid. • At entry to SCRATCH, register 0 was not zero and did not point to a valid UCB.

Table 15. Status Codes for Messages ARC0528I and ARC0734I during Scratch Processing

Status Code	Meaning
0	The DSCB for the data set was deleted from the VTOC on the volume pointed to.
1	The VTOC of this volume does not contain the DSCB to be deleted.

Table 15. Status Codes for Messages ARC0528I and ARC0734I during Scratch Processing (continued)

Status Code	Meaning
2	One of the following conditions occurred: <ul style="list-style-type: none"> • The data set could not be scratched because the console operator or TSO terminal operator did not specify the correct password in the two attempts allowed. • The user tried to scratch a VSAM data space or an ICF VSAM data set. • The user tried to scratch the VTOC index data set. • An SMS validation failure occurred. • The verify of the last referenced data failed.
3	The DSCB was not deleted because either the OVRD option was not specified or the retention cycle had not expired.
4	One of the following conditions occurred: <ul style="list-style-type: none"> • An invalid FIDSCB was encountered when processing this volume. • An unexpected CVAF error return code was encountered. • An installation-wide exit rejected the request. • An I/O error occurred while the DASD tracks occupied by the data set were being erased. Either the ERASE option was specified in the scratch parameter list or the ERASE attribute was specified for a RACF-defined data set.
5	It could not be verified that this volume was mounted nor was there a unit available for mounting the volume. If one or more of the volumes was an MSS virtual volume, see the explanation of message IEC666I in <i>z/OS MVS System Messages, Vol 7 (IEB-IEE)</i> .
6	The operator was unable to mount this volume. If the volume is an MSS virtual volume and is running in a JES3 environment, JES3 would not allow the volume to be mounted.
7	The DSCB was not deleted because the data set was open.
8	The DSCB indicates that the data set is defined to RACF, but the user is not authorized to the data set or to the volume, or the data set is a VSAM data space, or the data set is not defined to RACF.
10	An error occurred while deleting an SMS-managed data set.
Note: For any code not in this list, see <i>z/OS DFSMS Using Data Sets</i> .	

Table 16. Return Codes for Message ARC0734I When the Action is SCRATCH

Retcode	Meaning
0	Scratch is successful.
4	Scratch is successful, but the volume deallocation failed.
8	MVT entry can not be found/built, so the scratch is not performed.
10	Migration cleanup attempted to scratch an old migrated copy from an SDSP data set, but the scratch attempt failed. See the associated ARC0546I message for the appropriate action.
12	Volume allocation failed, so scratch is not performed.
14	Migration cleanup was trying to scratch an old migration copy from an SDSP data set but the ML1 volume was not mounted, so the scratch was not issued. If you want the copy deleted, have the migration volume mounted the next time migration cleanup is run.
16	Scratch failed. See the previous ARC0528I message for more information.
20	Scratch failed and volume deallocation also failed.
24	Uncataloging failed.
28	Migration DASD volume is not mounted, so scratch is not performed. If the migrated data set needs to be scratched from the volume, the volume has to be mounted before migration cleanup starts at the next time. If the migrated data set was scratched from the volume, but the MCD record is still marked as needs-scratch (MCDFNSCR flag is on), issue a FIXCDS PATCH command to turn off the needs-scratch flag.

Table 16. Return Codes for Message ARC0734I When the Action is SCRATCH (continued)

Retcode	Meaning
40	A DFSMSShsm CDS read error was encountered.
44	A DFSMSShsm CDS update error was encountered.
70	An error occurred deleting an SMS-managed data set.

Table 17. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I

Code	Meaning	System Action	Programmer Response
0	All valid data sets were successfully moved from the volume, and the volume was removed from DFSMSShsm control.	Recycle processing continues with the next eligible volume in the connected set or continues with the next eligible connected set.	None.
1	All valid data sets were successfully moved, but the attempt to remove the volume from DFSMSShsm control failed.	Recycle of the volume fails. Recycle processing continues with the next eligible volume in the connected set or continues with the next eligible connected set.	See the ARC0260I message that precedes this message in the recycle command log. An error during the DELVOL process might cause the BVR, MCT, and/or TIOC entries to become out of sync with one another. For example, all entries might not show the same unassigned status. Correct the respective volume entries as appropriate.
2	DFSMSShsm is in emergency mode.	Recycle of the volume fails. Recycle processing ends for all tasks.	None.
3	A failure occurred during volume allocation. The volume to be used is in use by another function.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	For a description of the volumes eligible for recycle, see <i>z/OS DFSMSShsm Storage Administration</i> .
4	Movement of a data set failed when the output volume was a scratch tape (no volume is available for selection).	Recycle of the connected set fails. Recycle processing ends for this task.	See the previous ARC0184I, ARC0371I, or ARC0500I message, if any, or notify the system programmer.
5	A failure occurred during deallocation of the output tape volumes.	Recycle of the connected set fails. Recycle processing ends for this task.	See message ARC0200I or ARC0208I for the reason for the deallocation failure.
6	A failure occurred during allocation of the input tape volumes.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	1. See message ARC0500I for the reason for the allocation failure. 2. Contact the operator to determine why the reply given was no. 3. See the previous ARC0184I message.
7	A failure occurred during deallocation of the input tape volumes.	Recycle of the connected set fails. Recycle processing ends for this task.	See message ARC0200I or ARC0208I for the reason for the deallocation failure.
8	The connected set is no longer needed.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	See the previous ARC0833I message in the Recycle command log.

Table 17. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
9	The OCDS T record for the volume being recycled was in use by another processing unit.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	See the ARC0371I message that precedes this message in the recycle command log.
10	Security of the tape label cannot be determined or DFSMSHsm never successfully wrote to the tape volume (the tape volume is empty.)	Examine the tape label and contents. If the tape has no useful data, do the following: <ul style="list-style-type: none"> • Use the PURGE parameter with the DELVOL command. • Reinitialize the volume. • Add the volume with the ADDVOL command. Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	None.
11	An I/O error occurred in writing a control data set record.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	See the ARC0184I message that precedes this message in the recycle command log.
12	The RECYCLE command was held.	Recycle of the connected set fails. Recycle processing ends for all tasks.	None.
13	Movement of the data set failed and was retried unsuccessfully 3 times. Processing for the volume ends.	Recycle of the connected set fails. Recycle processing ends for this task.	See the appropriate ARC0734I messages associated with this message in the recycle command log.
14	An attempt was made to recycle an unassigned volume that is invalid.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	For a description of the volumes eligible for recycle, see <i>z/OS DFSMSHsm Storage Administration</i> .
15	The input volumes are not all in the same library.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	Notify the tape librarian.
16	A read error occurred in reading input data.	Recycle of the volume fails. If processing with multibuffer data movement, recycle of the connected set fails and processing continues with the next eligible connected set. If processing with single-buffer, recycle processing continues with the next eligible volume or connected set.	See the appropriate ARC0734I messages associated with this message in the recycle command log. If an ARC0434E error message with 'MCBR UPDATE FAILED' is issued in addition to an ARC0734I message, reissue the RECYCLE FORCE command on a z/OS V1R11 or later system.
17	Percent valid for the volume was 0 but valid data was found.	The valid block field is updated and recycle of the volume fails. Recycle processing continues with the next eligible connected set.	Use the recycle by volume command to recycle the volumes. Or, wait until the next recycle for your installation and this volume is recycled if it is eligible.

Table 17. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
19	An abend occurred during close of the input tape data set.	Recycle processing ends for this task. Other recycle tasks continue.	Identify the problem from the dump, any related messages, and the PDA trace leading up to the abend.
20	Failure to update the offline control data set T record for the output volume.	Recycle of this data set fails. Processing continues with the next eligible connected set.	See the previous ARC0184I message in the recycle command log.
21	Failure to update the MVC or MCT record after successfully opening the output data set.	Recycle of this data set fails. Processing continues with the next eligible connected set.	See the previous ARC0184I message in the recycle command log.
25	An I/O error occurred in reading a control data set record or the requested record was not found in the control data set.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	If an I/O error occurred, there is a preceding ARC0184I message. See that message for the required action. There is no ARC0184I message if the record was not found. The recycle command was in error.
30	RECYCLE EXECUTE TAPELIST was specified for ML2 (or ALL) volumes. After the pull list was created, the operator replied to message ARC0825D that ML2 volumes should not continue to recycle.	Recycle processing of ML2 volumes ends.	Determine why the operator replied that the ML2 volumes should not continue to recycle, and then decide whether to use the pull list to issue another RECYCLE command.
31	One or more input volumes could not be mounted.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	Notify the tape librarian.
32	Mount of output volume failed.	Recycle of the connected set fails. Recycle processing ends for this task.	Notify the tape librarian.
33	DFSMSHsm was being shut down.	Recycle of the connected set fails. Recycle processing ends for all tasks.	None.
34	Recall or ABACKUP needed a source volume.	Recycle of the connected set ends. Recycle processing continues with the next eligible connected set.	None.
35	The OPEN macro was issued by DFSMSHsm to open a data set for input. OPEN processing was not successful.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	See the appropriate ARC0734I messages associated with this message in the recycle command log.
36	The OPEN macro was issued by DFSMSHsm to open a data set for output. OPEN processing was not successful.	Recycle of the connected set fails. Recycle processing ends for this task.	See the associated ARC0734I message in the recycle command log.

