

z/OS



MVS System Messages

Volume 2 (ARC - ASA)

z/OS



MVS System Messages

Volume 2 (ARC - ASA)

Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 469.

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About this document

This document supports z/OS™ (5694-A01) and z/OS.e (5655-G52).

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

- Operator messages issued by the BCP and DFSMS/MVS®.
- Log messages issued by the BCP and DFSMS/MVS.
- Some SYSOUT messages issued by the BCP and DFSMS/MVS. 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 documents indicate the range of message prefixes in the documents:

- *z/OS MVS System Messages, Vol 1 (ABA-AOM)*, SA22-7631
- *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7632
- *z/OS MVS System Messages, Vol 3 (ASB-BPX)*, SA22-7633
- *z/OS MVS System Messages, Vol 4 (CBD-DMO)*, SA22-7634
- *z/OS MVS System Messages, Vol 5 (EDG-GFS)*, SA22-7635
- *z/OS MVS System Messages, Vol 6 (GOS-IEA)*, SA22-7636
- *z/OS MVS System Messages, Vol 7 (IEB-IEE)*, SA22-7637
- *z/OS MVS System Messages, Vol 8 (IEF-IGD)*, SA22-7638
- *z/OS MVS System Messages, Vol 9 (IGF-IWM)*, SA22-7639
- *z/OS MVS System Messages, Vol 10 (IXC-IZP)*, SA22-7640

If you do not know which document describes a particular message, try using LookAt (see “Using LookAt to look up message explanations” on page vi). Here are some of the documents on that bookshelf:

- The MVS System Messages documents
- *z/OS MVS Dump Output Messages*, SA22-7590
- *z/OS MVS System Codes*, SA22-7626
- *z/OS and z/VM HCD Messages*, SC33-7986
- *z/OS JES2 Messages*, SA22-7537
- *z/OS JES3 Messages*, SA22-7552
- *z/OS TSO/E Messages*, SA22-7786
- *z/OS UNIX System Services Messages and Codes*, SA22-7807

For a list of message documents sorted by message prefix, see “Message directory” on page x.

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 (see “Message Color” on page 16).

Who should use these MVS System Messages documents

The system messages documents are for all 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 documents contain descriptions of messages, along with the following:

- “Message library” on page ix tells how to create a customized message library
- “Message directory” on page x lists all message prefixes and the documents containing the message descriptions
- Chapter 1, “Introduction,” on page 1 describes how the system issues messages, where it places them, and their formats
- “Routing Codes” on page 11 and “Descriptor Codes” on page 15 contain an introduction to routing and descriptor codes. These sections describe:
 - The meaning of each code
 - How these codes are specified
 - How the system uses these codes

For information on using routing and descriptor codes to route messages, see *z/OS MVS Planning: Operations*.

Message Explanations: Message chapters are arranged alphabetically by the message prefixes. In each chapter, the messages are arranged numerically by the numbers following the prefix. For a general description of message explanations, see “How Messages are Explained in this Book” on page 5.

Using LookAt to look up message explanations

LookAt is an online facility that lets you look up explanations for most of the IBM® messages you encounter, as well as for some system abends and codes. Using LookAt to find information is faster than a conventional search because in most cases LookAt goes directly to the message explanation.

You can use LookAt from these locations to find IBM message explanations for z/OS elements and features, z/VM®, VSE/ESA™, and Clusters for AIX® and Linux™:

- The Internet. You can access IBM message explanations directly from the LookAt Web site at www.ibm.com/servers/eserver/zseries/zos/bkserv/lookat/.
- Your z/OS TSO/E host system. You can install code on your z/OS or z/OS.e systems to access IBM message explanations using LookAt from a TSO/E command line (for example: TSO/E prompt, ISPF, or z/OS UNIX® System Services).
- Your Microsoft® Windows® workstation. You can install LookAt directly from the *z/OS Collection* (SK3T-4269) or the *z/OS and Software Products DVD Collection* (SK3T-4271) and use it from the resulting Windows graphical user interface (GUI). The command prompt (also known as the DOS > command line) version can still be used from the directory in which you install the Windows version of LookAt.
- Your wireless handheld device. You can use the LookAt Mobile Edition from www.ibm.com/servers/eserver/zseries/zos/bkserv/lookat/lookatm.html with a handheld device that has wireless access and an Internet browser (for example: Internet Explorer for Pocket PCs, Blazer or Eudora for Palm OS, or Opera for Linux handheld devices).

You can obtain code to install LookAt on your host system or Microsoft Windows workstation from:

- A CD-ROM in the *z/OS Collection* (SK3T-4269).
- The *z/OS and Software Products DVD Collection* (SK3T-4271).
- The LookAt Web site (click **Download** and then select the platform, release, collection, and location that suit your needs). More information is available in the LOOKAT.ME files available during the download process.

Using IBM Health Checker for z/OS

IBM Health Checker for z/OS is a z/OS component that installations can use to gather information about their system environment and system parameters to help identify potential configuration problems before they impact availability or cause outages. Individual products, z/OS components, or ISV software can provide checks that take advantage of the IBM Health Checker for z/OS framework. This book refers to checks or messages associated with this component.

For additional information about checks and about IBM Health Checker for z/OS, see *IBM Health Checker for z/OS: User's Guide*. Starting with z/OS V1R4, z/OS users can obtain the IBM Health Checker for z/OS from the z/OS Downloads page at www.ibm.com/servers/eserver/zseries/zos/downloads/.

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, you can look on the Web. Point your browser to the z/OS home page and click on Library:

www.ibm.com/servers/eserver/zseries/zos/

When you are in the z/OS library area, use the messages and codes database to search for the message ID you are interested in.

Where to find more information

Many message descriptions refer to:

- **Data areas and control blocks:** See *z/OS MVS Data Areas, Vol 1 (ABEP-DALT)*, *z/OS MVS Data Areas, Vol 2 (DCCB-ITZYRETC)*, *z/OS MVS Data Areas, Vol 3 (IVT-RCWK)*, *z/OS MVS Data Areas, Vol 4 (RD-SRRA)*, and *z/OS MVS Data Areas, Vol 5 (SSAG-XTLST)*.
- **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*.

The following tables list documents that contain information related to the information contained in the MVS System Messages documents. For the titles and order numbers of documents not in the tables, see *z/OS Information Roadmap*.

Use the appropriate *Principles of Operation* document for the hardware you have installed.

When the MVS System Messages documents reference information in other documents, the shortened version of the document title is used. The following tables show the complete titles and order numbers of the documents that you might need while you are using the MVS System Messages documents.

Information updates on the web

For the latest information updates that have been provided in PTF cover letters and Documentation APARs for z/OS and z/OS.e, see the online document at:

publibz.boulder.ibm.com/cgi-bin/bookmgr_OS390/BOOKS/ZIDOCMST/CCONTENTS.

This document is updated weekly and lists documentation changes before they are incorporated into z/OS publications.

Subsystem, product, and hardware documents

Title	Order Number
<i>ACF/TCAM Base Installation Guide</i>	SC30-3132
<i>Asynchronous Adapter Device Driver Table</i>	N/A
<i>C/370™ Programming Guide</i>	N/A
<i>CICS Family: General Information</i>	N/A
<i>CICS Recovery and Restart Guide</i>	SC34-6246
<i>Common I/O-Device Commands</i>	SA22-7204
<i>CPI Communications Reference</i>	SC26-4399
<i>DATABASE 2 Application Programming Guide</i>	SC26-4293
<i>DB2® Application Programming Guide for TSO and Batch Users</i>	SC26-4081
<i>DATABASE 2 General Information Manual</i>	GC26-4073
<i>IBM DATABASE 2 Messages</i>	SC23-0592
<i>IBM DATABASE 2 Version 2 Messages and Codes</i>	SC26-4113
<i>IBM DATABASE 2 Version 2 Release 3 Messages and Codes</i>	SC26-4379
<i>IBM Graphics Access Method/SP Messages and Codes</i>	SC33-0143
<i>ES/9000®: Operating Your System</i>	SA24-4350
<i>FileNet OSAR Library Unit Product Description</i>	PN9000102
<i>IBM 3290 Information Panel Description and Reference</i>	SR23-6155
<i>IBM 3990/9390 Operations and Recovery Guide</i>	GA32-0253
<i>IBM 3990/9390 Storage Control Planning, Installation, and Storage Administration Guide</i>	GA32-0100
<i>IBM 3990 Storage Control Reference for Model 6</i>	GA32-0099
<i>IBM 9340 Direct Access Storage Subsystems Reference</i>	GC26-4647
<i>LASERDRIVE** 1200 Engineering Specification</i>	N/A

Title	Order Number
LASERDRIVE** 1200 Intelligent Digital Optical Disk Drive with SCSI Engineering Specification	N/A
Maintaining IBM Storage Subsystem Media	GC26-4495
Maintenance Information for the 9037 Sysplex Timer®	SY27-2605
Maintaining IBM Storage Subsystem Media	GC26-4495
OS/2® Programming Tools and Info V-1.3 Manage Macro Assembler/2™	Z91F-9269
OS/2 WARP® Control Program Programming Reference	N/A
Portable Netware System Messages	SC23-2424
Print Services Access Facility/MVS User's Guide and Reference	S544-3100
z/Architecture™ Principles of Operation	SA22-7832
Remote Copy Administrator's Guide and Reference	SC35-0169
SCSI Adapter Completion Code Table	N/A
RT SCSI Adapter Device Driver Table	N/A
Sysplex Timer 9037 Maintenance	SY27-2605
VM/ESA® CP Command and Utility Reference	SC24-5519
VM/ESA General User Command Reference	SC24-5433

Message library

The message library is designed so that operators and programmers in an installation can build their own libraries of the message and code information that fits their specific needs. Each person can place into binders the chapters and documents containing only the messages and codes he or she could receive.

Basic documents

Each installation requires at least one copy of each of the MVS System Messages documents and of z/OS MVS Dump Output Messages. Regardless of your specific system's options, you will receive at the console or in listings some subset of the messages in these documents.

Each installation also requires at least one copy of z/OS MVS System Codes, which contains the 3-digit hexadecimal system completion codes (abend codes) and the wait state codes produced by all the components of the system.

Note: 4-digit decimal user completion codes appear in documents for the component, subsystem, or product that produces the codes. Codes produced by installation-provided programs do not appear in IBM documents.

All programming and operations personnel need access to the basic documents, although application programmers might not need to have their own copies.

Optional documents

For information about message changes for multiple z/OS elements including JES2, JES3, RACF®, TCP/IP, and others, see z/OS Summary of Message and Interface Changes.

CD-ROM collection

A comprehensive source of messages for IBM products is contained in the *IBM Online Library Productivity Edition: Messages and Codes Collection, SK2T-2068*.

Message directory

To use a message prefix to locate the document containing a specific message, see the following table.

Prefix	Component	Document title - order number
ABA	DFSMShsm™	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
ACP	LANRES	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
ADF	Time Sharing Option Extensions (TSO/E) session manager	<i>z/OS TSO/E User's Guide</i> , SA22-7794 <i>z/OS TSO/E Command Reference</i> , SC28-1881 <i>z/OS TSO/E Messages</i> , SA22-7786
ADM	Graphical data display manager	<i>GDDM® Messages</i> , SC33-0869
ADR	DFDSS	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
ADRY	DFDSS	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
ADY	Dump analysis and elimination (DAE)	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
AEM	Graphical data display manager	<i>GDDM Messages</i> , SC33-0869
AFB	VSFORTRAN	<i>VSFORTRAN Version 2 Language and Library Reference</i> , SC26-4221
AHL	Generalized trace facility (GTF)	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631 <i>z/OS MVS Dump Output Messages</i> , GC28-1749
AMA	SPZAP service aid	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
AMB	LIST service aid	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
AMD	Stand-alone dump	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
AMS	Availability manager	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631 <i>z/OS RMF Messages and Codes</i> , SC33-7993
ANT	Remote Copy	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
ANF	Starting with Release 8: Infoprint® Server	<i>z/OS Infoprint Server Messages and Diagnosis</i> , G544-5747
AOF	System Automation for OS/390®	<i>IBM Tivoli System Automation for z/OS Messages and Codes</i> , SC33-8264
AOM	Administrative operations manager	<i>z/OS MVS System Messages, Vol 1 (ABA-AOM)</i> , SA22-7631
AOP	Infoprint server	<i>z/OS Infoprint Server Messages and Diagnosis</i> , G544-5747
API	Starting with Release 8: Infoprint Server	<i>z/OS Infoprint Server Messages and Diagnosis</i> , G544-5747
APS	Print services facility (PSF)	<i>Print Services Facility™ Messages</i> , S544-3675
ARC	DFSMShsm	<i>z/OS MVS System Messages, Vol 2 (ARC-ASA)</i> , SA22-7632
ARRP	System Control Program (SCP)	See message 52099 in <i>Enterprise System/9000® Models 190, 210, 260, 320, 440, 480, 490, 570, and 610 Messages Part 2</i> for a complete message explanation and appropriate responses; see GA23-0378
ASA	MVS Reuse	<i>z/OS MVS System Messages, Vol 2 (ARC-ASA)</i> , SA22-7632
ASB	Advanced Program-to-Program Communications/MVS (APPC/MVS)	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633 <i>z/OS MVS Dump Output Messages</i> , SA22-7590

Prefix	Component	Document title - order number
ASD	LANRES	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633
ASM	Auxiliary storage manager (ASM)	<i>z/OS MVS Dump Output Messages</i> , SA22-7590
ASMA	High Level Assembler for MVS & VM & VSE	<i>HLASM Programmer's Guide</i> , SC26-4941
ASR	Symptom record (SYMREC)	<i>z/OS MVS Dump Output Messages</i> , SA22-7590
ATB	Advanced Program-to-Program Communications/MVS (APP/C/MVS)	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
ATR	Resource recovery services (RRS)	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
I ATRH	Resource recovery services (RRS)	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633
AVM	Availability manager	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633
BFS	IBM LAN server for MVS	<i>OS/390 MVS System Messages, Vol. 2</i> , GC28-1785
BLG	Information System, Information Management	<i>The Information/Management Library Messages and Codes</i> , SC34-4459
BLM	Information System, Information Management	<i>The Information/Management Library Messages and Codes</i> , SC34-4459
BLS	Interactive problem control system (IPCS)	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
BLX	Information System, Information Management	<i>The Information/Management Library Messages and Codes</i> , SC34-4459
BLW	Loadwait/Restart	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633
BNH	Network Problem Determination Application (NPDA)	<i>NPDA Messages</i> , SC34-2115
BPX	z/OS UNIX System Services	<i>z/OS MVS System Messages, Vol 3 (ASB-BPX)</i> , SA22-7633 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
CBDA	Hardware configuration definition (HCD)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634 <i>z/OS and z/VM HCD Messages</i> , SC33-7986
CBR	Object access method (OAM)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
CEE	Language Environment®	<i>z/OS Language Environment Debugging Guide</i> , GA22-7560
CHS	MVSSERV messages for the user and system programmer	<i>z/OS TSO/E Messages</i> , SA22-7786
CIM	Managed System Infrastructure for Setup (msys for Setup)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
CMP	Compression management services	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
CLB	C/C++ class library runtime messages	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634

Prefix	Component	Document title - order number
CNL	MVS message service (MMS)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
CNZ	Console Services	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
COF	Virtual lookaside facility (VLF)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634 <i>z/OS MVS Dump Output Messages</i> , SA22-7590 <i>z/OS TSO/E Messages</i> , GC28-1885
CRG	Context Services	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
CRU	Integrated catalog forward recovery utility (ICFRU)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
CSQ	MQSeries®	<i>MQSeries for OS/390 V2R1 Messages and Codes</i> , GC34-5375
CSR	Callable services requests (CSR)	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
CSV	Contents supervision, virtual fetch, fetch	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
CSY	OPC/A Production Control System	<i>OPC/A Messages</i> , SH19-6448
CSZ	OPC/A Network Event Communicator	<i>OPC/A Messages</i> , SH19-6448
CTX	Context Services	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634
DFH	Customer Information Control System/Virtual Storage (CICS/VS)	<i>CICS/ESA® Messages and Codes</i> , SC33-0672
DFQ	Interactive storage management facility (ISMF)	Online only. To display the message explanation and suggested action, press the HELP key (PF1) twice when the message is currently displayed. Otherwise, go to ISPF option 7.2 Display Panel, enter the message ID in the message ID field, then press the HELP key (PF1) twice to show the message explanation. For more information, see the "Using Help Panels for Error Messages" topic in the <i>z/OS DFSMS Using the Interactive Storage Management Facility</i> , SC26-7411.
DGT	Interactive storage management facility (ISMF)	Online only. To display the message explanation and suggested action, press the HELP key (PF1) twice when the message is currently displayed. Otherwise, go to ISPF option 7.2 Display Panel, enter the message ID in the message ID field, then press the HELP key (PF1) twice to show the message explanation. For more information, see the "Using Help Panels for Error Messages" topic in the <i>z/OS DFSMS Using the Interactive Storage Management Facility</i> , SC26-7411.
DLX	DLF installation exit COFXDLF2	These messages are issued by the sample DLF installation exit, COFXDLF2, whose source can be found in SYS1.SAMPLIB. Because the issuing module is a "sample", which can be modified by the customer, the messages are not described in an IBM document.
DMO	Device Manager	<i>z/OS MVS System Messages, Vol 4 (CBD-DMO)</i> , SA22-7634 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
DQD	Cache RMF™ Reporter (CRR)	<i>Cache RMF Reporter Program Description/Operations Manual</i> , SH20-6295
DRK	OPC/A Event Manager Subsystem	<i>OPC/A Messages</i> , SH19-6448

Prefix	Component	Document title - order number
DSI	NetView®	<i>TME 10™ NetView for OS/390 Messages</i> , SC31-8237
DSM	Document Composition Facility	<i>DCF: Messages</i> , SH35-0048
DSM	Document Library Facility	<i>DCF: Messages</i> , SH35-0048
DSN	Database 2™	<i>DB2 Universal Database™ for OS/390 Messages and Codes</i> , GC26-9011
DZI	Overlay Generation Language	<i>IBM Overlay Generation Language/370 User's Guide and Reference</i> , S544-3702
DZJ	Print Management Facility	<i>Print Management Facility User's Guide and Reference</i> , SH35-0059
EDC	C/C++ Run-time Library	<i>z/OS Language Environment Debugging Guide</i> , GA22-7560
EDG	DFSMSrmm™	<i>z/OS MVS System Messages, Vol 5 (EDG-GFS)</i> , SA22-7635
ELM	IBM Communications Server — SNA	<i>z/OS Communications Server: SNA Messages</i> , SC31-8790
EQQ	OPC/ESA	<i>OPC/ESA Messages and Codes</i> , SH19-6719
ERB	Resource Measurement Facility (RMF)	<i>z/OS MVS System Messages, Vol 5 (EDG-GFS)</i> , SA22-7635 <i>z/OS RMF Messages and Codes</i> , SC33-7993
ERX	Graphical data display manager	<i>GDDM Messages</i> , SC33-0869
EWX	LANRES	<i>z/OS MVS System Messages, Vol 5 (EDG-GFS)</i> , SA22-7635
EZA	IBM Communication Server — IP	<i>z/OS Communications Server: IP Messages Volume 1 (EZA)</i> , SC31-8783
EZB	IBM Communication Server — IP	<i>z/OS Communications Server: IP Messages Volume 2 (EZB, EZD)</i> , SC31-8784
EZM	Application Enabling Technology (AET)/Auto UNIX System	<i>OS/390 Application Enabling Technology: Administration and Programming</i> , GC28-1993 <i>OS/390 Application Enabling Technology: Customization Guide</i> , GC28-1994 <i>OS/390 MVS System Messages (EWX-IEB)</i> , GC28-1786
EZY	z/OS Communication Server — IP	<i>z/OS Communications Server: IP Messages Volume 3 (EZY)</i> , SC31-8785
EZZ	z/OS Communication Server — IP	<i>z/OS Communications Server: IP Messages Volume 4 (EZZ, SNM)</i> , SC31-8786
FAN(G)	REXX/370 compiler	<i>IBM Compiler and Library for SAA REXX/370 User's Guide and Reference</i> , SH19-8160
FDBX	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FLM	Software configuration and library manager	<i>z/OS ISPF Messages and Codes</i>
FOMC	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMF	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMI	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMM	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMO	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMOA	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMOG	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOMOH	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807

Prefix	Component	Document title - order number
FSUM	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FSUMA	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FSUMB	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FSUMF	UNIX System Services	<i>z/OS UNIX System Services Messages and Codes</i> , SA22-7807
FOR	LE FORTRAN Library	<i>IBM Language Environment for MVS & VM FORTRAN Run-Time Migration Guide</i> , SC26-8499
GDE	Distributed FileManager/MVS (DFM/MVS)	<i>z/OS MVS System Messages, Vol 5 (EDG-GFS)</i> , SA22-7635
I GFSA	Network File System Server	<i>z/OS Network File System Guide and Reference</i> , SC26-7417
I GFSC	Network File System Server Client Messages	<i>z/OS Network File System Guide and Reference</i> , SC26-7417
GIM	SMP/E	<i>SMP/E Messages, Codes, and Diagnosis</i> ,
GQD	Graphical data display manager	<i>GDDM Messages</i> , SC33-0869
GQF	Graphical data display manager	<i>GDDM Messages</i> , SC33-0869
HASP	JES2, network job entry facility for JES2	<i>z/OS JES2 Messages</i> , SA22-7537
I HZS	IBM Health Checker for z/OS	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636
IAR	Real storage manager (RSM)	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
I IARH	Real storage manager (RSM)	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636
IAT	JES3	<i>z/OS JES3 Messages</i> , SA22-7552
I IAZ	JES Common	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636
ICE	DFSORT™ sort program	<i>z/OS DFSORT Messages, Codes and Diagnosis Guide</i> , SC26-7525
ICH	Resource Access Control Facility (RACF)	<i>z/OS Security Server RACF Messages and Codes</i> , SA22-7686
ICK	Device Support Facilities	<i>Device Support Facilities User's Guide and Reference</i> , GC35-0033
ICN	NCP/SSP/EP	<i>NCP/SSP/EP Messages and Codes</i> , SC30-3169
ICP	Input/Output Configuration Program (IOCP)	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636 <i>Input/Output Configuration Program User's Guide and Reference</i> , GC28-1027
ICQA	Information Center Facility administrator messages	<i>z/OS TSO/E Messages</i> , SA22-7786
ICQC	Information Center Facility user messages	<i>z/OS TSO/E Messages</i> , SA22-7786
ICT	Programmed Cryptographic Facility	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636
ICU	Cryptographic Unit Support	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636
IDA	Virtual storage access method (VSAM) control block expansion	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636
IDC	Access method devices	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , SA22-7636

Prefix	Component	Document title - order number
IEA	<ul style="list-style-type: none"> • Allocation/unallocation • Auxiliary storage manager (ASM) • Contents supervision • Communications task (COMMTASK) • Data Facility Product (DFP) components • Generalized trace facility (GTF) • Initial program load (IPL) • Input/output supervisor (IOS) • Master scheduler • Nucleus initialization program (NIP) • Program Call authorization (PC/AUTH) service routines • Reconfiguration • Recovery termination manager (RTM) • Supervisor control • System resources manager • System trace • Timer supervision • Virtual storage management (VSM) 	<i>z/OS MVS System Messages, Vol 6 (GOS-IEA), SA22-7636</i> <i>z/OS MVS Dump Output Messages, SA22-7590</i>
IEB	Data Facility Product (DFP) utilities	<i>z/OS MVS System Messages, Vol 7 (IEB-IEE), SA22-7637</i>
IEC	Data Facility Product (DFP) components	<i>z/OS MVS System Messages, Vol 7 (IEB-IEE), SA22-7637</i> <i>z/OS DFSMSdfp Diagnosis, GY27-7618</i>

Prefix	Component	Document title - order number
IEE	<ul style="list-style-type: none"> • Auxiliary storage manager (ASM) • Communications task (COMMTASK) • Data Facility Product (DFP) components • JES2 • JES3 • Master scheduler • Reconfiguration • Recovery termination manager (RTM) • Supervisor control • System management facilities (SMF) • System resources manager (SRM) • System trace • Task management • Timer supervision 	<p><i>z/OS MVS System Messages, Vol 7 (IEB-IEE)</i>, SA22-7637</p> <p><i>z/OS MVS Dump Output Messages</i>, SA22-7590</p>
IEF	<ul style="list-style-type: none"> • Allocation/unallocation • Converter/interpreter • Data Facility Product (DFP) components • Initial program load (IPL) • Initiator/terminator • JES/scheduler services • JES2 • Master scheduler • Master subsystem/subsystem interface (MSI) • Reconfiguration • Scheduler JCL facilities (SJF) • Scheduler restart • Scheduler services (ENF) • System management facilities (SMF) 	<p><i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i>, SA22-7638</p> <p><i>z/OS MVS Dump Output Messages</i>, SA22-7590</p>
IEFC	Converter	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638
IEFI	Converter/interpreter	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638
IEH	Data Facility Product (DFP) utilities	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638
IEV	Assembler H	<i>Assembler H Version 2 Application Programming: Guide</i> , SC26-4036

Prefix	Component	Document title - order number
IEW	<ul style="list-style-type: none"> • DFSMS • Linkage editor • Binder • Transport utility • Loader 	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638
IFA	System management facilities (SMF)	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IFB	Input/output environment recording routines: OBR and SVC 76	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638
IFC	IFCDIP00 service aid for the logrec data set IFCEREP0 and IFCEREP1 service aids	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638 <i>Environmental Record Editing and Printing Program (EREP) User's Guide and Reference</i> , GC28-1378
IFD	Online test executive program (OLTEP)	<i>OS/390 MVS System Messages, Vol. 4</i> , GC28-1787
IFL	Network Control Program (NCP) Advanced Communications Function (ACF) for Network Control Program (NCP)	<i>3704 and 3705 Control Program Generation and Utilities Guide and Reference Manual</i> , GC30-3008 <i>Network Control Program/System Support Programs/Emulation Programs Messages and Codes</i> , SC30-3169
IFO	MVS Assembler	<i>OS/VS - VM/370 Assembler Programmer's Guide</i> , GC33-4021
IGD	Storage management subsystem (SMS) of Data Facility Product (DFP)	<i>z/OS MVS System Messages, Vol 8 (IEF-IGD)</i> , SA22-7638 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IGF	Dynamic device reconfiguration (DDR) Machine check handler (MCH)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IGGN	Data Facility Product (DFP)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IGV	Virtual storage management (VSM)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IGW	Data Facility Product (DFP) Storage management subsystem (SMS)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IGY	VS COBOL II	<i>VS COBOL II Application Programming Guide</i> , SC26-4045
IGZ	VS COBOL II	<i>VS COBOL II Application Programming: Debugging</i> , SC26-4049, <i>z/OS Language Environment Debugging Guide</i> , GA22-7560
IHJ	Data Facility Product (DFP) checkpoint/scheduler restart	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IKF	VS COBOL II	<i>VS COBOL II Application Programming: Debugging</i> , SC26-4049
IKJ	Time Sharing Option Extensions (TSO/E)	<i>z/OS TSO/E Messages</i> , SA22-7786 <i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IKM	Programming Language/I (PL/I) syntax checker	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639

Prefix	Component	Document title - order number
IKT	Time Sharing Option Extensions (TSO/E) IBM Communications Server — SNA	<i>z/OS TSO/E Messages</i> , SA22-7786, SC27-0614, SC27-0470, SC23-0114 <i>z/OS Communications Server: SNA Messages</i> , SC31-8790
ILM	IBM License Manager	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
ILR	Auxiliary storage manager (ASM)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
ILX	VS FORTRAN Compiler	<i>VS FORTRAN Version 2 Programming Guide for CMS and MVS</i> , SC26-4222
IHV	System Automation for OS/390	<i>IBM Tivoli System Automation for z/OS Messages and Codes</i>
ING	System Automation for OS/390	<i>IBM Tivoli System Automation for z/OS Messages and Codes</i> , SC33-8264
INM	Interactive Data Transmission Facility (IDTF) TRANSMIT and RECEIVE commands	<i>z/OS TSO/E Messages</i> , SA22-7786
IOAC	Open Systems Adapter-Express (OSA-Express)	<i>System z9 and zSeries OSA-Express Customer's Guide and Reference</i> , SA22-7935
IOP	Input/output configuration program (IOCP)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IOS	Input/output supervisor (IOS)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IPD	FORTRAN syntax checker	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IRA	System resources manager (SRM)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IRD	ESCON® Director Device Support (EDDS)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
IRR	Resource Access Control Facility (RACF)	<i>z/OS Security Server RACF Messages and Codes</i> , SA22-7686
IRX	Time Sharing Option Extensions (TSO/E) restructured extended executor language (REXX)	<i>z/OS TSO/E Messages</i> , SA22-7786
ISG	Global resource serialization	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
ISN	Service Processor Interface	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639
ISP	Interactive system productivity facility	<i>z/OS ISPF Messages and Codes</i>
ISQ	System Automation for OS/390	<i>IBM Tivoli System Automation for z/OS Messages and Codes</i>
ISRB	Interactive system productivity facility	<i>z/OS ISPF Messages and Codes</i>
ISRL	Library management facility	<i>z/OS ISPF Messages and Codes</i>
IST	IBM Communications Server — SNA	<i>z/OS Communications Server: SNA Messages</i> , SC31-8790
ISU	IBM Communications Server — SNA	<i>z/OS Communications Server: SNA Messages</i> , SC31-8790

Prefix	Component	Document title - order number
ITA	TOLTEP for Advanced Communications Function for Virtual Telecommunications Access Method (ACF/VTAM®)	<i>Advanced Communications Function for VTAM® Messages and Codes</i> , SC27-0614, SC27-0470, SC23-0114
ITT	Component trace	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
ITV	Data-in-virtual	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
ITZ	Transaction trace	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IST	IBM Communications Server — SNA	<i>z/OS Communications Server: SNA Messages</i> , SC31-8790
IVT	IBM Communications Server — SNA	<i>z/OS Communications Server: SNA Messages</i> , SC31-8790
IWM	Workload manager (WLM)	<i>z/OS MVS System Messages, Vol 9 (IGF-IWM)</i> , SA22-7639 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IXC	Cross-system coupling facility (XCF)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IXG	System logger (SCLOG)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640
IXL	Cross System Extended Services® (XES)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IXP	Input/output configuration program (IOCP)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640 <i>ES/9000 ES/3090™ IOCP User's Guide Volume A04</i> , GC38-0097
IXZ	JES common coupling services (JESXCF)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640 <i>z/OS MVS Dump Output Messages</i> , SA22-7590
IYP	Input/output configuration program (IOCP)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640 <i>zSeries™ 900 IOCP User's Guide for IYP IOCP</i> , SB10-7029
IZP	Input/output configuration program (IOCP)	<i>z/OS MVS System Messages, Vol 10 (IXC-IZP)</i> , SA22-7640 <i>ES/9000 IOCP User's Guide and ESCON CTC Reference Volume A04</i> , GC38-0401
SNM	IBM Communication Server — IP	<i>z/OS Communications Server: IP Messages Volume 4 (EZZ, SNM)</i> , SC31-8786
USS	IBM Communications Server — SNA	<i>z/OS Communications Server: SNA Messages</i> , SC31-8790

Message translation

Through the MVS message service (MMS), you can translate MVS system messages into other languages. Messages that cannot be translated include the following:

- Initialization messages
- DFSMS/MVS messages
- JES3 messages

- Some complicated multiple-line messages

See *z/OS MVS Planning: Operations* and *z/OS MVS Programming: Assembler Services Guide* for information about using the MMS.

Summary of changes

New, changed, or deleted messages can affect your system's automation routines. To ensure that your installation's automation routines are current, review the new, changed, and deleted messages listed in *z/OS Summary of Message and Interface Changes*. *z/OS Summary of Message and Interface Changes* is available on the *z/OS Collection*, SK3T-4269 and in the *z/OS Internet library* at:

<http://www.ibm.com/servers/eserver/zseries/zos/bkserv/>

**Summary of changes
for SA22-7632-13
z/OS Version 1 Release 8
as updated April 2007**

This document contains information previously presented in *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7631-12, which supports z/OS Version 1 Release 8.

You may notice changes in the style and structure of some content in this document—for example, headings that use uppercase for the first letter of initial words only, and procedures that have a different look and format. The changes are ongoing improvements to the consistency and retrievability of information in our documents.

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

**Summary of changes
for SA22-7632-12
z/OS Version 1 Release 8**

This document contains information previously presented in *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7631-11, which supports z/OS Version 1 Release 7.

This document contains terminology, maintenance, and editorial changes, including changes to improve consistency and retrievability.

**Summary of changes
for SA22-7632-11
z/OS Version 1 Release 7
as updated April 2006**

This document contains information previously presented in *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7631-10, which supports z/OS Version 1 Release 7.

This document contains terminology, maintenance, and editorial changes, including changes to improve consistency and retrievability.

**Summary of changes
for SA22-7632-10
z/OS Version 1 Release 7**

References to OpenEdition have been replaced with z/OS UNIX System Services or z/OS UNIX.

The document contains information previously presented in *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7632-09, which supports z/OS Version 1 Release 6.

This document contains terminology, maintenance, and editorial changes, including changes to improve consistency and retrievability.

**Summary of changes
for SA22-7632-09
z/OS Version 1 Release 6**

The document contains information previously presented in *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7632-08, which supports z/OS Version 1 Release 5.

Messages now contain the appropriate routing and descriptor codes. *z/OS MVS Routing and Descriptor Codes* is no longer being published.

This document contains terminology, maintenance, and editorial changes, including changes to improve consistency and retrievability.

**Summary of changes
for SA22-7632-08
z/OS Version 1 Release 5
as updated June 2003**

The document contains information previously presented in *z/OS MVS System Messages, Vol 2 (ARC-ASA)*, SA22-7632-07, which supports z/OS Version 1 Release 4.

This document contains terminology, maintenance, and editorial changes to improve consistency and retrievability.