Table 17. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
40	RECYCLE EXECUTE TAPELIST was specified for backup (or ALL) volumes. After the pull list was created, the operator replied to message ARC0825D that backup volumes should not continue to recycle.	Recycle processing of backup volumes ends.	Determine why the operator replied that the backup volumes should not continue to recycle, and then decide whether to use the pull list to issue another RECYCLE command.
42	An error occurred in processing an RDJFCB macro.	Recycle of the connected set fails. Recycle processing ends for this task.	None.
43	For DFSMSHsm V1R5 and above: the input tape is in CAPACITYMODE(EXTENDED), but the input unit is not CAPACITYMODE switchable. For DFSMSHsm V1R4: input tape is in CAPACITYMODE(EXTENDED) which this release does not support.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	For DFSMSHsm V1R5 and above: ensure that the unit that is shown in the input volume's CDS records is CAPACITYMODE switchable. For DFSMSHsm V1R4: use DFSMSHsm V1R5 or higher to Recycle the tape.
48	A data set required more than 40 output tapes and 40 tapes is the limit within HSM.	Recycle fails for the current data set. Recycle processing continues.	To RECYCLE the data set a higher capacity target tape will be required.
50	There was a failure to attach a subtask.	Recycle of the connected set fails. Recycle processing ends for this task.	See message ARC0090I in this publication.
52	There was a GETMAIN error.	Recycle processing ends for this task.	Attempt to recycle this volume again.
54	Tape data set installation-wide exit abnormal end.	Recycle processing ends for this task.	Turn off the exit if possible or release recycle and rerun. If the exit is in error, correct it and turn the exit back on.
61	During an attempt to add a new volume to DFSMSHsm control, an I/O error occurred in reading or writing a control data set record, or the OCDS was not defined.	Recycle of the current connected set ends. Recycle processing continues with the next eligible connected set.	See the preceding ARC0184I or ARC0133I message in the recycle command log.
68	There was an error in positioning to data during recycle.	Recycle fails for the current data set. Recycle processing continues.	See the appropriate ARC0734I messages associated with this message in the recycle command log. If an ARC0434E error message with 'MCBR UPDATE FAILED' is issued in addition to an ARC0734I message, reissue the RECYCLE FORCE command on a z/OS V1R11 or later system.
69	An error on SYNCDEV occurred.	Recycle fails for the current connected set. Recycle processing continues.	See the appropriate ARC0734I messages associated with this message in the recycle command log.

Table 17. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
70	A mismatch occurred in the number of read/write buffers.	This recycle task ends. Other recycle tasks continue.	Specify SETSYS RECYCLEOUTPUT and/or specify the same tape utilization for the esoteric and associated generic unit name.
98	The file sequence number or the volume sequence number exceeds the limit.	Recycle of the connected set fails. Processing continues with the next eligible connected set.	None.
99	<i>reason-code</i> is the TCB completion code if the task abnormally ended or is a termination ECB. The termination ECB is the return code from the data mover subtask. The reason code is in hexadecimal.	Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.	See the appropriate ARC0734I messages associated with this message in the recycle command log.
4xx	Internal parameter list error.	This recycle task ends. Other recycle tasks continue.	See message ARC9998I in this manual.

Table 18. Return Codes for Message ARC0835I

Code	Meaning	System Action	Programmer Response
1	DFSMSHsm failed to open the recycle command log.	Recycle processing ends. DFSMSHsm processing continues.	See message ARC0141I. This message was written to the operator's console and to the DFSMSHsm log.
2	DFSMSHsm is in emergency mode.	Recycle processing ends. DFSMSHsm processing continues.	None.
3	An I/O error occurred in scanning the OCDS T records or a positioning error occurred reading the OCDS.	All connected sets already identified are allowed to recycle. No new connected sets are identified to be recycled. DFSMSHsm processing continues.	Either message ARC0187I or message ARC0133I precedes this message in the recycle command log. Perform the problem determination indicated in this message.
5	Recycle command parse error.	Recycle processing ends.	Correct the syntax and reissue the command.
9	The attach of the recycle multitasker failed.	Recycle processing ends.	See message ARC0090I in this manual.
12	The RECYCLE command was held or DFSMSHsm was being shut down.	Recycle processing ends. DFSMSHsm processing continues.	None.
30	The RECYCLE EXECUTE TAPELIST was specified for ML2 (or ALL) volumes. After the pull list was created, the operator replied to message ARC0825D that ML2 volumes should not continue to recycle.	Recycle processing of ML2 volumes ends.	Determine why the operator replied that ML2 volumes should not continue to recycle, and then decide whether to use the pull list to issue another RECYCLE command.
33	DFSMSHsm is being shut down.	Recycle processing ends. DFSMSHsm processing ends.	None.

Table 18. Return Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
40	The RECYCLE EXECUTE TAPELIST was specified for backup (or ALL) volumes. After the pull list was created, the operator replied to message ARC0825D that backup volumes should not continue to recycle.	Recycle processing of backup volumes ends.	Determine why the operator replied that backup volumes should not continue to recycle, and then decide whether to use the pull list to issue another RECYCLE command.
52	A GETMAIN error occurred in the recycle multitasker.	Recycle processing ends.	See the preceding ARC0305I message in this manual.
90	Failure trying to attach the first recycle task.	Recycle processing ends.	See message ARC0090I in this manual.
99	A non-recycle task caused the control program to abend.	Recycle processing ends.	Reissue the command.
4xx	Recycle parameter list error.	Recycle processing ends.	See message ARC9998I in this manual.

Table 19. Reason Codes for Messages ARC1139I, ARC1239I, and ARC1339I

Reason code	Meaning
8	One of the following conditions occurred: <ul style="list-style-type: none"> • There is no RACF profile for a data set. • The user is not authorized to perform the requested function against the data set because the user does not have a sufficient level of resource access authority. • RACF protect-all support is enabled and the data set is not protected by either a discrete or generic profile. In this instance, the user should create a profile for the data set and then retry the request.
12	An error occurred when DFSMSHsm added, deleted, or changed a volume in a RACF discrete data set profile.
15	An attempt to write to a RACF protected User or Master Catalog is made during RECOVER processing. The user ID (UID) issuing the command does not have sufficient RACF authority to perform the UPDATE/ALTER.
20	An error occurred in adding or deleting the tape volume to or from the DFSMSHsm RACF tape volume set.
24	An attempt was made to add an already protected tape volume to the DFSMSHsm RACF tape volume set.
28	Failure to set up ESTAE environment.
36	A LOCATE failure occurred in getting catalog information for the RACF ERASE status check of the original data set.
40	A failure occurred in reading the migration control data set (MCDS) record to get information for the RACF ERASE status check of a migrated data set.
44	A field that contains the <i>volser</i> is null or blank when a valid value is required.
99	DFSMSHsm is in test mode, a RACHECK was requested, and the data set RACF-INDICATOR was on.

Chapter 2. ARCH messages

ARCHC0001I A MAIN DFSMSHsm host is not active. The check is disabled with REASON=ENVNA until a MAIN DFSMSHsm host is initialized.

Explanation: CHECK (IBMHSM,*) encountered an error attempting to read the MHCR record from the DFSMSHsm address space because a MAIN DFSMSHsm host was not active at the time of the request. The check will be requested to run again when a MAIN DFSMSHsm host initializes.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

Problem determination: Determine why a MAIN DFSMSHsm host was not active. If it is normal for this z/OS image not to have a MAIN host running, this check can be removed.

For more information about modifying check parameters, see *IBM Health Checker for z/OS User's Guide*.

For more information about DFSMSHsm, see *z/OS DFSMSHsm Implementation and Customization Guide*.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0002I An error occurred during a request to read the MHCR record from DFSMSHsm. The check is disabled.

Explanation: CHECK (IBMHSM,*) encountered an error attempting to read the MHCR record from the DFSMSHsm address space. The check remains disabled until it is refreshed.

System action: The system continues processing.

Operator response: N/A

System programmer response: Perform problem determination to ensure requests to read the MHCR are successful.

Problem determination: Determine if message ARC0057I, ARC0058I, or ARC0059I was issued by DFSMSHsm before or during the execution of this check. If so, refer to the text for these messages to determine the corrective action. Otherwise, search problem reporting data bases for a fix for the problem. If no fix exists, call the IBM Support Center.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0003I The MHCR indicates that the storage administrator is performing maintenance on the control data sets. The check is disabled with REASON=ENVNA until the maintenance is complete.

Explanation: CHECK (IBMHSM,*) found that the MHCR_MCDS_NUMBER or the MHCR_BCDS_NUMBER field in the MHCR record is set to X'FF'. The storage administrator patches these fields to this value when the key ranges are to be reorganized for a multi-cluster control data set. The check cannot process until DFSMSHsm has been shut down, the maintenance is complete and DFSMSHsm is restarted.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

ARCHC0005I • ARCHC0106I

Problem determination: Complete the control data set maintenance and restart DFSMSHsm. If the storage administrator does not intend to perform maintenance, a restart of the DFSMSHsm host should reset the fields that indicate maintenance was being performed.

Module: ARCHCCD1

Source: DFSMSHsm

Reference Documentation: For more information about this check, see *IBM Health Checker for z/OS User's Guide*.

For more information about DFSMSHsm, see *z/OS DFSMSHsm Implementation and Customization Guide*.

Automation: N/A

Routing Code: N/A

Descriptor Code: N/A

ARCHC0005I CDS backup was active during the execution of this check. This check has ended early.

Explanation: CHECK(IBMHSM,*) found that the CDS backup function was active for the control data sets used by the DFSMSHsm host(s) on this LPAR. Execution of the check during CDS backup could result in invalid check exceptions. The check execution is ended early to avoid errant check exception. The check will be executed again based on the triggers defined for this check.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

Problem determination: This condition can occur if the ARCENQG:ARCCDSVF or ARCENGQ:ARCCDSVF &mcname (when RNAMEDSN=YES) resource is not available or when the latest final qualifier for the CDS backup versions has changed while this check was running. Both of these conditions indicate that CDS backup was active at some point during the check execution.

Review logs to determine if CDS backup was active during this check execution on any DFSMSHsm host on this LPAR or any host that shares the control data sets with the hosts on this LPAR. If CDS backup did not run, determine the status of the ARCENQG:ARCCDSVF or ARCENGQ:ARCCDSVF&mcname (when RNAMEDSN=YES) resource. If using GRS, use the "DISPLAY GRS,RES=(ARCENQG,ARCCDSVF*)" command to determine if the resource is still held by a job. Investigate the reason why this resource is still held by the job.

Otherwise, search problem reporting data bases for a fix for the problem. If no fix exists, call the IBM Support Center.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0106I Control Data Set backup statusMCD S Backups:

```
=====//=====
Data Set Name Status
=====//=====
dsname status
dsname status
... ..
BCDS Backups:
=====//=====
Data Set Name Status
=====//=====
dsname status
dsname status
... ..
OCDS Backups:
=====//=====
```

```

Data Set Name Status
=====//=====
dsname status
dsname status
... ..
JRNL Backups:
=====//=====
Data Set Name Status
=====//=====
dsname status
dsname status
... ..

```

Explanation: The control data set (CDS) backup status is included in the message buffer when CHECK(IBMHSM,HSM_CDSB_DASD_BACKUPS) or CHECK(IBMHSM,HSM_CDSB_VALID_BACKUPS) generates an exception or executes in VERBOSE mode.

In the message text:

dsname CDS backup data set name that is searched.

status Status of the CDS backup data set.

FOUND

Data set was found. Both a catalog LOCATE and an OBTAIN performed for this data set name were successful.

CATALOGED

Data set was cataloged. When BACKUPDEVICECATEGORY is set to tape, an OBTAIN is not performed for the CDS backup data set. The check can only report the catalog status of the data set.

***** NOT FOUND *****

Data set was not cataloged.

***** NOT VALID *****

Data set was found but it is not a valid CDS backup.

***** OBTAIN ERROR *****

Data set was cataloged to a volume but an OBTAIN request for the data set on the cataloged volume failed.

System action: The system continues processing.

Operator response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary operator actions.

System programmer response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary system programmer actions.

Problem determination: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on problem determination.

Module: N/A

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC01071 CDS Backup Check Summary**Critical Value:** *critval* (specified by *src*)
BACKUPCOPIES specified: *reqbackups*

Explanation: Control data set (CDS) backup check summary is presented when CHECK(IBMHSM,HSM_CDSB_DASD_BACKUPS) or CHECK(IBMHSM,HSM_CDSB_VALID_BACKUPS) runs to completion.

In the message text:

critval Critical number of CDS backups.

ARCHC0108E

src Source of the critical value.

owner Default value supplied by IBM.

installation

Modified by the installation through the CRITVAL(n) parameter.

reqbackups

Number of CDS backup copies that DFSMSHsm is configured to maintain.

System action: The system continues processing.

Operator response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary operator actions.

System programmer response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary system programmer actions.

Problem determination: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on problem determination.

Module: N/A

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0108E The number of Control Data Set backup copies that DFSMSHsm is configured to maintain is below the critical level.

Explanation: CHECK(IBMHSM,*) has determined that the number of control data set (CDS) backup copies that DFSMSHsm is set up to maintain is below the owner- or installation-specified critical level. A system with fewer CDS backups than the critical level is considered to be at an increased risk of discarding all valid CDS backup copies. Information message ARCHC0107I is placed in the message buffer to describe the variables used.

System action: The system continues processing.

Operator response: N/A

System programmer response: Review the values displayed in the ARCHC0107I message and then perform problem determination.

Problem determination: Ensure the SETSYS CDSVERSIONBACKUP(BACKUPCOPIES(x)) command in the DFSMSHsm ARCCMDxx PARMLIB member specifies a value that is equal to or greater than the owner- or installation-specified critical value of backup copies. If the BACKUPCOPIES value is increased and the control data sets are backed up to DASD, ensure that each backup data set is pre-defined.

If the SETSYS CDSVERSIONBACKUP(BACKUPCOPIES(x)) command in the DFSMSHsm ARCCMDxx PARMLIB member specifies a value equal to or greater than the critical value, issue a QUERY CDSVERSIONBACKUP command to DFSMSHsm and determine the BACKUPCOPIES value reported in the ARC0376I message. If this value is not consistent with the value in the ARCCMDxx PARMLIB member, either the SETSYS CDSVERSIONBACKUP(BACKUPCOPIES(x)) command was issued dynamically to DFSMSHsm or the ARCCMDxx PARMLIB member may have been modified since the last time DFSMSHsm was initialized.

Modify the SETSYS CDSVERSIONBACKUP(BACKUPCOPIES(x)) command in the ARCCMDxx parmlib member and issue the command dynamically to DFSMSHsm. Confirm the changes by issuing a QUERY CDSVERSIONBACKUP command to DFSMSHsm and reviewing the BACKUPCOPIES value reported in the ARC0376I message. As noted, CDS backups to DASD require that all CDS backup data sets be pre-allocated. Data sets may need to be allocated if the BACKUPCOPIES value has been increased.

For more information about DFSMSHsm control data set backup, see *Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of z/OS DFSMSHsm Implementation and Customization Guide*.

For more information about modifying check parameters, see *IBM Health Checker for z/OS User's Guide*.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: See note 35.

Descriptor Code: The default set by this check is 3. See note 1.

ARCHC0109I The check ran successfully and found no exceptions. The number of Control Data Set backup copies that DFSMSHsm is configured to maintain meets or exceeds the critical value.

Explanation: CHECK(IBMHSM,HSM_CDSB_VALID_BACKUPS) determined that the number of CDS backup copies that DFSMSHsm is set up to maintain meets or exceeds the owner- or installation-specified critical level. Message ARCHC0107I is placed in the message buffer to describe the variables used.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

Problem determination: None.

For more information about DFSMSHsm control data set backup, see Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of *z/OS DFSMSHsm Implementation and Customization Guide*.

For more information about modifying check parameters, see *IBM Health Checker for z/OS User's Guide*.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0110I CDS Backup Check Summary **BACKUPCOPIES** specified: *reqbackups*

Explanation: Control data set backup check summary is presented when the check runs to completion.

In the message text:

reqbackups

Number of CDS backup copies that DFSMSHsm is set up to maintain.

System action: The system continues processing.

Operator response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary operator actions.

System programmer response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary system programmer actions.

Problem determination: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on problem determination.

Module: N/A

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0111E One or more required control data set backup copies not found.

Explanation: CHECK(IBMHSM,HSM_CDSB_DASD_BACKUPS) found that DFSMSHsm backed up the control data sets to DASD. This configuration requires all backup data sets to be defined. If a backup data set is not available, the DFSMSHsm CDS backup function may fail and subsequently hold critical functions.