Chapter 1. Introduction

The z/OS operating system issues messages from z/OS elements and features, and from program products and application programs running on the system. The system issues messages in different ways and to different locations:

- Most messages are issued through WTO and WTOR macros to one of the following locations:
 - Console
 - Hard-copy log
 - Job log
 - SYSOUT data set
- Routing codes determine where the messages are displayed or printed. The routing codes for messages issued by the operating system are included with each message.
- Other messages are issued through the WTL macro or the LOG operator command to the system log (SYSLOG).
- Dump messages are issued through the dumping services routines and can appear in:
 - SVC dumps, stand-alone dumps, or SYSMDUMP ABEND dumps formatted by the interactive problem control system (IPCS)
 - Trace data sets formatted by the interactive problem control system (IPCS)
 - ABEND dumps or SNAP dumps produced by the dumping services
- In dump or trace data sets formatted by IPCS, the messages appear interactively on a terminal or in a printed dump.
- Some messages are issued through DFSMS/MVS access methods directly to one of the following locations:
 - Output data set
 - Display terminal

Locations

Console

Messages sent to a multiple console support (MCS) console, an SNA multiple console support (SMCS) console, or an extended MCS (EMCS) console are intended for the operators. Operations can control which messages are displayed. See *z/OS MVS Planning: Operations* for information about controlling message display.

The system writes in the hard-copy log all messages sent to a console, whether the message is displayed or not.

OPERLOG

- | The operations log (OPERLOG) records all message traffic from each system in a sysplex that activates the OPERLOG. The operations log consists of the following data:
 - Messages to and from all consoles
 - Commands and replies entered by the operator

System Log

The system log (SYSLOG) is a SYSOUT data set that stores the messages and commands from the current system. SYSOUT data sets are output spool data sets on direct access storage devices (DASD) provided by the job entry subsystem (either JES2 or JES3). An installation usually prints the system log periodically. The system log consists of:

- All messages issued through WTL macros
- All messages entered by operator LOG commands

- Usually, the hard-copy log
- Any messages routed to the system log from any system component or program

Job Log

Messages sent to the job log are intended for the programmer who submitted a job. The job log is specified in the system output class on the MSGCLASS parameter of the JCL JOB statement.

SYSOUT Data Set

Messages sent to a SYSOUT data set are intended for a programmer. These messages are issued by an assembler or compiler, the linkage editor and loader, and an application program. If the SYSOUT data set and the MSGCLASS parameter on the JCL JOB statement specify the same class, all messages about a program will appear in the same SYSOUT listing.

Messages

A displayed or printed message can appear by itself or with other information, such as a time stamp. The following topic shows the format of the message. Then the topics show the information accompanying the message on the MCS console and on the hard-copy log in a JES2 system and a JES3 system.

Message Format

```
id CCCnnn text
id CCCnnns text
id CCCnnnns text
id CCCnnnnns text
id CCCSnnns text
```

id Reply identifier: It is optional. It appears if an operator reply is required. The operator specifies it in the reply.

CCCNnn, CCCnnns, CCCnnnns, CCCnnnnns, CCCSnnns

Message identifier.

CCC

A prefix to identify the component, subsystem, or product that produced the message. The prefix is three characters.

S The subcomponent identifier, which is an optional addition to the prefix to identify the subcomponent that produced the message. The subcomponent identifier is one character.

nnn, nnnn, nnnnn

A serial number to identify the individual message. The serial number is three, four, or five decimal digits.

s An optional type code, which is one of the following:

A **Action:** The operator must perform a specific action.

D **Decision:** The operator must choose an alternative.

E **Eventual action:** The operator must perform action when time is available.

I **Information:** No operator action is required.

S **Severe error:** Severe error messages are for a system programmer.

W **Wait:** Processing stops until the operator performs a required action.

For messages with the prefix ADR, the type codes depend on whether the message is issued to the operator console or to SYSPRINT. For console messages, the type codes indicate the operator action:

- A** **Action:** Operator must perform a specific action.
- D** **Decision:** Operator must choose an alternative action.
- I** **Information:** No operator action is required.
- W** **Attention:** No operator action is required, but an error occurred.

For SYSPRINT messages, the type code indicates the severity:

- I** Informational message.
- W** Attention message. Task continues, but an error occurred.
- E** Error message. The particular task might end or might continue without completing all requests.
- T** Termination message. DFSMSdss™ ends.

For messages with the prefix BFS, the type codes indicate the severity of the detected error and are:

- E** **Error.** Operator action is required.
- I** **Information**
- W** **Attention**

For messages with the EWX prefix, an 11-character message exists of the form **EWXffffnnnns**:

- EWX** LANRES product code
- fff** Function (module) identifier
- nnnn** Message number
- s** Severity code. Severity codes can be:
 - E** Error. Action is required.
 - I** Information. Action is not required.
 - S** Severe Error. Action is required.
 - W** Attention. Action may be required.

In the EWX messages, the three-character function identifiers are as follows:

Table 1. EWX Message Module Identifiers

Module ID	Function	Sending Command
ADM	Administration	EWXADMIN commands
COM	Host communications	All commands
DSK	Disk serving	Disk serving commands
DST	Distribution	EWXDS commands
PHL	Host-to-LAN print	EWXHLSRV
PLH	LAN-to-host print	EWXLHSRV
RES	Host session initialization	EWXCONN
SRV	NetWare service	EWXNWSRV

Note: When the term "MMC" is used in the messages, it is also referring to the System/370™ Parallel Channel Adapter feature of the IBM 3172-3 interconnect controller.

For messages with the prefix CNLC, the type codes indicate the severity of the detected error and are:

- E Error**
- I Information**
- S Severe**
- W Attention**

Messages with the prefix IEW and numbered in the range 2000 through 2999 have the following format:

<message number> <internal code> <message text>

The internal codes are not documented because they are used for diagnostic purposes.

The following type codes indicate the severity of the detected error:

- E Error:** Severity 8
- I Information:** Severity 0
- S Severe error:** Severity 12
- T Terminating error:** Severity 16
- W Attention:** Severity 4

For messages with the prefix IGW01, the type codes indicate the severity of the detected error and are:

- E Error:** Return code 8
- I Information:** Return code 0
- S Severe:** Return code 16
- T Ending:** Return code 12
- W Attention:** Return code 4

text

Text: The text provides information, describes an error, or requests an operator action.

Messages with the prefix IDA are preceded by a 2-digit severity code:

- 04 Attention:** Processing may be successful.
- 08 Error:** Processing may fail.
- 12 Serious error:** Processing will probably fail.

Some messages have asterisks (*) before or after the message identifier. Two asterisks after the message identifier for IDC messages indicates a second-level message that further explains a preceding message.

How Messages are Explained in this Book

The following describes the different parts of message explanations in this book:

Explanation

The meaning of the message, including why the system issued the message.

System Action

- What the system did as a result of the system condition reported by the message. A system condition could include running out of storage, a hardware or software failure, an abend, a wait state.
- What the system did as a result of user input. User input can include a system command, a job running on the system, a transaction, a query, or another user-system interaction.

Operator Response

Instructions for the system operator, including, as appropriate, decisions to make and actions to take.

Only provided for messages that could appear at the operator console.

User Response

Instructions for the end user.

Only provided for messages that could appear at an interactive interface such as a TSO/E terminal or ISPF application.

Note: Most user messages are explained in other message books, such as *z/OS TSO/E Messages*.

Application Programmer Response

Instructions for an application programmer.

Only provided for messages that could appear in SYSOUT produced by a job, for example SPZAP.

System Programmer Response

Instructions for the system programmer.

Only provided for messages that require additional action beyond the operator response, user response, or application programmer response.

Storage Administrator Response

Instructions for the DFSMSdfp storage administrator.

Security Administrator Response

Instructions for the security administrator.

Only provided for security-related messages.

Problem Determination

Additional instructions for determining the cause of the problem, searching problem databases, and, if necessary, reporting the problem to the IBM support center. These instructions are for a customer support person who can troubleshoot problems, such as the system programmer or system administrator, an experienced security administrator, or an experienced storage administrator.

For additional information on performing problem determination procedures, see *z/OS Problem Management* and the appropriate diagnosis guide for the product or element issuing the message, such as:

- DFSMS/MVS diagnosis guides and references
- *z/OS JES2 Diagnosis*
- *z/OS JES3 Diagnosis*

Source

Element, product, or component that issued the message.

Detecting Module

Name of the module or modules that detected the condition that caused the message to be issued.

Routing Code

For WTO or WTOR messages, the routing code of the message.

Descriptor Code

For WTO or WTOR messages, the descriptor code of the message.

Messages Sent to MCS/SMCS Consoles

Messages sent to MCS/SMCS consoles appear in one of the following formats:

- The MFORM parameter in the OPERPARM segment in the CONSOLxx parmlib member
- The MFORM parameter on the CONTROL S operator command.

```
f hh.mm.ss sysname jobname message
f hh.mm.ss sysname message
f hh.mm.ss jobname message
f hh.mm.ss message
f sysname jobname message
f sysname message
f jobname message
f message
```

f A screen character to indicate the status of certain messages, as follows:

- I The operator has performed the action required for the message. The message has been deleted.
- The message is for information only; no operator action is required. The message was issued by the system or by a problem program.
- * The message requires specific operator action and was issued by a WTOR or by an authorized program. The message has a descriptor code of 1, 2, or 11.
- @ The message requires specific operator action and was issued by a WTOR or by a problem program. The message has a descriptor code of 1, 2, or 11.
- + The message requires no specific operator action and was issued by a problem program using a WTO macro.
- blank** The message requires no specific operator action.

hh.mm.ss

Time stamp: the hour (00-23), minute (00-59), and second (00-59).

sysname

System name for the system that issued the message.

jobname

Job name for the task that issued the message. This field is blank if a job did not issue the message.

message

Reply identifier, message identifier, and text.

Messages Sent to Hard-Copy Log in JES2 System

Multiple console support (MCS) handles message processing in:

- A JES2 system
- A JES3 system on a local processor

- A JES3 system on a global processor, if JES3 has failed

MCS sends messages with routing codes 1, 2, 3, 4, 7, 8, and 10 to the hard-copy log when display consoles are used or more than one console is active. All other messages can be routed to the hard-copy log by a system option or a VARY HARDCPY operator command.

Messages sent to the hard-copy log appear in the format:

tcrrrrrrr	sysname	yyddd	hh:mm:ss.th	ident	msgflags	message
t						message
t				1id		message

t The first character on the line indicates the record type:

- D** Data line of a multiple-line message; this line may be the last line of the message.
- E** End line or data-end line of a multiple-line message.
- L** Label line of a multiple-line message.
- M** First line of a multiple-line message.
- N** Single-line message that does not require a reply.
- O** Operator LOG command.
- S** Continuation of a single-line message or a continuation of the first line of a multi-line message. This continuation may be required because of the record length for the output device.
- W** A message that requires a reply.
- X** A log entry that did not originate with a LOG command or a system message.

c The second character on the line indicates whether the line was generated because of a command:

- C** Command input.
- R** Command response.
- I** Command issued internally. The job identifier contains the name of the internal issuer.
- blank** Neither command input nor command response.

rrrrrrr

Hexadecimal representation of the routing codes 1 through 28. To understand this hexadecimal number, convert it to binary; each binary 1 represents a routing code. For example, X'420C' represents routing codes 2, 7, 13, and 14 as shown here:

Hexadecimal:	4	2	0	C
Binary:	0 1 0 0	0 0 1 0	0 0 0 0	1 1 0 0
Routing Codes:	1 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16

sysname

The system name from the SYSNAME parameter in parmlib.

yyddd

The Julian date, given as the year (00-99) and the day of the year (000-366).

Note: If HCFORMAT(CENTURY) is specified in the CONSOLxx parmlib member, the Julian date appears as *yyyyddd*.

hh:mm:ss.th

Time stamp, given as the hour (00-23), minute (00-59), second (00-59), and hundredths of a second (00-99).

ident

The job identifier for the task that issued the message, if the second character on the line is blank.

If the second character on the line is C or R, this field contains one of the following:

jobid	The job identifier of the task that issued the message, if it was issued by a job.
consname	Console name of the console which issued the command or received the message.
INTERNAL	For a command generated by a problem program or the system.
INSTREAM	For a command read from the input stream.
blank	If MCS could not determine the source or destination for the message.

lid Multiple-line identifier for the second and succeeding lines of a multiple-line message. This field appears after the message text (1) on the first line or (2) in the message area and is not followed by text on a continuation of the first line. The identifier appears on all lines of the same message.

msgflags

Installation exit and message suppression flags. For information about the description of the hardcopy log message flags, see HCL in *z/OS MVS Data Areas, Vol 2 (DCCB-ITZYRETC)*.

message

Reply identifier, message identifier, and text. The reply identifier and message identifier appear only on the first line of a multiple-line message.

Messages Sent to Hard-Copy Log in JES3 System

Messages sent to the JESMSG hard-copy log in a JES3 system appear in the format:

hh:mm:ss message

Messages sent to the MLOG/DLOG hard-copy log in a JES3 system appear as follows:

```

C3E0SY1 05311 0841114 +I 0
C3E0SY1 05311 0841114 IAT8589 CONSOLE DISPLAY
C3E0SY1 05311 0841114 NAME COUNT SWITCH LL AUTH SAVEMSG
C3E0SY1 05311 0841114 SPC74 00000001 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(BROADCAST)
C3E0SY1 05311 0841114 DEST CLASS=(ALL)
C3E0SY1 05311 0841114 WS77S 00000000 0120 10 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 S8100 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 S0400 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 W8100 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 W0400 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 W3774 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 B0001 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 T0001 00000002 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(BROADCAST,HARDCOPY,3,7-10,41-128)
C3E0SY1 05311 0841114 DEST CLASS=(TOTAL)
C3E0SY1 05311 0841114 T0002 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 T0003 00000000 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(NONE)
C3E0SY1 05311 0841114 DEST CLASS=(NONE)
C3E0SY1 05311 0841114 T0004 00000002 0120 15 YES
C3E0SY1 05311 0841114 ROUTE CODE=(BROADCAST,HARDCOPY,3,7-10,41-128)
C3E0SY1 05311 0841114 DEST CLASS=(TOTAL)

```

Messages sent to the MLOG/DLOG hard-copy log appear in the format:

dest console yyddd hhmmssstia[prefix] message

dest

JES3 destination class, which corresponds to the MVS routing code.

console

JES3 or MVS console name, as follows:

blank For a message issued without a console name.

nnnnn The JES3 console name (JNAME) from the JES3 initialization stream. This applies to remote consoles only.

cnname The MCS console name, as specified on the NAME(cnname) parameter under the CONSOLE definition in SYS1.PARMLIB(CONSLxx).

INTERNAL For a command generated by a problem program or operating system routine.

NETWORK For a message issued to the network job entry (NJE) console.

yyddd

The Julian date, given as the year (00-99) and the day of the year (000-366).

Note: If HCFORMAT(CENTURY) is specified in the CONSLxx parmlib member, the Julian date appears as *yyyyddd*.

hhmmss

Time stamp, given as the hour (00-23), minute (00-59), second (00-59), and tenth of a second (0-9).

i Attention indicator for JES3 space constraints, as follows:

blank	Normal output or no action required.
#	The message is rerouted automatically or by a command from another console.
%	Minimum space (track) situation (JSAM).
=	Marginal space (track) situation (JSAM).
<	Minimum buffer situation (JSAM).

Note: The above four symbols can be changed by a CONSTD statement in the JES3 initialization stream.

a Action prefix character, as follows:

blank	Normal message.
+	JES3 input command, issued on the global processor.
-	MVS input command, issued on the global processor.
	Operator action required.

prefix

sysname R=jobname

Optional prefix for messages issued outside the JES3 address space or on a local processor, as follows:

sysname

The name of the system where the issuing program is running. JES3 determines the name from the ID parameter on the MAINPROC statement in the JES3 initialization stream.

jobname

The job name of the issuing program. It is all blanks for an system routine.

message

Reply identifier, message identifier, and text.

Messages Sent to the Job Log, to Other Data Sets, and to Display Terminals

Messages sent to the job log, to other data sets, and to display terminals appear in the format designed by the program that issued them.

Truncated Data in Multi-line Messages

Under any one of the following conditions, the system might need to truncate a multi-line message:

- When a message is being transported from one system to another in a sysplex, the sending or receiving system might encounter an error that prevents some or all of the message text from appearing. This can be caused by any of the following:
 - The issuing system is stopped or quiesced.
 - The issuing system fails to end a multi-line message.
 - The issuing system has an XCF buffer shortage.
 - A disruption occurs in sysplex communication.
 - An error occurs on the receiving system.

When one of the above conditions occurs, one of the following messages can appear within the message text, indicating such an error:

LOSS OF DATA - MESSAGE COMPLETION FORCED
LOSS OF INTERMEDIATE MESSAGE DATA

- When no data line or endline has been issued for a multi-line message after an interval of thirty seconds, the system issues the following endline:
MESSAGE TIMED OUT - MESSAGE COMPLETION FORCED
- When a connect request exceeds the limit of 65533 lines, the system truncates the message with the following text:
EXCEEDED LINE LIMIT - MESSAGE COMPLETION FORCED
- When a multi-line message is issued with no end line, and it is not possible for the system to obtain space to temporarily store the message, the system truncates the message with the following text:
CONNECT UNAVAILABLE - MESSAGE COMPLETION FORCED
- When a multi-line connect request is issued, and the system is unable to obtain space to store the connecting lines, the system truncates the message with the following text:
CONNECT UNSUCCESSFUL - MESSAGE COMPLETION FORCED
- When a message is too long to fit into 80% of the Console message cache, the system truncates the message with the following text:
MESSAGE TRUNCATED FOR CONSOLE MESSAGE CACHE
- When there is a shortage of WTO buffers for display on MCS consoles, the screen display may be truncated with one of the following lines of text:
NUMBER OF LINES EXCEEDED MLIM - MESSAGE TRUNCATED
STORAGE CONSTRAINT - MESSAGE TRUNCATED

Routing Codes

Routing codes send system messages to the consoles where they are to be displayed. More than one routing code can be assigned to a message to send it to more than one console. For more information on message routing, see the following books:

- *z/OS MVS Programming: Authorized Assembler Services Guide*
- *z/OS MVS Programming: Authorized Assembler Services Reference SET-WTO*
- *z/OS MVS Installation Exits*
- *z/OS MVS Initialization and Tuning Reference*

Specification

The routing codes are specified in the ROUTCDE parameter of the WTO or WTOR macro. If you specify a message which contains no routing codes, MVS may provide one or more default routing codes, based upon the presence or lack of other queuing specifications.

If you specify a message containing descriptor codes but no routing codes and no target console, MVS will not assign any routing codes and will write the message to the hardcopy log.

If you specify a message containing no routing codes, no descriptor codes, and no target console, MVS will assign a default set of routing codes. This set of default routing codes is specified at MVS initialization on the DEFAULT statement in your CONSOLxx parmlib member. If a set of default routing codes was not provided on the DEFAULT statement, MVS will assign routing codes 1 through 16.

Routing Code Meaning

Programming Interface information

Code	Meaning
1	Operator Action

- | The message indicates a change in the system status. It demands action by a primary operator.
- 2 Operator Information**
- | The message indicates a change in system status. It does not demand action; rather, it alerts a primary operator to a condition that might require action.
- This routing code is used for any message that indicates job status when the status is not requested specifically by an operator inquiry. It is also used to route processor and problem program messages to the system operator.
- 3 Tape Pool**
- The message gives information about tape devices, such as the status of a tape unit or reel, the disposition of a tape reel, or a request to mount a tape.
- 4 Direct Access Pool**
- The message gives information about direct access storage devices (DASD), such as the status of a direct access unit or volume, the disposition of a volume, or a request to mount a volume.
- 5 Tape Library**
- The message gives tape library information, such as a request by volume serial numbers for tapes for system or problem program use.
- 6 Disk Library**
- The message gives disk library information, such as a request by volume serial numbers for volumes for system or problem program use.
- 7 Unit Record Pool**
- The message gives information about unit record equipment, such as a request to mount a printer train.
- 8 Teleprocessing Control**
- The message gives the status or disposition of teleprocessing equipment, such as a message that describes line errors.
- 9 System Security**
- The message gives information about security checking, such as a request for a password.
- 10 System/Error Maintenance**
- The message gives problem information for the system programmer, such as a system error, an uncorrectable I/O error, or information about system maintenance.
- 11 Programmer Information**
- This is commonly referred to as write to programmer (WTP). The message is intended for the problem programmer. This routing code is used when the program issuing the message cannot route the message to the programmer through a system output (SYSOUT) data set. The message appears in the JESYMSG data set.
- 12 Emulation**
- The message gives information about emulation. (These message identifiers are not included in this publication.)
- 13-20** For customer use only.
- 21-28** For subsystem use only.

29	Disaster recovery.
30-40	For IBM use only.
41	The message gives information about JES3 job status.
42	The message gives general information about JES2 or JES3.
43-64	For JES use only.
65-96	Messages associated with particular processors.
97-128	Messages associated with particular devices.

End of Programming Interface information

Routing Codes in this Book

Routing codes appear within the associated message. The routing code field can also contain the following special characters or notes:

- * The message will be routed back to the consoles that initiated the associated requests.
- / The message will be routed to different locations according to the task issuing it. For example, */2/3 means the message is routed back to the console that initiated the request, to a primary operator, or to the tape pool.
- # The message will be routed in one of the following ways:
 - According to the routing indicators specified by the operator
 - According to the default routing instructions previously specified by the operator
 - Back to the console that initiated the associated request
- The message has no routing code.
- N/A A routing code is not applicable for the message.
- Note 2** The message is issued by a WTO or WTOR macro, but has no routing or descriptor codes (old format WTO or WTOR macro).
- Note 3** The message has a routing code of 1, which sends the message to a primary operator, and the message is also routed to the console that it describes.
- Note 4** The message is sent to all active consoles; this is a broadcast message.
- Note 5** The message has a routing code of 2, which sends the message to a primary operator.
- Note 6** The message is routed only to non-printer consoles. This message is not issued by a WTO or WTOR macro.
- Note 7** The message is routed to consoles where one or more of the following are active:
 - MONITOR JOBNAMES
 - MONITOR SESSIONS
 - MONITOR STATUS
- Note 9** The message is issued during the nucleus initialization program (NIP) processing.
- Note 10** The message is issued by the WTL macro.
- Note 11** The message is routed to a SYSPRINT data set by data management.
- Note 12** The message is issued by a WTO or WTOR macro with SYNCH=YES. See *z/OS MVS Initialization and Tuning Reference* for more information.
- Note 13** The message is routed only to receivers of the hardcopy message set.

- Note 14** The message is routed back to the console that initiated the request and to all associated consoles.
- Note 16** The message is routed to the IPCS print file IPCSPRNT.
- Note 17** The message is issued by JES3. A JES3 destination class is specified either by the initialization stream or by operator commands.
- Note 18** The message is sent in response to a command to the console where the command was entered.
- Note 19** The message is written to a data set. If routing and descriptor codes are also included for the message, the message might also be displayed according to the specified routing and descriptor codes. (The descriptor code does not apply to writing the message to the data set.)
- Note 20** JES3 does not issue the message. JES3 sends the message to another subsystem for processing.
- Note 21** This message is a trailer attached to multiple messages previously issued. It has the same routing and descriptor codes as the first line of the conglomerate.
- Note 22** This message is routed to the transaction program (TP) message log.
- Note 23** This message is issued by the device controller. The routing code will vary according to the device controller's task.
- Note 24** This message is routed to the assembly listing.
- Note 25** When this message is issued during IPL, the routing codes are 2 and 10 and the descriptor code is 12. When it is issued after IPL, it has no routing code and the descriptor code is 5.
- Note 26** When this message is issued during NIP processing, the descriptor code is 12. When it is issued after NIP processing, the descriptor code is 4.
- Note 27** The indicated route codes are used only if this message is issued in response to a reply of CKPTDEF during a JES2 checkpoint reconfiguration. This message might be issued to a specific console rather than directed by route code. For further information concerning the routing of JES2 messages issued during a reconfiguration, see *z/OS JES2 Initialization and Tuning Guide*.
- Note 28** These routing and descriptor codes apply only when SMS issues the message. If SMS returns the message to its caller and the caller issues the message, the codes do not apply.
- Note 29** This message is written to the JES3OUT data set.
- Note 30** This message is issued by JES3. The message is written to the *MODIFY CONFIG (*F MODIFY) log and/or the issuer of the *F CONFIG command.
- Note 31** The routing and descriptor codes for this message are dependent on the setting of indicator bits within the S99EOPTS field in the SVC 99 Request Block Extension (S99RBX). See the *z/OS MVS Programming: Authorized Assembler Services Guide*, Processing Messages and Reason Codes from Dynamic Allocation for additional information.
- Note 32** Routing code 2 is only applicable if message IYP050D was issued.
- Note 33** Routing code 2 is only applicable if message IZP050D was issued.
- Note 34** This message is only displayed on the SMCS Console Selection screen, and is not issued via WTO support.
- Note 35** By default, IBM Health Checker for z/OS messages does not use routing codes, but the

- | installation can override the default to use routing codes using either the MODIFY *hzsproc* command or in the HZSPRMxx parmlib member. See *IBM Health Checker for z/OS: User's Guide* for more information.
 - | **Note 36** This message is written to the JESYSMSG data set.
-

Descriptor Codes

Descriptor codes describe the significance of messages. They indicate whether the system or a task stops processing, waits until some action is completed, or continues. This code also determines how the system will display and delete the message.

Association with Message Type Code

Descriptor codes are associated with message type codes, specified by a letter following the message serial number, as follows:

Descriptor Code	Type Code
1	W (wait)
2	A (action) or D (decision)
3	E (eventual action)
4 through 10	I (information)
11	E (critical eventual action)
12 and 13	I (information)

Valid combinations and restrictions for descriptor codes

Descriptor codes are specified in the DESC parameter of the WTO or WTOR macro. The following restrictions apply when specifying descriptor codes:

- Descriptor codes 1 through 6, 11, and 12 are mutually exclusive. Assign only one of these codes to a message. If you assign two mutually exclusive codes to one message, the system uses the most important code and ignores the other.
- Descriptor codes 7 through 10 and 13 can be assigned in combination with any of the mutually exclusive codes.
- | • Descriptor code 9 can be used only with descriptor code 8.

Under certain conditions, the system uses a descriptor code other than that specified in the macro as follows:

- The system assigns descriptor code 6 if the macro specifies a ROUTCDE parameter, but no DESC parameter.
- The system assigns descriptor code 7 if all of the following are true:
 1. A problem program issued the macro.
 2. The macro omits both DESC and ROUTCDE parameters, or specifies descriptor codes 1 or 2.
 3. The message is not a multiple-line WTO message.
- The system assigns no descriptor code if all of the following are true:
 1. An authorized program issued the macro.
 2. The macro omits both DESC and ROUTCDE parameters.
 3. The message is not a multiple-line WTO message.

Note: An authorized program has at least one of these characteristics:

- Authorized by the authorized program facility (APF)
- Runs in supervisor state

- Runs under PSW key 0 through 7

Message Deletion

With multiple console support (MCS), action messages with descriptor code 1 or 2 issued by problem programs are assigned descriptor code 7; thus, they are automatically deleted from the system at task or address space ending.

- I The system deletes messages issued by any program when that program issues the DOM macro for a message.

The operator can manually remove all messages from a display console screen or can set the console to roll messages off the screen.

Message Color

On operator consoles with color, the descriptor code determines the color of the message. The use of color is explained in *z/OS MVS System Commands*. Also see the descriptions of the CONSOLxx and MPFLSTxx parmlib members in *z/OS MVS Initialization and Tuning Reference*.

Descriptor Code Meaning

Programming Interface information	
Code	Meaning
1	System Failure The message indicates an error that disrupts system operations. To continue, the operator must rel IPL the system or restart a major subsystem. This causes the audible alarm to be sounded.
2	Immediate Action Required The message indicates that the operator must perform an action immediately. The message issuer could be in a wait state until the action is performed or the system needs the action as soon as possible to improve performance. The task waits for the operator to complete the action. This causes the audible alarm to be sounded. Note: When an authorized program issues a message with descriptor code 2, a DOM macro <i>must</i> be issued to delete the message after the requested action is performed.
3	Eventual Action Required The message indicates that the operator must perform an action eventually. The task does not wait for the operator to complete the action. If the task can determine when the operator has performed the action, the task should issue a DOM macro to delete the message when the action is complete.
4	System Status The message indicates the status of a system task or of a hardware unit.
5	Immediate Command Response The message is issued as an immediate response to a system command. The response does not depend on another system action or task.
6	Job Status The message indicates the status of a job or job step.

- 7 **Task-Related**
The message is issued by an application or system program. Messages with this descriptor code are deleted when the job step that issued them ends.
- 8 **Out-of-Line**
The message, which is one line of a group of one or more lines, is to be displayed out-of-line. If a message cannot be displayed out-of-line because of the device being used, descriptor code 8 is ignored, and the message is displayed in-line with the other messages.
- 9 **Operator's Request**
| The message is written in response to an operator's request for information by a DEVSERV, DISPLAY, or MONITOR command.
- 10 **Not defined**
Descriptor code 10 is not currently in use.
- 11 **Critical Eventual Action Required**
| The message indicates that the operator must perform an action eventually, and the action is important enough for the message to remain on the display screen until the action is completed. The task does not wait for the operator to complete the action. This causes the audible alarm to be sounded.
| Avoid using this descriptor code for non-critical messages because the display screen could become filled.
If the task can determine when the operator has performed the action, the task should issue a DOM macro to delete the message when the action is complete.
- 12 **Important Information**
The message contains important information that must be displayed at a console, but does not require any action in response.
- 13 **Automation Information**
Indicates that this message was previously automated.

End of Programming Interface information

14-16 Reserved for future use.

Descriptor Codes in this Book

Descriptor codes appear within the associated message. The descriptor code field can also contain the following special characters.

- / The message will have different descriptor codes according to the task issuing it. For example, 4/6 means the message can describe system status or job status.
- The message has no descriptor code.
- N/A A descriptor code is not applicable for the message.

| **Note 1**

| The descriptor code for an IBM Health Checker for z/OS check exception message might vary, because the installation can override the descriptor code either using the MODIFY hzsproc command or in the HZSPRMxx parmlib member. See *IBM Health Checker for z/OS: User's Guide* for more information. In addition to the descriptor code selected by the installation, one of the following descriptor codes is also included based on the severity of the check:

- High severity checks use a descriptor code of 11.
- Medium severity checks use a descriptor code of 3.
- Low severity checks use a descriptor code of 12.

A Method for Finding Changes to MVS and TSO/E Message Texts

Automation routines are sensitive to changes to message text between releases. You can find changes to message texts in the following ways:

- The Summary of Changes of the related messages book can be helpful when you go from one release to the next.
- Data set SYS1.MSGENU contains data that can help you identify changes to message texts more accurately. This method allows you to find message text changes between your current release and whatever release you choose to migrate to. This method is described below.

Using SYS1.MSGENU to Find Message Text Changes

IBM supplies a data set containing the text of system messages that are translated. This data set, called SYS1.MSGENU, contains the text of system messages in the form of message skeletons. (For more information, see *z/OS MVS Planning: Operations*.)

Note that this method will not show changes to:

- MVS system messages that are not translated, such as IPL and NIP messages (which are issued before the MVS message service is available)
- Other product messages that are not translated, such as DFSMS/MVS messages, and JES3 messages.
- For JES2 messages, use the appropriate SYS1.SHASMENU data set.

Also, this method works better if the “old” copy of SYS1.SHASMENU has the same level of service as the system from which you are migrating.

You can compare the new data set with the data set on the system from which you are migrating. Depending on how you do the comparison, you can get output like the following.

For new messages, the output might show an I (for Insert) on the left:

```
I - IEA403I      VALUE OF RMAX HAS BEEN CHANGED TO 99
```

For messages whose text has changed, the output might show both an I and a D, indicating that a record in the message file has been replaced:

```
I - IEE162I 46  &NNN. ROLL &A. MESSAGES (DEL=R OR RD)
D - IEE162I 46  &NNN. ROLL &A. MESSAGES (DEL=R, RD)
```

This means that, in message IEE162I, (DEL=R, RD) was replaced by (DEL=R OR RD).

Using this information, you can decide if your automation routines need to be changed.

Chapter 2. 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.

Application 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
ffssuuuu 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.
- *ffssuuuu* 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. 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.

Application 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 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 ARCnn54I message following this message.

System action: DFSMShsm processing continues.

Application 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.

ARC0006I • ARC0008I

Application 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 MVS image.
4	Another DFSMShsm has already been started as HOST= <i>hostid</i> in this HSMplex.
8	HOSTMODE is MAIN, and another DFSMShsm host is currently active in the MVS image with HOSTMODE=MAIN.
12	The data set name of one or more control data sets in the startup procedure for HOST= <i>hostid</i> 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: <ul style="list-style-type: none">• 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.

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

Application 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 MVS 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.

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 HSMPARM 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.

Application 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.

Application Programmer Response: None.

Source: DFMSHsm

ARC0009I DFSMSHSM STARTUP ATTEMPT FAILED, NOT A STARTED TASK

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

System action: DFMSHsm ends.

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

Application Programmer Response: If DFMSHsm needs to be started, issue an MVS operator START command from the system console.

Source: DFMSHsm

ARC0010E INVALID PARAMETER OR ERROR READING STARTUP PARMS - RESTART DFSMSHSM

Explanation: One of the initialization parameters supplied to DFMSHsm 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: DFMSHsm ends.

Operator response: Notify the storage administrator.

Application Programmer Response: Correct the parameter or member, and restart DFMSHsm.

Source: DFMSHsm

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

Explanation: While processing an LJES3-directed RECALL command, DFMSHsm 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/DFMSHsm setup for directed RECALL ended and allocation of the migrated data set also failed. DFMSHsm processing continues.

Operator response: Notify the storage administrator.

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

Source: DFMSHsm

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

Explanation: During initialization of DFMSHsm, 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: DFMSHsm continues initializing nonmigration functions, with migration held. If the problem is not resolved, but migration is released, DFMSHsm 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 DFMSHsm when the problem has been corrected.

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

Source: DFMSHsm

ARC0013I SYSTEM TIMER INACTIVE, AUTO SPACE MANAGEMENT INOPERATIVE

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

System action: DFMSHsm 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.

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

Source: DFMSHsm

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, DFMSHsm 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: DFMSHsm processing continues. Volume backup and migration of SMS-managed volumes will not occur.