Information messages ARCHC0110I and ARCHC0106I are placed in the message buffer to describe the check's findings.

System action: The system continues processing.

Operator response: N/A

ARCHC0112I • ARCHC0113I

System programmer response: Review the backup copy data sets in message ARCHC0106I, which have a status of *** NOT FOUND *** or *** OBTAIN ERROR ***. Perform problem diagnosis for these data sets.

Problem determination: Investigate the reason for the missing backup copy or copies. SMF records can be analyzed to determine how the data set was uncataloged or deleted.

- For *** NOT FOUND *** data sets, the backup data set was expected to be cataloged, however a catalog locate request for the data set failed. Determine why the backup copy cannot be located. Re-define the missing backup data sets using the attributes of the existing backup data sets for a given control data set.
- For *** OBTAIN ERROR *** data sets, an OBTAIN request for the data set on the cataloged volume failed. The catalog entry must be scratched using an IDCAMS DELETE NOSCRATCH or similar utility. Re-define these backup data sets using the attributes of the existing backup data sets for a given control data set.

For more information about DFSMSHsm control data set backup, see *Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of z/OS DFSMSHsm Implementation and Customization Guide*.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: See note 35.

Descriptor Code: The default set by this check is 3. See note 1.

ARCHC0112I The check ran successfully and found no exceptions. All required DASD Control Data Set backup copies were found.

Explanation: CHECK(IBMHSM,HSM_CDSB_DASD_BACKUPS) has found that DFSMSHsm backs up the control data sets to DASD. This configuration requires all backup data sets to be defined. All backup data sets were found by the check.

Information message ARCHC0110I is placed in the message buffer to indicate the number of BACKUPCOPIES specified. When the check is run in VERBOSE mode, information message ARCHC0106I is also placed in the message buffer to describe the status of the backup data sets.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

Problem determination: None.

For more information about DFSMSHsm control data set backup, see *Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of z/OS DFSMSHsm Implementation and Customization Guide*.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0113I The BACKUPDEVICECATEGORY for DFSMSHsm Control Data Set backups is set to TAPE. The check is disabled with REASON=ENVNA.

Explanation: CHECK(IBMHSM,HSM_CDSB_DASD_BACKUPS) is not required when CDS backups are being created on tape.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

Problem determination: None.

For more information about DFSMSHsm CDS backup, see *Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of z/OS DFSMSHsm Implementation and Customization Guide*.

Module: N/A

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0114I CHECK (IBMHSM,HSM_CDSB_VALID_BACKUPS) Summary Critical Value: *critval* (specified by *src*) **Temporary Critical Value:** *tempcrit* **BACKUPCOPIES specified:** *reqbackups* **MCDS Valid Backups:** *mcdsnum* **BCDS Valid Backups:** *bcdsnum* **OCDS Valid Backups:** *ocdsnum* **JRNL Valid Backups:** *jrnlnum*

Explanation: CHECK(IBMHSM,HSM_CDSB_VALID_BACKUPS) control data set backup summary is presented when the check runs to completion.

In the message text:

critval Critical number of CDS backups.

src Source of the critical value.

owner Default value supplied by IBM.

installation

Modified by the installation through the CRITVAL(n) parameter.

tempcrit Temporary critical value. This value is only displayed when a temporary value is used.

reqbackups

Number of CDS backup copies that DFSMSHsm is set up to maintain.

mcdsnum

Number of valid MCDS backup copies found by the check.

bcdsnum

Number of valid BCDS backup copies found by the check.

ocdsnum

Number of valid OCDS backup copies found by the check.

jrnlnum Number of valid Journal backup copies found by the check.

System action: The system continues processing.

Operator response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary operator actions.

System programmer response: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on any necessary system programmer actions.

Problem determination: This message is presented with an accompanying message. Refer to the documentation for the accompanying message for information on problem determination.

Module: N/A

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

ARCHC0115E The number of valid DFSMSHsm Control Data Set backup copies is below the critical level.

Explanation: CHECK(IBMHSM,HSM_CDSB_VALID_BACKUPS) determined that the number of valid CDS backup copies is below the owner- or installation-specified critical level. A system with fewer CDS backups than the critical level is considered to be at an increased risk of discarding all valid CDS backup copies.

Information messages ARCHC0114I and ARCHC0106I are placed in the message buffer to describe the check's findings.

System action: The system continues processing.

ARCHC0116I

Operator response: N/A

System programmer response: Review the backup copy data sets in message ARCHC0106I, which have a status of ***** NOT FOUND *****, ***** NOT VALID *****, or ***** OBTAIN ERROR *****. Perform problem diagnosis for these data sets.

Problem determination: Investigate the reason for the backup copy or copies in error. If applicable, SMF records can be analyzed to determine how the data set was uncataloged or deleted.

- For ***** NOT VALID ***** data sets, DFSMSHsm failed to create a valid backup of the CDS. If a ***** NOT VALID ***** backup is followed by one or more **CATALOGED** or **FOUND** backups, it is possible the problem was transient. In all cases, investigate the cause of the failure. The DFSMSHsm joblog or the system log can be used to determine if additional messages were issued during the failed backup attempts.
- For ***** NOT FOUND ***** data sets, the backup data set was expected to be cataloged, however a catalog locate request for the data set failed. Determine why the backup copy cannot be located. If the control data sets are backed up to DASD, re-define the missing backup data sets using the attributes of the existing backup data sets for a given control data set.
- For ***** OBTAIN ERROR ***** data sets, at OBTAIN request for the data set on the cataloged volume failed. The catalog entry must be scratched using an IDCAMS DELETE NOSCRATCH or similar utility. If the control data sets are backed up to DASD, re-define the missing backup data sets using the attributes of the existing backup data sets for a given control data set.

In some instances, a field titled "Temporary Critical Value" may appear in the accompanying ARCHC0114I message. This field indicates a temporary critical value was used for this execution of the check. A temporary critical value is used when the latest version number for the CDS backups is less than the owner- or installation-specified critical value.

For more information about DFSMSHsm control data set backup, see *Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of z/OS DFSMSHsm Implementation and Customization Guide*.

Module: N/A

Source: DFSMSHsm

Routing Code: See note 35.

Descriptor Code: The default set by this check is 3. See note 1.

ARCHC0116I The check ran successfully and found no exceptions. The number of valid Control Data Set backup copies is equal to or greater than the critical value.

Explanation: CHECK(IBMHSM,HSM_CDSB_VALID_BACKUPS) found the number of valid CDS backup copies to be equal to or greater than the critical value.

Information message ARCHC0114I is placed in the message buffer to describe the check's findings. When the check is run in VERBOSE mode, informational message ARCHC0106I is also placed in the message buffer to describe the status of the backup data sets.

System action: The system continues processing.

Operator response: N/A

System programmer response: N/A

Problem determination: None.

For more information about DFSMSHsm control data set backup, see *Defining the Backup Environment for Control Data Sets in DFSMSHsm Data Sets of z/OS DFSMSHsm Implementation and Customization Guide*.

Module: ARCHCCD1

Source: DFSMSHsm

Routing Code: N/A

Descriptor Code: N/A

Chapter 3. ASA messages

ASA001I ERROR(S) FOUND IN PROCESSING PARMLIB MEMBER=*memname*: *text*

Explanation: *text* is one of the following:

PARMLIB MEMBER NOT FOUND. DETECTING MODULE IS *detmod*

PARMLIB I/O ERROR. DETECTING MODULE IS *detmod*

SYNTAX ERROR - MESSAGES FOLLOW. DETECTING MODULE IS *detmod*

INSUFFICIENT STORAGE FOR PARMLIB BUFFER. DETECTING MODULE IS *detmod*

PARMLIB CANNOT BE READ. DETECTING MODULE IS *detmod*

DYNAMIC ALLOCATION OF PARMLIB FAILED. DETECTING MODULE IS *detmod*

OTHER PARMLIB ERROR. DETECTING MODULE IS *detmod*

The system could not process the indicated parmlib member.

In the message text:

memname

The name of the parmlib member in which the error was found.

detmod

The name of the module that detected the error.

PARMLIB MEMBER NOT FOUND. DETECTING MODULE IS *detmod*

The system could not find parmlib member *memname*.

PARMLIB I/O ERROR. DETECTING MODULE IS *detmod*

An I/O error occurred while the system was processing parmlib member *memname*.

SYNTAX ERROR - MESSAGES FOLLOW. DETECTING MODULE IS *detmod*

Syntax errors were found while processing the parmlib member.

INSUFFICIENT STORAGE FOR PARMLIB BUFFER. DETECTING MODULE IS *detmod*

The system tried to read the entire parmlib member into storage prior to parsing but was unable to acquire enough storage to do so.

PARMLIB CANNOT BE READ. DETECTING MODULE IS *detmod*

The system could not read the parmlib member.