Application Programmer Response: Determine the

ARC0015I • ARC0021I

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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0019I CELL POOL entry# ENCONTRUED A SHORTAGE OF *number* CELLS. PERFORMANCE IS DEGRADED.

Explanation: The number of cells allocated to the Cell Pool were all used. GETMAINs are issued for the module's dynamic storage area. The Cell Pool entry number's (*entry#*) GETMAIN counter is *number*.

System action: DFSMShsm continues; however, DFSMShsm's performance might be impacted.

Application Programmer Response: Increase the size of the desired CPOOL entry. See *z/OS DFSMShsm Implementation and Customization Guide* for the method of adjusting CPOOL Table entry sizes at startup time.

Source: DFSMShsm

ARC0020I

Explanation: This message is a separator.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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, EOV 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.

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

Operator response: Notify the system programmer.

Application 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 EOV 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,
 TAPEREPL, 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, EOV 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.

ARC0027I • ARC0028I

System action: The DFMSHsm commands of MIGRATION, BACKUP, FRBACKUP, DUMP, TAPECOPY, TAPEREPL, 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 above DISPLAY R,I command:

CONTROL C,I,*id*

Application 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 DFMSHsm control. See *z/OS DFMSHsm Storage Administration Guide* 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 DFMSHsm 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 DFMSHsm Storage Administration Guide* 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.

If an error occurs which specifies EOVS 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 DFMSHsm Control Data Sets" in the *z/OS DFMSHsm Storage Administration Guide*.) 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: DFMSHsm

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

Explanation: DFMSHsm 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: DFMSHsm processing continues.

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

Source: DFMSHsm

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

Explanation: DFMSHsm 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.

Application 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.

Application 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.

Application 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.

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 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: 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.

Note: In an SMS tape environment, this message might not be appropriate. See APAROW57282 or the *z/OS DFSMShsm Implementation and Customization Guide* if you need to disable this checking.

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.

Application 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.

Application 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).

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.

Application 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. |
| 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

**ARC0036I I/O {INHIBITED I 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 ARC0503I 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. |

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

Application 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 I
UNSUCCESSFULLY} ADDED,
RETCODE = return-code, TYPE =
{ADDRSPC I 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

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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.

Application Programmer Response: For *return-code* 0, 2, 4, 6, 8, and 10, this is an informational message only. For *return-code* 12 and 14, contact IBM.

Source: DFSMShsm

ARC0040I COMMAND SENT TO DFMSHSM, 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0042I *msgtext*

Explanation: DFSMShsm has invoked the MVS concatenated PARMLIB service to locate the requested ARCSTRxx or ARCCMDxx 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.

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

Source: DFSMShsm

ARC0043E ERROR OPENING OR READING MEMBER ARCSTRxx

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

System action: DFSMShsm ends.

Operator response: Notify the storage administrator.

Application Programmer Response: Ensure that the member ARCSTRxx 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 DFMSHSM ADDRESS SPACE HAS ISSUED THE MVS START COMMAND *start-command-text* TO RESTART DFMSHSM

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.

Application 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

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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 DFMSHsm has become active.

Source: DFMSHsm

ARC0056A JES3 JOB FAILED — START DFMSHSM

Explanation: In a JES3 system, a DFMSHsm wait-type request was issued while DFMSHsm 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 DFMSHsm is not active, JES3 then reschedules the attempt on a local partition (another >system image). If DFMSHsm was started with HOSTMODE=MAIN in that image, the C/I will continue successfully and the job will be successful, too.

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

Operator response: Start DFMSHsm.

Application Programmer Response: Request that DFMSHsm be started in an appropriate mode. Reissue the job when DFMSHsm is ready.

Source: DFMSHsm

ARC0057I CSA USAGE BY DFMSHSM HAS REACHED DFMSHSM INACTIVE THRESHOLD OF xxxxxK BYTES, REQUEST FAILED

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

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

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

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

Source: DFMSHsm

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

Explanation: The DFMSHsm limit of xxxxxK-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 DFMSHsm CSA queue. All other requests will fail.

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

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

Source: DFMSHsm

ARC0059I CSA USAGE BY DFMSHSM HAS REACHED MAXIMUM LIMIT OF xxxxxK BYTES, JOB=jobname FAILED

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

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

Application Programmer Response: To determine the action needed to alleviate the problem, *z/OS DFMSHsm Implementation and Customization Guide* and *z/OS DFSMS Storage Administration Reference*.

Source: DFMSHsm

ARC0060A WARNING: DFMSHSM IS NOT ACTIVE

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

System action: Processing continues.

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

Source: DFMSHsm

ARC0061I DFMSHSM SHUTTING DOWN DUE TO SMSVSAM SERVER ERROR

Explanation: An error with the SMSVSAM server has caused DFMSHsm to lose access to its control data sets. 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 DFMSHsm 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.

Application 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 I 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0063I DFSMShsm WILL {HOLD FUNCTIONS I SHUT DOWN} DUE TO A VSAM TRAP FINDING A CORRUPT INDEX IN THE {MCDS I BCDS I 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.

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 shutdown and for hold commands. Additional CDS errors and function failures can be expected during this process.

Application 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

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. |

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- 10 Needed enqueue not obtained.
- 92 DFSMShsm could not service the update request from Catalog Services because the DFMSHsm task abended, DFMSHsm was shutting down, the DFMSHsm address space was being cancelled, or the DFMSHsm request was cancelled.
- System action:** The IDCAMS ALTER command fails.
- Application 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 DFMSHsm 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: DFMSHsm was unable to recall a data set (*dsname*), because the DFMSDSS 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.

Application 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 DFMSDSS to restore the data set using the NOPACKING option.

ARC0087I CDS VERSION BACKUP SHOULD BE PERFORMED AT THIS TIME

Explanation: During DFMSHsm startup, it was detected that the number of clusters for the MCDS or BCDS, or both, has changed since the last time DFMSHsm 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.

System action: DFMSHsm processing continues.

Application 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. DFMSHsm processing continues.

Application Programmer Response: Do not specify SETSYS TAPEFORMAT(MULTIFILE).

Source: DFMSHsm

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

Explanation: A DFMSHsm 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 the z/OS DFSMS Macro Instructions for Data Sets publication. The function is ended.

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

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

Source: DFMSHsm

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

Explanation: The DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: Contact the IBM Support Center.

Source: DFMSHsm

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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: For details on specifying the SETSYS CSALIMITS subparameters, see *z/OS DFSMS Storage Administration Reference*. 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.

Application 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.
- 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.

Application 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 above DISPLAY R,I command:

CONTROL C,I,*id*

Application Programmer Response: This message is an attention message. The installation has requested DFMSHsm, via 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 DFMSHsm tape volume sets since the last initialization of DFMSHsm, you must reinitialize DFMSHsm on each processing unit in which you have defined the resources for them to take effect. For more information, see *z/OS DFMSHsm Implementation and Customization Guide*.

A RACF-defined user can reactivate RACF by entering the following RACF command: RVARY 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: DFMSHsm

ARC0100I {RELEASE | HOLD | SETSYS} COMMAND COMPLETED

Explanation: The DFMSHsm 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 DFMSHsm hosts continue.

Application 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: DFMSHsm

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 DFMSHsm hosts continue.

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

Source: DFMSHsm

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

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

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

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

Operator response: Notify the storage administrator.

Application Programmer Response:

Retcode	Action
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 DFMSHsm hosts in this z/OS MVS image. You might need to

ARC0102I

update the ARCCMDxx PARMLIB
members used for this host or the
other hosts, or both, before restarting
one or more hosts.

Source: DFSMShsm

ARC0103I	<p>INVALID SETSYS PARAMETER {AMSTART ABSTART ADSTART ARECOVERPERCENTUTILIZED TAPEMAXRECALL TASKS TAPEMAXRECALL TASKS > MAXRECALL TASKS MAXSSMTASKS ({TAPEMOVEMENT CLEANUP}) MAXCOPYPOOLTASKS SMALLDATASETPACKING MAXBACKUPTASKS MOUNTWAITTIME MAXMIGRATIONTASKS MAXINTERVALTASKS PRIMARYSPMGMTSTART SECONDARYSPMGMTSTART PARTIALTAPE SELECTVOLUME TAPEDELETION OUTPUT UNITNAME=<i>es2out</i> CANNOT BE TRANSLATED TO INPUT UNITNAME=<i>es2in</i>, NO ONLINE DEVICES FOR OUTPUT UNIT NAME OR NOT ALL ONLINE DEVICES FOR OUTPUT UNIT NAME HAVE ACLS OUTPUT UNITNAME=<i>es2in</i> CANNOT BE TRANSLATED TO INPUT UNITNAME=<i>es2in</i>, DEVICE TYPE CONFLICT OUTPUT UNITNAME=<i>es2out</i> CANNOT BE TRANSLATED TO INPUT UNITNAME=<i>es2in</i>, INVALID INPUT UNIT NAME INVALID USER UNIT TABLE ENTRY, UNITNAME=<i>unitname</i> UNKNOWN INVALID USER UNIT TABLE ENTRY, UNITNAME=<i>unitname</i>, NO ONLINE DEVICES FOR UNIT NAME INVALID USER UNIT TABLE ENTRY, UNITNAME=<i>unitname</i> CONTAINS INCOMPATIBLE DEVICES INVALID USER UNIT TABLE ENTRY, UNITNAME=<i>unitname</i> IS A RESERVED SYSTEM NAME - CONFLICTING TRANSLATIONS FOR USER UNIT TABLE UNITNAME=<i>unitname</i> USER UNIT TABLE CREATE FAILED, THERE ARE NO VALID USER UNIT TABLE ENTRIES USER UNIT TABLE CREATE FAILED, A MODULE'S ESTAE SETUP FAILED USER UNIT TABLE CREATE FAILED, A FREEMAIN FAILURE OCCURRED USER UNIT TABLE CREATE FAILED, A MACRO FAILED WHILE BUILDING THE UCB LIST USER UNIT TABLE CREATE FAILED, AN ABEND OCCURRED IN A MODULE OR MACRO USER UNIT TABLE CREATE FAILED, THE CAUSE OF FAILURE IS UNKNOWN TAPEMIGRATION DUMPIO MAXDUMPTASKS MAXDSRECOVERTASKS ACTLOGMSG_LVL </p>	<p>ACCEPTPSCBUSERID NOACCEPTPSCBUSERID DAYS DENSITY INCOMPATIBLE DENSITY=<i>n</i> UNITNAME=<i>unitname</i> MIGUNITNAME=<i>unitname</i> EXITS EXITON MAXABARSADDRESSSPACE SWAP ARECOVERUNITNAME ABARSUNITNAME ARECOVERML2UNIT ABARSBUFFERS ARECOVERREPLACE NOARECOVERREPLACE BACKUP PROCESSING WILL BE DONE WITHOUT USING IDRC FORMAT FOR ESOTERIC=<i>unitname</i> CDSVERSIONBACKUP NOCDSVERSIONBACKUP TAPESPANSIZE TRACE NOTRACE MAXRECYCLETASKS, VALUE OUT OF RANGE ML2RECYCLEPERCENT OUT OF RANGE RECYCLEPERCENT OUT OF RANGE RECYCLE INPUT DEALLOC FREQUENCY (BACKUP) OUT OF RANGE RECYCLE INPUT DEALLOC FREQUENCY (MIGRATION) OUT OF RANGE NODEFERMOUNT NOT SUPPORTED. DEFEROUNT WILL BE USED MAXSINGLEFILEBLOCKS - NO LONGER SUPPORTED USE SETSYS TAPEUTILIZATION TAPEUTILIZATION UNIT=<i>unit</i> TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH LIBRARYBACKUP OR LIBRARYMIGRATION TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH A GENERIC UNIT NAME TAPEUTILIZATION, ESOTERIC DOES NOT SUPPORT CAPACITYMODE(EXTENDED) TAPERECALLLIMITS PLEXNAME PROMOTE RECYCLEOUTPUT SPILL ML2PARTIALSNOTASSOCIATEDGOAL DATA SET BACKUP TASK OUT OF RANGE STANDARD DASDSELECTIONSIZE EXCEEDS MAXIMUM DASDSELECTIONSIZE MAXIDLETASKS DEMOUNTDELAY TAPEMIGRATION(RECONNECT) ABARSACTLOGMSG_LVL ABARSACTLOGTYPE ABARSDELETEACTIVITY ABARSOPTIMIZE ABARSPROCNAME ABARSTAPES ABARSVOLCOUNT ARECOVERTGTGDS CSALIMITS NOCSALIMITS MAXDSTAPERECOVERTASKS FASTREPLICATION(DATASETRECOVERY ({PREFERRED REQUIRED NONE})) }}</p>
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Explanation: A SETSYS command was issued to establish or change the current setting of a parameter. An ABARS or CSALIMITS parameter might have been specified for a host started with HOSTMODE=AUX. The parameters indicated in this message are:

- ABARSACTLOGMSG_LVL — 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 — The ACCEPTPSCBUSERID parameter was issued in an MVS system where RACF is active. This parameter is invalid in an active RACF environment.
- ACTLOGMSG_LVL — The ACTLOGMSG_LVL parameter has 3 valid subparameters:
 - FULL
 - REDUCED
 - EXCEPTIONONLY

The subparameter specified on the ACTLOGMSG_LVL parameter is incorrect.

- 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 — The ARECOVERPERCENTUTILIZED 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 — The CDSVERSIONBACKUP 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 subparameters. 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 — The DENSITY 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 — The DUMPIO 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(*abcdefghijklm*) 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.
 - | • 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 DFSMShsm's 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 — The MAXDSRECOVERTASKS parameter is specified with a value outside the range of 1–64.
- | • MAXDSTAPERRECOVERTASKS - Parameter specified is out of the range of 0 - 64, or is greater than the value specified for MAXDSRECOVERTASKS.
- MAXDUMPTASKS — The MAXDUMPTASKS parameter is specified with a value outside the range of 1–32.
- 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.
- 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.
- 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 — The MOUNTWAITTIME 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 — The NOACCEPTPSCBUSERID parameter was issued in an MVS system where RACF is active. This parameter is invalid in an active RACF environment.
- NOARECOVERREPLACE — The NOARECOVERREPLACE parameter was specified; however, it is no longer supported.
- NOCDSVERSIONBACKUP — The NOCDSVERSIONBACKUP 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 DEFEROUNT 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.
- 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:
 - 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 DFSMShsm's 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 — The PARTIALTAPE 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 — The SELECTVOLUME 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.
 - 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 — A SETSYS command with the TAPEMAXRECALLTASKS 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 — The TAPEMIGRATION 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 — The TAPESPANSIZE 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 invalid.
- 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.
- 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.
- Application Programmer Response:** The correction necessary for the parameter indicated is specified below (a reference to HOSTMODE=MAIN assumes you are executing DFMSHsm in multiple address spaces):
- ABARSACTLOGMSG_LVL — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSACTLOGTYPE — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSBUFFERS — Reenter the command with a valid number between 1–9. Ensure that the SETSYS command is directed to a host started with HOSTMODE=MAIN.
 - ABARSDLETEACTIVITY — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSKIP — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSOPTIMIZE — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSPROCNAME — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSTAPES — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
 - ABARSUNITNAME — Reenter the command with a valid tape unit type. Ensure that the SETSYS command is directed to a host started with HOSTMODE=MAIN.
 - ABARSVOLCOUNT — Respecify the parameter on a SETSYS command 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.
 - ACTLOGMSG_LVL — Correct the subparameter for the ACTLOGMSG_LVL parameter and reissue the command.
 - 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 — Reenter the command with a valid tape unit type. Ensure that the SETSYS command is directed to a host with HOSTMODE=MAIN.
 - ARECOVERPERCENTUTILIZED — Reissue the SETSYS command 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 — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.

- ARECOVERUNITNAME — Reenter the command 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 reissue the command. If the current date is before 2000 and the desired expiration date is after 1999, ensure that *date* is specified in the format yyyyddd.
- CONFLICTING TRANSLATION FOR USER UNIT TABLE UNITNAME=*unitname*. Do not ask for two different translations for the same output unit name.
- CSALIMITS — Respecify the parameter on a SETSYS command 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 reissue the command.
- DEMOUNTDELAY — Specify a value for minutes in the range of 0–1440.
- 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 reissue the command.
- EXITON — Link edit the exit into SYS1.LINKLIB so it can be loaded by DFSMShsm. Reissue the SETSYS command 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) --
| Re-specify 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 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 DFSMShsm's user unit table.
- MAXABARSADDRESSSPACE — Reenter with 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 reissue the command.
- 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 reissue the command.
- MAXDSRECOVERTASKS — The value supplied with the parameter must be from 1–64. Correct the value and reissue the command.
- | • MAXDSTAPERECOVERTASKS — Re-specify with 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 1–32. Correct the value and reissue the command.
- MAXIDLETASKS — Specify a value for tasks in the range of 0–64.
- MAXINTERVALTASKS — Specify value in the range of 1–15.
- MAXMIGRATIONTASKS — Specify 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.
- 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.

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- **ML2PARTIALSNOTASSOCIATEDGOAL** — Reissue the command 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 reissue the command.
- **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.
- **NOCDSVERSIONBACKUP** — This parameter is no longer supported.
- **NOCSALIMITS** — Respecify the parameter on a SETSYS command directed to a host started with HOSTMODE=MAIN.
- **NODEFERMOUNT** — This parameter is no longer supported.
- **NOTRACE** — This parameter is no longer supported.
- **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 DFMSHsm's 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.
- **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 DFMSHsm 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 DFMSHsm 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 DFMSHsm swappable. Otherwise, wait for all secondary address spaces to shut down, and then enter the SETSYS SWAP 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 DFMSHsm startup procedure, add it to the startup JCL. If the OCDS is not defined, define it and add a JCL DD statement to your DFMSHsm startup procedure. An example of the define procedure and the JCL DD statement is in *z/OS DFMSHsm Implementation and Customization Guide*. To activate the tape migration function after you have received this message, stop DFMSHsm 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 reissue the command.

- TAPEMIGRATION(RECONNECT) — Specify a subparameter of NONE, ALL, or ML2DIRECTEDONLY.
- TAPERECALLLIMITS — Set the TASK or the TAPE time, or both.
- TAPESPANSIZE — Reissue the command 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 DFMSHsm Storage Administration Guide*.
- TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH LIBRARYBACKUP OR LIBRARYMIGRATION — Correct the command and reissue.
- TAPEUTILIZATION, CAPACITYMODE(EXTENDED) SPECIFIED WITH A GENERIC UNIT NAME — Correct the command and reissue.
- TAPEUTILIZATION, ESOTERIC DOES NOT SUPPORT CAPACITYMODE(EXTENDED) — Correct the command and reissue.
- TRACE — This parameter is no longer supported.
- UNITNAME=unitname — Specify a tape unit name you want DFMSHsm 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 — 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: DFMSHsm

ARC0104I INVALID INITIALIZATION COMMAND

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

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

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

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

Source: DFMSHsm

ARC0105I INITIALIZATION COMMAND MEMBER membername NOT FOUND - RESTART DFMSHSM

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

System action: DFMSHsm processing ends.

Operator response: Restart DFMSHsm with the correct member name.

Application Programmer Response: Make sure the data set and member with DFMSHsm commands are available.

Source: DFMSHsm

ARC0106I INVALID DFMSHSM PARAMETER LIST parameter — RESTART DFMSHSM

Explanation: The DFMSHsm invocation parameter list contains an invalid parameter value *parameter*. The

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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.

Application 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.

Application 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 catalogued 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.

Application 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.

Application 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.

Application 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.
 - | 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 DFMSHsm processing continues.

- | **Application Programmer Response:** The main function must be released to release the subfunction. For example, releasing RECALL will also release RECALL(TAPE).

Source: DFMSHsm

ARC0112I AUTOMIGRATION NOT RELEASED - PREVIOUS HOLD COMMAND STILL IN PROGRESS

Explanation: A DFMSHsm 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.

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

Source: DFMSHsm

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: DFMSHsm processing continues.

Application 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: DFMSHsm

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: DFMSHsm processing continues.

Application 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: DFMSHsm

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 DFMSHsm 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. DFMSHsm will no longer select this volume to receive data sets during undirected recalls.

System action: DFMSHsm processing continues.

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Application 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.

Application 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.

Application 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.

Application 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.		specified on the ADDVOL command. When reading another type of record, an error occurs in the read.
12	Error in writing the BVR record.	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.
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.	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.
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.	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.
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.	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.
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.	44	The creation of the tape table of contents record (TTOC) has failed.
32	Invalid density specified. Valid for dump volumes only, density must be 2, 3, or 4.	48	An internal ADDVOL command for a tape backup volume has failed because the volume already contains valid DFSMSHsm data.
	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.	52	The deletion of the TTOC record has failed.
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	56	The read for update of the MCT record has failed.
		58	Internal error in module ARCCPADV.
		61	DRAIN and NODRAIN parameters are valid only for DASD migration volumes.
		70	An internal ADDVOL command has failed. See <i>reason-code</i> for additional information.
		72	The dump volume has not been added because it is currently in use.
			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(<i>class</i> ,...) parameter has not been specified, the MCV record is checked for dump classes specified on a previous ADDVOL command. If DUMPCLASS(<i>class</i>) 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.	16	Error in writing the MCV record.
20		20	Error in creating the MCT record.
22		22	Error in creating the DVL record.
24		24	Error in deleting the MCT record.
26		26	Error in deleting the DVL record.
28		28	Error in reading the MCT record.
30		30	Error in reading the DVL record.
32		32	Error in writing the MCT record.
34		34	Error in updating the DVL record.
36		36	Error in creating the TTOC record.
38		38	Error in reading a dump class record (DCL).
40		40	Error in reading the TTOC record.
44		44	Error in writing the TTOC record.
48		48	Error in changing the key of a TTOC record.
52		52	Error in deleting a BVR volume entry.
56		56	Error in creating a BVR volume entry.
60		60	Error in updating a BVR volume entry.
64		64	Tape volume contains valid DFSMShsm data. The file sequence number in the MCV or MCT record is nonzero.
68		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		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		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
	The following reason codes <i>reason-code</i> 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.		

	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.

Application 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 56, 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.

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

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.

Application 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.

Application 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.

Application 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 DFMSHSM WITH THE NOSDSP ATTRIBUTE, RC = *return-code* REAS = *reason-code*

Explanation: An ADDVOL command adding a ML1 volume with an SDSP attribute is being processed. However, the SDSP 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 SDSP data set for the volume was cataloged, but the SDSP data set does not exist on the ML1 volume being ADDVOLed.
8	SDSP data set not found.

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

System action: DFSMShsm processing continues.

Application 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.

Application 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 DFMSHsm for backup and migration functions. However, dump volumes can still use reel-type tapes.

Source: DFSMShsm

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

Explanation: The ADDVOL command was issued to add a volume with volume serial number *volser* to DFMSHsm 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.

Application 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 HSMPARM 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.

Application 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

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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.

Application Programmer Response: Examine the BACKUP, DUMP, MIGRATIONCLEANUPCYCLE, PRIMARYSPGMTCYCLE, or SECONDARYSPGMTCYCLE 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.

Application 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 I BCDS I 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

- multiclus ter 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 was defined as a multiclus ter data set without key ranges. During DFSMSHsm processing to calculate the dynamic key boundaries, an inconsistency was found in the DFSMSHsm control records.
- 14 The MCDS was defined as a multiclus ter 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'IIC'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.
- 18 The CDS cluster is defined with the IMBED parameter. z/OS DFSMS V1R3 no longer supports IMBED from VSAM; unpredictable space calculations may occur.
- 19 OCDS cluster was defined with a record size of 6144 on a level of DFSMSHsm that does not support the extended TTOC feature.

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 Guide* 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'IIC'MHCR'. See the *z/OS DFSMSHsm Storage Administration Guide* for details on the correct method to restructure the CDS clusters' key boundaries.

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.

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

Source: DFSMSHsm

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.

Application 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.

Application 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).

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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: DFMSHsm

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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: If either backup or dump is desired, this message represents an error and DFMSHsm 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: DFMSHsm

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 DFMSHsm.

System action: The operation ends. DFMSHsm processing continues.

Application Programmer Response: Correct the *unittype*, and reissue the command.

Source: DFMSHsm

ARC0136I UNIT AND VOLUME NOT SPECIFIED, BOTH REQUIRED

Explanation: In a request to DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Reissue the command with all the required information.

Source: DFMSHsm

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. DFMSHsm processing continues.

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

Source: DFMSHsm

ARC0138I NO {MCDS | BCDS} INFORMATION FOUND FOR {VOLUME | DATASET | DUMPVOLUME | DUMPCCLASS | 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. DFMSHsm processing continues.

Application 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,
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 that can run concurrently. If this parameter is not specified, then the MAXMIGRATIONTASKS value is used.

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.

Application 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.

Application 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.

Application 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=tcbaddress**

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.

ARC0143I • ARC0145I

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

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm 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 DFMSHsm commands that have been processed during startup.
- uid is the authorized user identifier for DFMSHsm 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 DFMSHsm log has been swapped at startup time.

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

- STARTUP indicates whether DFMSHsm sends startup messages to the operator console at startup time.
- EMERGENCY indicates whether DFMSHsm 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 DFMSHsm automatically restarts itself after abnormally ending. If RESTART=IS SPECIFIED, message ARC0248I follows with the restart parameters.

- CDSSHR indicates if DFMSHsm 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, DFMSHsm 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 DFMSHsm scans for additional startup parameters.

See following message ARC0249I for additional startup parameters.

System action: DFMSHsm/MVS processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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.

Application 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.

Application 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. Updates 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.

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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 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.

Application 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.

Application 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}

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

In the message text:

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, SYSDUMP, or SYSUDUMP.

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

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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.

System action: DFSMShsm processing continues.

Application 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 SMALLDATASET PACKING 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0152I **MAXRECALLTASKS=***tasks*,
RECALL={ANYSTORAGEVOLUME(LIKE
I UNLIKE) | PRIVATEVOLUME(LIKE
I UNLIKE)}, **MAXEXTENTS=***extents*,
CONVERSION={NO | REBLOCKBASE |
REBLOCKTOANY |
REBLOCKTOUNLIKE},
VOLCOUNT=(*NONE* **I 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 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* **I NONE}****,** **SWAP={**YES **I**
NO}**,**
PERMISSION={YES **I** NO**,**
EXITS={NONE **I** *exits***}****,** **UNLOAD={**YES **I**
NO}**,** **DATASETSERIALIZATION= {**USER
I DFHSM}

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.

If SWAP=YES, 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.

If PERMISSION=YES, the operator's permission is required to start:

- Automatic backup
- Automatic dump
- Primary space management
- Secondary space management

If PERMISSION=NO, the operator's permission is not required to start

- Automatic backup
- Automatic dump
- Primary space management
- Secondary space management

If EXITS=NONE, no installation-wide exits are active. In the EXITS=*exits*, 2 character abbreviations appear

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specifying the active written installation-wide exits. For example, if the second level migrate data set exit (ARCMMEXT) 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 (ARCBEEXT)
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)

If UNLOAD=YES, 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.

System action: DFSMSHsm processing continues.

Application 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.

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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0157I DS MIGRATE L1=*nlevel1*, DS MIGRATE L2=*nlevel2*, DS EXTENT REDUCTIONS=*exts*, DS MIGRATE FAIL=*fails*, TRKS MIGRATE=*tracks*, {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.
- *tracks* indicates the number of tracks of data sets that migrated.
- *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.

Application 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
TBYTES	terabytes	1 099 511 627 776

To convert to bytes, use the following formula:

$$\text{nbytes} \times \text{bytes per unit (unit)} = \text{total bytes}$$

Example: If nbytes = 2 and unit = KBYTES, then $2 \times 1024 = 2048$ 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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMSHsm

```
| ARC0161I {MIGRATING I BACKING UP I
| RECOVERING I RECYCLING I
| AUDITING I {DUMPING I FRBACKUP
| DUMP OF I FRBACKUP DUMPONLY
| OF} I MOUNTING INITIAL TAPE FOR
| DS BACKUP,I RESTORING } VOLUME
| {volser I volser, SGROUP=sg I volser,
| COPY POOL = cpname } FOR USER
| {userid I **AUTO** I * } REQUEST
| {request-number I NONE I * } [, TCB=X'tcbaddress']
```

Explanation: The system has issued a QUERY command with the ACTIVE, USER, or REQUEST parameter.

DFSMSHsm space management 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. *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. *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.

System action: DFSMSHsm processing continues.

Application Programmer Response: None.

Source: DFSMSHsm

```
| ARC0162I {MIGRATING I BACKING UP I
| RECALLING I RECOVERING I
| DELETING I RESTORING I FRRECOV
| OF} DATA SET dsname FOR USER
| userid, REQUEST request ON HOST
| hostid [,TCB=X'tcbaddress']
```

Explanation: A QUERY command was issued with the ACTIVE, USER, REQUEST, or DATASETNAME parameter. DFSMSHsm migration, backup, recall, recovery, delete, data set restore, or Fast Replication data set recovery is processing the data set with *dsname*. 'DATA SET *dsname*, ***' appears in the message text when a FRRECOV DSNAME request was

issued with multiple data set names.

The user identification of the initiator is *userid*. The request number *request* is nonzero only for requests that 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.

System action: DFSMSHsm processing continues.

Application Programmer Response: None.

Source: DFSMSHsm

```
| ARC0163I BACKUP={NOT HELD I HELD AT END
| OF VOLUME I HELD},
| AUTOBACKUP={NOT HELD I HELD AT
| END OF VOLUME I HELD},
| RECOVERY={NOT HELD I HELD AT
| END OF VOLUME I HELD},
| TAPEDATASETRECOVERY={HELD I
| NOT HELD}, DATA SET
| BACKUP={HELD I NOT HELD I TAPE
| HELD I DASD HELD}, VOLUME
| BACKUP={ACTIVE I INACTIVE}, DATA
| SET RECOVERY={ACTIVE I INACTIVE},
| VOLUME RECOVERY={ACTIVE I
| 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.

Application 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.

Application 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.

Application 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.

Application 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 lname, SGROUP = sg | name, COPY POOL = cname} 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.

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.
- 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 DFMSHsm through the DFMSHsm supervisor call (SVC). *nmwe* is the number of MWEs ahead of this MWE on the same DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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
| DFMSHsm 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 DUMPONLY 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 DFMSHsm 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: This message only reports requests that reside on DFMSHsm 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.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0171I SETMIG LEVEL *qualifier* PROCESSED

Explanation: All data sets controlled by DFMSHsm beginning with the initial characters of the data set name, *qualifier*, had their space management status changed by the SETMIG command.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0173I ALTERDS *dname* {SUCCESSFULLY | UNSUCCESSFULLY} PROCESSED

Explanation: The ALTERDS or HALTERDS command was issued to alter backup parameters for the data set *dname*. DFMSHsm processed the command. If processing of the ALTERDS or HALTERDS command was unsuccessful, one or more messages has preceded this one.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm with the SETMIG command or defaulted to by DFMSHsm at startup.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm mounted volume table or it is an SMS-managed volume.

System action: The command ends. DFMSHsm processing continues.

Application 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. DFMSHsm 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 DFMSHsm. Reissue the command.

Source: DFMSHsm

ARC0178I VOLUME *volser* NOT IN DFMSHSM 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. DFMSHsm processing continues.

Application Programmer Response: Examine the VOLUME parameter of the SETMIG command and

determine if the volume is specified correctly and is available to DFMSHsm. If there was an earlier message, make the necessary corrections and reissue the command.

Source: DFMSHsm

ARC0179I DATA SET NAME IS MISSING

Explanation: DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Be sure to specify a data set name on the command.

Source: DFMSHsm

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	DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Only if IS NOT is specified.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application 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: DFMSHsm

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) and version numbers (if specified) are correctly specified. If not, make corrections and reissue the command. If the data set and backup versions were correctly specified and should exist, notify the system programmer or storage administrator.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application 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: DFMSHsm

**ARC0184I ERROR WHEN {READING | WRITING}
THE DFMSHSM CONTROL DATA SET
type RECORD FOR key, RC=return-code**

Explanation: An attempt to read or write the DFMSHsm 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. DFMSHsm 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, DFMSHsm 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
```

DFMSHsm 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 8 on page 442.

If *type* is 0, the first character of the external key is not printed.

System action: DFMSHsm processing continues.

Application Programmer Response: Notify the storage administrator or system programmer.

System programmer response: To aid in problem resolution, see the information about maintaining

DFMSHsm control data sets in *z/OS DFMSHsm Storage Administration Guide*.

Source: DFMSHsm

**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,
RC=return-code, REASON=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.	20	The data set name is a VSAM component name instead of a cluster name.
11	Unsupported data set for backup. The catalog entry shows at least one AIX defined with key ranges and the base cluster is <i>not</i> defined with key ranges.	24	The catalog entry indicates that the data set is a non-VSAM multivolume data set. The data set's <i>volser</i> list also indicates multiple volumes.
12	The components of the non-SMS-managed VSAM cluster are on different volumes.	28	A LOCATE error occurred for a VSAM AIX* (alternate index) cluster.
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.	38	A LOCATE error occurred for the data or index component of the VSAM AIX cluster.
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.	39	A LOCATE error occurred for the path component of the VSAM AIX cluster.
22		40	At least one component of the VSAM data set is empty.
52			a GETMAIN error occurred during the process of getting the catalog information about a VSAM data set.
16	A component of the VSAM data set is open for output.	22	Password check fails. The <i>reason-code</i> 8 indicates the password is not specified or the password is incorrectly specified.
18	A LOCATE error occurred for the data or index component of the VSAM base cluster.	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.
19	A LOCATE error occurred for the path component of the VSAM base cluster.	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 is specified.
39			RACF check fails. The <i>reason-code</i> is the return code from ARCRACF. For

the meanings of *reason-code*, see Table 18 on page 454.

System action: DFSMShsm processing continues.

Application 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.

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

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. <i>reason-code</i> is the return code from ARCZREAD.
2	An error has occurred updating the BCDS B record for the data set. The <i>reason-code</i> is the return code from ARCZUPDT.
3	An error has occurred writing a record for the data set. The <i>reason-code</i> 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 <i>reason-code</i> is the VSAM catalog return code. A <i>reason-code</i> 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 <i>reason-code</i> , see <i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> , 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. <i>reason-code</i> 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 (<i>reason-code</i> = 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 <i>reason-code</i> =0, LOCATE error has occurred on an AIX path component. For any other <i>reason-code</i> , RACF authorization check fails. See message ARC1139I for <i>reason-code</i> explanation.

70	The ALTERDS or HALTERDS command is not allowed for SMS-managed data sets.
	System action: DFSMShsm processing continues.
	Application 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.
	System programmer response: To aid in problem resolution, see the information about maintaining DFSMShsm control data sets in <i>z/OS DFSMShsm Storage Administration Guide</i> .

Source: DFSMShsm

**ARC0187I I/O ERROR {POSITIONING TO I
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 8 on page 442.

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 Guide*.

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 8 on page 442.

System action: DFSMShsm processing continues.

Application Programmer Response: Notify the storage administrator or system programmer.

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

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
RECORD**

Explanation: An HBDELETE user command or a BDELETE storage administrator command was issued to delete backup version(s) of data set *dsname*. A backup version entry in the BCDS data set record for *dsname* indicated the existence of backup version *backupdsname* but there was no BCDS backup version record found for that backup version. The backup version entry was deleted from the BCDS data set record.

System action: DFSMShsm processing continues. BDELETE or HBDELETE command processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC0190I DISPLAY COMPLETE

Explanation: The DISPLAY command completed processing.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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 a installation-wide exit *exitname* that was not loaded into the DFSMShsm system at startup time. The command fails.

System action: DFSMShsm processing continues.

Application 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
 - 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.

Application 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 FNTRY and PATCH FNTRY.

System action: DFSMShsm processing continues.

Application 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 8 on page 442 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.

Application 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.

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

Source: DFSMShsm

ARC0199I {MCT I BVR} RE-CREATION {SUCCESSFUL I 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 8 on page 442 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.

Application Programmer Response: Notify the storage administrator or system programmer.

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

Source: DFSMShsm

ARC0200I TRAP IN MODULE *modname*, CODE=*errcode*, {LOG ALWAYS ADDED I NODUMP ONCE ADDED I FATAL ONCE ADDED I DEBUG ALWAYS ADDED I SNAP {ALWAYS I ONCE I NEVER} ADDED I ABEND {ALWAYS I ONCE I NEVER} ADDED I 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.

When the message is issued for the first time the error occurs, an entry is made in the trap table. ARCPERP 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 ARCPERP by the module recognizing the error condition. The TRAP command overrides the error procedures in ARCPERP 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. Contact the IBM Support Center.

If the *modname* is ARCZWRIT and the *errcode* is 8, the message indicates a record with a duplicate key already existed when DFMSHsm tried to write the record. This condition is an error.

More information about modules and error codes can be found in *z/OS DFMSHsm Diagnosis* under "Diagnosing From Return Codes and Reason Codes" in the table titled "Entries that Pass Error Codes to ARCPERP".

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 DFMSHsm log and message ARC0900I is issued to the operator.

- FATAL ONCE ADDED

The DFMSHsm task that had the error is abended with a dump request.

A log entry of the error is written to the DFMSHsm log and message ARC0900I is issued to the operator.

DFMSHsm is shut down immediately.

- NODUMP ONCE ADDED | ABEND ONCE ADDED

The DFMSHsm task that had the error is abended.

A log entry of the error is written to the DFMSHsm 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 DFMSHsm log and message ARC0900I is issued to the operator.

- SNAP ALWAYS ADDED

A SNAP dump of the DFMSHsm address space is taken.

A log entry of the error is written to the DFMSHsm log and message ARC0900I is issued to the operator.

- SNAP ONCE ADDED

The DFMSHsm 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 DFMSHsm log and message ARC0900I is issued to the operator.

- ABEND ALWAYS ADDED

The DFMSHsm task that had the error is abended.

A log entry of the error is written to the DFMSHsm log and message ARC0900I is issued to the operator.

- DEBUG ALWAYS ADDED

A log entry of the error is written to the DFMSHsm log.

Application Programmer Response: If FATAL ONCE is added, restart DFMSHsm.

If you want DFMSHsm to stop issuing this message, issue the TRAP command with the OFF parameter.

Source: DFMSHsm

ARC0202W ENTRY POINT *modname* NOT FOUND IN MODULE ENTRY TABLE

Explanation: A TRAP command was issued for a DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Verify that the *modname* specified by the TRAP command is correct and reissue the command if it was not correct.

Source: DFMSHsm

ARC0203I CSALIMITS={NO | YES}, CSA CURRENTLY USED=*NNNNNN* BYTES, MWE=*WWWW*, MAXIMUM=*XXXXXX*K BYTES, ACTIVE=*YY%*, INACTIVE=*ZZ%*

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 DFMSHsm.

WWWW 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 DFMSHsm processing in K-bytes.

YY is the percent of the maximum amount of CSA

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storage that is allocated to all types of MWEs while DFMSHsm is active.

zzz is the percent of the maximum amount of CSA storage that is allocated to nonwait-type MWEs when DFMSHsm is inactive.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0204I NO ACTIVE TRAP ENTRIES

Explanation: The QUERY command has been issued with the TRAPS parameter. There were no DFMSHsm modules with active traps for error codes.

System action: DFMSHsm processing continues.

Application Programmer Response: None

Source: DFMSHsm

**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 DFMSHsm error handling routine.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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.

Application Programmer Response: Specify the VOLSER of the control block that is to be PATCHed.

Source: DFMSHsm

**ARC0208I TRAP FOR ERROR CODE *errcode*,
MODULE *modname*, {NODUMP ONCE I
FATAL ONCE I DEBUG ALWAYS I *nnnn*
MAXLIMIT I SNAP {ALWAYS I ONCE I
NEVER} I ABEND {ALWAYS I ONCE I
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. Contact the IBM Support Center.

If the *modname* is ARCZWRIT and the *errcode* is 8, the message indicates that a record with a duplicate key already existed when DFMSHsm tried to write the record. This condition is an error.

More information about modules and error codes can be found in *z/OS DFMSHsm Diagnosis*, in Appendix A, in the section “Diagnosing from Return Codes and Reason Codes”, in Figure 5, “Entries that Pass Error Codes to ARCKER.”

System action: The system issues this message as a result of an error occurring in one of the DFMSHsm processes. ARCKER 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 DFMSHsm 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 DFMSHsm log and message ARC0900I is issued to the operator.

- **FATAL ONCE**

The DFMSHsm task that had the error is abnormally ended (abended) with a dump request.

A log entry of the error is written to the DFMSHsm log and message ARC0900I is issued to the operator. DFMSHsm is shut down immediately.

- ***nnn* MAXLIMIT**

The number specified by MAXLIMIT has been exceeded for this day.

The DFMSHsm task that had the error has been abended with a dump request.

A log entry of the error is written to the DFMSHsm log and message ARC0900I is issued to the operator. DFMSHsm 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 DFMSHsm 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 DFMSHsm 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 DFMSHsm log.

- **SNAP ALWAYS**

A SNAP dump of the DFMSHsm 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 DFMSHsm log and message ARC0900I is issued to the operator.

- **SNAP ONCE**

The DFMSHsm 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 DFMSHsm log and message ARC0900I is issued to the operator.

- **ABEND ALWAYS**

The DFMSHsm 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 DFMSHsm log and message ARC0900I is issued to the operator.

- **DEBUG ALWAYS**

A log entry of the error is written to the DFMSHsm log.

Application Programmer Response: If FATAL ONCE or *nnn* MAXLIMIT is the DFMSHsm action, restart DFMSHsm. Otherwise, no action is necessary.

If you want DFMSHsm to stop issuing this message, issue the TRAP command with the OFF parameter.

Source: DFMSHsm

ARC0210I PATCH PROCESSING COMPLETE

Explanation: The PATCH command was issued. Patch processing has completed.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Verify the patch data and the length of patch input and reissue the command.

Source: DFMSHsm

ARC0212I PATCH FAILED - {PROTECTION/ ADDRESSING INTERRUPT OCCURRED | VOLUME NOT SPECIFIED}

Explanation: DFMSHsm received a PATCH command. During an attempt to patch a location in the DFMSHsm address space, a protection or addressing interruption occurred. This message is also issued when a PATCH command is issued for a DFMSHsm control block and the volume parameter is not specified.

System action: The command ends. The previous DFMSHsm environment is restored. DFMSHsm processing continues.

Application 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 DFMSHsm address space. For VOLUME NOT SPECIFIED, a volume must be specified to patch the DFMSHsm control block.

Source: DFMSHsm

ARC0213I VERIFY SUCCESSFUL

Explanation: DFMSHsm received a PATCH command. The data at the specified address is compared to the verification data supplied. The comparison was correct.

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System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.	the ENCRYPT parameter. The ICOUNT value specified was not in the range between 1 to 10000.
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.	A DEFINE command was issued with the HWCOMPRESS parameter. The required YES/NO parameter was not specified with the HWCOMPRESS keyword.
24	A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The date specified was in the past.	A DEFINE dump class 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.
26	A DEFINE command was issued with the TAPEEXPIRATIONDATE parameter. The date was specified using the form <i>yyddd</i> , but the current date is after 1999.	System action: If UNSUCCESSFUL, the DEFINE command fails. DFSMShsm processing continues.
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.	Application Programmer Response: If UNSUCCESSFUL and the return code is not 2, determine the incorrect parameter, correct it, and resubmit the DEFINE command. For return code 2, determine the cause of the control data set access error, correct it, and resubmit the DEFINE command.
32	A DEFINE command was issued with the ENCRYPT parameter. The NONE keyword was specified with conflicting encryption keywords.	Source: DFSMShsm
34	A DEFINE command was issued with the ENCRYPT parameter. The TYPE keyword was specified without its required parameter.	ARC0217I DEFINE POOL <i>char</i> REJECTED. POOL ALREADY EXISTS
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.	Explanation: DFSMShsm received a DEFINE command to define a pool <i>char</i> 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.
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.	System action: The command ends. The existing pool definition remains. DFSMShsm processing continues.
40	A DEFINE command was issued with the ENCRYPT parameter. ICOUNT was specified without the KEYPASSWORD keyword.	Operator response: Notify the storage administrator.
42	A DEFINE command was issued with	Application 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.

ARC0219I DEFINE MIGRATION LEVEL 2 REJECTED - {TAPE VOLUME CANNOT BE ASSOCIATED WITH KEY RANGE I I/O ERROR I MIGRATION TO LEVEL 2 DASD IN PROCESS I DRAIN ATTRIBUTE I TOO MANY KEYS PREVIOUSLY SPECIFIED FOR VOLUME=*volume*}

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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.

Application 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.

Application 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.

Application 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.

Application 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 ARC0503I 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.

Application 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 ARC0503I 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.

Application 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.

Application 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.

Application 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]) I
SSMMIG=(S01=volser1,...,
S15=volser15)}

Explanation: A QUERY command was issued with the

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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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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: An attempt was made to patch data that is located in protected fields.

System action: The command ends with no data modified. DFSMShsm processing continues.

Application Programmer Response: None.

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.

Application 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

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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.

Application 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.

Application 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.

Application 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 STORAGEGROUP parameter must be specified. The VOLUMES or STORAGEGROUP 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.

Application 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.

Application 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.

Application 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.

Application 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

14

NOLIMIT, or an asterisk as a place holder, as in RETPD(*,*,90).

16

Stack is specified, and the number of stack values exceeds the number of dump classes.

Invalid STACK values are specified. The only valid values are the numbers 1 through 99, or an asterisk as a place holder.

System action: The BACKVOL command ends. DFSMShsm processing continues.

Application Programmer Response: Reissue the command with the correct syntax and valid values for the DUMP subparameter indicated in error. IF RETENTIONPERIOD or STACK 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 VOLUMES RESTRICTED TO PROCESSING BY THIS PROCESSING UNIT: NOT PROCESSED =uu, TOTAL =vv, SMS 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:

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.

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.
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.
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.
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.

Notes:

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 (via 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.**Application Programmer Response:** None.**Source:** DFSMShsm

ARC0247I {AUTO BACKUP | AUTO DUMP | PRIMARY SPACE MANAGEMENT | INTERVAL 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.**Application 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.**Application Programmer Response:** None.**Source:** DFSMShsm

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.**Application 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 DFHSMA S0100002 002C AUX
```

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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 DFSMS Storage Administration Reference*. for further information about the SWITCHTAPES process.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application Programmer Response: List the units and note the associated volsters. Vary the TOVOLUME volser unit offline. Reissue the command.

Source: DFSMShsm

**ARC0260I {PRIMARY I MIGRATION I BACKUP I DUMP} VOLUME volser ENTRY
{DELETED I NOT DEFINED I NOT
DELETED - CDS ERROR I NOT
DELETED - VALID DATA MAY EXIST
ON VOLUME I NOT DELETED -
VOLUME INELIGIBLE FOR DELVOL I
NOT DELETED - ERROR REMOVING
VALID DATA I NOT DELETED -
SELECTED BY ANOTHER HOST I
DELETED - nnnn VALID VERSIONS
ALSO DELETED I NOT DELETED -
CONTAINS ONLY DUMP COPY I
UNASSIGNED I MARKED FULL I NOT
MARKEDFULL I MARKFULL INVALID I
MARKFULL READERROR I NOT
DELETED - PURGE NOT SPECIFIED
FOR STACKED VOLUME I NOT
DELETED - COPYPOOLCOPY NOT
SPECIFIED I NOT DELETED - VOLUME
IS PART OF THE LAST DUMP
VERSION I DELETED WITH AN
UPDATING COPY POOL CDS ERROR I
NOT DELETED - ANOTHER
DFSMShsm FUNCTION WAS
PROCESSING THE COPY POOL I 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 V1R8 system for a dump volume from a copy pool version processed on a z/OS V1R8 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).

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.

System action: DFSMShsm processing continues.

Application 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 Guide 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 the z/OS DFSMShsm Storage Administration Guide 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, contact the IBM Support Center.

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- | 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 DFMSHSM FUNCTION WAS PROCESSING THE COPY POOL, issue DELVOL command after the current DFMSHsm 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.

Source: DFMSHsm

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: DFMSHsm processing continues.

Operator response: Run the IEHINIT utility to relabel the specified tape volume.

Source: DFMSHsm

ARC0262I DUMP {COPY | GENERATION} INVALIDATED FOR VOLUME *volser*, CREATION DATE= *yy/mm/dd*, {EXPIRATION DATE= {*yy/mm/dd* | NOLIMIT}, DUMP CLASS= *class*}

Explanation: DFMSHsm 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: DFMSHsm processing continues. DFMSHsm internally deletes the volumes containing the dump copy.

Application Programmer Response: None.

Source: DFMSHsm

ARC0263I DUMP VOLUME *volser* {DELETED | NOT DELETED}, VOLUME STATUS= {PURGED | UNASSIGNED | REASSIGNED | UNAVAILABLE | UNCHANGED}{, RETCODE= *return-code*}

Explanation: DFMSHsm 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 DFMSHsm 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 DFMSHsm was trying to process it.

System action: DFMSHsm processing continues.

Application 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 DFMSHsm's control.

- To list the tapes marked *unavailable* issue: LIST DUMPVOLUME SELECT(UNAVAILABLE)
- Run the IEHINIT utility to relabel the tape.
- Issue the DELVOL *volser* DUMP(PURGE) command for each volume.

Source: DFMSHsm

ARC0269I DATA SET DASD BACKUP
TASKS={number of tasks}, DATA SET
TAPE BACKUP TASKS={number of
tasks}, DEMOUNTDELAY
MINUTES={delay minutes},
MAXIDLETASKS={number of idle
drives}, DATA SET BACKUP MAXIMUM
DASD SIZE={kbytes}, DATA SET
BACKUP STANDARD DASD
SIZE={kbytes}, SWITCHTAPES
TIME={time to demount idle tapes},
PARTIALTAPE OPTION={MARKFULL |
SETSYS | REUSE}

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 DASD is referred to as TASKS.

DATA SET DASD BACKUP TASKS

The number of data set backup tasks that may use ML1 DASD as the backup target device.

DATA SET TAPE BACKUP TASKS

The number of data set backup tasks that may use tape as the backup target device.

DEMOUNTDELAY MINUTES

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.

DATA SET BACKUP MAXIMUM DASD SIZE

The size in kilobytes of the largest data set that may be directed to ML1 DASD for WAIT requests that do not specify the TARGET keyword.

DATA SET BACKUP STANDARD DASD SIZE

The size in kilobytes of a small data set. Small data sets are directed to ML1 DASD 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 OPTION

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.

System action: DFSMShsm processing continues.

Application 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.

Application 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 *nth* 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 *nth* 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0272I PRIMARY SPACE MGMT CYCLE LENGTH=ndays DAY(S), }, TODAY IS DAY=n, CYCLE START DATE=yy/mm/dd,

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 *nth* 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 *nth* 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.

System action: DFSMShsm processing continues.

Application 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 *nth* 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 *nth* 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0274I BACKUP={YES({ANY | DASD | TAPE{ (unit) }} | NO}, SPILL={YES({ANY | DASD | TAPE {{(unit)}}} | NO}, MAXDSRECOVERTASKS=nn, MAXDSTAPERECOVERTASKS=nn

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.

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(*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.

| MAXDSTAPERRECOVERTASKS *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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0280I REPORT COMPLETED

Explanation: The REPORT command has successfully completed processing.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: None.

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.

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.

Application 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 above two actions.

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.

Application 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.

Application 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

ARC0302I DATA SET *dname* 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 *dname* 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. DFSMShsm processing continues.

Application 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: DFSMShsm

ARC0303I DATA SET *dname* 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 *dname*. 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 DFSMShsm data movement was used, the new *blocksize* for the data set is specified.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC0304I SETUP OF ESTAE ENVIRONMENT FOR MODULE *modname* FAILED, RETURN CODE=*return-code*

Explanation: The DFSMShsm 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.

Application Programmer Response: Examine the return codes from the MVS ESTAE macro and take corrective action.

Source: DFSMShsm

ARC0305I GETMAIN/FREEMAIN FAILURE IN MODULE *modname*, RETURN CODE=*return-code*

Explanation: The DFSMShsm 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.

Application Programmer Response: Examine the return code from the MVS GETMAIN or FREEMAIN macro and take corrective action.

Source: DFSMSHsm

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.

Application 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.

Application 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.

Application 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.
- 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(YIN) setting.

System action: A keep message is sent for the tape volume. The tape volume is rewound and unloaded by OPEN or EOV 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 EOV 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 EOV condition. To resolve a TTOC conflict, the tape operator can mount a tape volume with a compatible TTOC type.

Application 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? REPLY Y OR N

Explanation: The wait time as established by the DFSMShsm SETSYS command for open or end-of-volume (EOV) processing of a tape data set has elapsed and open or EOV 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 EOV processing completes, open or EOV 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

ARC0311A • ARC0315I

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.

Application 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.

Application 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 ARCRDEXT exit for the recall function has abnormally ended (abended). The data set name that ARCRDEXT 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.

Application 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.

Application Programmer Response: Examine the DFMSHsm parameters to ensure that they are correct for the volumes in the DFMSHsm pool associated with the data set.

Source: DFMSHsm

**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. DFMSHsm 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, DFMSHsm 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.
- 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.

Application 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: DFMSHsm

ARC0320I BVR REFRESH STARTING

Explanation: DFMSHsm has successfully completed CDS Backup and is beginning to rebuild the BVR records into an optimal form.

System action: DFMSHsm processing continues. The BVR records are being refreshed.

Application Programmer Response: None.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Notify the Storage Administrator.

Source: DFMSHsm

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: DFMSHsm BVR refresh processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm complex.

System action: BVR Refresh completed successfully. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm release.

System action: Conversion processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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.

Application 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.

Application 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 8 on page 442.

System action: DFSMShsm processing continues with volume backup disabled.

Application 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 ARCPRT

Explanation: During the initialization of the DFSMShsm log utility program ARCPRLOG or ARCPEDIT, an open for the file ARCPRT failed.

System action: Processing ended and the final condition code was set to 4.

Application Programmer Response: This error generally occurs when the DD statement is missing. Add the DD statement to the job and rerun.

Source: DFSMShsm

ARC0329I ERROR OPENING FILE ARCLG

Explanation: During the initialization of the DFSMShsm log utility program ARCPRLOG or ARCPEDIT, an open for the file ARCLG failed.

System action: Processing ended and the final condition code was set to 4.

Application 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 ARCDIT

Explanation: During the initialization of the DFSMShsm log utility program ARCPRLOG, an OPEN request for the file ARCDIT failed.

System action: Processing ended and the final condition code was set to 4.

Application 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 | MEDIA*n*) 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 MEDIA*n* cartridge, where *n* is a number, then MEDIA*n* 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.

Application Programmer Response: This message is issued only if requested via 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.

Application 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.
- **OSCAPU** macro — DFSMShsm invokes the OSCAPU 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.
- **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.
- **IOCMAPE** 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.

Application 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 *ddd* 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.

Application 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 OPTIONS SPECIFIED - OPTION {ALL | NONE} WILL BE USED

Explanation: A SETSYS command was issued with the COMPACT 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, DFSMShsm ignores all other subparameters.

System action: If you specified the ALL subparameter, all compaction options are enabled. If you specified the NONE subparameter, all compaction options are disabled. DFSMShsm processing continues.

Application 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.

Source: DFSMShsm

ARC0337I {EXIT I USER UNIT I COMPACTION NAMES I 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.

Application 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.

Application 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) UNIT*unittype*

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 I OPTIMAL}, LOGGING LEVEL = {FULL I REDUCED I EXCEPTIONONLY}, LOG TYPE = {SYSOUT(*sysout-class*) I 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0340I COMPACT OPTIONS ARE:
TAPEMIGRATION=[YES | NO],
DASDMIGRATION=[YES | NO],
TAPEBACKUP=[YES | NO],
DASDBACKUP=[YES | NO],
TAPEHARDWARECOMPACT=[YES | NO]

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

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.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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 DFSMS Storage Administration Reference.

System action: DFSMShsm processing continues for the original tape. The duplex tape is released. A tapecopy is made when processing completes.

Application 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.

Application 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 EOV processing has not returned control to DFMSHsm. 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 DFMSHsm task waits until a reply of Y is received. If the waiting task holds resources critical for DFMSHsm processing, all of DFMSHsm may eventually be waiting for the reply.

When a reply of Y is received, DFMSHsm 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 EOV 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: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: If the return code is 4, a read or write of the MCP record failed. See message ARC0184I for details.

Source: DFMSHsm

ARC0351I CANNOT UPDATE DFSMHSIM CDS ENTRY IN THE type RECORD HAVING KEY key, IN USE BY ANOTHER HOST

Explanation: DFMSHsm 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.

Application Programmer Response: None.

Source: DFMSHsm

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 40 volumes for one data set as established by DFMSHsm.

System action: The first tape volume is marked full, all others are internally deleted and the data set is skipped.

Application Programmer Response: None.

Source: DFMSHsm

ARC0353I TAPE VOLUME volser SUCCESSFULLY {ADDED TO I REMOVED FROM} DFMSHSM'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 DFMSHsm’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 (DFMSHsm’s ABARS tape volume set).

If the message indicates the tape volume has been successfully added to DFMSHsm’s RACF tape volume set, DFMSHsm has RACF-protected the tape volume as part of DFMSHsm’s RACF tape volume set of either HSMHSM or DFHSMx, or HSMABR. The tape volume has been RACF-protected by DFMSHsm for the following reason:

- The tape security option specified with the TAPESECURITY parameter of the SETSYS command is either RACF or RACFINCLUDE. DFMSHsm 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 DFMSHsm’s RACF tape volume set, DFMSHsm has removed the RACF protection of the tape volume by removing the volume serial number from DFMSHsm’s RACF tape volume set of either HSMHSM, DFHSMx, or HSMABR. DFMSHsm 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 ABARSEVERSIONS processing.

System action: DFSMShsm processing continues.

Application 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
```

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: DFMSHsm

**ARC0354I ERROR WRITING HEADER/TRAILER
LABELS DURING EOV 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.

Application Programmer Response: See any other associated messages to determine the cause of the failure.

Source: DFMSHsm

**ARC0355I ERROR {READING I 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 8 on page 442.

System action: The update is not performed. Migration, backup, or recycle processing for the data set continues.

Application Programmer Response: Notify the storage administrator, who can use the FIXCDS command to update the full flag in the appropriate CDS record.

Source: DFMSHsm

**ARC0356I NEW TAPE VOLUME *volser* CANNOT
BE ADDED. VOLUME ALREADY
CONTAINS DATA**

Explanation: DFMSHsm has attempted to add a tape volume *volser* that already contains valid data.

System action: The tape volume is rejected and DFMSHsm processing continues.

Application 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 DFMSHsm Diagnosis*.

Source: DFMSHsm

**ARC0357I TAPE VOLUME *volser* IS
RACF-PROTECTED BUT DOES NOT
APPEAR IN DFMSHSM'S RACF TAPE
VOLUME SET, IT IS BEING REMOVED
FROM DFMSHSM'S INVENTORY OF
{BACKUP I DUMP I MIGRATION}
VOLUMES**

Explanation: RACF is installed in the computing system and is active. The system-wide RACF tape volume protection option is in effect. DFMSHsm selected tape volume *volser* for use during backup, full volume dump, or migration processing. The first RACHECK macro issued by DFMSHsm has indicated that the tape volume is RACF-protected. A second RACHECK macro issued by DFMSHsm has indicated that the tape volume does not appear in a DFMSHsm RACF tape volume set. Because the tape volume is RACF-protected but does not appear in a DFMSHsm RACF tape volume set and contains no DFMSHsm data, it is being removed from DFMSHsm's inventory of backup, dump, or migration volumes. DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: The system programmer or storage administrator responsible for DFMSHsm 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 DFMSHsm using the ADDVOL command, no further action is required because DFMSHsm 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 I 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.

Application 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 I REMOVING} TAPE VOLUME volser {TO I FROM} DFSMSHSM'S RACF TAPE VOLUME SET, RC=return-code, REAS={reason-code I 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.

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- An authorized user has issued a DELVOL command with the PURGE parameter for the tape volume. The tape volume is being removed from DFMSHsm's control. All DFMSHsm 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 DFMSHsm's RACF tape volume sets.
- The tape volume has previously contained valid DFMSHsm data and has been RACF-protected by DFMSHsm some time in the past. All the data on the tape volume has become invalid and DFMSHsm 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, DFMSHsm is removing the RACF-protection of the tape volume by deleting the volume serial number from one of DFMSHsm's RACF tape volume sets.
- The tape volume contains DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: This message is intended for the storage administrator or system programmer responsible for DFMSHsm operations and the RACF security administrator. This message is informing you that an error has occurred when DFMSHsm 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 DFMSHsm 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*.

DFMSHsm only removes the RACF-protection from tape volumes that it has RACF-protected. The system programmer or storage administrator responsible for

DFMSHsm operations or the RACF security administrator can take the initiative of RACF-protecting the tape volumes before DFMSHsm uses the tape volume by adding the tape volume to one of DFMSHsm'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 DFMSHsm's RACF tape volume sets before DFMSHsm uses the tape volume, you are responsible for removing the RACF protection from that tape volume when it is removed from DFMSHsm's control.

DFMSHsm 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 DFMSHsm's RACF tape volume sets. You can delete the volume serial number from one of DFMSHsm'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: DFMSHsm

**ARC0360I TAPE VOLUME volser IS
RACF-PROTECTED BUT DOES NOT
APPEAR IN DFMSHsm's RACF TAPE
VOLUME SET, THE VOLUME
CONTAINS VALID DFMSHsm 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.

DFMSHsm has selected tape volume *volser* for use during backup or migration processing.

The records in DFMSHsm control data sets indicate that the tape volume is not full and is not RACF-protected by DFMSHsm. Because the RACF or RACFINCLUDE tape security option is in effect, DFMSHsm is going to RACF-protect this tape volume in one of DFMSHsm's RACF tape volume sets of

HSMHSM or DFHSMx (where *x* is the last nonblank character of the tape volume's volume serial number). See *z/OS DFSMShsm Implementation and Customization Guide*, under "Authorizing and Protecting DFSMShsm Resources" for a description of how to add tape volumes to DFSMShsm's RACF tape volume sets. Before RACF-protecting the tape volume, DFSMShsm issues two RACHECK macros to determine the current protection status of the tape volume.

The first RACHECK macros issued by DFSMShsm indicates that the tape volume is RACF-protected. The second RACHECK macro issued by DFSMShsm indicates that the tape volume does not appear in a DFSMShsm RACF tape volume set of either HSMHSM or DFHSMx.

Because the tape volume is RACF-protected but does not appear in a DFSMShsm RACF tape volume set, DFSMShsm will not use it. The tape volume is indicated as full in all necessary records in the DFSMShsm control data sets to prevent DFSMShsm from using it again. DFSMShsm control data set records indicate that the tape volume already contains valid DFSMShsm data.

Application Programmer Response: The system programmer or storage administrator responsible for DFSMShsm 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 DFSMShsm as a backup volume or a tape migration volume, the system programmer or storage administrator responsible for DFSMShsm operations can determine which valid data is on the tape volume by entering the following DFSMShsm space manager command: LIST TTOC(*volser*) TERMINAL

If the volume is defined to DFSMShsm 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 DFSMShsm backup versions or migration copies. DFSMShsm 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 DFSMShsm 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 DFSMShsm backup version or migration copies.

If the tape volume physically contains DFSMShsm backup versions or migration copies, the RACF security administrator should inform the owner of the tape volume that the tape volume contains DFSMShsm backup versions or migration copies. If the volume does not contain necessary data and can be used by DFSMShsm, 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

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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.

Application 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

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.

Application 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 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.

Application 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 I 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.

Application Programmer Response: If tape volumes are needed, see *z/OS DFSMS Storage Administration Reference* 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.

Application Programmer Response: After all the

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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 I
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.

Application 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.

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.

Application 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 8 on page 442.

System action: The current DFSMShsm function continues processing.

Application 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.

Application 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 DFMSDSS} 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 DFMSdss insert. IMPORTED or RESTORED BY DFMSdss 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.

Application 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=rnocode**

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:

- IOCMAPE macro — DFSMShsm invokes IOCMAPE macro to obtain the CHPIDs for the primary volume (SMS or non-SMS) during automatic processing. IOCMAPE 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 IOCMAPE or UCBINFO macro. The reason code *rnocode* is the reason code passed from the system macro IOCMAPE 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.

Application Programmer Response: Inform the system programmer of the message or examine the return code from IOCMAPE 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.

These parameters have no meaning when RACF is installed on the processing unit system.

System action: DFSMShsm processing continues.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0376I BACKUPCOPIES=*backupcopies*,
BACKUPDEVICECATEGORY={DASD |
TAPE(UNITNAME=*unitname*,
DENSITY=*density*,
{RETPD=*retentionperiod* |
EXPDT=*expirationdate*}, {PARALLEL |
NOPARALLEL}}}
LATESTFINALQUALIFIER=x*nnnnnnnn*,**
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 V*nnnnnnnn* or D*nnnnnnnn* 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 DFMSdss 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 TAPE TABLE OF CONTENTS 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 DFMSHsm 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: DFMSHsm will not select the tape volume *volser* for output processing until after the mismatch is resolved (see programmer response). DFMSHsm processing continues.

Application 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 DFMSHsm Storage Administration Reference*.

See the *z/OS DFMSHsm Storage Administration Guide* for the procedure that documents how to handle inconsistencies between tape media contents and OCDS TTOC records.

Source: DFMSHsm

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.
<i>nnn</i>	Three digit abnormal ending code.

System action: DFMSHsm processing continues.

Application 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.

Source: DFMSHsm

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 DFMSHsm Implementation and Customization Guide*.

System action: The DFMSHsm 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

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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.

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.Xyddd. 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

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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*

Application 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.

Application 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.

Application 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.

Application 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 <i>userid</i> 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 <i>userid</i> 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.

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 DFMSHsm processing continues.

Application 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: DFMSHsm

**ARC0400I VOLUME volser IS percent% FREE,
tracks FREE TRACK(S), cylinders FREE
CYLINDER(S), FRAG fragx**

Explanation: This is the first of three messages DFMSHsm 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 DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0401I LARGEST EXTENTS FOR volser ARE
CYLINDERS cylinders, TRACKS tracks.**

Explanation: This is the second of three messages DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0402I VTOC FOR volser IS tracks
TRACKS(*totdscbs* DSCBS), free FREE
DSCBS(*percent%* OF TOTAL) avlspc
AVAILABLE SPACE DSCB**

Explanation: This is the last of three messages DFMSHsm 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.
- *avlspc* indicates the number of available space DSCBs. If the volume has an indexed VTOC, *avlspc* represents the number of equivalent available space DSCBs.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0404I ERROR WHILE ACCESSING VOLUME'S
VTOC FOR volser, RC= *return-code*,
REAS= *reason-code***

Explanation: DFMSHsm 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, DFMSHsm 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 DFMSHsm 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: DFMSHsm processing continues.

Application 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 (IEC60nl) 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.

Application 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 HSENCMD 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0407I QUERY SPACE FAILED, {{VOLUME *volser* NOT I 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.

Application 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 I NOWAIT}, OUTPUT TAPE ALLOCATION= {WAIT I NOWAIT}, RECYCLE TAPE ALLOCATION= {WAIT I NOWAIT}, TAPEFORMAT= {SINGLEFILE, MAXSINGLEFILEBLOCKS=*blocks* I MULTIFILE}

Explanation: A DFMSHsm QUERY command with the SETSYS parameter was issued. This message indicates how DFMSHsm 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, DFMSHsm will turn on the S99WTUNT bit in the S99FLAGS2 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 DFMSHsm and your computing system.

If INPUT TAPE ALLOCATION= NOWAIT, DFMSHsm will not turn on the S99WTUNT bit in the S99FLAGS2 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, DFMSHsm will turn on the S99WTUNT bit in the S99FLAGS2 field passed to dynamic allocation when it is allocating a tape unit during backup, migration and dump processing.

If OUTPUT TAPE ALLOCATION= NOWAIT, DFMSHsm will not turn on the S99WTUNT bit in the S99FLAGS2 field passed to dynamic allocation when it is allocating a tape unit during backup, migration, and dump processing.