DYNAMIC ALLOCATION OF PARMLIB FAILED. DETECTING MODULE IS *detmod*

The system could not allocate the parmlib member.

OTHER PARMLIB ERROR. DETECTING MODULE IS *detmod*

Accompanying messages explain the error.

System action: The system ignores the parmlib member.

Operator response: If PARMLIB MEMBER NOT FOUND. DETECTING MODULE IS *detmod* appears in the message text, ensure that you specified an existing parmlib member. If the parmlib member exists, enter the command again. If the problem recurs or if the parmlib member does not exist, notify the system programmer.

For all other message texts, notify the system programmer.

System programmer response: If PARMLIB I/O ERROR. DETECTING MODULE IS *detmod* appears in the message text, correct the I/O error. Tell the operator to enter the command again.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

If INSUFFICIENT STORAGE FOR PARMLIB BUFFER. DETECTING MODULE IS *detmod* appears in the message text, check the private storage utilization.

ASA002I • ASA003I

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4,5

ASA002I SYNTAX ERROR IN PARMLIB MEMBER=*memname* LINE *line-number*: *symbol1* EXPECTED BEFORE *symbol2*. DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: The system found a syntax error while processing a parmlib member. The parmlib member is:

- Missing a necessary character or symbol, or
- Contains a character or symbol in error.

In the message text:

memname

The name of the parmlib member containing a syntax error.

line-number

The number of the line in parmlib member *memname* that contains the syntax error.

symbol1 The missing character or symbol that the system expects.

symbol2 The character or symbol after the missing symbol, *symbol1*. Either *symbol1* is missing, or *symbol2* is not correct.

detmod The name of the module that detected the error.

input-line

The text of the line containing the syntax error.

System action: The system ignores the statement that contains the syntax error. The system may check the syntax for the remaining statements in the parmlib member.

Operator response: Contact the system programmer.

System programmer response: Correct the syntax error in the parmlib member before reusing it.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA003I SYNTAX ERROR IN PARMLIB MEMBER=*memname* ON LINE *line-number*, POSITION *position-number*: *symbol* WAS SEEN, WHERE ONE OF (*yyy* [*yyy...*]) WOULD BE CORRECT. DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: The system found a syntax error in a parmlib member.

In the message text:

memname

The name of the parmlib member containing a syntax error.

line-number

The number of the line in parmlib member *memname* that contains the syntax error.

position-number

The position of the error in the line. The position number is the number of columns in from the left.

symbol The missing character or symbol that the system expects.

yyy One or more correct symbols or characters to choose in place of *symbol*.

detmod The name of the module that detected the error.

input-line

The text of the line containing the syntax error.

System action: The system ignores the statement that contains the syntax error. The system may check the syntax for the remaining statements in the parmlib member.

Operator response: Contact the system programmer.

System programmer response: Correct the syntax error in the parmlib member before reusing it.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA004I PARSING OF PARMLIB MEMBER=*memname* CONTINUED AT *symbol*, LINE *line-number*.
DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: The system found a syntax error in a parmlib member. The system ignores the portion of the parmlib member containing the syntax error, but continues processing at the point indicated in the message text.

In the message text:

memname

The name of the parmlib member containing a syntax error.

symbol The next statement, keyword, or character after the syntax error (where the system begins processing the parmlib member again).

line-number

The number of the line in parmlib member *memname* where the system resumes processing.

detmod The name of the module that detected the error.

input-line

The text of the line after the syntax error (where the system begins processing the parmlib member again).

System action: The system does not check the syntax in the portion of the parmlib member containing the syntax error, but continues processing at the point indicated in the message text.

Operator response: Contact the system programmer.

System programmer response: Look in the portion of the parmlib member that was not processed for the syntax error. Correct the error before reusing the parmlib member.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA005I *symbol* SHOULD BE DELETED FROM PARMLIB MEMBER=*memname*, LINE *line-number*.
DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: The system found a syntax error in a parmlib member.

In the message text:

symbol The statement, keyword, or character that should be removed from parmlib member *memname*

memname

The name of the parmlib member containing a syntax error.

ASA006I • ASA007I

line-number

The number of the line in parmlib member *memname* containing the statement, keyword, or character that should be removed.

detmod The name of the module that detected the error.

input-line

The text of the line that contains the statement, keyword, or character that should be removed.

System action: The system continues processing the parmlib member. The system previously issued message ASA002I or ASA003I to describe the problem further.

Operator response: Contact the system programmer.

System programmer response: See the explanation for any preceding messages. Correct the syntax error and, if necessary, delete the keyword statement, or symbol provided in the *symbol* field before reusing the parmlib member.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA006I *symbol* WAS ASSUMED BEFORE THE ERROR POINT IN PARMLIB MEMBER=*memname*, LINE *line-number*. DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: The system found a syntax error in a parmlib member. The system did not find a necessary statement, keyword, or other input in the parmlib member, but continues to process the member as if the symbol was entered correctly.

In the message text:

symbol The statement, keyword, or character that the system assumed to be in place.

memname

The name of the parmlib member containing the error point.

line-number

The number of the line in parmlib member *memname* that contains the error point.

detmod The name of the module that detected the error.

input-line

The text of the line containing the error point.

System action: The system continues processing the parmlib member. The system previously issued message ASA002I or ASA003I to describe the problem further.

Operator response: Contact the system programmer.

System programmer response: See the explanation for any preceding messages and correct the error before reusing the parmlib member.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA007I ERRORS IN PARMLIB MEMBER=*memname*, REFER TO HARDCOPY LOG. DETECTING MODULE IS *detmod*

Explanation: The system found errors while processing parmlib member *memname*. The system wrote error messages to the hardcopy log.

In the message text:

memname

The name of the parmlib member containing the syntax errors.

detmod The name of the module that detected the error.

System action: The system writes error messages to the hardcopy log. Processing continues.

Operator response: Contact the system programmer.

System programmer response: Look in the hardcopy log for messages that describe the syntax errors in the parmlib member. Correct any errors in the parmlib member before reusing it.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Module: -

Source: Shown in the message text.

Routing Code: 5

ASA008I ERROR IN PARMLIB MEMBER=*memname* ON LINE *line-number*, POSITION *position-number*: VALUE IS NOT VALID - *error* DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: In a parmlib member, the system found an incorrect value for a keyword.

In the message text:

memname

The name of the parmlib member in which the error was found.

line-number

The number of the line in parmlib member *memname* containing the error.

position-number

The position of the error in the line. The position number is the number of columns in from the left.

error is one of the following:

CONTAINS BAD CHARACTER(S).

The value contains characters that are not valid.

FIRST CHARACTER IS NOT VALID.

The first character specified for the value is not valid.

IT IS TOO LONG.

The specified value contains too many characters.

OUT OF RANGE.

The specified value does not fit within the required range.

NUMBER OF ENTRIES EXCEEDS LIMIT.

The number of entries specified is greater than is allowed.

MISSING OPERAND.

The required operand is not specified.

NO MATCH FOUND.

The requested operand does not exist within the system.

IT IS TOO SHORT.

The specified value contains too few characters.

RANGE IS NOT VALID.

The specified range is not valid .

DUPLICATE VALUE(S).

There are duplicate value(s) within the data.

detmod The name of the module that detected the error.

ASA009I

input-line

The text of the line containing the syntax error.

System action: The system ignores the statement but continues processing the parmlib member with the next statement.

Operator response: Contact the system programmer.

System programmer response: Correct the value for the keyword in the parmlib member

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA009I SYNTAX ERROR IN PARMLIB MEMBER=*memname* ON LINE *line-number*, POSITION *position-number*: WHEN *symbol* IS SPECIFIED, *relation* (*yyy* [*yyy...*]). DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: The system found a syntax error in a parmlib member.

In the message text:

memname

The name of the parmlib member containing a syntax error.

line-number

The number of the line in parmlib member *memname* that contains the syntax error.

position-number

The position of the error in the line. The position number is the number of columns in from the left.

symbol

The symbol that the system found in the command text. The symbol is not valid because of the condition described in the message.

relation

is one of the following:

THE FOLLOWING MAY NOT BE SPECIFIED:

When *symbol* is specified, the other named symbols may not be.

THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, the other named symbol must be.

ALL OF THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, the other named symbols must be.

ONE OF THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, one of the other named symbol(s) must be.

ONE OR MORE OF THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, at least one of the other named symbol(s) must be.

yyy

One or more correct symbols or characters that relate to *symbol*, as described in the *relation* field.

detmod

The name of the module that detected the error.

input-line

The text of the line containing the syntax error.

System action: The system ignores the statement that contains the syntax error. The system may check the syntax for the remaining statements in the parmlib member.

Operator response: Contact the system programmer.