If RECYCLE TAPE ALLOCATION= WAIT, DFMSHsm will turn on the S99WTUNT bit in the S99FLAGS2 field passed to dynamic allocation when it is allocating a tape unit during recycle processing.

If RECYCLE TAPE ALLOCATION= NOWAIT, DFMSHsm will not turn on the S99WTUNT bit in the S99FLAGS2 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 DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0409I ERROR READING VTOC ON VOLUME volser

Explanation: DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: Take corrective action in the VTOC of the volume *volser*.

Source: DFMSHsm

ARC0410I TAPEMIGRATION=
{DIRECT(TAPE(ANY) I *unitname*)
NONE(ROUTETOTAPE(ANY) I
unitname), MIGDENSITY=*density*,
MIGUNIT=*unit*, ML2 RECYCLE
PERCENTAGE=*percent %*,
TAPEMAXRECALLTASK=*tasks*, ML2
PARTIALS NOT ASSOCIATED
GOAL=(*nnn* I NOLIMIT),
RECONNECT(NONE I ALL I
ML2DIRECTEDONLY)}

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

If TAPEMIGRATION=DIRECT, DFMSHsm migrates all migration data sets directly to tape migration level 2 volumes.

- If TAPE(ANY), DFMSHsm selects any available tape during migration processing.
- If TAPE(*unitname*), DFMSHsm selects available *unitname* tapes during migration processing.

If TAPEMIGRATION=ML2TAPE, DFMSHsm migrates data sets from DASD migration level 1 volumes to tape migration level 2 volumes.

- If TAPE(ANY), DFMSHsm selects any available tape during migration processing.
- If TAPE(*unitname*), DFMSHsm 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:

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- 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.

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 *nnn*.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC0411I **TAPESECURITY={RACF | RACFINCLUDE} {PASSWORD} {EXPIRATION | EXPIRATIONINCLUDE}, {DEFERMENT | NODEFERMENT}**

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 DEFERMENT parameter. For additional information about this parameter, see *z/OS DFSMS Storage Administration Reference*.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC0412I **RECYCLEOUTPUT BACKUP={unit | **NONE**}, MIGRATION={unit | **NONE**}**

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.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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 I NOT HELD} AND
{ACTIVE I 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 default, start at the *bcdskey1* if ABARSVERSIONS is omitted, or will start at the *bcdskey2* if ABARSVERSIONS is specified.

System action: DFSMShsm processing continues.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0417I TAPE INPUT PROMPT FOR
BACKUPTAPES I DUMPTAPES I
MIGRATION TAPES = YIN**

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.

Application Programmer Response: None

Source: DFSMShsm

**ARC0418I TAPEUTILIZATION PERCENT=(*pct* I
NOLIMIT), (UNIT=*unit*
CAPACITYMODE=(EXTENDED I
COMPATIBILITY I **NONE**)) I
LIBRARYMIGRATION I
LIBRARYBACKUP**

Explanation: Here are the values that are specified by the SETSYS TAPEUTILIZATION command:

<i>pct</i>	This is the amount of the tape volume that will be written until DFSMShsm forces the end of volume.
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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.
Application 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 | HSMTAPE | SCRATCHTAPE FOR *func[,func]*, HSMTAPE 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 | HSMTAPE} is displayed, this implies a global specification that applies to backup, dump, and migration tape volume deletion.
- If TAPEDELETION=SCRATCHTAPE FOR *func[,func]*, HSMTAPE 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 thez/OS DFSMS Storage Administration Reference.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application Programmer Response: None.

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.

Application 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.

Application 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: <ul style="list-style-type: none"> • 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 <i>yyddd</i>, 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

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copy process continues to check the volume list for valid entries. DFSMShsm processing continues.

Application 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.	4	I/O error on output tape.
2	The volume is not a 3480 single-file tape volume and it cannot be copied, or the tape volume may be empty.	5	EOV on output tape (tape too short).
3	The expiration date field in the INDATASET record for this volume is invalid. Correct the expiration date and rerun the tape copy process.	6	Open error on input tape.
4	The volume cannot be copied because the TTOC record is missing.	7	Open error on output tape.
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 <i>volser</i> , except when RECYCLE processing is forced. For information about extended AUDIT MEDIACONTROLS and RECYCLE FORCE, see the <i>z/OS DFSMS Storage Administration Reference</i> . See the <i>z/OS DFSMShsm Storage Administration Guide</i> for the procedure for handling inconsistencies between tape media contents and OCDS TTOC records.	8	Close error on input tape.
6	The volume cannot be copied while the alternate volume is marked as a disaster alternate volume.	9	Close error on the output tape.
7	None	10	ARCCPCTS subtask abnormally ended (abended).
		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.
		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: <ul style="list-style-type: none">• 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

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.

	capacity cartridge to an enhanced capacity tape cartridge.	abnormally (not including RC40), the TAPECOPY process ends. DFMSHsm processing continues.
	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:	Application 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 <i>reason-code</i> 28, specify an alternate unit compatible with the tape to be copied.
	<pre>SETSYS TAPEOUTPUTPROMPT(TAPECOPY(YES))</pre>	For reason codes 3, 4, 5, 9, and 15 use the following actions:
30	and then reissue the TAPECOPY command. This causes DFMSHsm 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.	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.
31	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.	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.
32	If the source volume is not RACF protected, TAPECOPY does not output to a tape volume that has RACF protection that DFMSHsm did not provide.	5 If the SETSYS MAXSINGLEFILEBLOCKS parameter was changed, restore the DFMSHsm-supplied maximum single-file default and recycle all 3480 single-file tape volumes containing more blocks than the DFMSHsm 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.
40	Error attempting to issue the TAPEOUTPUTPROMPT message ARC0332A.	9 An internal DFMSHsm error occurred, as the result of two consecutive abends for the tape copy process. Save all associated output and contact the IBM Support Center.
41	Error attempting to determine if tape is standard capacity or enhanced capacity.	11, 15 If this was a user-generated TAPECOPY, rerun it when the volume is not in use. If DFMSHsm internally generated the TAPECOPY because of a duplex tape failure, secondary space management or auto backup will retry the TAPECOPY later.
	ML2 input volume was needed by RECALL or ABACKUP.	41 For DFMSHsm 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 DFMSHsm 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 DFMSHsm message that provides details of the failure.
	System action: The TAPECOPY process continues with the next tape. If two consecutive tapes end	

For DFSMShsm MVS V1R4, use
DFSMShsm V1R5 or higher for the
operation.

Source: DFSMShsm

**ARC0426I TAPEREPL COMPLETED - RETURN
CODE=return-code**

Explanation: DFSMShsm 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: DFSMShsm 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: DFSMShsm

**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: DFSMShsm processing continues.

Application 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: DFSMShsm

**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.
- 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.

Application 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 <i>volser</i> 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.

Application 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: <ul style="list-style-type: none"> • 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 <i>yyddd</i>, 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 TAPEREPL 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.		alternate units has been specified for the ALTERNATE3590UNITNAME parameter.
17	Output tape unit allocation has failed. Another DFSMShsm message will accompany this reason code providing more information.	34	The unit type specified in the UUT does not match the specified ALTERNATE3590UNITNAME unit type.
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.	35	The ALTERNATE3590UNITNAME parameter has been specified, but the unit type is incorrect.
20	An error has occurred positioning to the first volume record in the MCDS or BCDS.	36	The UUT has not been defined or cannot be accessed for the ALTERNATE3590UNITNAME parameter.
21	An error has occurred reading a volume record from the MCDS or BCDS.		System action: The TAPECOPY or TAPEREPL 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.
23	The ALTERNATEUNITNAME parameter has been specified, but the unit type has not been specified.		System programmer response: For all but reason codes 14 and 19, correct the problem and reissue the TAPECOPY or TAPEREPL command to process the volumes.
24	The ALTERNATEUNITNAME parameter has been specified, and the unit type is incorrect.		For reason code 13, issue a RELEASE command and reissue a TAPECOPY or TAPEREPL command for the volumes not processed.
25	The unit type specified in the UUT does not match the specified ALTERNATEUNITNAME unit type.		For reason codes 14 and 19, contact the IBM Support Center.
26	The UUT has not been defined or cannot be accessed.		Source: DFSMShsm
27	The hardware compaction of the original unit is not compatible with the ALTERNATEUNITNAME unit type specified.	ARC0431I {ORIGINAL I PREVIOUS I 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.
29	More than the allowable number of alternate units has been specified.		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.
30	An error has been encountered in determining if a storage class is assigned to the output tape copy data set name.		If an original volume TTOC record is missing when replacing a tape, the tape replace process bypasses the volume.
31	An error has been encountered in reading the tape library volume record for an OVOL or an AVOL.		If the previous or successor TTOC record is missing, all data set updates have been completed.
32	The ALTERNATE3590UNITNAME parameter has been specified, but the unit type has not been specified.		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.
33	More than the allowable number of		

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.

Application 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, TTCEENTRY
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.

Application 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 TAPEREPL 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.

System action: Recycle processing continues with the next data set. DFSMShsm processing continues.

Application 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.

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0442I TAPE OUTPUT PROMPT FOR TAPECOPY = x, DUPLEX BACKUP TAPES =x, DUPLEX MIGRATION TAPES = x, ERRORALTERNATE= {CONTINUE I 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.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

ARC0443I <MIGRATION I BACKUP> VOLUME *volsr1* WITH ALTERNATE *volsr2* 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0445I VOLUME *volser* CANNOT BE RECYCLED, REASON=*rc*, EXPLANATION: {TAPE HAS DISASTER ALTERNATE I TTOC RECORD IS INCOMPLETE I TAPE IS UNASSIGNED BACKUP I TAPE CONTAINS NO DATA I CANNOT FORCE MULTIPLE VOLUMES I VOLUME RECORD NOT FOUND I CONNECTED SET TOO LONG I 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 TAPEREPL 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.	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.
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.		Application Programmer Response: None.
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.		Source: DFSMShsm
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.	ARC0450I	CDD UNEXPECTEDLY FOUND IN DATA SET <i>dsname, VOLUME volser, BLOCKID=bkid</i>
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.		Explanation: Data set <i>dsname</i> was being recycled from volume <i>volser</i> . 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, <i>bkid</i> 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.
28	CONNECTED SET TOO LONG: DFSMShsm will not recycle connected sets exceeding 40 volumes. The volume specified belongs to a connected set exceeding this limit.		System action: DFSMShsm processing continues. Recycle of the data set fails.
			Application 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 DFMSHsm in Kbytes is *limit*. The total unallocated space is *unalloc*. The largest contiguous virtual storage areas that are available to DFMSHsm are indicated by *first* and *second*.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0461I ON LINE JOURNAL DATA SET IS IN
ERROR, RETURN CODE =*returncode***

Explanation: An attempt was made to back up an online journal file. ARCBJRNLL 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 | DFMSHsm 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 DFMSHsm 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. |
| 20 | Journal control record and data set type are inconsistent. The journal might be corrupted. |
| 28 | Journal I/O error. |
| 40 | OPEN error. |
| 64 | JRNLO DD DUMMY card. |
| 68 | RDJFCB error; the JRNLO DD card is missing. |
| 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: DFMSHsm

**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.

Application 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:

```
//STEPPx EXEC PGM = ARCIMPRT,PARM =
'MCDS'
```

Source: DFMSHsm

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.

Application Programmer Response: With DFMSHsm in stopped mode, use utility ARCBJRNLL to backup the on-line journal. Then rerun utility ARCIMPRT.

Source: DFMSHsm

**ARC0464I *nnnnnnn* JOURNAL RECORDS
WRITTEN TO BACKUP JOURNAL DATA
SET**

Explanation: Program ARCBJRNLL successfully processed *nnnnnnn* records found in the on-line DFMSHsm journal data set. These records were successfully written to the backed up journal data set.

System action: None.

Application Programmer Response: None.

Source: DFMSHsm

ARC0465I INVALID VALUE SPECIFIED FOR {ALTERDSISETSYS} 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.

Application 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.

Application 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 Guide*.

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.

Application Programmer Response: None.

ARC0468I EXTENDEDTTOC = {Y | N}

Explanation: A QUERY SETSYS command was issued and the setting of the EXTENDEDTTOC parameter of the SETSYS command is returned in this message. The following are the possible settings of the EXTENDEDTTOC parameter:

EXTENDEDTTOC=Y

EXTENDEDTTOC Y - Indicates that the installation specified SETSYS EXTENDEDTTOC(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 TTOC 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.

EXTENDEDTTOC=N

EXTENDEDTTOC N - Indicates that the installation specified SETSYS EXTENDEDTTOC(N). In this case, DFSMShsm can write up to 330,000 data sets per volume. Any TTOC 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 EXTENDEDTTOC(Y) was in effect will still allow up to 106 data set entries.

System action: DFSMShsm processing continues.

Operator response: None.

Source: DFSMShsm

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. DFMSHsm processing continues.

Operator response: None.

Source: DFMSHsm

ARC0500I CANNOT ALLOCATE VOLUME volser, DARC=reason-code, EXTENDED REASON CODE=extreas, INFO CODE=infocode

Explanation: While DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC0501I CANNOT PROCESS VOLUME volser, I/O ERROR ON VTBC

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 VTBC of the volume.

System action: The operation ends. DFMSHsm processing continues.

Application Programmer Response: Take corrective action based on the I/O encountered and retry the request.

Source: DFMSHsm

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. DFMSHsm marks the exit inoperative.

System action: DFMSHsm processing continues without using the exit.

Application 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 DFMSHsm Diagnosis*.

Source: DFMSHsm

ARC0503I ALLOCATION ERROR, {VOLUME=volser | DATA SET=dsname | DD DUMMY}, RC=return-code, REASON=reason-code, INFO CODE=infocode, EXTENDED REASON CODE=extreas

Explanation: DFMSHsm 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: DFMSHsm processing continues. The function requiring the data set or volume allocated ends.

Application Programmer Response: Determine the cause of the error based on the meaning of the return

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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.

Application 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.

Application 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 ARC0503I 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.

Application 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

System action: DFSMSHsm shuts down.

Operator response: None.

Source: DFSMSHsm

**ARC0510I DFSMSHSM CONTROLLED VOLUME
volser NOT *fct*, 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 *fct*. 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.

Application 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 | I | 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. DFMSHsm processing continues.

Application 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: DFMSHsm

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, DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Use any other names that have been cataloged successfully to recall the data set (no message is issued for these). If DFMSHsm 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: DFMSHsm

ARC0513I FAILED TO UNCATALOG [NON] SMS ENTRY, ENTRY NAME = *entname*, CATALOG RC = *return-code*

Explanation: While DFMSHsm 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 DFMSHsm deletes the migration copy. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC0514I ERROR UPDATING MCD RECORD FOR DATA SET *dsname* AFTER DATA SET WAS MIGRATED TO VOLUME(S) *volser*, *volser*

Explanation: After DFMSHsm 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 40 volume serial numbers for the data set.

System action: The operation continues. DFMSHsm processing continues.

Application Programmer Response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFMSHsm

**ARC0515I {COMMAND I AUTO} LEVEL-1-TO
LEVEL-2 MIGRATION NOT
PERFORMED, {COMMAND I 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.

Application 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.

Application Programmer Response: To reactivate DFSMShsm invocation of EDGTVEXT, issue the RELEASE RMM command.

Source: DFSMShsm

**ARC0517I SECONDARY SPACE MANAGEMENT
{STARTING I RESTARTING}**

Explanation: DFSMShsm has begun automatic secondary space management functions.

System action: Automatic secondary space management proceeds.

Application Programmer Response: None

Source: DFSMShsm

**ARC0518I SECONDARY SPACE MANAGEMENT
{ENDED SUCCESSFULLY I
COMPLETED, ENDING TIME REACHED
I ENDED PRIOR TO COMPLETION,
{DFSMShsm SHUTDOWN I AUTO
SPACE MANAGEMENT HELD I
DFSMShsm IN EMERGENCY MODE I
RESOURCES NOT AVAILABLE I MORE
THAN 10 BAD MCDS RECORDS WERE
ENCOUNTERED I TASK ABENDED}}**

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.

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 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.

DFSMShsm processing continues.

Application 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 ARCMSSM_h 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 resume 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 *hhmm1* and 0100 for *hhmm2* 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.

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 Guide*.

System action: DFSMShsm processing continues.

Application 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.

Application 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 | | DFMSHSM 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.

Application 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.

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) I (SMSI) I (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.

Application 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.

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- 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.

Application 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.

Application 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.

Application Programmer Response: Run the AUDIT command with the DATASETNAME 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.

Application 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.

Application 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 13 on page 447. For the meaning of *dadrc* see, Table 14 on page 447. See *z/OS DFSMS Using Data Sets* for more information.

System action: DFSMShsm processing continues.

Application 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 I S} RECORDS, KEEP FOR x DAYS, OLDEST KEEPDAT=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 (<i>ddd</i>) of year (<i>yy</i>) for non-reconnectable data sets will be deleted.
z	The number of days (<i>z</i>) 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 (<i>x</i>) since their creation that records will be kept.
yyddd	The records older than day (<i>ddd</i>) of year (<i>yy</i>) for nonreconnectable data sets will be deleted.
z	Not applicable.

System action: DFSMShsm processing continues.

Application 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 I 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0532I MIGRATION OF {ALL LEVEL 1 I 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.

Application 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.

System programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMShsm

<p>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}</p> <p>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:</p> <ul style="list-style-type: none"> • Migration level 1 DASD and migration level 2 tapes, if either of the following is true: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – SMS is not installed on the system. – The DFSMShsm tape migration environment is direct-to-tape. <p>System action: The migration was held; DFSMShsm processing continues.</p> <p>Application 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, contact IBM Support.</p> <p>Source: DFSMShsm</p>	<p>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 TAPE MIGRATION VOLUME AVAILABLE MIGRATION HELD AUTO MIGRATION 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}</p> <p>Explanation: DFSMShsm attempted to migrate the volume with the volume serial number <i>volser</i> or migrate all level 1 migration volumes, but encountered one of the following errors:</p> <ul style="list-style-type: none"> • 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. • 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.
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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.

Application 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.
- 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.

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.

Application 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 I
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 SDSP, the associated volume record (MCV) is checked repeatedly to see if an input function task needs an SDSP 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.

Application Programmer Response: To determine the cause of the errors in reading the MCR or MCV record, see the return code value from the **ARC184I** message. For *return-code* values, see Table 8 on page 442.

ARC0540I • ARC0541I

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 DFMSHSM 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 DFMSHSM 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 DFMSHsm. Either specify the unit type

of the target volume or issue the ADDVOL command to make it a DFMSHsm-managed volume before you reissue this command.

- **CONVERT UNIT DIFFERENT THAN DFMSHSM 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.

Application Programmer Response: Reissue the MIGRATE command with the appropriate parameters.

Source: DFMSHsm

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 <i>reason-code</i> are: 4 Dynamic allocation indicates the SDSP data set on volume <i>volser</i> is in use. See the preceding ARC0503I message for the return code and the reason code from dynamic allocation. 6 SDSP data set serialization checking indicates the SDSP on volume <i>volser</i> is in use by another DFMSHsm function.

7	SDSP is marked as needed by RECALL or ABARS processing.	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	Operator cancels mount. See the preceding ARC0503I message for the return code and the reason code from dynamic allocation.	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.
9	Control data set read error has occurred. See the preceding ARC0184I message.	12	The read of the MCV record failed. DFSMShsm has not removed the serialization for the data set in the MCV record.
10	Control data set update error has occurred. See the preceding ARC0187I message.	16	The update of the MCV record failed. DFSMShsm has not removed the serialization for the data set in the MCV record.
12	No units are available. See the preceding ARC0503I message for the return code and the reason code from dynamic allocation.		Catalog error. Reason code is the catalog return code.
16	Other dynamic allocation error. See the preceding ARC0503I message for the return code and the reason code from dynamic allocation.	28	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 <i>feedbackcode</i> appears in the hexadecimal format. For meaning of VSAM return codes and VSAM feedback codes, see <i>z/OS DFSMS Using Data Sets</i> .
19	An error has occurred in allocating the SDSP data set. The values for <i>reason-code</i> are:	32	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 <i>reason-code</i> are:
11	The SDSP data set on volume <i>volser</i> is in use by another job or user.	4	GENCB has failed on opening an SDSP data set on volume <i>volser</i> .
20	Cancelled by installation validation routine.	8	Failure has occurred on OPEN macro.
24	An undetermined error has occurred while trying to allocate the SDSP data set.	11	The SDSP data set on volume <i>volser</i> is in use by another job or user.
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 <i>reason-code</i> are:	12	GENCB has failed on creating an RPL for VERIFY.
		16	VERIFY has failed.

ARC0542I • ARC0545I

- 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 DFMSHsm. Other DFMSHsm processing continues.

Application Programmer Response: For reason codes 4 and 6 under return code 8, reissue the command when the SDSP data set is not in use. For the other reason codes, perform problem determination and reissue the command.

Source: DFMSHsm

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 SDSP 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 SDSP 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 SDSP, and results in an out-of-space failure.

Application Programmer Response: Reorganize the SDSP data set using the IDCAMS REPRO or EXPORT/IMPORT command. The volume is a candidate for migration to an SDSP the next time the volume is added with the ADDVOL command and the SDSP parameter. You might do this by entering an ADDVOL command as soon as the data set is reorganized, or the next startup of DFMSHsm probably contains one. Alternatively, a reorganization of the SDSP can be auto-operations triggered upon issuance of this message to the console.

Source: DFMSHsm

ARC0543I VOLUME *volser* NOT PROCESSED BECAUSE OF ERROR READING MCV RECORD

Explanation: While DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Notify the storage administrator or system programmer to correct the problem and reissue the command.

System programmer response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFMSHsm

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 *z/OS DFSMS Using Data Sets*.

System action: DFMSHsm processing continues.

Application Programmer Response: Take corrective action based on the meaning of the return code and retry the request.

Source: DFMSHsm

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 <i>volser</i> or data set <i>dsname</i>

	allocation has failed; the <i>dsname</i> has not been scratched.	7	The SDSP is marked as needed by recall.
76	The data set allocation has failed.	8	Operator cancelled mount.
<i>nn</i>	Use the dynamic allocation (DYNALLOC macro) return codes or error codes. See <i>z/OS MVS Programming: Authorized Assembler Services Guide</i> .	9	Error reading DFMSHsm MCV record during SDSP serialization checking.
20	The SCRATCH macro has failed and the volume <i>volser</i> deallocation has also failed.	10	Error updating DFMSHsm MCV record during serialization of SDSP.
63	Volume deallocation has failed. See <i>z/OS MVS Programming: Assembler Services Reference ABE-HSP</i> .	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.

System action: DFMSHsm processing continues.

Application Programmer Response: Take corrective action based on the meaning of the return code and reason code and retry the request.

Source: DFMSHsm

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 <i>volser</i> failed. The <i>dsname</i> data set records are not deleted:
4	Allocation failure — data set in use.
6	SDSP serialization check indicated SDSP was in use.

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:

4	The data set records are in use.
8	The GENCB macro failed.

System action: DFMSHsm processing continues.

Application Programmer Response: Take corrective action based on the meaning of the return code and reason code, then retry the request.

Source: DFMSHsm

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

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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.

Application 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: DFMSHsm

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. DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

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 may still remain on volume *volser*. The data remaining on the volume may include three categories of data not moved when FREEVOL AGE(0) is specified. The three 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

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: DFMSHsm processing continues.

Application 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 DFMSHsm 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 DFMSHsm 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.

System personnel must deal individually with any remaining data sets that must be kept.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application 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 DFMSHsm 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.

Application 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.

Application 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 will have an incorrect continuation indicator. Use the FIXCDS command to look for the last MC1 record and turn off the MC1FCONT flag 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, and so on.)

Take corrective action based on the meaning of the return code in message ARC0184I.

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.

Application 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.

Application 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.

Application 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.

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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.

Application 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.

Application 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.

Application 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 | 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).

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 ARC12nnx 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.

Application 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, determine why no tape was made available to DFSMShsm and arrange for having at least one tape made available.
- 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.

ARC0562I • ARC0566I

System action: Volume migration processing continues. DFMSHsm processing continues.

Application 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 DFMSHsm integrity age.
- Change the DFMSHsm integrity age to be less than or equal to the PRIMARY-DAYS-NON-USAGE attribute value. SETSYS DFHSDMDATASETSERIALIZATION or SETSYS USERDATASETSERIALIZATION controls the DFMSHsm integrity age.

Source: DFMSHsm

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.

Application 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 DFMSHsm functions.

Source: DFMSHsm

ARC0563I MIGRATION OF *number* DATA SET(S)
SKIPPED BECAUSE ALL TARGET
SMALL DATA SET PACKING DATA
SET(S) WERE IN USE

Explanation: When DFMSHsm 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.

Application Programmer Response: Run the migration function again at a time when not all SDSP data sets are being used by other DFMSHsm functions.

Source: DFMSHsm

**ARC0564I UNEXPECTED MCDS RECORD
ENCOUNTERED, RECORD KEY =
X(hexrecordkey), MCHTYPE =
X(hextype). nn UNEXPECTED
RECORDS HAVE BEEN
ENCOUNTERED. PROCESSING WILL
{CONTINUE I 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.

Application 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: DFMSHsm

**ARC0565I SMPM CFQUERY FUNCTION FAILED
FOR VSAM DATA SET dsname,
RC=return-code, REASON=reason-code**

Explanation: DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: See the z/OS DFMSHsm Diagnosis for an explanation of the listed return and reason codes.

Source: DFMSHsm

**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. DFMSHsm 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.

Application Programmer Response: When a ML 2 target is available for command data set migration, issue the RELEASE MIGRATION command.

Source: DFSMShsm

**ARC0570I {PRIMARY SPACE MANAGEMENT |
INTERVAL 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} 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; or of command migration, command backup, command dump, command restore, or command recovery of a specific volume. 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.

4

The IGDCSP00 module could not be loaded when the LOAD macro was issued to bring the module into DFSMShsm's virtual storage.

5

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.

6

An error occurred while reading the volume VTOC entry for the volume being processed.

7

DFSMShsm read the volume VTOC entry to determine if the volume being processed is an SMS-managed volume. The read failed.

8

An error occurred while retrieving an SMS volume definition. DFSMShsm invoked SMS to retrieve an SMS volume definition. SMS failed to retrieve it.

9

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.

10

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.

The volume being processed is in SMS initial status. DFSMShsm cannot process a volume in SMS initial status.

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.	DFSMShsm selected volumes that meet certain conditions, created MVT entries, and added the MVT entries to the DFMSHsm SMS MVT chain. DFMSHsm 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.
12	An error occurred while retrieving a list of all SMS-managed volumes. DFMSHsm invoked SMS to retrieve a list of all SMS-managed volumes associated with the eligible storage groups for DFMSHsm 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.	There are no storage groups defined that are eligible for processing.
13	The device type of the volume that was retrieved from the SMS storage group definition is not supported by DFMSHsm.	At the start of the DFMSHsm automatic function, DFMSHsm attempted to retrieve a list of storage group definitions for processing during the automatic function. DFMSHsm 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.
14	An error occurred while returning an extract list entry. DFMSHsm 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 <i>reason-code</i> is the return code from VTOC catalog entry.	There are no SMS volumes eligible for processing.
15	An error occurred in reading or writing a migration control data set volume record (MCV). During volume processing, DFMSHsm 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, DFMSHsm attempted to create an MCV for the volume. The creation failed and an ARC0184I message is issued to indicate the error.	At the start of the DFMSHsm automatic function, DFMSHsm attempted to retrieve a list of SMS-managed volumes for processing during the automatic function. DFMSHsm 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.
16	No eligible SMS-managed volumes could be internally ADDVOLED. At the start of the DFMSHsm automatic function, DFMSHsm invoked SMS to retrieve a list of all SMS-managed volumes associated with the specified storage group for DFMSHsm automatic processing. From the list that was returned,	The volume being processed is not mounted.
17		DFMSHsm attempted to locate the unit control block (UCB) for the volume being processed and finds the volume is not mounted.
18		DFMSHsm attempted to locate the unit control block (UCB) for the volume being processed and finds the volume is not mounted.
19		An error occurred while processing extract list entries. DFMSHsm successfully invoked VTOC catalog entry services to retrieve a list of data sets from an SMS-managed volume. DFMSHsm detected a discrepancy in the extract list while processing the extract list entries.
20		Storage group not found.
21		No volumes were in the requested storage group.
22		

23	No volumes were eligible for storage group processing.			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 nonsms volumes.
24	An error occurred while retrieving the base configuration. DFSMShsm invoked SMS to retrieve the base configuration. SMS failed to retrieve it.			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 NONSMS volumes.
25	There is a space management request on an SMS-managed volume with DBA or DBU specified, or a nonzero value of <i>days</i> on MIGRATE (<i>days</i>) or DAYS (<i>days</i>) is specified on a MIGRATE 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 NONSMS volumes.
26	There is a space management request on an SMS-managed volume without the <i>days</i> stipulated on MIGRATE (<i>days</i>) and DAYS (<i>days</i>).			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 NONSMS volumes.
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:	52		A GETMAIN error occurred.
	• MIGRATE VOLUME(<i>volser</i>)			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 NONSMS volumes.
28	No requested storage groups were eligible for storage group processing.			System action: The indicated function ends. DFSMShsm processing continues.
29	The volume is not eligible for processing.			Application Programmer Response: Perform the action that corresponds to the return code you received.
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.			Retcode Action
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.	8, 12, 24, 35, 37		2, 6, 7,
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.			See the preceding ARC0935I message in the command activity log for the specific failing code from the subsystem interface (SSI) of SMS.
33	The storage group was not eligible for processing.			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.
34	Copy pool not found.	3		See the preceding ARC0014I message in the command activity log for the specific reason for the failure.
35	An error occurred while retrieving a copy pool definitions from SMS.	5		The <i>reason-code</i> for this error is the return code from the CAMLST
36	There are no copy pools defined.			

	OBTAİN macro. An error from the OBTAIN macro can also indicate a possible problem with the volume serial number. Ensure that the volume serial number was correctly identified. See <i>z/OS DFSMS Using Data Sets</i> 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 DFSShsm DELVOL command. Then, issue a volume command against the DELVOLed volume.	• MIGRATE VOLUME(volser) DAYS(0) [CONVERT]
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.	• MIGRATE VOLUME(volser MIGRATE) DAYS(0) [CONVERT]
14	See the preceding ARC0936I message in the command activity log for the specific failing code from SMS VTOC catalog entry service.	27 Update the associated storage group to indicate valid high and low thresholds and resubmit the command.
15	See the preceding ARC0184I message in the appropriate activity log for the specific I/O failing code.	28 It may be valid that no volume is eligible for processing.
16	See the preceding ARC0940I message in the appropriate activity log for the specific failing code.	30 Perform one of the following: <ul style="list-style-type: none">• Install a version of DFSSdss that supports SMS-managed volumes.• Convert the volume to a non-SMS-managed volume and rerun the function.
17	It may 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.	31, 32 Perform one of the following: <ul style="list-style-type: none">• 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.
20	Follow the procedures in Table I, items 13 and 29; Table III, items 2, 6, 10, and 13.	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.
21	Correct the storage group name if needed, and issue the command for this storage group.	34 Correct the copy pool name, if needed, and issue the command for this copy pool.
22	It may be valid that no volumes exist in this storage group. Check your storage group definition to validate this situation.	36 It may be valid that no defined copy pools are eligible for processing. To determine copy pool eligibility, validate your copy pool definitions.
23, 29	It may be valid that no volume is eligible for processing in this storage group.	52 See the preceding ARC0305I message for the specific failing code.
25, 26	Reissue the command with one of the following valid MIGRATE commands for an SMS-managed volume: <ul style="list-style-type: none">• MIGRATE VOLUME(volser)• MIGRATE VOLUME(volser MIGRATE(0)) [CONVERT]	Source: DFSShsm

ARC0571I NO SMS MANAGED MIGRATED DATA SETS WILL BE PROCESSED, SMS IS NOT ACTIVE IN THE SYSTEM

Explanation: DFSShsm 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 DFSShsm cannot process any SMS-managed migrated data sets.

System action: No SMS-managed migrated data sets

are processed. DFSMShsm processing continues.

Application Programmer Response: Bring up SMS and rerun the function.

Source: DFSMShsm

ARC0580I INTERVAL MIGRATION {STARTING | RESTARTING} AT hh:mm:ss ON yyyy/mm/dd

Explanation: DFSMShsm begins Interval Migration.

System action: Interval Migration proceeds. DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC0581I INTERVAL MIGRATION {ENDED SUCCESSFULLY | ENDED PREMATURELY, {DFSMSSHSM SHUTDOWN | SPACE MGMT HELD | DFSMSSHSM IN EMERGENCY MODE | RESOURCES NOT AVAILABLE}} AT hh:mm:ss ON yyyy/mm/dd

Explanation: DFSMShsm successfully completed Interval Migration, or Interval 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 processing.
- A SETSYS command with the EMERGENCY parameter was issued to place DFSMShsm in emergency mode.
- Resources were not available to allow Interval Migration to continue. Message ARC0560E was issued to the operator's console and the migration activity log, indicating the resource DFSMShsm found unavailable.

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 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. DFSMShsm processing continues.

Application Programmer Response: If Interval Migration ends prematurely because resources are not available, see message ACR0560E, which is issued to the operator's console and the migration activity log. This message indicates which resource DFSMShsm finds unavailable, and the appropriate programmer 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.

Application 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

**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.

Application 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.

| Application 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 I
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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0621I AUTOMATIC DUMP ENDING

Explanation: DFSMShsm has completed the automatic dump process.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0622I FULL VOLUME {DUMP I RESTORE}
STARTING ON VOLUME *volser* [(SMS) I
(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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0623I FULL VOLUME {DUMP I RESTORE} OF
VOLUME *volser* ENDING AT *time* [,
DCLASS=*class*, DGEN=*generation*,
DATE=*date*], PROCESSING
{SUCCESSFUL I ERRORS OCCURRED
I 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.

Application 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 DFMSHsm 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 DFMSHsm.
- A SETSYS command with the EMERGENCY parameter has been issued to place DFMSHsm in emergency mode.
- A SETSYS command with the NOBACKUP parameter has been issued to disable DFMSHsm 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 DFMSHsm has been waiting for a required tape volume to be mounted.
- The number of tapes required for the full volume dump has exceeded the DFMSHsm 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, DFMSHsm processing ends. Otherwise, DFMSHsm processing continues. If the output volume limit has been exceeded, the dump volumes that have been used will have their contents internally invalidated.

Application 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 DFMSHsm after corrective action is taken.

Source: DFMSHsm

**ARC0625I AUTOMATIC DUMP TERMINATED
PRIOR TO COMPLETION, {DFSMShsm
SHUTDOWN | DFSMShsm IN
EMERGENCY MODE | BACKUP
DISABLED | DUMP HELD | AUTODUMP
HELD | QUIESCE TIME REACHED}**

Explanation: The DFMSHsm 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 DFMSHsm.
- A SETSYS command with the EMERGENCY parameter was issued to place DFMSHsm 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.

System action:

- If a STOP command was issued, DFMSHsm 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, DFMSHsm 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, DFMSHsm 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, DFMSHsm

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 SHUTDOWN is indicated, DFSMShsm processing ends. Otherwise, DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

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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.

Application 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 DFSMShsm 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. DFSMShsm processing continues.

Application Programmer Response: Verify that DFDSS 2.2.0 or a subsequent release is installed. DFSMSdss must be available for DFSMShsm to load by residing in an execution library accessible by LNKLSTxx in SYS1.PARMLIB. The xx is a specified number, usually 00, however, it can be altered during an IPL.

Source: DFSMShsm

ARC0634I AUTOMATIC DUMP FAILED TO RESTART BECAUSE THE CURRENT TIME IS OUTSIDE THE AUTOMATIC DUMP START WINDOW		ARC0500I might precede this message for each allocation failure.
Explanation: DFSMShsm has determined that the automatic dump function did not run to completion on the current day. However, during its restart processing, DFSMShsm 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.	12	The dump process for the volume was ended because an error occurred in allocating the source volume.
System action: Automatic dump is not restarted. DFSMShsm processing continues.	16	Before writing a dump copy to a dump volume for a dump class with stacking, DFSMShsm encountered an error while trying to read or update the JFCB intended to represent the dump copy opened by DFSMSdss.
Application 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.	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.
Source: DFSMShsm	24	A volume failed because the maximum BCDS record size is too small.
ARC0635I DUMP OF {VOLUME <i>volser</i> SGROUP <i>sg</i> COPY POOL <i>cpname</i>} NOT PERFORMED, REASON=<i>reascode</i>		System action: Dump operations end for the volume, storage group, or copy pool. DFSMShsm processing continues.
Explanation: An error was encountered while DFSMShsm was beginning a full volume dump of volume <i>volser</i> or of the volumes in storage group <i>sg</i> or copy pool <i>cpname</i> . The error caused the operation to end. The values for <i>reascode</i> are:		Application Programmer Response:
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. 	<ul style="list-style-type: none"> • For reason code 4, look for any preceding ARC0650I messages which will indicate the one or more invalid dump class name. • 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 <i>volser</i> 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.
8	The dump process for the volume ended because all attempts to allocate tapes for output for target dump classes failed. Message	Source: DFSMShsm
		ARC0636I ERROR WRITING DUMP COPY OF VOLUME <i>volser1</i>, DUMPCLASS= <i>class</i>, OUTPUT VOLUME= <i>volser2</i>, COPY WILL BE INVALIDATED
		Explanation: While writing a dump copy of volume <i>volser1</i> to dump class <i>class</i> , DFSMSdss encountered a permanent I/O error. The dump tape volume where the error occurred is <i>volser2</i> . 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 HSMTAPE, 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0638I MAXDUMPTASKS=*dtasks*, ADSTART= (*time1d time2d time3d*), DUMPIO=(*n,m*), VOLUMEDUMP(CC | NOCC)

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. VOLUMEDUMP(CC) indicates concurrent copy was specified for dump volumes. VOLUMEDUMP(NOCC) indicates concurrent copy was not specified for dump volumes.

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.

System action: DFSMShsm processing continues.

Application 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.

Application 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 ARCDVOLx, where *x* is the identifier 1-W of the dump task processing the request. The hexadecimal identifier should be associated with

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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 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: DFSMShsm processing continues.

Application Programmer Response: See z/OS MVS System Messages, Vol 1 (ABA-AOM) for a description of the DFSMSdss messages.

Source: DFSMShsm

ARC0641I VOL DUMP= *nvol1*, VOL DUMP FAIL= *fails3*, VOL RESTORE= *nvol2*, VOL RESTORE FAIL= *fails4*, DS RESTORE= *ndatasets3*, 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.

- *nvol1* indicates the number of volumes successfully dumped.
- *fails3* indicates the number of volumes whose dumps failed.
- *nvol2* indicates the number of volumes successfully restored.
- *fails4* indicates the number of volumes whose restores failed.
- *ndatasets3* indicates the number of data sets successfully restored.
- *fails5* indicates the number of data sets whose restores failed.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

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: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

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 DFSMShsm.

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/HWCMPRESS settings.

During FRBACKUP, required dump class *class* is not defined.

System action: The command fails. DFSMShsm processing continues.

Application Programmer Response: If the dump classes contain conflicting settings, modify the dump class definitions so that the encryption/HWCMPRESS 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.

Application 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.

Application 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.

Application 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 were 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 ARC0704I 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.

Application 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

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.

Application 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:

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- 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.

Application 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.

Application 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.

Application 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.

Application 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, DFMSdss 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 DFMSdss limit of 100.

Application Programmer Response: Correct the errors on the volume and monitor the next full volume dump operation.

Source: DFSMShsm

**ARC0654I STACK *nn* FOR DUMP CLASS *name*
WENT TO *mm* DUMP VOLUMES,
ENDING on *dmpvol***

Explanation: Dump class *name* has a STACK value of *nn*. 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 *mm* dump volumes (the last one being *dmpvol*) of the dump class.

System action: DFSMShsm continues.

Application 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:

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.

Application 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.

ARC0680I • ARC0682I

Application Programmer Response: If desired, this message can be used in an auto-operation to hold an autodump.

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.

Application 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.

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.

Application 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,
{DFSMSSHSM SHUTDOWN | DFSMSSHSM
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 *agname* 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.

Application 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 MCVRERL. 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.

Application 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.

Application 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.
- 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.

Application 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 *dname*, IS NOT AVAILABLE.

Explanation: While DFSMShsm was processing SMS-managed data set *dname* with the EXPIREBV command, it detected that the active SMS configuration did not contain management class *mgtclassname*.

- If the message contains DELETED, data set *dname* 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 *dname* 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.

Application 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

**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.

Application 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: Notify the storage administrator to determine the exact cause of the error.

Source: DFSMShsm

ARC0704I {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.

System action: The volume operation ends. DFSMShsm processing continues.

- | **Application 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.

Application 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.

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.

Application 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.

Application 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 I SPILL I CLEANUP I
RECOVER I DUMP I RESTORE I
FRBACKUP I 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.

Application 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 I
BACKUP OF MIGRATED DATA SETS I
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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0710I {MOVEMENT OF BACKUP VERSIONS I
BACKUP OF MIGRATED DATA SETS I
DATA SET BACKUP} TERMINATED,
ERROR {ALLOCATING I
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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0711I {MOVEMENT OF BACKUP VERSIONS I
BACKUP OF MIGRATED DATA SETS I
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.

Application Programmer Response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMShsm

**ARC0712I {BACKUP I SPILL I 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0713I {MOVEMENT OF BACKUP VERSIONS I
BACKUP OF MIGRATED DATA SETS I
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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0714I {BACKUP I SPILL I CLEANUP I
FREEVOL } OF VOLUME *volser*
TERMINATED, DFSMShsm
{SHUTDOWN I IN EMERGENCY MODE I
BACKUP HELD I AUTOBACKUP HELD I
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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0715I {MOVEMENT OF BACKUP VERSIONS I
BACKUP OF MIGRATED DATA SETS} TERMINATED, {DFSMSSHSM
SHUTDOWN I DFMSHSM IN
EMERGENCY MODE I BACKUP HELD I
BACKUP DISABLED I 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0716I {MOVEMENT OF BACKUP VERSIONS I
BACKUP OF MIGRATED DATA SETS I
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. 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0717I {AUTOMATIC I COMMAND} BACKUP
TERMINATED PRIOR TO COMPLETION,
{DFSMSSHSM SHUTDOWN I DFMSHSM
IN EMERGENCY MODE I BACKUP
HELD I AUTOBACKUP HELD I
QUIESCE TIME REACHED I 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

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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 DFMSHsm as the command that caused the multiple-volume backup command to end.

Application Programmer Response: None.

Source: DFMSHsm

ARC0718I MOVEMENT OF BACKUP VERSIONS STARTING AT *time* ON *date* SYSTEM *sysid*

Explanation: DFMSHsm 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. DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0719I MOVEMENT OF BACKUP VERSIONS ENDING AT *time*, *nbv* BACKUP VERSIONS MOVED

Explanation: The DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0720I AUTOMATIC BACKUP {STARTING I RESTARTING}

Explanation: DFMSHsm 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.
- DFMSHsm abnormal end.
- DFMSHsm was shut down.
- DFMSHsm was placed in emergency mode.
- Backup was held.
- Backup was disabled.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0721I AUTOMATIC BACKUP ENDING

Explanation: DFMSHsm has completed automatic backup.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0723I BACKUP ENDING ON VOLUME *volser*
AT *time*, *nds* DATA SETS BACKED UP**

Explanation: A DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0725I BACKUP SPILL IS USING VOLUME
*volser***

Explanation: DFMSHsm 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0728I VTOC FOR VOLUME *volser1* COPIED
TO DATA SET *dsname* ON VOLUME
*volser2***

Explanation: Part of DFMSHsm incremental volume backup or full volume dump is to copy the VTOC of the volume being processed to a data set on a DFMSHsm owned volume. The volume serial number of the volume being processed is *volser1*. The data set name of the VTOC copy is *dsname*. The DFMSHsm volume containing the VTOC copy data set has a volume serial number of *volser2*.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0729I ENTRIES FROM VSAM CATALOG
catname COPIED TO DATA SET *dsn* ON
VOLUME *volser2***

Explanation: DFMSHsm 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 *dsn* 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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0730I {BACKUP I SPILL I 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.

Application Programmer Response: Take corrective action based on the meaning of the return code in message ARC0184I.

Source: DFSMShsm

**ARC0731I {MOVEMENT OF BACKUP VERSIONS I
BACKUP OF MIGRATED DATA SETS I
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.

Application 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.

Application Programmer Response: Determine why the volume VTOC entry and the VSAM catalog are giving conflicting information.

Source: DFSMShsm

**ARC0733I {BACKUP I SPILL I 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.

Application 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.
- 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.
- **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.
- **RCVSCHD** — 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
<i>volser1</i>	The serial number of the volume being backed up.
<i>volser2</i>	The serial number of the volume on which the backup version is created. This field is blank if the volume was not selected.
<i>tracks</i>	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 SYSTLG data sets, this field contains the number of tracks originally allocated.
<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC13nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
	If <i>retcode</i> is 9 <i>nn</i> , an abnormal end (abend) occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC13nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
	If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.
<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC13nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>days</i>	The number of days since the last backup of this data set, or *** (not applicable).

The meanings of variables when *action* is BK-SCHD are:

Variable	Meaning
<i>volser1</i>	The serial number of the volume being backed up.
<i>volser2</i>	*** (not applicable).
<i>tracks</i>	The size of the data set in tracks.

<i>retcode</i>	0
<i>reascode</i>	0
<i>days</i>	*** (not applicable).

The meanings of variables when *action* is DEL-AGE are:

Variable	Meaning
<i>volser1</i>	The serial number of the volume being processed by data set deletion.
<i>volser2</i>	*** (not applicable).
<i>tracks</i>	The size of the data set in tracks. This field contains *** if the size is not known.
<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.
<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>days</i>	The number of days since the last reference to this data set.

The meanings of variables when *action* is DELETED are:

Variable	Meaning
<i>volser1</i>	*** (not applicable).
<i>volser2</i>	This field is blank.
<i>tracks</i>	*** (not applicable).
<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater

than 0), see message ARC12nnl where *nn* is the last two digits of *retcode*.

If *retcode* is 400–499, see the explanation of message ARC9998I for problem determination.

<i>reascode</i>	If <i>reascode</i> is nonzero, see the return code in message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>days</i>	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
<i>volser1</i>	*** (not applicable).
<i>volser2</i>	*** (not applicable).
<i>tracks</i>	*** (not applicable).
<i>retcode</i>	See Table 9 on page 442 for return code values.
<i>reascode</i>	0
<i>days</i>	The number of days since the backup version was created.
<i>dsname</i>	If <i>retcode</i> is 28, then <i>dsname</i> identifies the data set that was backed up, not a specific version.

The meanings of variables when *action* is EXPIRED are:

Variable	Meaning
<i>volser1</i>	Serial number of the volume on which the data set resides.
<i>volser2</i>	*** (not applicable).
<i>tracks</i>	Allocated size of the data set in tracks. This field contains *** if the size is not known.
<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .

	If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.	<i>retcode</i>	If <i>retcode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>reascode</i>	If <i>reascode</i> is nonzero, see the return code in message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .		If <i>retcode</i> is 9 <i>nn</i> , an abnormal end (abend) occurred after the return code was set to <i>nn</i> . See message ARC0003I for more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>days</i>	The number of days since the last reference to this data set.		The number of days since the last data set was referenced.
The meanings of variables when <i>action</i> is MIGRATE are:			
Variable	Meaning		
<i>volser1</i>	The serial number of the volume on which migrate processing is active.		If <i>reascode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>volser2</i>	The serial number of the volume to which the data set migrated. If no migration volumes were available, this field contains ***.		<i>days</i>
<i>tracks</i>	The allocated size of the data set in tracks. This field contains *** if the size of the data set is not known.		The number of days since the last data set was referenced.
<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.		The meanings of variables when <i>action</i> is MOVE BV are:
<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .		Variable
<i>days</i>	The number of days since the data set was last referenced.		Meaning
The meanings of variables when <i>action</i> is MIG-RCN are:			
Variable	Meaning		
<i>volser1</i>	Serial number of the volume on which migrate processing is active.		If <i>reascode</i> is nonzero, see message ARC13nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>volser2</i>	The serial number of the migration level 2 tape on which the migration copy being reconnected to resides.		<i>reascode</i>
<i>tracks</i>	The allocated size of the data set in tracks.		If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.
The meanings of variables when <i>action</i> is MOVE VT are:			
<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC13nnl where <i>nn</i> is the last two digits of <i>retcode</i> .		<i>days</i>
<i>days</i>	The number of days since the backup version was created.		

Variable	Meaning	Variable	Meaning
<i>volser1</i>	The serial number of the volume from which the VTOC copy data set is being moved.	<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>volser2</i>	*** (not applicable).	<i>days</i>	*** (not applicable).
<i>tracks</i>	The size of the data set in tracks. This field contains *** if the size of the data set is not known.	The meanings of variables when <i>action</i> is RECOVER or RCVSCHD are:	
<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.	<i>volser1</i>	The serial number of the volume on which the backup version resides. For scheduled requests (RCVSCHD), this might be *** to indicate the tape volume is not yet determined.
<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .	<i>volser2</i>	The serial number of the volume being targeted.
<i>days</i>	The number of days is 0 since movement of VTOC copies occur only when AGE(0) is specified.	<i>tracks</i>	The size of the data set in tracks. For a scheduled request (RCVSCHD), this field is *** to indicate that the size is not yet known.
<i>name</i>	The name of the VTOC copy data set being processed.	<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC11nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abnormal end occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abnormal end. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC11nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.
The meanings of variables when <i>action</i> is PARTREL are:		<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC11nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>volser1</i>	The serial number of the volume on which space management processing is active.	<i>days</i>	*** (not applicable).
<i>volser2</i>	*** (not applicable).	The meanings of variables when <i>action</i> is RECYCLE are:	
<i>tracks</i>	The number of tracks released by the DADSM PARTREL function.	<i>Variable</i>	Meaning
<i>retcode</i>	If <i>retcode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> . If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . See message ARC0003I for more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .	<i>volser1</i>	The serial number of the volume being recycled.
		<i>volser2</i>	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.

<i>blocks</i>	The size of the data set in 16K blocks. This field contains *** if the size is not known.	<i>reascode</i>	If <i>reascode</i> is nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
<i>retcode</i>	If <i>retcode</i> is 16, see Table 11 on page 445. If <i>retcode</i> is 36, see Table 12 on page 446. If <i>retcode</i> is 100 or greater, see message ARC1900I. If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see Table 10 on page 443. If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination. For other return codes, see Table 12 on page 446.	<i>days</i>	The number of days since the last reference to this data set.
			The meanings of variables when <i>action</i> is SCRATCH are:
		Variable	Meaning
		<i>volser1</i>	The serial number of the volume on which the data set resides.
		<i>volser2</i>	*** (not applicable).
		<i>tracks</i>	The size of the data set in tracks. This field contains *** if the size is not known.
		<i>retcode</i>	See Table 15 on page 448. If <i>retcode</i> is 100 or greater, see message ARC1900I.
			If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> . There may be an associated ARC0003I message with more information about the abend. If <i>retcode</i> is 9 <i>nn</i> (where <i>nn</i> is greater than 0), see Table 13 on page 447.
			If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.
<i>reascode</i>	If <i>reascode</i> is 36, see Table 12 on page 446.	<i>reascode</i>	0 or DADSM scratch status code. See Table 14 on page 447.
<i>days</i>	The age of the backup version. This field contains *** if the age is not known.	<i>days</i>	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 <i>action</i> is REDUCED are:		The meanings of variables when <i>action</i> is SPCMGMT are:
		Variable	Meaning
		<i>volser1</i>	The serial number of the volume on which space management processing is active.
		<i>volser2</i>	*** (not applicable).
		<i>tracks</i>	The size of the data set in tracks. This field contains *** if the size of the data set is not known.
		<i>retcode</i>	If the last two digits of <i>retcode</i> are nonzero, see message ARC12nnl where <i>nn</i> is the last two digits of <i>retcode</i> .
			If <i>retcode</i> is 9 <i>nn</i> , an abend occurred after the return code was set to <i>nn</i> .
			If <i>retcode</i> is 400–499, see the explanation of message ARC9998I for problem determination.

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*nnl* 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*nnl* 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 9 on page 442.

If the action is RECYCLE, see the system action for specific return codes in Table 10 on page 443.

Application 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.

Application 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.

Application 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.

Application 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 DFMSHsm 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 DFMSHsm processing continues.

Application Programmer Response: If backup, dump, or recover tasks are desired, stop DFMSHsm and analyze the error conditions. After corrective action has been taken or it is determined the error will not recur, restart DFMSHsm. For any of the return codes, it is possible to leave DFMSHsm running. For a GETMAIN failure, it is highly unlikely DFMSHsm will be able to perform other functions. It may be necessary to increase the size of the region where DFMSHsm runs.

Source: DFMSHsm

ARC0739I [BACKUP I SPILL I CLEANUP I FREEVOL I RECOVER] OF VOLUME volser TERMINATED, ERROR READING JOB FILE CONTROL BLOCK

Explanation: DFMSHsm was performing the indicated function on the volume *volser*. DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Retry the volume function for the indicated volume after corrective action has been taken.

Source: DFMSHsm

ARC0740I CDS BACKUP STARTING AT time ON date, SYSTEM sysid, TO {TAPE I DASD} IN {PARALLEL I NOPARALLEL} MODE, DATAMOVER = {HSM I DSS}

Explanation: The DFMSHsm function to back up the DFMSHsm control data sets is about to begin. This function has been invoked either within the DFMSHsm 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 DFMSHsm or DFSMSdss is being used for this backup.

System action: DFMSHsm continues to process.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0741I (CDS BACKUP I NULL JOURNAL)
ENDING AT time ON date,
STATUS=status**

Explanation: The DFMSHsm function to back up the DFMSHsm 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 DFMSHsm control data sets have been successfully backed up.

UNSUCCESSFUL suggests that DFMSHsm control data sets or journal has not been successfully backed up. If message ARC0747I preceded this message, and message ARC0743I has been issued for each data set to be backed up, then 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: DFMSHsm ends the control data set backup function and continues to process other DFMSHsm functions.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0742I BACKUP FOR *dsid* STARTING AT *time*
ON *date*, BACKUP COPY TECHNIQUE
is {UNDEFINED | REQUIRED |
PREFERRED | STANDARD}.**

Explanation: During the DFMSHsm 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 DFMSHsm migration control data set is about to begin.
- BCDS indicates the attempt to back up the DFMSHsm backup control data set is about to begin.
- OCDS indicates the attempt to back up the DFMSHsm 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:

- CONCURRENT REQUIRED, which means the data sets must be backed up by concurrent copy, and if a concurrent copy session cannot be established, the data sets do not get backed up.
- CONCURRENT PREFERRED, which means if a concurrent copy session can be established, concurrent copy is used to back up the data sets. If a concurrent copy session cannot be established, normal backup processing is used.
- STANDARD, which means concurrent copy should not be used to back up the data sets. Normal backup processing is used.

UNDEFINED means the CDS is not SMS managed, or the DATAMOVER is specified as DFMSHsm.

System action: DFMSHsm continues to process.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0743I *dsid* SUCCESSFULLY BACKED UP TO
dsname, ON VOLUME(S) *volser*,
TIME=*time*, DATE=*date***

Explanation: During the DFMSHsm 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 DFMSHsm migration control data set was successfully backed up.
- BCDS suggests that the DFMSHsm backup control data set was successfully backed up.
- OCDS suggests that the DFMSHsm offline control data set was successfully backed up.
- JRNL suggests that the DFMSHsm 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: DFMSHsm continues to process.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0744E *dsid* COULD NOT BE BACKED UP,
RC=*retcode*, REAS=*reascode*
MIGRATION, BACKUP, FRBACKUP,
DUMP, AND RECYCLE HELD**

Explanation: During the DFMSHsm 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 DFMSHsm migration control data set was not successfully backed up.
- BCDS indicates the DFMSHsm backup control data set was not successfully backed up.
- OCDS indicates the DFMSHsm offline control data set was not successfully backed up.
- JRNL indicates the DFMSHsm 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 <i>dsid</i> . <i>reascode</i> 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 <i>dsid</i> . <i>reascode</i> 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. <i>reascode</i> describes the return code from the IDCAMS EXPORT or DFSMSdss function.	34	An error occurred trying to open the output data set while getting the device entry.
13	A system abnormal end (abend) occurred during IDCAMS or DFSMSdss processing. <i>reascode</i> is the hexadecimal abend code.	36	An error was encountered in locating the backup data set indicated by <i>dsid</i> . <i>reascode</i> describes the return code from the super 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 catalogued. See the ARC0745E message for the steps necessary to correct the problem.
14	The module performing the IDCAMS EXPORT or DSS dump abended and the program control block exists. This is probably a program error. <i>reascode</i> is the 3-digit hexadecimal abend code.	38	An error occurred trying to open the output data set while reading the DSCB.
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 <i>reascode</i> is zero.	40	An error was encountered in opening the DFMSHsm journal data set. This is probably a program error. The <i>reascode</i> is set to zero.
16	An error was encountered allocating the data set suggested by <i>dsid</i> . <i>reascode</i> identifies the error returned by the allocation routine.	41	The OPEN of the journal data set abended during the point, read, and check sequence. This is probably a program error. <i>reascode</i> is the 3-digit hexadecimal abend code.
17	The module performing the IDCAMS EXPORT or DSS dump abended during return processing. This is probably a program error. The <i>reascode</i> 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. <i>reascode</i> is the 3-digit hexadecimal abend code.
18	The IDCAMS EXPORT operation failed attempting to write a record. <i>reascode</i> is the return code from the IDCAMS EXPORT function.	44	An error was encountered in opening the backup data set for the journal data set. This is probably a program error. The <i>reascode</i> = 0.
20	An error was encountered allocating the backup data set for the data set suggested by <i>dsid</i> . <i>reascode</i> identifies the error returned by the allocation routine.	46	The CLOSE of the journal data set abended. This is probably a program error. <i>reascode</i> is the 3-digit hexadecimal abend code.
24	An error was encountered allocating a scratch tape by backing up the specified data set <i>dsid</i> . <i>reascode</i> identifies the error returned by the tape allocation routine.	47	The CLOSE of the backup journal data set abended. This is probably a program error. <i>reascode</i> is the 3-digit hexadecimal abend code.
28	In backing up the DFMSHsm journal data set, the GET macro encountered an I/O error. <i>reascode</i> identifies the first byte returned in general register 1 on entry to the SYNAD routine.	48	In processing the journal backup data set, the end of the output volume was reached, or an abend occurred. The <i>reascode</i> indicates a 3-digit hexadecimal abend code.
32	In backing up the DFMSHsm journal data set, the PUT macro encountered an I/O error. <i>reascode</i> identifies the first byte returned in general register 1 on entry to the SYNAD routine.	52	A GETMAIN error was encountered. <i>reascode</i> = the return code from the GETMAIN macro.
		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 <i>reascode</i> is the return code from the QMNGRIO macro.										
58	An error occurred setting up an ESTAE environment.	80	An abend occurred during the CDS Version Backup Services module. This is probably a program error. The <i>reascode</i> is the 3-digit hexadecimal abend code.								
60	The QMNGRIO macro encountered a write error in attempting to update a real JFCB. The <i>reascode</i> is the return code from the QMNGRIO macro.	82	The preallocated output data set was in extended format.								
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.		If the <i>retcode</i> is 400–499, see message ARC9998I for the explanation and problem determination.								
68	An error was found in the data while DFSMSHsm was placing an end-of-file marker in the journal data set during backup. <i>reascode</i> describes the reason the data is in error. <ul style="list-style-type: none"> • 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 case, the journal data set is not backed up.		<p>System action: The DFSMSHsm functions of migration, backup, fast replication backup, dump, and recycle are held. Any backups of other CDS data sets already started, are completed. If the journal backup fails, journaling is inhibited. DFSMSHsm processing continues.</p> <p>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.</p> <p>When the problem is corrected and you can allow DFSMSHsm to continue, issue the RELEASE command to allow held functions to resume processing.</p> <p>Application 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.</p> <p>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.</p> <p>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.</p> <p>The following list shows the return codes issued for this message and the appropriate actions to be taken for each:</p> <table border="0"> <thead> <tr> <th>Retcode</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>See the return codes issued by the RDJFCB macro in <i>z/OS DFSMS Using Data Sets</i> and take appropriate action.</td> </tr> <tr> <td>8</td> <td>Process a system dump before stopping DFSMSHsm and then contact the IBM Support Center.</td> </tr> <tr> <td>10</td> <td>Make the BLKSIZE in the range of</td> </tr> </tbody> </table>	Retcode	Meaning	4	See the return codes issued by the RDJFCB macro in <i>z/OS DFSMS Using Data Sets</i> 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
Retcode	Meaning										
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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 DFMSHsm as the datamover.	and 60	Inform your system programmer or examine the reason code.
12, 13, and 18	Error messages from the IDCAMS or DFMSDss function describe the specific error. See the IDC or ADR messages and take appropriate action.	64	No action required.
	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 <i>z/OS DFMSHsm Implementation and Customization Guide</i> in "Directing DFMSHsm Temporary Tape Data Sets to Tape." in the section titled, "Specifying Commands that Define Your DFMSHsm Environment."	68	If <i>reascode</i> is 0004, the control record in the journal data set is destroyed. Restart DFMSHsm so the control record is re-created in the journal data set.
			If <i>reascode</i> 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 DFMSHsm makes entries in the data set.
14, 15, and 17	Process a system dump before stopping DFMSHsm and then contact the IBM Support Center.		If the backup of the control data sets defined to DFMSHsm is successful, the backup copies are valid and the backup data set names are renamed. When the <i>reascode</i> 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.
16, 20, and 24	See message ARC0500I or ARC0503I issued before this message was issued. The appropriate message indicates the dynamic allocation return and reason codes.	70	See message ARC0090I for the programmer response and problem determination.
28, 32	See the return codes issued by the GET and PUT macros in <i>z/OS DFMS Macro Instructions for Data Sets</i> and take appropriate action.	72	Take the action indicated by the OPEN error message with component identifier IEC. Retry the backup.
34	Inform your system programmer or examine the reason code.	74	Take the action indicated by the CLOSE error message. Retry the backup.
36	See the error codes issued by the catalog management function in <i>z/OS DFMS Managing Catalogs</i> , and take appropriate action.	80	Process a system dump before stopping DFMSHsm and then contact the IBM Support Center.
38	Inform your system programmer or examine the reason code.	82	Ensure that the preallocated DASD output data sets are in standard format and release AUTOBACKUP.
40, 41, 42, 44, and 46	Process a system dump before stopping DFMSHsm and then contact the IBM Support Center.		Note: To determine the full name of the data set referred to by <i>dsid</i> , see the DFMSHsm startup procedure. To determine the full name of the backup data sets related to the data set referred to by <i>dsid</i> , see the DFMSHsm 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.
47, 48	Make the journal backup data set larger and retry the backup.		Source: DFMSHsm
52, 54, 56, 58,			

ARC0745E UNABLE TO READ MHCR DURING CDS BACKUP

Explanation: The DFMSHsm 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 DFMSHsm 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 DFMSHsm MHCR Record could not be accessed. ACTION is required. Perform the required steps listed in **Application Programmer Response**.

Application 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, DFMSHsm 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: DFMSHsm

ARC0746I {{BACKUP I SPILL} OF VOLUME *volser* I MOVEMENT OF BACKUP VERSIONS I BACKUP OF MIGRATED DATA SETS} TERMINATED, UNABLE {TO MOUNT INITIAL TAPE I 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 <i>volser</i> 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. DFMSHsm processing continues.

Application 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: DFMSHsm

**ARC0747I 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 DFMSHsm 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, DFMSHsm attempts to rename, catalog, or uncatalog those data sets where renaming, cataloging, or uncataloging has not been attempted. DFMSHsm continues processing.

Application 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 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: DFMSHsm

**ARC0748I LAST SUCCESSFUL CDS BACKUP -
SET QUALIFIER IS 'xnnnnnnn'**

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 DFMSHsm is the data mover. If '*M*' is *D*, then DFMSDss 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 DFMSHsm Storage Administration Guide*.

In the message text:

xnnnnnnn

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 DFMSHsm is the data mover
- *D*, indicates that DFMSDss is the data mover used for the last backup.

System action: The CDS backup function ends. DFMSHsm continues processing.

Application Programmer Response: None.

Source: DFMSHsm

**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 DFMSHsm 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.

ARC0750I

6	An error occurred in reading the JFCB while processing the backup VTOC copy data set.	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.
8	A volume allocation error occurred.	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.
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.	52	A GETMAIN error occurred in getting storage for the recovery queue elements.
12	An error occurred in allocating the backup or dump VTOC copy data set.	60	An error occurred in establishing an ESTAE environment.
14	An error occurred in reading the backup or dump VTOC copy data set.	66	An internal error occurred in sorting the queue of recovery queue elements (RQEs). The queue was broken.
16	An error occurred in opening the backup or dump VTOC copy data set.	System action: The restore process is performed. The incremental volume recovery is not performed. DFSMShsm processing continues.	
20	The required backup or dump tape volumes are not available.	Application 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.	
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.	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.	
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.	Source: DFSMShsm	
25	APPLYINCREMENTAL processing is not allowed because the volume contained a VSAM catalog the last time DFSMShsm dumped or backed up the volume.	<hr/> ARC0750I BACKUP FOR <i>dsid</i> STARTING AT <i>time</i> ON <i>date</i>	
26	APPLYINCREMENTAL processing is not allowed for DFSMShsm owned volumes because these volumes are not supported for the volume backup function.	Explanation: The attempt to back up the data set identified by <i>dsid</i> is about to begin during the DFSMShsm control data set 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.	<ul style="list-style-type: none">• <i>dsid</i> — specifies 'JRNL' (JOURNAL)• <i>time</i> — time of day the backup started expressed as hh:mm:ss (hours, minutes, seconds)• <i>date</i> — current date expressed as yy/mm/dd (year, month, day).	
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.	System action: DFSMShsm continues processing.	
30	SMS has not been active in the system when DFSMShsm has attempted to process SMS-managed volumes.	Application Programmer Response: None.	
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 or DFSMShsm 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.

Application 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.

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

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	represent the dump copy when opened by DFSMSdss.	System action: The recovery ends. DFSMShsm processing continues.																												
66	An internal error occurred in sorting the queue of recovery queue elements (RQEs). The queue was broken.	Application 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.																												
System action: The RECOVER command ends. DFSMShsm continues.																														
Application 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.																														
Source: DFSMShsm																														
ARC0753I	CANNOT RESTORE VOLUME <i>volser1</i> , ERROR ALLOCATING DUMP VOLUME <i>volser2</i>	Explanation: During the restore operation, DFSMShsm could not allocate the dump volumes necessary to restore the volume <i>volser1</i> . The volume serial number of the first dump volume required is <i>volser2</i> .																												
System action: The restore operation ends. DFSMShsm processing continues.																														
Application Programmer Response: Ensure the dump volumes are available to DFSMShsm.																														
Source: DFSMShsm																														
ARC0754I	CANNOT RECOVER VOLUME <i>volser</i> , 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.																														
Application 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 <i>volser</i> , REAS= <i>reascode</i>	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 <i>volser</i> .																												
The values for <i>reascode</i> are:																														
<table><thead><tr><th>Reascode</th><th>Meaning</th></tr></thead><tbody><tr><td>4</td><td>Allocation of the volume failed.</td></tr><tr><td>6</td><td>No VCAT copy data set exists.</td></tr><tr><td>8</td><td>An open error occurred.</td></tr><tr><td>10</td><td>The required backup volumes are not available.</td></tr><tr><td>12</td><td>A read error occurred.</td></tr><tr><td>16</td><td>A GETMAIN failure occurred.</td></tr><tr><td>20</td><td>An MCT read failure occurred.</td></tr><tr><td>25</td><td>An invalid unit type from MCT (X) record.</td></tr><tr><td>26</td><td>Unsupported device type.</td></tr><tr><td>28</td><td>DFSMShsm has written on this tape volume in single-file format.</td></tr><tr><td>31</td><td>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).</td></tr><tr><td>54</td><td>Installation-wide exit abnormally ended.</td></tr><tr><td>60</td><td>Setup of an ESTAE around the open failed.</td></tr></tbody></table>			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.
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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.