System programmer response: Correct the syntax error in the parmlib member before reusing it.

If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA010I ERROR IN PARMLIB MEMBER=*memname* ON LINE *line-number*, POSITION *position-number*: DATA SET NAME *dsname* IS NOT CORRECT - *error*. DETECTING MODULE IS *detmod*

Explanation: The system found an incorrectly specified data set name.

In the message text:

memname

The name of the parmlib member in which the error was found.

line-number

The number of the line in parmlib member *memname* containing the error.

position-number

The position of the error in the line. The position number is the number of columns in from the left.

dsname The input data set name.

error is one of the following:

LENGTH EXCEEDS 44 CHARACTERS

The data set name is too long.

A CHARACTER IS NOT VALID

The name contains a character that is not alphabetic, numeric, national, or a period.

SEGMENT LENGTH IS NOT 1-8

A segment of the name - between periods or at the beginning or end - is not of an acceptable length.

FIRST CHARACTER IS NOT VALID

The first character is not alphabetic or national.

FIRST CHARACTER OF A SEGMENT IS NOT VALID

The first character of a segment of the name was not alphabetic or national.

detmod The name of the module that detected the error.

System action: The system may stop processing the statement.

Operator response: If no message prompt follows, correct the syntax and re-issue the command.

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA011I ERROR IN PARMLIB MEMBER=*memname* ON LINE *line-number*, POSITION *position-number*: DUPLICATE SPECIFICATION OF '*keyword*'. FIRST SPECIFICATION IS USED. DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: In a parmlib member, the system found a duplicate keyword specification.

In the message text:

memname

The name of the parmlib member in which the error was found.

line-number

The number of the line in parmlib member *memname* containing the error.

position-number

The position of the error in the line. The position number is the number of columns in from the left.

keyword The keyword that was previously specified.

ASA012I • ASA013I

detmod The name of the module that detected the error.

input-line

The text of the line containing the syntax error.

System action: The system ignores the duplicate specification (the first specification will be used) and continues processing the parmlib member.

Operator response: Contact the system programmer.

System programmer response: Correct the duplication specification of the keyword in the parmlib member. If the problem recurs, search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Module: Many.

Source: Shown in the message text.

Routing Code: hardcopy only or not hardcopy only

Descriptor Code: 5,12

ASA012I ERROR IN PARMLIB MEMBER=*memname* ON LINE *line-number*, POSITION *position-number*: *keyword* IS IGNORED. DETECTING MODULE IS *detmod*. INPUT LINE:*input-line*

Explanation: In a parmlib member, the system found a keyword the use of which is ignored. This is likely a situation where the keyword is introduced in a newer release and your release tolerates the keyword so that you can more likely use the same parmlib member across releases.

In the message text:

memname

The name of the parmlib member in which the error was found.

line-number

The number of the line in parmlib member *memname* containing the error.

position-number

The position of the error in the line. The position number is the number of columns in from the left.

keyword The keyword which is ignored.

detmod The name of the module that detected the error.

input-line

The text of the line containing the ignored keyword.

System action: The system ignores the keyword.

Module: Many.

Source: Shown in the message text.

ASA013I ERROR IN PARMLIB MEMBER=*memname*: *keyword* IS IGNORED. DETECTING MODULE IS *detmod*

Explanation: In a parmlib member, the system found a keyword the use of which is ignored. This is likely a situation where the keyword is introduced in a newer release and your release tolerates the keyword so that you can more likely use the same parmlib member across releases.

In the message text:

memname

The name of the parmlib member in which the error was found.

keyword The keyword which is ignored.

detmod The name of the module that detected the error.

System action: The system ignores the keyword.

Module: Many.

Source: Shown in the message text.

| **ASA020I** SYNTAX CHECKING IS COMPLETE FOR PARMLIB MEMBER=*memname*. ERROR(S) WERE
| FOUND

| **Explanation:** Syntax checking was requested and has been completed. Errors were detected, identified by preceding
| messages.

| In the message text:

| *memname*

| The name of the parmlib member for which syntax checking was done.

| **System action:** The system continues processing.

| **System programmer response:** Correct any reported syntax errors. If the problem recurs, search problem reporting
| data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the parmlib
| member shown in the message text and the command that was used to initiate the syntax checking.

| **Programmer response:** None.

| **Source:** Component responsible for the parmlib member and the command.

| **ASA021I** SYNTAX CHECKING IS COMPLETE FOR PARMLIB MEMBER=*memname*. NO ERRORS WERE
| FOUND

| **Explanation:** Syntax checking was requested and has been completed. No errors were detected.

| In the message text:

| *memname*

| The name of the parmlib member for which syntax checking was done.

| **System action:** The system continues processing.

| **System programmer response:** None.

| **Programmer response:** None.

| **Source:** Component responsible for the parmlib member and the command.

ASA014I WARNING IN PARMLIB MEMBER= *memname*. '*keyword*' IS UNDEFINED. PROCESSING
CONTINUES DUE TO WARNUND. DETECTING MODULE IS *detmod*. INPUT LINE: *input-line*

Explanation: In a parmlib member, the system found data that it did not recognize. Since the WARNUND system
parameter has been specified, the data is ignored.

In the message text:

memname

The name of the parmlib member in which the warning was found.

keyword The keyword which is being ignored.

detmod The name of the module that detected the data being ignored.

input-line

The text of the line containing the data being ignored.

System action: The system continues processing

Operator response: Contact the system programmer.

System programmer response: If this is intended, no action is necessary. Otherwise correct the data.

If the problem recurs, search problem reporting databases for a fix for the problem. If no fix exists, contact the IBM
Support Center. Provide the name of the detecting module shown in the message text.

Module: Many

ASA100I • ASA102I

Source: Shown in the message text.

Routing Code: -

Descriptor Code: 5

ASA100I SYNTAX ERROR: *symbol1* EXPECTED BEFORE *symbol2*. DETECTING MODULE IS *detmod*

Explanation: The system found a syntax error while processing a command. The command is:

- Missing a necessary character or symbol, or
- Contains a character or symbol in error.

In the message text:

symbol1 The missing character or symbol that the system expects.

symbol2 The character or symbol after the missing symbol *symbol1*. Either *symbol1* is missing, or *symbol2* is not correct.

detmod The name of the module that detected the error.

System action: The system ignores the command.

Operator response: Correct the syntax error. Enter the command again. If the error recurs, contact the system programmer.

System programmer response: Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: 11,2

Descriptor Code: 5,6,12

ASA101I SYNTAX ERROR: *symbol* WAS SEEN, WHERE ONE OF (*yyy* [*yyy...*]) WOULD BE CORRECT. DETECTING MODULE IS *detmod*

Explanation: The system found a syntax error in a command.

In the message text:

symbol An incorrect symbol that appeared in the command text.

yyy One or more correct symbols or characters that should replace *symbol* in the command text.

detmod The name of the module that detected the error.

System action: The system ignores the command.

Operator response: Correct the syntax error. Enter the command again. If the error recurs, contact the system programmer.

System programmer response: Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: 11,2

Descriptor Code: 5,6,12

ASA102I *symbol* WAS ASSUMED BEFORE THE ERROR POINT. DETECTING MODULE IS *detmod*

Explanation: The system found a syntax error while processing a command. The system did not find a necessary statement, keyword, or other input in the command, but continues as if the statement was present.

In the message text:

symbol The statement, keyword, or character that the system assumed to be present so that processing could continue.

detmod The name of the module that detected the error.

System action: The system continues processing the command. The system previously issued message ASA100I or ASA101I to describe the error further.

Operator response: See the explanations for messages ASA100I or ASA101I. Correct the syntax error. Enter the command again. If the error recurs, contact the system programmer.

System programmer response: Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: 11,2

Descriptor Code: 5,6,12

ASA103I SYNTAX ERROR: WHEN *symbol* IS SPECIFIED, *relation* (*yyy* [*yyy...*]). DETECTING MODULE IS *detmod*

Explanation: The system found a syntax error in a command.

In the message text:

symbol The symbol that the system found in the command text. The symbol is not valid because of the condition described in the message.

relation is one of the following:

THE FOLLOWING MAY NOT BE SPECIFIED:

When *symbol* is specified, the other named symbols may not be.

THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, the other named symbol must be.

ALL OF THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, the other named symbols must be.

ONE OF THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, one of the other named symbol(s) must be.

ONE OR MORE OF THE FOLLOWING MUST ALSO BE SPECIFIED:

When *symbol* is specified, at least one of the other named symbol(s) must be.

yyy One or more correct symbols or characters that relate to *symbol*, as described in the *relation* field.

detmod The name of the module that detected the error.

System action: The system ignores the command.

Operator response: Correct the syntax error. Enter the command again. If the error recurs, contact the system programmer.