Application Programmer Response: When *reascode* is 28, later recovery attempts must be made from a processing unit that has DFHSM 2.2.0 or a subsequent release installed and running.

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 129) 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 OF A DATA SET OF
tracks-used TRACKS TO ML1 VOLUME
volser FAILED FOR INADEQUATE
SPACE**

Explanation: A data set 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.

Either there are no ML1 overflow volumes defined, or none of ADDVOLed volumes has sufficient free space.

The backup request may be from a BACKDS or HBACKDS command, an ISMF panel, the inline program ARCINBAK, or a program issuing the ARCHBACK macro.

System action: DFSMShsm fails the request with ARC0734I and ARC1337I. Processing continues.

Application Programmer Response: Consider freeing space at level 1 by issuing the FREEVOL ML1BACKUPVERSIONS command to move backup versions to daily backup volumes. If the failing data set is not less than 500 tracks in size, consider ADDVOLing a new ML1 volume with the OVERFLOW 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 (<i>reascode</i>) 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	<i>reascode</i> 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.

Application 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.

Application 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. |
| 16 | An OPEN error occurred. |
| 20 | The required tapes are unavailable. |
| 24 | An invalid unit type is in the MCT record. |
| 28 | DFSMShsm has written on this tape volume in single-file format. |
| 32 | DFHSM 2.3.0 or a subsequent release has written the VTOC copy data set in a different format. |

System action: DFSMShsm processing continues.

Application 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.

When *reascode* is 28, subsequent volume recovery attempts must be made from a processing unit that has DFHSM 2.2.0 or a subsequent release installed and running.

When *reascode* is 32, subsequent volume recovery attempts must be made from a processing unit that has DFHSM 2.3.0 or a subsequent release installed and running.

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.

Application 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.

Application 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.

Application 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=*cname*, DATANAM=*dataname* [,INDEXNAM=*indexname*]

Explanation: A VSAM data set having a new cluster name of *cname* 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.

Application 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 processed. Message ARC1001I follows this message and explains the reason for the error.

System action: Recovery or recall of this data set ends. DFSMShsm processing continues.

Application 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.

Source: DFSMShsm

ARC0768I SUCCESSFUL {RECOVERY | RECALL} FOR ALTERNATE INDEX=*altidxname*

Explanation: This message follows ARC0767I and lists the name *altidxname* 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.

Application 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

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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.

Application 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
 {RECALLEDIRECOVERED} AS
 {ACTIVEIROLLED-OFFIDEFERRED}
 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.

Application 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.

Application 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.

Application 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 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.

Application 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 DFSMS Storage Administration Reference* under Return Codes from Catalog, and CREASe 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.

Application 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 DFMSDSS ENCOUNTERED A MINOR ERROR WHILE PERFORMING DATA MOVEMENT.

Explanation: The RECOVER or HRECOVER command was issued and DFSMShsm was using DFMSdss data movement to recover the data set; however, DFMSdss 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.

Application Programmer Response: See DFMSdss 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.

Application 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 I 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.

Application Programmer Response: If the residual data is needed, recover the data set specifying either DAOPTION(SAMETRK) or DAOPTION(ELTRK).

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.

Application 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.

Application 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 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 DFMSHsm 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 DFMSHsm performs:

- DFMSHsm 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:
 - DFMSHsm 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. DFMSHsm processing continues.

Application 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 DFMSHsm catalogs the multivolume extended format data set during physical dump copy restore processing.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm before the RECALL was attempted. DFMSHsm 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. DFMSHsm processing continues.

Application 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.

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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 I RECOVER} FOR
DATA SET *dsname*, {RECALL I
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 *nnnn* DATA SET RECOVER REQUESTS
SCHEDEDLED 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.

Application Programmer Response: None.

Source: DFSMSHsm

**ARC0789I *func* ENDED ON STORAGE GROUP *sg func*
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.

Application 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 DFMSHsm 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.

Application 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: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0792I BACKVOL CDS COMMAND FAILED DUE TO INCOMPATIBLE PARAMETERS

Explanation: Whenever DFMSHsm control data sets are accessed in record level sharing mode, DFMSDss must be the specified datamover and the PARALLEL parameter must be specified if the backup is directed to tape. One or both of these conditions was not met.

System action: BACKVOL CDS command processing ends. DFMSHsm processing continues.

Application Programmer Response: If DFMSHsm 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, DFMSDss 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 DFMSDss as the datamover and the PARALLEL parameter. DFMSHsm continues processing.

Application 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 DFMSDss 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 DFMSHsm CDS version backup environment indicates TAPE(NOPARALLEL). If DATAMOVER(DSS) is specified, CDS version backup must run in PARALLEL.

System action: DFMSHsm continues to process; the BACKVOL CDS command processing ends.

Application Programmer Response: Reenter the BACKVOL CDS command with BACKUPDEVICECATEGORY(DASD) or BACKUPDEVICECATEGORY(TAPE(PARALLEL)) parameter. The SETSYS command can also be used to change the CDS version backup environment.

Source: DFMSHsm

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 DFMSHsm CDS version backup environment indicates TAPE(NOPARALLEL). If DATAMOVER(DSS) is specified CDS version backup must run in PARALLEL.

System action: DFMSHsm continues to process; the

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DFSMShsm environment is changed to TAPE(PARALLEL).

Application Programmer Response: Informational only.

Source: DFSMShsm

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.

Application Programmer Response: Informational only.

Source: DFSMShsm

ARC0797I {NO | MORE THAN 30 | MORE THAN 80} {STORAGE GROUPS | VOLUMES} WERE LISTED IN THE BACKVOL COMMAND

Explanation: A BACKVOL command was issued for storage groups or volumes.

For STORAGE GROUPS, either no storage groups or more than 30 storage groups were listed in the command. If more than 30 are listed, only the first 30 storage groups are processed.

For VOLUMES, more than 80 volumes were listed in the command. If more than 80 are listed, only the first 80 volumes are processed.

System action: DFSMShsm continues processing.

Application Programmer Response: Correct the BACKVOL command for STORAGE GROUPS to specify at least one, but no more than 30 storage groups. Correct the 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.

Application 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.

Application 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 DFMSHSM AUDIT STARTING

Explanation: DFSMShsm AUDIT command processing is in process.

System action: AUDIT processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC0802I DFMSHSM AUDIT ENDING

Explanation: DFSMShsm AUDIT command processing has ended.

System action: Normal DFSMShsm activities resume without any intervention.

Application 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.

Application Programmer Response: None.

Source: DFMSHsm

ARC0804I AUDIT OF CATALOG CANCELLED BY OPERATOR

Explanation: A request to DFMSHsm to audit a user or master catalog was cancelled. The operator response to message ARC0803A was not Y.

System action: Other DFMSHsm processing continues.

Application Programmer Response: Reissue the AUDIT command at a time when DFMSHsm activity is minimal.

Source: DFMSHsm

ARC0805I I/O ERROR OCCURRED DURING READING OF VTOC ON VOLUME *volser*

Explanation: During processing of the AUDIT command, DFMSHsm 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 DFMSHsm processing continues.

Operator response: Respond to the associated I/O error message. Retry the AUDIT command when the problem has been fixed.

Application Programmer Response: None.

Source: DFMSHsm

ARC0806I OPEN OF VTOC FOR VOLUME *volser* FAILED

Explanation: While performing an audit request on a primary, backup, or migration volume, DFMSHsm 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 DFMSHsm 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.

Application Programmer Response: None.

Source: DFMSHsm

ARC0807I INSUFFICIENT SPACE FOR READING VTOC OF VOLUME *volser*

Explanation: DFMSHsm 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 DFMSHsm processing continues.

Application 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 DFMSHsm.

Source: DFMSHsm

ARC0808I UNABLE TO AUDIT VOLUME *volser*

Explanation: DFMSHsm 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 DFMSHsm. 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 DFMSHsm as a daily backup or SPILL backup.

System action: The audit command ends. DFMSHsm processing continues.

Operator response: Mount the necessary volume if requested to do so.

Application Programmer Response: If the volume is non-SMS-managed, make sure the volume is known to DFMSHsm. If the volume is SMS-managed, use the IDCAMS DIAGNOSE command to check the volume for inconsistencies.

Source: DFMSHsm

ARC0809I BVR *bvrkey* 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 *bvrkey* 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 DFMSHsm function, such as backup, is running. AUDIT processing continues.

System action: DFSMShsm processing continues.

Application 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 DATASETNAMES 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.

Application 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.

System action: The LIST command ends.

DFSMShsm processing continues.

Application 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, or there is no dump copy of the

specified volume serial number on the listed dump volume or volumes.

System action: DFSMShsm lists the dump copies on the dump volumes without listing the contents of any dump copy.

Application 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.

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 <i>reascode</i> for the cause of the read failure.
4	A partial audit has been completed because of a LOCATE failure. See <i>reascode</i> for the cause of the LOCATE failure.
6	Control data set positioning has failed. See <i>reascode</i> 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.	5	VTOC copy data set for BACKUPCONTENTS request processing.
8	Control interval in use.	6	An error occurred in opening a VTOC copy data set for BACKUPCONTENTS request processing.
12	Work area is not large enough.	7	An error occurred in reading a VTOC copy data set for BACKUPCONTENTS request processing.
16	A physical error has occurred.	8	An error occurred in reading a DGN record to determine the dump volume serial numbers associated with the dump.
20	A logical error has occurred.	9	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.
22	OCDS has not been defined.	12	An error occurred in processing your request. See previously issued ARC0184I messages and <i>retcode</i> for further explanation of the errors.
24	BCDS has not been defined.	13	An error occurred in retrieving the library name for a tape volume. Check the command activity log for messages.
System action: DFSMShsm processing continues.		15	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).
Application Programmer Response: For return code 4, see <i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> under message IDC3009I.			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.
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, DUMPCCLASS, 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

System action: LIST command processing ends. DFSMShsm processing continues.

Application 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

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BOTH. The default is information from the MCDS.

Source: DFSMShsm

ARC0815I HOSTID=*procid* FOUND IN DFMSHSM CONTROL DATA SET RECORD, TYPE=*rtype*, KEY=*rkey*

Explanation: A LIST command was issued with the HOST parameter to list DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: If the processing unit is not operational and you want to remove the processing unit ID from the DFMSHsm records, issue the LIST HOST (*hostid*) RESET command.

Source: DFMSHsm

ARC0816I NO DFMSHSM 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 DFMSHsm control data set records were found.

System action: LIST processing ends. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC0817I HOSTID=*procid* FOUND IN DFMSHSM 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 SDSP serialization information is reset.

System action: LIST processing continues. DFMSHsm processing continues. If the reset failed, the processing unit identifier field in the listed record is not nulled.

Application 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: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Operator response: Specify SETSYS DUPLEX(MIGRATION(Y) ERRORALTERNATE(CONTINUE)).

Application Programmer Response: None.

System programmer response: Specify SETSYS DUPLEX(MIGRATION(Y) ERRORALTERNATE(CONTINUE)) or set YGCB_BYPASS_ALT_SYNC flag OFF.

Source: DFMSHsm

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, DFMSHsm 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, DFMSHsm 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'.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC0831I RECYCLE COMMAND PROCESSING ENDING

Explanation: The RECYCLE command has completed processing.

System action: DFSMShsm processing continues.

Application 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.

Application 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 16 on page 449. 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 16 on page 449 for the system action related to the specific return code reported by this message.

Application Programmer Response: See the programmer response for the specific return codes reported by this message in Table 16 on page 449.

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 16 on page 449.

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.

Application 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.

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- If the VERIFY or the DISPLAY parameter has been specified, the remaining volumes are not listed.

For *retcode* values, see Table 17 on page 453. For *reascode* values, see Table 16 on page 449.

System action: See the system action for specific return codes in Table 17 on page 453.

Application Programmer Response: See the programmer response for specific return codes in Table 17 on page 453.

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 Guide*.

System action: Recycle processing ends. DFSMShsm processing continues.

Application 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 Guide*.

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 TTOC 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.

Application 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 and RECYCLE FORCE, see the *z/OS DFSMS Storage Administration Reference*. See the *z/OS DFSMShsm Storage Administration Guide* for the procedure for handling inconsistencies between tape media contents and OCDS TTOC records.

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.

Application 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

ARC0839I RECYCLE TASK *id* COULD NOT BE STARTED. RC=*return-code*, REAS=*reason-code*.

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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0841I RECYCLED NET *number* {BACKUP I
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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC0842I {INPUT I 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.

Application 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.

Application 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.

Application 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 16 on page 449.

System action: See Table 16 on page 449 for the system action related to the specific return code reported by this message.

Application Programmer Response: See the programmer response for specific return codes in Table 16 on page 449.

Source: DFSMShsm

**ARC0846I {ML2 I SPILL I 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

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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.

Application Programmer Response: Wait until the other host has completed before reissuing the recycle request.

Source: DFMSHsm

**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.

Application Programmer Response: DFMSHsm processing continues.

Source: DFMSHsm

**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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Correct any parse errors, and resubmit the command.

Source: DFMSHsm

**ARC0850I DFMSHSM 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: DFMSHsm is put into emergency mode while the update is taking place. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC0851I DFMSHSM 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 DFMSHsm 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: DFMSHsm continues processing.

Operator response: If the DFMSHsm UPDATEC command completed successfully, issue the BACKVOL command with the CONTROLDATASET parameter if desired.

If the DFMSHsm UPDATEC command completed unsuccessfully, notify the storage administrator.

Application Programmer Response: See the previously issued error message ARC0854I or ARC0025I message and determine the cause of the UPDATEC error.

Source: DFMSHsm

**ARC0852I DFMSHSM CDS UPDATE
TERMINATED { I/O ERROR ON |
INVALID } JOURNAL DATA SET**

Explanation: During reading of the DFMSHsm 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.

Operator response: Notify the system programmer. If your installation procedures require the DFSMShsm journal data, shut down DFSMShsm.

Application Programmer Response: Correct the cause of the I/O error or the invalid journal data set, and rerun the UPDATEC 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 UPDATEC command. The journal data set whose name is *dsname* could not be allocated.

System action: The UPDATEC command ends. DFSMShsm processing continues.

Application 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 UPDATEC 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 8 on page 442. The control data set record type is *type*. The control data set record key is *key*.

System action: The UPDATEC command processing continues.

Application 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 UPDATEC command was issued without specifying which control data set DFSMShsm should update. You must specify MIGRATIONCONTROLDATASET, BACKUPCONTROLDATASET, OFFLINECONTROLDATASET, or ALL.

System action: The UPDATEC command fails.

DFSMShsm processing continues.

Application Programmer Response: Be sure to specify on the UPDATEC 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 8 on page 442.

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*

Application 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 either deleting it (DFSMShsm creates a new one) or by issuing the SETSYS command specifying the MONITOR parameter with the NEWCOPY subparameter. In either 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.

Application 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 TTCAFI=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.

Application 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.

Application Programmer Response: None.

Source: DFSMSHsm

**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	ARC11nn
Space Management	ARC12nn
Backup	ARC13nn

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.

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.

Application 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.

Application 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 DEVTYPE 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.

Application 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.

Application 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.

Application 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.

Application 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.

ARC0910E

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 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.

Application 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 Guide*.

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.

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*

Application 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 DFSMS Storage Administration Reference* under the section “Maintaining DFMSHsm Control Data Sets”, and *z/OS DFMSHsm Implementation and Customization Guide*.

Source: DFMSHsm

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, DFMSHsm 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, DFMSHsm may issue this message more than once. DFMSHsm issues this message every time the percent drops below and then reaches the threshold. For this reason, DFMSHsm 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, DFMSHsm performance degrades. This message indicates that the CDS must be reorganized and the size of the VSAM index must be increased.

System action: DFMSHsm processing continues.

Operator response: Notify the system programmer or storage administrator.

Application 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 DFMSHsm should begin issuing this message.

If the MCDS, BCDS, or OCDS is full enough to require action, DFMSHsm should be shut down.

Prior to a DFMSHsm 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 DFMSHsm FIXCDS or REPORT command.
- Run migration cleanup using the SETSYS command with the SECONDARYSPMGMTSTART parameter and the DEFINE command with the SECONDARYSPMGMTCYCLE parameter.

After DFMSHsm 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: DFMSHsm

ARC0920I ERROR ON POINT MACRO, BLOCKID= *blkid*, RC= *retcode*

Explanation: A SETSYS command has specified that the 3480 single-file format is being used.

DFMSHsm 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
4	Does not support block ID.
8	Invalid input parameters are specified.
12	An I/O error has occurred for the LOCATE (<i>blkid</i>) command. The data set block is not found.

System action: The recall, recovery, or recycle fails. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC0921I ERROR ON NOTE MACRO, RC= *retcode*

Explanation: A SETSYS command has specified that the 3480 single-file format is being used. DFMSHsm 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.

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12 An I/O error has occurred during the RDBLKID command.

System action: The migration, backup, or recycle action fails. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC0922I ERROR ON SYNCDEV MACRO, RC= *retcode*, REAS = *reas*

Explanation: A SETSYS command has specified that the 3480 single-file format is being used. DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC0923I ERROR CLOSING TAPE DATA SET *dsname*, RC= *retcode*

Explanation: DFMSHsm 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 FREEPOOL 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. DFMSHsm processing continues.

Application Programmer Response: Correct the condition causing the error.

Source: DFMSHsm

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.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm 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 DFMSHsm user or was not authorized by RACF facility class.

System action: DFMSHsm processing continues.

Application Programmer Response: Contact a DFMSHsm-authorized user if it is imperative to cancel requests or active tasks that you are not authorized to cancel.

Source: DFMSHsm

**ARC0933I (H)CANCEL COMMAND REJECTED,
(H)CANCEL CANNOT BE ISSUED VIA
BATCH IN EXISTING ENVIRONMENT**

Explanation: A batch request specified a CANCEL, HCANCEL, or HSENDCMD 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. DFMSHsm processing continues.

Application 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: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: A *userid* that has been authorized with the AUTHDBA(CONTROL) command can authorize this user ID.

Source: DFMSHsm

**ARC0935I ERROR INVOKING SSI FOR SMS
SERVICES, SUBFUNCTION = *func*,
DATA = *data type*, R15RC = *rcl*, SSIRC =
rc2, SSIREAS = *reas***

Explanation: DFMSHsm 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 DFMSdip Diagnosis*.

System action: The function requesting the SSI ends. DFMSHsm processing continues.

Application Programmer Response: Determine the error from either or both return and reason codes and possible related SMS messages that precede this message in the DFMSHsm command activity log. Correct the error and retry the failing function.

Source: DFMSHsm

**ARC0936I ERROR RETRIEVING SMS VTOC/VVDS
DATA, FUNC = (ACCESS | FREE),
RC=*retcode*, REASON=*reas1*,
SUBREAS=*reas2***

Explanation: DFMSHsm 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:

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 = 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).

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.

Application 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* I, 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.

Application 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.

Application 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.

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.

System action: BACKUP processing continues.

Application 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 8 on page 442).
- 12 Error creating MCV record (REAS = return code from write. See Table 8 on page 442).
- 13 Device table entry not found (REAS = 0).
- 16 Error updating MCV record (REAS = return code from update. See Table 8 on page 442).
- 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.

Application 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.

Application Programmer Response: If the maximum number of backup versions in the indicated 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.

Application 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

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the displayed ranges are the boundaries that DFSMShsm has calculated to use.

System action: DFSMShsm processing continues.

Application 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.

Application 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.)

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.
 - MSGDSDROLIN — 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.

Application 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 | RECYCLE} VOLUME {volser} HAS ENDED DUE TO AN ERROR

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.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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

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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.

Application 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.

Application 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 <i>volser</i> . The function requested was <i>func</i> . An error occurred during this processing. <i>lcsrc</i> contains the return code from the LCS and <i>lcsreas</i> contains the reason code from the LCS.
---	--

12	An abnormal end (abend) occurred when DFSMShsm invoked the CBRXLCS macro to process volume <i>volser</i> . The function requested was <i>func</i> .
----	---

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.

Application Programmer Response: Return codes have the following actions:

Reascode	Meaning
----------	---------

8	Take corrective action based on the meaning of <i>lcsrc</i> and <i>lcsreas</i> .
12	Follow the problem determination procedures.
60	Take corrective action based on the message ARC0304I that precedes this message.

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.

System action: Processing ends for the task requesting the allocation. The function being performed is held. Other DFSMShsm processing continues.

Application Programmer Response: If the allocation results are not what the installation desires, modify the ACS routines accordingly and reissue the command.

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.

Application 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.

Application Programmer Response: Take corrective action based on the *cbrxvolrc*

Source: DFSMShsm

ARC0970I	TAPE ALLOCATION REQUEST DENIED BY ARCTEEXT EXIT FOR ALLOCATION BEGINNING WITH TAPE <i>volser1</i>	0	See the corresponding ARC0982I messages to ensure the intended requests were reprioritized.
	Explanation: Installation-wide exit ARCTEEXT has returned a return code 8, which indicates that tape allocation should not be attempted. <i>volser1</i> is the first or only volume in the DFSMSHsm tape volume set.	2	See the corresponding ARC1506E messages and take appropriate action as described in the ARC1506E message text.
	System action: The command fails. DFSMSHsm processing continues.	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.
	Application 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.	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.
	Source: DFSMSHsm		
ARC0980I	ALTERPRI {REQUEST USER DATASETNAME} COMMAND STARTING	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.
	Explanation: An ALTERPRI REQUEST, USER, or DATASETNAME command has been issued. The response to this command follows this message.		
	System action: DFSMSHsm processing continues.		
	Application Programmer Response: None.		
	Source: DFSMSHsm		
ARC0981I	ALTERPRI {REQUEST USER DATASETNAME} COMMAND COMPLETED, RC=<i>retcode</i>		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.
	Explanation: An ALTERPRI REQUEST, USER, or DATASETNAME command has completed. The <i>retcode</i> indicates the outcome of the ALTERPRI command.		
Retcode	Meaning		Source: DFSMSHsm
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.		
8	The priority was not altered for any of the associated requests.		
12	No associated requests found.		
	System action: DFSMSHsm processing continues.		
	Application Programmer Response: The <i>retcode</i> responses are as follows:		
Retcode	Action		

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

	<p>Is one of the following:</p> <ul style="list-style-type: none"> Volume serial number, if VOLUME appears. If SGROUP follows <i>name</i>, the request was for the BACKVOL command specifying storage group <i>sg</i>. If COPY POOL follows <i>name</i>, the request was for a FRBACKUP or FRRECOV command specifying copy pool <i>cpname</i>. 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. 		<ul style="list-style-type: none"> 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.
<i>userid</i>	The user identification of the initiator of this request.	<i>userid</i>	The user identification of the initiator of this request.
<i>reqnum</i>	The request number. For any request generated internally by DFSMShsm, the <i>reqnum</i> will be zero.	<i>reqnum</i>	The request number. For any request generated internally by DFSMShsm, the <i>reqnum</i> will be zero.
System action:	DFSMShsm processing continues.	System action:	Other requests may be reprioritized for this command. DFSMShsm processing continues.
Application Programmer Response:	None.	Application Programmer Response:	Review and resolve the cause of the problem. Reissue the ALTERPRI command when necessary.
Source:	DFSMShsm	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.

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.
Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1000I *{dsname | VOL=volser | agname | cpname} {MIGRATE | BACKVOL | BACKDS | DELETE | RECALL | RECOVER | FREEVOL | ABACKUP | ARECOVER | FRBACKUP | FRRECOV} PROCESSING ENDED*

Explanation: DFSMShsm completed a data set, volume, aggregate, or copy pool request. 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 type of operation performed by

ARC1001I

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.

Application 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 2. 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>nnns</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 3 on page 435 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. For more information about type codes, see Table 2.

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:

Condition	Meaning
If reascode	
is zero	If <i>reascode</i> is zero or the related message gives no explanation, no further information is discernible.
If retcode	
is 900	A <i>retcode</i> of 900 indicates an abnormal end (abend) has occurred. The abend code is listed in message ARC1900I.
If retcode	
is 9<i>nn</i>	If <i>retcode</i> is in the form 9 <i>nn</i> and <i>nn</i> is greater than zero, this indicates that an abend has occurred after the return code has been set to <i>nn</i> . For example, if <i>retcode</i> is 931 and the function is recovery: The recovery function issues ARC11 <i>nns</i> messages. The <i>retcode</i> of 931 establishes 31 as the <i>nn</i> variable. The result: ARC11 <i>nns</i> + 31 = message ARC1131I.
If retcode	
is 93	A <i>retcode</i> of 93 indicates a Fast Replication function has failed. The <i>reascode</i> is in the form <i>nn-mm</i> where <i>nn</i> represents the last two digits of the ARC1800 series message (ARC18 <i>nn</i>) and <i>mm</i> represents the ARC18 <i>nn</i> 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.

Application 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.
Application Programmer Response:	None.
Source:	DFSMShsm
ARC1004I	DFSMSHSM NOT ACTIVE - REQUEST <i>rnumber</i> QUEUED
Explanation:	A nonwait-type request was issued while DFSMShsm was not active. The request was assigned the DFSMShsm request number <i>rnumber</i> 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.
Application 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/V2 MVS processing continues.
Operator response:	Restart DFSMShsm, if desired.
Application Programmer Response:	Request that DFSMShsm be started. Reissue the command when DFSMShsm is ready.
Source:	DFSMShsm
ARC1006I	DFSMSHSM REJECTED REQUEST, RC=<i>retcode</i>
Explanation:	A request to DFSMShsm was rejected. The values for <i>retcode</i> 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.
Application 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 DFMSHSM

Explanation: The TSO command processor has completed verification of a request for the DFMSHsm operation indicated in the message text. The command is sent to DFMSHsm. The specific DFMSHsm request number is *rnumber*.

System action: The user is notified of the request number assigned. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC1008I {agname | dsname | VOL=volser, SGROUP=sg | COMMAND | CDS } operationREQUEST 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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC1009I JES3 C/I REQUEST FAILED BY DFMSHSM FOR DSN= dsname,RC=mwerc REAS=mwereas

Explanation: The DFMSHsm SVC 26 intercept module IGG026DU failed a JES3 converter/interpreter

(C/I) request for the migrated data set *dsname*. The return code *mwerc* and the reason code *mwereas* are the return and reason codes returned by DFMSHsm to IGG026DU in the DFMSHsm management work element (MWE).

The values for *mwerc* are:

- 04 — IGG026DU could find no volumes in the JES3 volume pool.
- 13 — DFMSHsm 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 — DFMSHsm 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 is failed.

Application Programmer Response: The following action should be taken for the following *mwerc* return codes:

- 04 — Primary volume must be defined to DFMSHsm in a JES3 environment prior to attempting to process a JES3 C/I request.
- 13 — Determine whether the data set is migrated using the DFMSHsm LIST and FIXCDS commands. If the DFMSHsm 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 *mwerc* return codes — Consult your DFMSHsm service representative to determine the error that occurred.

Source: DFMSHsm

ARC1010I USER REQUEST FOR A MIGRATED DATA SET FAILED.

Explanation: DFMSHsm 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.

Application 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.

Application Programmer Response: Remove the patch from the startup procedure.

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.

Application 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 | HSENDCMD} 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 DFMSHsm processing of the HLIST command. Conversely, an N response will allow DFMSHsm processing of the HLIST command to complete.

Source: DFMSHsm

**ARC1040I CATALOG SEARCH INTERFACE
CANNOT BE LOADED, ABEND CODE
IS xxx, REASON CODE IS yyy**

Explanation: DFMSHsm 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: DFMSHsm function fails.

Application 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: DFMSHsm

**ARC1051I UNIT OR {VOLUME | TOVOLUME } NOT
SPECIFIED, BOTH REQUIRED**

Explanation: In a request to DFMSHsm for recall or backup command processing, either the VOLUME or UNIT parameter has been specified, but not both. In a request to DFMSHsm for recover command processing, either the TOVOLUME or UNIT parameter has been specified, but not both.

System action: The operation ends. DFMSHsm processing continues.

Application Programmer Response: Reissue the command with all the required information. See *z/OS DFSMS Storage Administration Reference* for a description of the required parameters.

Source: DFMSHsm

ARC1052I UNSUPPORTED UNIT TYPE - *unittype*

Explanation: DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Change the unit type and reissue the command. See *z/OS DFMSHsm Managing Your Own Data* for a list of the valid unit types.

Source: DFMSHsm

**ARC1055I INVALID CHARACTERS USED IN
*dsnfilter***

Explanation: A request to DFMSHsm 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.

Application 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: DFMSHsm

ARC1056I *dsname* NOT IN CATALOG

Explanation: A request was sent to DFMSHsm 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.

Application 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: DFMSHsm

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, DFMSHsm 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 DFMSHsm 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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. DFMSHsm processing continues.

Application Programmer Response: Reissue the command with a valid date. See the *z/OS DFMSHsm Managing Your Own Data* for more information about the format of the DATE parameter.

Source: DFMSHsm

**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. DFMSHsm processing continues.

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

Source: DFMSHsm

**ARC1065I MEMBER NAME NOT ALLOWED IN
DSNAME**

Explanation: DFMSHsm 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. DFMSHsm processing continues with any other data set name specified in the command.

Application Programmer Response: Reissue the command with the data set name only.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Determine if the data set should be migrated by using LISTCAT, HLST or LISTVTOC. If the data set should be migrated, then catalog the data set as being on *volser* MIGRAT.

Source: DFMSHsm

**ARC1067I MM/DD/YY DATE FORMAT NOT VALID
AFTER 1999**

Explanation: The HRECOVER command was issued before 1 January 2000 with DATE(mm/dd/yy).

System action: DFMSHsm uses the date to determine which backup version should be recovered.

Application Programmer Response: After 1999, the date must be specified as yyyy/mm/dd.

Source: DFMSHsm

**ARC1101I ERROR READING DFMSHSM
CONTROL DATA SET DURING
RECALL/RECOVER/RESTORE/DELETE**

Explanation: While DFMSHsm 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. DFMSHsm processing continues.

Application 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.

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

Source: DFMSHsm

**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. DFMSHsm processing continues.

Application Programmer Response: Issue the HLST command to determine the fully qualified data set name. Reissue the recall, recovery, delete, or alter request with the corrected data set name.

Source: DFMSHsm

**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

System action: Processing of this data set ends. DFSMShsm processing continues.

Application 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.

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

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 Guide* 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 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.

Application 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.

Application 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 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.

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.

System action: The operation ends. DFSMShsm processing continues.

Application 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: <ul style="list-style-type: none"> • 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. <p>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.</p> <p>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</p>

	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:
	<ul style="list-style-type: none"> • 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 ARC0503I 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, *xxyy*, 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. |
| 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.

Application 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.

Application 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 DFMSHSM
CONTROL DATA SET DURING
RECALL/ RECOVER/DELETE**

Explanation: While DFMSHsm 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 8 on page 442.

System action: The recall, recover, or delete operation ends. DFMSHsm processing continues.

Application 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: DFMSHsm

**ARC1110I DELETE OF MIGRATED DATA SET
FAILED**

Explanation: The migrated data set was selected for DFMSHsm 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	DFMSHsm 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 DFMSHsm 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. DFMSHsm processing continues.

Application 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 DFMSHsm storage administrator can use the FIXCDS command to display the MCDEXPDT field.

If the JES3 setup expiration date has not been reached, an authorized DFMSHsm 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: DFMSHsm

**ARC1111I UNEXPECTED EOF ON
BACKUP/MIGRATED COPY**

Explanation: During a recovery or recall operation, an unexpected end-of-file condition occurred. DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: The data set might be empty or damaged. DFMSHsm cannot recover or recall this version of the data set. Recover the next latest backup version of that data set.

Source: DFMSHsm

**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 DFMSHsm job log SYSMSG 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. DFMSHsm processing continues.

Application 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.

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 Guide.

Source: DFSMSHsm

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 SYSMSG 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.

Application 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.

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	<ul style="list-style-type: none">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 <i>z/OS MVS System Messages, Vol 6 (GOS-IEA)</i> .	

System action: The recall, recovery, or restore operation ends. DFSMShsm processing continues.

Application 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.

Application 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, 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.

Application 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.
- 20 The following *reascodes* represent internal DFMSHsm errors. All errors due to an inconsistent user request are identified in the previous *reascode* definitions.
- 22 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 DFMSHsm 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 DFMSHsm 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 DFMSHsm 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 DFMSHsm was recovering a data set. This indicates an internal DFMSHsm programming error.
- 34 A recover is to be done but an MCC record does exist. This indicates an internal DFMSHsm programming error.

System action: The recall or recovery operation ends. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1119I ERROR UPDATING DATA SET VTOC ENTRY

Explanation: During a DFMSHsm 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 DFMSHsm job log SYSMSG data set.

System action: The recovery or recall operation ends. DFMSHsm processing continues.

Application Programmer Response: If recovering a deleted VSAM data set using the DFMSHsm FROMDUMP and DUMPVOLUME parameters, a DFMSdss 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 DFMSHsm Storage Administration Guide*.

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, DFMSHsm 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: DFMSHsm

ARC1120I UNSUPPORTED DEVICE TYPE REQUESTED

Explanation: One of the following errors occurred during a recall or recovery operation:

- In a DFMSHsm 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 DFMSHsm 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 DFMSHsm was recovering a data set.

System action: The command ends. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1121I REQUESTED VOLUME FOR RECOVERY/RECALL NOT AVAILABLE

Explanation: During a DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1122I ERROR PROCESSING PASSWORD PROTECTED DATA SET, RECOVERY/RECALL/DELETE TERMINATED

Explanation: The data set specified in a DFMSHsm command is write password protected. When DFMSHsm 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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	<p>The BCDS entry was found for the data set or volume. However, one of the following occurred:</p> <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.
12	<p>A recover request was issued without specifying FROMDUMP(DUMPVOLUME(<i>volser</i>)) for a multivolume data set. A BCDS backup version was not found for the data set.</p>
	<p>A dump copy is used to restore a multivolume data set only if FROMDUMP(DUMPVOLUME(<i>volser</i>)) was specified by a DFSMShsm authorized user. If FROMDUMP(DUMPVOLUME(<i>volser</i>)) was not specified, DFSMShsm only recovers a multivolume SMS-managed data set using an</p>
16	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.
20	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.
24	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.
Application 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	<p>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:</p>
	<ul style="list-style-type: none"> • 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
- 24** RECOVER command without the NEWNAME parameter.
- Reissue the recovery command without the RCVRQD keyword.
- 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.
- Application 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.
- Application 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.