System programmer response: Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: 11,2

Descriptor Code: 5,6,12

ASA104I SYNTAX ERROR IN POSITION *position*. ERROR IN VALUE FOR KEYWORD *keyword* - *error*. DETECTING MODULE IS *detmod*

Explanation: The system found an incorrect value in a parameter.

In the message text:

position The position of the error in the line. The position is the number of columns counting from the left, starting at 0.

ASA105I

keyword The keyword with the syntax error.

error One of the following:

CONTAINS UNACCEPTABLE CHARACTER(S)

The value contains characters that are not valid. For example, a decimal value might be required, but the value contained a character that was not 0 through 9.

FIRST CHARACTER IS NOT VALID

The first character specified for the value is not valid.

IT IS TOO LONG

The specified value contains too many characters.

OUT OF RANGE

The specified value does not fit within the required range.

NUMBER OF ENTRIES EXCEEDS LIMIT

The number of entries specified is greater than allowed.

MISSING OPERAND

The required operand is not specified.

NO MATCH FOUND

No match was found for the keyword.

IT IS TOO SHORT

The specified value contains too few characters.

RANGE IS NOT VALID.

The specified range is not valid .

DUPLICATE VALUE(S).

There are duplicate value(s) within the data.

detmod The name of the module that detected the error.

System action: The system stops processing the statement or operand.

Operator response: Correct the syntax error. Enter the command again. If the error recurs, contact the system programmer.

System programmer response: Search problem reporting data bases for a fix for the problem. If no fix exists, contact the IBM Support Center. Provide the name of the detecting module shown in the message text.

Source: Shown in the message text.

Routing Code: 11,2

Descriptor Code: 5,6,12

ASA105I DATA SET NAME *dsname* IS NOT CORRECT - error. DETECTING MODULE IS *detmod*

Explanation: The system found an incorrectly specified data set name.

In the message text:

dsname The input data set name.

error is one of the following:

LENGTH EXCEEDS 44 CHARACTERS

The data set name is too long.

A CHARACTER IS NOT VALID

The name contains a character that is not alphabetic, numeric, national, or a period.

SEGMENT LENGTH IS NOT 1-8

A segment of the name - between periods or at the beginning or end - is not of an acceptable length

FIRST CHARACTER IS NOT VALID

The first character is not alphabetic or national.

FIRST CHARACTER OF A SEGMENT IS NOT VALID

The first character of a segment of the name was not alphabetic or national.

detmod The name of the module that detected the error.

System action: The system may stop processing the statement.

Operator response: If no message prompt follows, correct the syntax and re-issue the command.

Source: Shown in the message text.

Routing Code: 11,2

Descriptor Code: 5,6,12

ASA111I SYNTAX ERROR IN POSITION *position-number*:**DUPLICATE SPECIFICATION OF 'keyword'.FIRST SPECIFICATION IS USED.DETECTING MODULE IS** *detmod*.

Explanation: The system found a duplication specification of a parameter.

In the message text:

position-number

The position of the error in the line. The position number is the number of columns in from the left. When the line is a system command, the position number is the number of columns in from the start of the command operand.

keyword The keyword that was previously specified.

detmod The name of the module that detected the error.

System action: The system ignores the duplicate specification (the first specification will be used) and continues processing.

Operator response: Don't specify duplication keywords.

Module: Many.

Source: Shown in the message text.

Routing Code: -,2,11

Descriptor Code: 5,6,12

| **ASA120I SYNTAX CHECKING IS COMPLETE FOR** *issuer*. **NO ERRORS WERE FOUND**

| **Explanation:** Syntax checking was requested and has been completed. No errors were detected.

| In the message text:

| *memname*

| The issuer, such as the command name.

| **System action:** The system continues processing.

| **System programmer response:** None.

| **Source:** Component responsible for the parmlib member and the command.

ASA2000I SUBSYSTEM *ssname*: **PRODID=productid PRODLVL=productlvl COMPID=compid (C) COPYRIGHT IBM CORP. year ALL RIGHTS RESERVED. U.S. GOVERNMENT USERS RESTRICTED RIGHTS - USE, DUPLICATION, OR DISCLOSURE RESTRICTED BY GSA ADP SCHEDULE CONTRACT WITH IBM CORP.**

Explanation: This is a proprietary statement concerning the use of the product. The second line of the message indicates the product identifier, product level, and component identifier of the product.

In the message text:

ssname The name of the subsystem.

ASA2005I • ASA2006I

productid

The product identifier.

productlvl

The product level.

compid

The component identifier.

year

The year to which the copyright applies.

System action: Subsystem processing continues

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4

ASA2005I SUBSYSTEM JOBNAME *jobname* IS NOT VALID. COMPONENT ID=*compid*

Explanation: The job name/procedure name, which is used as the name of the subsystem, is not a valid subsystem name. The name must be from 1 to 4 characters.

In the message text:

jobname

The name of the job or started procedure.

compid

The component identifier.

System action: The address space is terminated.

Operator response: Notify your system programmer.

System programmer response: Ensure that the job name/procedure name is a valid subsystem name (1-4 characters).

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2006I *ssname* INPUT COMMAND PREFIX IS NOT VALID. DEFAULT PREFIX USED. COMPONENT ID=*compid*

Explanation: A command prefix value that was specified as input to the subsystem *ssname* is not valid. The prefix value is either greater than 8 characters, begins with an incorrect symbol, or contains an imbedded blank.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: Subsystem initialization continues. The system ignores the specified command prefix value and uses subsystem name *ssname* as the default command prefix.

Operator response: If the default command prefix is unacceptable, enter a CANCEL command prefixed by *ssname* to cancel the subsystem immediately. Then, if you entered the incorrect command prefix as a parameter on the START command when you first started the subsystem, re-enter the START command to restart the subsystem with a valid command prefix value.

If you did not specify the incorrect command prefix on the START command, notify your system programmer.

System programmer response: If the incorrect command prefix was specified as a parameter in the job procedure that was used to start the subsystem, correct the command prefix parameter in the procedure so the system will use the correct command prefix the next time the subsystem is started.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2007I *ssname* **COMMAND PREFIX IS** *cmdprefix*. **COMPONENT ID=***compid*

Explanation: The command prefix that is in use for subsystem *ssname* is *cmdprefix*. All commands entered for the subsystem should begin with this prefix.

In the message text:

ssname

The name of the subsystem.

cmdprefix

is a 1-8 character command prefix.

compid

The component identifier.

System action: Subsystem initialization continues.

Operator response: Whenever you enter one of the commands supported by the subsystem, you must begin the command with the indicated command prefix (such as *cmdprefix* STATUS).

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4

ASA2008I **SUB=***ssname* **WAS NOT SPECIFIED.** **COMPONENT ID=***compid*

Explanation: When the subsystem was started, the START command did not specify SUB=*ssname*.

In the message text:

ssname

The name of the required subsystem.

compid

The component identifier.

System action: The system terminates the address space.

Operator response: Specify SUB=*ssname* when starting the subsystem.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2011I *ssname* **INITIALIZATION COMPLETE.** **COMPONENT ID=***compid*

Explanation: Subsystem *ssname* has completed its initialization.

In the message text:

ASA2012I • ASA2013I

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem continues processing. It is now ready to process any data set whose DD statement specifies the SUBSYS= keyword indicating this subsystem (that is, *ssname*).

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4

ASA2012I *ssname* ENDED. COMPONENT ID=*compid*

Explanation: The subsystem *ssname* has completed shutting itself down.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem address space terminates.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4

ASA2013I *ssname* INITIALIZATION FAILED. COMPONENT ID=*compid*

Explanation: The system could not initialize subsystem *ssname* successfully. An error message or abend issued just prior to this message indicates the specific initialization error.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem terminates.

Operator response: Notify your system programmer.

System programmer response: Examine both the SYSLOG and LOGREC to locate the error message or abend that describes the error that caused initialization to fail, then correct the condition that caused the error.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2014I *ssname* ALREADY ACTIVE. COMPONENT ID=*compid*

Explanation: One instance of subsystem *ssname* already exists. The system does not allow starting more than one subsystem with the same name.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem that issued this message terminates.

Operator response: Ensure you specified the correct name on the START command when starting the subsystem.

If you were restarting the subsystem after an error, ensure that the first instance of the subsystem ends before issuing the START command.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2016I *ssname* IS NOT A VALID SUBSYSTEM. COMPONENT ID=*compid*

Explanation: Subsystem *ssname* is not a defined subsystem name that the system recognizes.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem terminates.

Operator response: Notify your system programmer.

System programmer response: Ensure the subsystem name *ssname* is defined as a valid subsystem name in the IEFSSNxx parmlib member that was used to IPL the system.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2326I SUBSYSTEM *ssname* ALTERED TO USE THE PRIMARY SUBSYSTEM. COMPONENT ID=*compid*

Explanation: Subsystem *ssname* has been set to indicate that it is to be started only under the primary subsystem.

This message occurs if the installation has specified the subsystem initialization routine on the initialization statement for the subsystem in its IEFSSNxx parmlib member. The subsystem initialization routine will always force the specified subsystem to be initialized under only the primary subsystem.

This message is written to hardcopy only.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

ASA2432I • ASA2962I

System action: System initialization continues.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 12

ASA2432I *ssname* PARMLIB MEMBER *memname* READ. COMPONENT ID=*compid*

Explanation: Parmlib member *mname* was successfully read and processed.

In the message text:

ssname

The name of the subsystem.

memname

The name of the parmlib member that was read.

compid

The component identifier.

System action: Subsystem processing continues.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4,5

ASA2960I *ssname* SUBSYSTEM FUNCTIONS DISABLED. COMPONENT ID=*compid*

Explanation: During the process of terminating either normally or abnormally, subsystem *ssname* disabled the subsystem functions it normally provides for jobs.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem will proceed to terminate. Any jobs that attempt to allocate, open, or close resources managed by subsystem *ssname* will fail during allocation, open, or close processing.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4

ASA2962I *ssname* SUBSYSTEM FUNCTION DISABLEMENT FAILED. COMPONENT ID=*compid*

Explanation: During the process of terminating either normally or abnormally, subsystem *ssname* attempted to disable the subsystem functions it normally provides. However, a failure occurred that prevented the subsystem from completely disabling all the subsystem functions it provides.

In the message text:

ssname

The name of the subsystem.

compid

The component identifier.

System action: The subsystem will proceed to terminate. Any jobs that attempt to allocate, open, or close resources managed by subsystem *ssname* might end abnormally.

Module: Many.

Source: Shown in the message text.

Routing Code: 2

Descriptor Code: 4,10

Appendix. Accessibility

Accessible publications for this product are offered through IBM Knowledge Center (<http://www.ibm.com/support/knowledgecenter/SSLTBW/welcome>).

If you experience difficulty with the accessibility of any z/OS information, send a detailed message to the "Contact us" web page for z/OS (<http://www.ibm.com/systems/z/os/zos/webqs.html>) or use the following mailing address.

IBM Corporation
Attention: MHVRCFS Reader Comments
Department H6MA, Building 707
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Poughkeepsie, NY 12601-5400
United States

Accessibility features

Accessibility features help users who have physical disabilities such as restricted mobility or limited vision use software products successfully. The accessibility features in z/OS can help users do the following tasks:

- Run assistive technology such as screen readers and screen magnifier software.
- Operate specific or equivalent features by using the keyboard.
- Customize display attributes such as color, contrast, and font size.

Consult assistive technologies

Assistive technology products such as screen readers function with the user interfaces found in z/OS. Consult the product information for the specific assistive technology product that is used to access z/OS interfaces.

Keyboard navigation of the user interface

You can access z/OS user interfaces with TSO/E or ISPF. The following information describes how to use TSO/E and ISPF, including the use of keyboard shortcuts and function keys (PF keys). Each guide includes the default settings for the PF keys.

- *z/OS TSO/E Primer*
- *z/OS TSO/E User's Guide*
- *z/OS V2R2 ISPF User's Guide Vol I*

Dotted decimal syntax diagrams

Syntax diagrams are provided in dotted decimal format for users who access IBM Knowledge Center with a screen reader. In dotted decimal format, each syntax element is written on a separate line. If two or more syntax elements are always present together (or always absent together), they can appear on the same line because they are considered a single compound syntax element.

Each line starts with a dotted decimal number; for example, 3 or 3.1 or 3.1.1. To hear these numbers correctly, make sure that the screen reader is set to read out

punctuation. All the syntax elements that have the same dotted decimal number (for example, all the syntax elements that have the number 3.1) are mutually exclusive alternatives. If you hear the lines 3.1 USERID and 3.1 SYSTEMID, your syntax can include either USERID or SYSTEMID, but not both.

The dotted decimal numbering level denotes the level of nesting. For example, if a syntax element with dotted decimal number 3 is followed by a series of syntax elements with dotted decimal number 3.1, all the syntax elements numbered 3.1 are subordinate to the syntax element numbered 3.

Certain words and symbols are used next to the dotted decimal numbers to add information about the syntax elements. Occasionally, these words and symbols might occur at the beginning of the element itself. For ease of identification, if the word or symbol is a part of the syntax element, it is preceded by the backslash (\) character. The * symbol is placed next to a dotted decimal number to indicate that the syntax element repeats. For example, syntax element *FILE with dotted decimal number 3 is given the format 3 * FILE. Format 3* FILE indicates that syntax element FILE repeats. Format 3* * FILE indicates that syntax element * FILE repeats.

Characters such as commas, which are used to separate a string of syntax elements, are shown in the syntax just before the items they separate. These characters can appear on the same line as each item, or on a separate line with the same dotted decimal number as the relevant items. The line can also show another symbol to provide information about the syntax elements. For example, the lines 5.1*, 5.1 LASTRUN, and 5.1 DELETE mean that if you use more than one of the LASTRUN and DELETE syntax elements, the elements must be separated by a comma. If no separator is given, assume that you use a blank to separate each syntax element.

If a syntax element is preceded by the % symbol, it indicates a reference that is defined elsewhere. The string that follows the % symbol is the name of a syntax fragment rather than a literal. For example, the line 2.1 %OP1 means that you must refer to separate syntax fragment OP1.

The following symbols are used next to the dotted decimal numbers.

? indicates an optional syntax element

The question mark (?) symbol indicates an optional syntax element. A dotted decimal number followed by the question mark symbol (?) indicates that all the syntax elements with a corresponding dotted decimal number, and any subordinate syntax elements, are optional. If there is only one syntax element with a dotted decimal number, the ? symbol is displayed on the same line as the syntax element, (for example 5? NOTIFY). If there is more than one syntax element with a dotted decimal number, the ? symbol is displayed on a line by itself, followed by the syntax elements that are optional. For example, if you hear the lines 5 ?, 5 NOTIFY, and 5 UPDATE, you know that the syntax elements NOTIFY and UPDATE are optional. That is, you can choose one or none of them. The ? symbol is equivalent to a bypass line in a railroad diagram.

! indicates a default syntax element

The exclamation mark (!) symbol indicates a default syntax element. A dotted decimal number followed by the ! symbol and a syntax element indicate that the syntax element is the default option for all syntax elements that share the same dotted decimal number. Only one of the syntax elements that share the dotted decimal number can specify the ! symbol. For example, if you hear the lines 2? FILE, 2.1! (KEEP), and 2.1 (DELETE), you know that (KEEP) is the

default option for the FILE keyword. In the example, if you include the FILE keyword, but do not specify an option, the default option KEEP is applied. A default option also applies to the next higher dotted decimal number. In this example, if the FILE keyword is omitted, the default FILE(KEEP) is used. However, if you hear the lines 2? FILE, 2.1, 2.1.1! (KEEP), and 2.1.1 (DELETE), the default option KEEP applies only to the next higher dotted decimal number, 2.1 (which does not have an associated keyword), and does not apply to 2? FILE. Nothing is used if the keyword FILE is omitted.

*** indicates an optional syntax element that is repeatable**

The asterisk or glyph (*) symbol indicates a syntax element that can be repeated zero or more times. A dotted decimal number followed by the * symbol indicates that this syntax element can be used zero or more times; that is, it is optional and can be repeated. For example, if you hear the line 5.1* data area, you know that you can include one data area, more than one data area, or no data area. If you hear the lines 3* , 3 HOST, 3 STATE, you know that you can include HOST, STATE, both together, or nothing.

Notes:

1. If a dotted decimal number has an asterisk (*) next to it and there is only one item with that dotted decimal number, you can repeat that same item more than once.
2. If a dotted decimal number has an asterisk next to it and several items have that dotted decimal number, you can use more than one item from the list, but you cannot use the items more than once each. In the previous example, you can write HOST STATE, but you cannot write HOST HOST.
3. The * symbol is equivalent to a loopback line in a railroad syntax diagram.

+ indicates a syntax element that must be included

The plus (+) symbol indicates a syntax element that must be included at least once. A dotted decimal number followed by the + symbol indicates that the syntax element must be included one or more times. That is, it must be included at least once and can be repeated. For example, if you hear the line 6.1+ data area, you must include at least one data area. If you hear the lines 2+, 2 HOST, and 2 STATE, you know that you must include HOST, STATE, or both. Similar to the * symbol, the + symbol can repeat a particular item if it is the only item with that dotted decimal number. The + symbol, like the * symbol, is equivalent to a loopback line in a railroad syntax diagram.

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