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- 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 DFMSHsm 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 DFMSHsm MVS V1R4, CAPACITYMODE(EXTENDED) is not supported.

System action: The recall or recovery operation ends. DFMSHsm processing continues.

Application 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 is available. For Reason Code 2 and DFMSHsm 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 DFMSHsm MVS V1R4, use DFMSHsm MVS V1R5 or higher for the operation.

Source: DFMSHsm

ARC1133I OLD COPY OF DATA SET EXISTS, BUT REPLACE NOT SPECIFIED

Explanation: A RECOVER or HRECOVER command was issued to DFMSHsm. 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1134I RECOVERY FAILED - ERROR SCRATCHING OLD COPY

Explanation: A RECOVER or HRECOVER command was issued with the REPLACE parameter. During DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: See the explanation for message ARC0528I or ARC0545I. Take the appropriate action.

Source: DFMSHsm

ARC1135I ERROR OPENING INPUT DATA SET DURING RECALL/RECOVERY

Explanation: DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Take the action indicated by the OPEN error message, and retry the DFMSHsm operation.

Source: DFMSHsm

ARC1136I ERROR OPENING OUTPUT DATA SET DURING RECALL/RECOVERY

Explanation: The OPEN macro was issued by DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Take the action indicated by the OPEN error message, and retry the DFMSHsm 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.

Application 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.

Application 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 18 on page 454.

System action: The recall, recovery, restore, or delete operation ends. DFSMShsm processing continues.

Application 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. 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.

Application 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 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.

Application 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.

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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.

Application 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 catalogued in an OSCVOL catalog.

System action: Processing for the data set ends. DFSMShsm processing continues.

Application Programmer Response: Follow the corrective action in the problem determination section. Resubmit the request after corrective action has been taken. If *recode* = 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 *recode* of 18: If a VSAM data set is catalogued 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: See the associated ARCO950I 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.

Application 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.

Application 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.

Application 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 DFHSM 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.

Application 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.

Application 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 ARCRDEXT 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 ARCRDEXT exit will not abnormally end (abend) again, issue a RELEASE command with the RECALL parameter. DFSMShsm runs with the ARCRDEXT volume selection routine exit.

Application 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.

Application 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.

Application 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.
- 14** The NEWNAME specified on the RECOVER command is a non-SMS-managed VSAM key range data set. DFSMShsm and DFSSMSdss 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.

Application 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.		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.
22	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.	38	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.	38	An extended format data set is filtered by ACS routines to be recovered or restored to a non-SMS-managed volume.
24	The tape volume is not mounted.	40	The data set is currently uncataloged, but the backup version is a cataloged data set.
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.	44	FROMVOLUME is specified to recover or restore an extended format data set to a non-SMS-managed volume.
28	<ul style="list-style-type: none"> • 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. 	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.
30	The recovery of the ICF catalog is directed to a volume other than the volume from which it is backed up.	48	The data set organization of the target data set differs from the data set
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		

	organization of the original data set from which the cataloged data set was backed up.		Procedures" under the topic, "Backing Up and Recovering an ICF Catalog".
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.	32	To recover the backup version, issue a RECOVER or HRECOVER command for the data set and specify the REPLACE parameter.
	System action: The recovery operation of this data set ends. DFSMShsm processing continues.	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 DFSMShsm catalogs the multivolume extended format data set during physical dump copy restore processing.
	For reason code 36, the RECOVER command ends because DFSMShsm does not recover multiple volume data sets during a volume recovery process. DFSMShsm recovers SMS VSAM and SMS non-VSAM multiple volume data sets only by a data set recover command.		
	Application 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.	36	DFSMShsm 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, BLDINDEX or similar utilities. Otherwise, you can recover using individual data set requests, such as with the RECOVER or HRECOVER data set commands.
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.		
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 DFSMShsm-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.	38	Modify the ACS filter routine to direct the extended format data set to be recovered or restored to SMS-managed volumes. DFSMShsm does not recover or restore an extended format data set to non-SMS-managed volumes.
26 or 30	See <i>z/OS DFSMShsm Storage Administration Guide</i> in the section titled, "Availability Management		

- 44** Reissue the RECOVER command without specifying the FROMVOLUME parameter. DFMSHsm does not recover or restore an extended format data set to non-SMS-managed volumes.
- 46** DFMSHsm 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 DFMSHsm 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: DFMSHsm

**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 ARC0503I gives the base cluster name being allocated. Message ARC0503I 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. DFMSHsm processing continues.

Application 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 ARC0503I.

Source: DFMSHsm

**ARC1160I ESTAE MACRO FAILURE DURING
RECALL/RECOVERY/DELETE**

Explanation: DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Inform the system programmer of the message, and examine the return code from the previous message.

Source: DFMSHsm

**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 DFMSHsm determined that DFP is not of a sufficient release level to support the DFSMSdss invocation from DFMSHsm to recall or recover

	<p>the data set. The minimum level for DFMSDss data movement support is DFP version 2.3.0.</p>
12	<p>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.</p>
	<p>System action: The recall or recovery of the data set ends. DFMSHsm processing continues.</p>
	<p>Application Programmer Response: Recall or recover the data set on a level of DFMSHsm/DFSMS that supports Large Format Sequential data sets.</p>

Source: DFMSHsm

ARC1162I DFSMSDSS NOT AT SUFFICIENT LEVEL

Explanation: The recall or recover of the data set failed because DFMSDss 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	DFMSHsm determined that it should invoke DFMSDss to restore the data set or volume from a full volume dump copy, or the FROMDUMP parameter was specified for the RECOVER command. DFMSHsm then determined that DFMSDss is not of a sufficient release level to support invocation from DFMSHsm. DFDSS 2.2.0 or a later release is required.
8	The data set was migrated or backed up using DFMSDss data movement but an insufficient level of DFMSDss 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. DFMSHsm processing continues.

Application 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 DFMSDss must be installed on the system.

Source: DFMSHsm

ARC1164I VOLUME ALLOCATION ERROR DURING RECOVERY

Explanation: An error occurred in allocating a tape under DFMSHsm 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 DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

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, DFMSHsm 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. DFMSHsm processing continues.

ARC1166I DATA SET RESTORE FAILED

Explanation: DFMSHsm has invoked DFMSDss to do a physical data set restore from a dump volume or a fast replication target volume. DFMSDss 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. DFMSHsm issues an ending message.

ARC1167I • ARC1169I

- | **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 DFMSHsm recover task ends. DFMSHsm processing continues.

- | **Application Programmer Response:** If a RECOVER command was issued, determine if a DFMSHsm incremental backup version exists for the data set by using the LIST or HLIST command. If a DFMSHsm 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.
- | DFMSHsm routes the DFMSDss 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 DFMSDss messages. DFMSDss message numbers are prefixed with ADR.

Source: DFMSHsm

ARC1167I DATA SET REFERENCED DURING VOLUME RECOVERY

Explanation: A RECOVER command was issued with the APPLYINCREMENTAL keyword. DFMSHsm 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. DFMSHsm processing continues.

Application 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 DFMSHsm 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: DFMSHsm

ARC1168I DATA FORMAT OR POSITIONING ERROR DURING RECALL/RECOVERY

Explanation: During the recall or recovery of a data set, the positioning to the DFMSHsm copy of the data set has failed. In general, this error occurs when the DFMSHsm copy of the data set is stored in 3480

single file format and the POINT macro fails to locate the first record of the DFMSHsm 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 DFMSHsm 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 DFMSHsm internal error. The specified device does not support the block ID.
8	The POINT macro has failed due to a DFMSHsm 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 DFMSHsm copy of the data set did not contain a valid common data set descriptor. The DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1169I RECALL/RECOVER FAILED DUE TO AN ERROR IN DFMSDSS

Explanation: A RECALL or RECOVER command was issued for a data set originally migrated or backed up using DFMSDss as the datamover. The DFMSDss RESTORE command was issued to move the data set. When DFMSHsm issues this message, the corresponding DFMSDss messages should be consulted. The DFMSDss 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 DFMSDss message number issued for the highest severity error encountered during DFMSDss 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 DFMSHsm 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, DFMSHsm 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 ARC0079E message for more information.

System action: This data set operation fails. DFMSHsm processing continues.

Application 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)*.

System programmer response: When the DFSMSdss message requests the operation be retried using the NOPACKING option, issue the RECALL or RECOVER command with DFDSSOPTION(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.

Source: DFMSHsm

ARC1170I DFSMSHSM ENCOUNTERED AN SMS-RELATED ERROR WHILE PROCESSING A DATA SET

Explanation: During the recall, delete, recovery, or restore of a data set, DFMSHsm 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 DFMSHsm 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

02

IGD306I— UNEXPECTED ERROR DURING INTEXPDT PROCESSING, RETURN CODE 8, REASON CODE 1017, the problem may be the data set expiration date in the DFMSHsm MCC record for a recover function or the data set expiration data in the DFMSHsm MCD record for a recall function.

An error occurred while attempting to allocate space on the target volume for the recall or recovery of a non-VSAM data set. Either DFMSHsm encountered an error attempting to invoke the VTOC/Data Set Services' (VDSS) create space function or VDSS had a failure creating the space. 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 DFMSHsm 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.	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.
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: <ul style="list-style-type: none"> • 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.	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.
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.	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.
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.	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.
10	An SMS-managed data set is not eligible for automatic recall directly from a VSAM OPEN call. One of the following situations occurred: <ul style="list-style-type: none"> • 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.	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 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. DFSMSShsm processing continues.	05	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.
Application 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.	08	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.
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. 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.	06	Do one of the following: <ul style="list-style-type: none">• Reissue the request when the SMS subsystem is active.• Reissue the request with the FORCENONSMS parameter specified. Do one of the following: <ul style="list-style-type: none">• 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. 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		07	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		10	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		13	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 DFMSHsm 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 DFMSHsm 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 DFMSHsm 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Use the HSENDCMD command or see the storage administrator for authorization.

Source: DFMSHsm

ARC1172I DFSMSHSM ENCOUNTERED AN SMS-RELATED ERROR WHILE SELECTING A TARGET VOLUME

Explanation: During the recovery or restore of a data set, DFMSHsm 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:

Reason Code	Meaning
1	SMS is not installed in the system. DFMSHsm 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 DFMSHsm is running. A DFMSHsm-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. DFMSHsm 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 DFMSHsm-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. DFMSHsm 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. After the volume being selected has been determined to be an SMS-managed volume (by reading the volume VTOC entry), DFMSHsm 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.	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.
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 retry may be successful if the GETMAIN failure occurs while DFSMShsm is performing many simultaneous activities which require large amounts of virtual storage.
	A DFSMShsm authorized user may resubmit the request with the FORCENONSMS parameter to recover the data set to non-SMS-managed storage.		System action: The recovery or restore processing ends. DFSMShsm processing continues.
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.		Application Programmer Response: Perform the action that corresponds to the reason code you received.
13	The device type of the volume retrieved from the SMS storage group definition is not supported by DFSMShsm.		System programmer response: To aid in problem resolution, see the information about maintaining DFSMShsm control data sets in <i>z/OS DFSMShsm Storage Administration Guide</i> .
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.		Source: DFSMShsm
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.		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.
	Contact the storage administrator to determine why the volume is not mounted.		System action: The RECOVER command ends. DFSMShsm processing continues.
			Application Programmer Response: Reissue the command, specifying the base cluster name.
			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.

Application 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.

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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.

Application 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.

Application 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.

Application 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 ARC0503I 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.

Application Programmer Response: Review the allocation error codes contained in the preceding ARC0503I 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
4	The data set was migrated or backed up using DFHSM 2.6.0 but an insufficient level of DFSMShsm is installed to recall or recover, the data set. DFHSM 2.6.0 or a later release is required.
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.

Application 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.

System action: Processing of the data set ends. DFSMShsm processing continues.

Application 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.

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.

Application 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.

Application 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.

Application 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.

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- 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.
- 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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 Guide* 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.	32
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.	34
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.	36
8	An error has occurred in allocating the dump VTOC copy data set.	38
10	The DUMPVOLUME subparameter has been specified for a volume restore, and the specified dump volume does not contain valid data.	40
14	An error has occurred in reading the backup or dump VTOC copy data set.	44
16	An error has occurred in opening the dump VTOC copy data set.	48
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.	50
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.	52
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.	54
	DUMPCCLASS and DUMPVOLUME parameters has not been specified, and no dump copy is found that has a retention date other than NOLIMIT.	
	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.	
	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.	
	No VTOC copy data set entry is found for the requested data set.	
	The DUMP generation that has been specified is not found or is invalid.	
	The DATE parameter has been specified, and no eligible dump copy is found that meets the specified date requirements.	
	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.	
	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.	
	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.	
	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.	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.
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.	DFSMSdss does not support data set restore for a VSAM data set currently cataloged in a non-ICF catalog.
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.	System action: The RECOVER command ends. DFSMShsm processing continues.
60	An error has occurred in establishing an ESTAE environment.	Application 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.
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.	For <i>reascode</i> 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.
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.	For reason code 52, specify or correct the FROMVOLUME parameter, or specify or correct the SOURCEVOLUME parameter and reissue the command.
70	DFSMShsm cannot restore an integrated catalog facility (ICF) catalog data set.	For reason code 62, to restore a data set with the NEWNAME option, rename the existing data set with the original name.
72	DFSMSdss does not support key range VSAM data sets.	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.
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	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 <i>z/OS DFSMShsm Storage Administration Guide</i> , in section, "Availability Management Procedures" under, "Backing Up and Recovering an ICF Catalog".
		For reason code 64, reissue the RECOVER command.
		For <i>reascode</i> 72 or 76, reissue the RECOVER command without specifying the FROMDUMP keyword if an incremental backup version exists for the data set.
		For <i>reascode</i> 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: DFMSHsm

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 DFMSHsm (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. DFMSHsm 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: DFMSHsm

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. DFMSHsm cannot delete the RACF profiles for the VSAM cluster identified in the preceding ARC1001I message.

System action: The delete operation ends. DFMSHsm processing continues.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Source: DFMSHsm

ARC1192I TERMINATING DFSMSHSM RECALL/RECOVERY WAIT REQUEST, DFSMSHSM SHUTTING DOWN

Explanation: DFMSHsm 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: DFMSHsm ends.

Application Programmer Response: Restart DFMSHsm and resubmit the request.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: Take the corrective action according to the reason code in message ARC1001I.

Source: DFMSHsm

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: DFMSHsm ends.

Application Programmer Response: See the Programmer Response for the specific messages that have been issued prior to the ARC1001I RC94 message. An ARC0503I will be issued for an allocation error.

Source: DFMSHsm

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.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application 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 DFMSDss message ADR367E during volume restore, see topic "Volume Recovery and Restore Considerations" under, "Other Considerations for Availability Management" in the *z/OS DFMSHsm Storage Administration Guide* for information to aid in problem resolution.

Source: DFMSHsm

ARC1197I DFMSHSM 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 DFMSHsm job.

The user can detect the error using the DFMSHsm 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 DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1198E TAPE(S) CONTAINING NEEDED DATA NOT AVAILABLE.

Explanation: The tape volumes needed for the DFMSHsm function cannot be allocated. This message may be proceeded by message ARC1001I or ARC1020I containing the data set name.

System action: All DFMSHsm 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.

Application 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: DFMSHsm

ARC1199I ERROR DURING RECALL/RECOVERY

Explanation: An error was detected while DFMSHsm 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 DFMSHsm CDS record that describes the data set indicated a source volume device type that is not supported by DFMSHsm.

System action: The recall or recovery operation ends. DFMSHsm processing continues.

Application 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.
- 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

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.

Application 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.

Application 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 MOVEABLE

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.

Application 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.		reading or writing the DFMSHsm migration control data set level 2 (L2CR) record.
6	SDSP serialization checking indicated that all SDSPs were in use.	12	No DASD level 2 volumes are available for association to a key range because there were 2 errors in reading or writing DFMSHsm migration control data set volume (MCV) records. See the associated ARC0184I or ARC0187I message for the specific record. DFMSHsm attempted to associate a level 2 volume to a key range for one of the reasons explained in <i>reascode 8</i> .
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 DFMSHsm 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.		If tape migration was being used, there are no tape level 2 volumes available because there were 2 errors in reading or writing DFMSHsm migration control data set volume (MCV) records.
9	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.	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 DFMSHsm. It is possible that the device type in the migration control data set volume (MCV) record is also incorrect.
10	Error reading DFMSHsm MCV record during SDSP serialization checking. See the associated ARC0184I message to determine the specific read failure.	20	The allocation of the level 2 volume failed. When there is a DASD level 2 volume associated to a key range, DFMSHsm 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, DFMSHsm disassociates the DASD volume from the key range and associates another DASD level 2 volume. DFMSHsm tried to allocate the new volume and the allocation failed again. If tape migration was being used, DFMSHsm 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,
	If tape migration was being used, there are no tape level 2 volumes available because of an error in		

**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 DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

**ARC1207I OBTAIN ERROR ON DATA SET
EXTENSION VTOC ENTRY DURING
MIGRATION**

Explanation: While DFMSHsm 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 DFMSHsm 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

DFMSHsm detected an inconsistent size calculation as a result of data obtained from the data set extension VTOC entry. The data set VTOC entry or data set extension VTOC entry for this data set may be damaged.

System action: The space management operation ends. DFMSHsm processing continues.

Application 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: DFMSHsm

**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 DFMSHsm-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.	
Application 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 DFMSDss 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 Guide*.

System action: Migration processing fails for the data set. DFSMShsm processing continues.

Application Programmer Response: Determine why so many migration copies are being created at the same time with nearly identical names.

Source: DFSMShsm

ARC1210I CANNOT MIGRATE VSAM DATA SET WITH OUTSTANDING MIGRATION RECORD

Explanation: The data set has an outstanding MCA record. DFSMShsm failed to delete the record and cannot migrate the data set.

System action: The migration operation ends. DFSMShsm processing continues.

Application 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: DFSMShsm

ARC1211I ERROR CREATING/UPDATING RECORD IN MIGRATION CONTROL DATA SET

Explanation: While DFSMShsm 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. DFSMShsm processing continues.

Application 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 DFSMShsm job log SYSMSG data set. If *reascode* is 20, an internal DFSMShsm error occurred.

Source: DFSMShsm

**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.

Application 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 DFMSHsm 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: DFMSHsm

**ARC1213I ERROR UPDATING SYSTEM CATALOG
DURING MIGRATION**

Explanation: While DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

**ARC1214I ERROR SCRATCHING DATA SET
DURING MIGRATION**

Explanation: During a DFMSHsm 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 <i>dsname</i> was scratched, but the volume deallocation failed.
8	The MVT entry could not be found or built for the volume. The <i>dsname</i> scratch failed.
12	The volume allocation failed. The <i>dsname</i> 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. DFMSHsm processing continues.

Application Programmer Response: Notify the system programmer to take the appropriate corrective action.

Source: DFMSHsm

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 DFMSHsm restriction that such partitioned data sets will not migrate.

System action: The command ends. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC1216I ERROR READING PRIMARY COPY DURING MIGRATION

Explanation: While DFMSHsm 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 DFMSHsm 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:

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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1217I I/O ERROR READING PDS DIRECTORY DURING MIGRATION

Explanation: During a DFMSHsm 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.
nn	Error other than an empty data set directory.

System action: The space management for the data set ends. DFMSHsm processing continues.

Application 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 DFMSHsm catalogued procedure or in the DFMSHsm job log SYSMSG data set. Respond to the associated error message.

Source: DFMSHsm

ARC1218I I/O ERROR WRITING MIGRATED COPY

Explanation: While DFMSHsm 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.

Application 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 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.
- 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.

Application 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

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.
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.	28	The data set has retained locks.
5	The current level of DFMSHsm cannot migrate an extended format data set (sequential striped or compressed). A minimum of DFMSHsm 1.1.0 is required for sequential striped data sets, and a minimum of DFMSHsm 1.2.0 is required for extended format compressed data sets.	30	The data set is RLS inconsistent.
6	An attempt was made to migrate a Large Format Sequential data set on a level of DFMSHsm that does not support them.	32	The data set is empty, SMS-managed, multiple volume, and physical sequential with a block size of zero.
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.	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.
12	The data set is a non-SMS-managed multiple volume data set. This type of data set is not supported.	98	An attempt was made to migrate a data set from ML1 to ML2, but the data set was either not cataloged or was cataloged with a volume serial of other than MIGRAT.
16	The data set is an SMS-managed multiple volume non-VSAM data set, but the datamover is DFMSHsm. 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.		System action: The migration operation of the data set ends. DFMSHsm processing continues. Application 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 <i>reascode</i> are:
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.	1	Reascode Meaning Specify DFSMSdss as the datamover for extended format data sets.
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.	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.
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.	2	Move the data set to an SMS-managed volume.
26	The DSCB for this migrated data set indicates DS1LSTAR=0, which should not occur for a migrated data set.	4	The storage administrator can correct the catalog and retry the command.
		5	No action required.
		6	Retry migration on DFMSHsm 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.
- 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.
- 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.

Application Programmer Response: If a volume space management request has been issued, correct the invalid parameter and retry the operation.

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.

Application 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.

Application 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.

Application Programmer Response: Notify the storage administrator.

Source: DFSMShsm

**ARC1225I ERROR READING DFMSHSM
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 8 on page 442.

System action: The migration operation for the data set ends. DFSMShsm processing continues.

Application 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 catalogued 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 DFMSHSM 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.

Application 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.

Application 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.

Application 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.

System action: Processing of the data set fails. DFSMSHsm processing continues.

Application 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.

Application 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.

Application 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.

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.

Application 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.

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- 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.

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.

Application 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.

Application 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.

Application 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.

Application 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.

System action: The migration operation of the data set ends. DFSMShsm processing continues.

Application 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. DFMSHsm processing continues.

Application Programmer Response: Change the security option for DFMSHsm 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 DFMSHsm.

Source: DFMSHsm

ARC1239I ERROR PROCESSING RACF PROTECTED DATA SET, MIGRATION TERMINATED

Explanation: During a migration operation of DFMSHsm, 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 18 on page 454.

System action: The migration operation of the data set ends. DFMSHsm processing continues.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application 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: DFMSHsm

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.

Application Programmer Response: None.

Source: DFMSHsm

ARC1242I ERROR READING JFCB FOR PRIMARY COPY DURING MIGRATION

Explanation: During a DFMSHsm 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 DFMSHsm job log SYSMSG 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. DFMSHsm processing continues.

Application Programmer Response: Respond to the data management error message as indicated, and retry the operation.

Source: DFMSHsm

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 ARC0503I 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.

Application 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 DFMSHsm to remove the full indication associated with the volume. This allows DFMSHsm to select the volume as a target for migration.

Source: DFMSHsm

ARC1245I DATA SET NOT ELIGIBLE FOR MIGRATION	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.
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 <i>reascode</i> and its meaning are:		Note: Reason codes below 90 are not produced during interval migration regardless of the patch described above.
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.	90
2	The SETMIG command restricts the data set by initial characters of the data set name.	91
3	The SETMIG command restricts the data set by the full data set name.	92
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.	93
5	The management class attribute COMMAND-OR-AUTO-MIGRATE=COMMAND restricts migration of this SMS-managed data set.	94
6	The management class attribute COMMAND-OR-AUTO-MIGRATE=NONE restricts migration of this SMS-managed data set.	95
7	The setting of the backup-while-open bits restricts migration of this SMS-managed data set.	96
	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".	97
		98
		99

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
 - DFHSM DATASETSERIALIZATION
 - 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 (ARCMMEXT) indicates that the data set should not be migrated.
 - 116 The ESTAE setup for the data set migration exit (ARCMDEXT) failed.
- 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.
- Application Programmer Response:** Perform the action that has been assigned to the *reascode* you have received.
- | 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.	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.
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.	100 No action required. The data set is ineligible for reconnection until migrated and recalled again.
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.	101 No action required. The data set is ineligible for reconnection until migrated and recalled again.
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.	102 No action required. Reconnection not permitted by the storage administrator.
95	The data set can only be migrated by a data set migration command (HMIGRATE or MIGRATE).	103 No action required. MIGRATE CONVERT does not use reconnection because an immediate RECALL is scheduled.
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.	104 Remove the option forcing migration to ML1 if reconnection to an ML2 copy is desired.
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.	105 No action required. ARCMDEXT installation exit has disallowed reconnection.
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 <i>z/OS DFSMShsm Storage Administration Guide</i> .	106 No action required. The SETSYS TAPEMIGRATION (RECONNECT(ML2DIRECTONLY)) command was not overridden by the ARCMDEXT installation exit.
99	No response required. DFSMShsm	107 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
296	z/OS V1R8.0 MVS System Messages, Vol 2 (ARC-ASA)	108 No action required. The data set remains eligible for reconnection when the volume it resides on is next space managed.
		109 Increase the <i>reconnectdays</i> 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 (ARCMMEEXT) must be updated so that it does not exclude the data set from migration.
- 116** Contact the IBM Support Center.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Create the OCDS and restart DFMSHsm. For details on creation of the OCDS, see *z/OS DFMSHsm Implementation and Customization Guide*.

Source: DFMSHsm

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.

Application Programmer Response: Check the preceding messages and the dump, if applicable, to determine the cause.

Source: DFMSHsm

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 (40). 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.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm removal of RACF protection.

System action: The deletion of the record fails. DFMSHsm processing continues.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: See message RAC0503I 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: DFMSHsm

ARC1251I ANOTHER DFMSHSM FUNCTION ACTIVE FOR DATA SET, MIGRATION REJECTED

Explanation: A migration request is rejected because another DFMSHsm 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.
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. DFMSHsm processing continues.

Application Programmer Response: Retry the operation when the data set is available.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Retry the migration operation. If the problem occurs again, notify the storage administrator.

Source: DFMSHsm

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.

DFMSHsm 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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 (abended). DFMSHsm 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 DFMSHsm RELEASE command.

System action: DFMSHsm processing continues without the migration function.

Operator response: If you determine that the DFMSHsm 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, DFMSHsm might delete data sets that the exit would have kept.

Application Programmer Response: Correct the cause of the abend, and relink the exit module. The exit can be reactivated with a SETSYS command.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application 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: DFMSHsm

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 DFMSHsm 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. DFMSHsm processing continues.

Application 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 DFMSHsm job log SYSMSG data set.

Source: DFMSHsm

ARC1257I I/O ERROR UPDATING DSCB

Explanation: During a DFMSHsm 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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Retry the space management operation. If the problem still exists, notify the storage administrator.

Source: DFMSHsm

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.
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 <i>not</i> 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.

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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.	determine if the data set being processed is in the APF list.
16	A component of the VSAM data set is open for output.	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.
18	A LOCATE error occurred for the data or index component in the VSAM base cluster.	62 An error occurred while invoking APF for determining if a data set is in the APF list.
19	A LOCATE error occurred for a path component in the VSAM base cluster.	64 The system list of APF libraries is not available.
20	The data set name is a VSAM component name instead of a cluster name.	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.
28	A LOCATE error occurred for the VSAM alternate index (AIX) cluster.	System action: The data set is not space managed. DFSMShsm processing continues.
38	A LOCATE error occurred for the data or index component in a VSAM AIX cluster.	Application Programmer Response: If a LOCATE error occurred, update the catalog entry, and retry the command. If <i>reascode</i> is 40, load data in all the components. If <i>reascode</i> is 57, contact your storage administrator or the IBM Support Center for help. If <i>reascode</i> is 89, DFSMSdss needs to be the datamover. In order to use DFSMSdss as the datamover, do not use the "PATCH .DMVST.+0" command.
39	A LOCATE error occurred for a path component in the VSAM AIX cluster.	Source: DFSMShsm
40	A least one component of the VSAM data set is empty. The VSAM data component had no data for IDCAMS to move.	<hr/> ARC1259I DBA/DBU FAILED - ERROR DELETING DATA SET
48	A LOCATE error occurred for the data set or its alias.	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.
52	Two or more directory entries for a partitioned data set had the same TTR.	System action: DFSMShsm processing continues.
53	A directory entry in a partitioned data set has an invalid length value.	Operator response: An associated ARC0734I message contains the return code from the delete request. Take the action indicated by the return code from delete.
54	An imbedded record has a zero or negative length. The member name is reported in the associated ARC0901I message with module ARCMPPDS.	Source: DFSMShsm
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.	<hr/> ARC1260I ESTAE MACRO FAILURE DURING MIGRATION
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.	Explanation: DFSMShsm attempted to set up an ESTAE environment, but the MVS function was unsuccessful during a migration process.
58	The authorized program facility (APF) is not available to DFSMShsm to	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.
		Application Programmer Response: Inform the

system programmer of the message and examine the return code from the previous ARC0304I message.

Source: DFMSHsm

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 DFMSHsm 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 DFMSHsm control. Another volume is selected, and DFMSHsm processing continues.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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'00yyddds'. 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 MCDDL or the MCDDLC is bad.
2	The SDATADAT field is bad.
4	The MCDEXPDT field is bad.

System action: The data set is not processed.

DFMSHsm processing continues.

Application Programmer Response: Perform the action assigned to the *reascode* you received:

Reascode	Meaning
0	Use the FIXCDS command to patch the MCDDL or MCDDLC 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: DFMSHsm

ARC1264I ERROR CLOSING INPUT DATA SET DURING MIGRATION

Explanation: During the migration of a data set, an error has occurred when DFMSHsm 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, DFMSHsm 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. DFMSHsm 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. DFMSHsm 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.		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.
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.	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.
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.	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.
	System action: The data set is not successfully migrated. DFSMShsm processing continues.	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.

Application 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

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.

Application 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 DFMSHsm 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: DFMSHsm

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 DFMSHsm volume function is using it.

System action: The command ends. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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, DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

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 (abended) and DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC1269I ERROR ON SYNCDEV DURING MIGRATION

Explanation: During migration of a data set to a 3480 single-file format tape volume, DFMSHsm 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.

Application 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	9	An error occurred while locating the 'minus <i>n</i> th' GDG when checking the management class attribute #GDG-ELEMENTS-ON-PRIMARY.
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.	10	An error occurred while deleting an SMS-managed data set.
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.	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.
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.	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.
4	SMS is either not active or not installed.	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.
5	An error occurred while obtaining the management class definition for the data set.	14	A failure occurred retrieving catalog information. See the associated ARC0950I message for the return code and reason code from Superlocate.
6	An error occurred while updating the catalog entry for the data set.	16	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:
7	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.	
	Application Programmer Response: Perform the action assigned to the <i>reascode</i> 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

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.

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9	The volume containing the data set to be migrated is in SMS initial status.	Using Data Sets for further information on the CAMLIST OBTAIN macro.
11	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.	See the preceding ARC0935I message in the command activity log for the specific failing code from the subsystem interface (SSI) of SMS.
13	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.	Determine why the SMS volume definition and volume VTOC entry do not agree. Correct the inconsistency and issue the MIGRATE command.
15	The device type of the volume that has been retrieved from the SMS storage group definition is not supported by DFSMShsm.	See the preceding ARC0184I message in the appropriate activity log for the specific I/O failing code.
19	An error has occurred while reading or writing a migration control data set (MCDS) volume record (MCV).	See the preceding ARC0305I message for the specific failing code.
52	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.	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.

Application 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. DFMSHsm processing continues.

Application Programmer Response: Reissue the command after issuing the RELEASE MIGRATION command.

Source: DFMSHsm

ARC1276I ERROR LINKING TO DFSMSDSS DURING MIGRATION

Explanation: A request sent to DFMSHsm 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. DFMSHsm backup and migration functions are held.

Application Programmer Response: Review the abend code of the LINK macro.

Source: DFMSHsm

ARC1277I ERROR ALLOCATING DUMMY DD DURING MIGRATION

Explanation: DFMSHsm is migrating a data set using DFSMSdss data movement. A request sent to DFMSHsm 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 ARC0503I message. The data set name is contained in the preceding ARC1001I or associated ARC0734I message.

System action: The migration of the data set ends. DFMSHsm processing continues.

Application Programmer Response: Review the allocation error codes contained in the preceding ARC0503I message.

Source: DFMSHsm

ARC1278I DATA SET NOT CATALOGED IN AN ICF CATALOG

Explanation: A request was sent to DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Catalog the data set in an ICF catalog.

Source: DFMSHsm

ARC1280I MIGRATION FAILED - DATA SET IS IN NEED OF BACKUP

Explanation: DFMSHsm attempted to migrate a data set 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 of the data set ends. DFMSHsm processing continues.

Application 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.

Source: DFMSHsm

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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Notify the storage administrator to isolate the cause of the error.

Source: DFMSHsm

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

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migration level 2 volume is not supported.

System action: Migration of this data set fails. DFSMShsm processing continues.

Application 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.
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.

Application Programmer Response: Determine the cause of the error and take the appropriate corrective action.

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.

Application 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.

Application 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.

Application 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.

Application 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 ARC0503I 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.
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.

Application 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 ARC0503I 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.

Application 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: DFMSHsm

ARC1292I TERMINATING DFMSHSM MIGRATION WAIT REQUEST, DFMSHSM SHUTTING DOWN

Explanation: DFMSHsm 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: DFMSHsm ends.

Application Programmer Response: Restart DFMSHsm and resubmit the request.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Take the action indicated by the OPEN error message and retry the operation.

Source: DFMSHsm

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 EOF.

System action: The migration of the data set ends. DFMSHsm processing continues.

Application Programmer Response: Determine why the operator cannot mount the tape volume. When the problem is resolved, retry the migration of the data set.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Access the VTOC to be sure it is usable.

Source: DFMSHsm

ARC1297I DFMSHSM 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 DFMSHsm catalogued procedure. There is a SNAP dump that has been associated with this error in the SYSOUT data set for the DFMSHsm 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.

Application 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
2	The data set is VSAM. One of the following is true: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.
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.

Application 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.

Source: DFSMShsm

ARC1302I CATALOG LOCATE ERROR DURING BACKUP

Explanation: During a DFSMShsm 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
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4	The required catalog does not exist or it is not open.	8	The data set VTOC entry was not found in the VTOC of the specified volume.
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	A permanent I/O error was encountered, or an invalid data set VTOC entry was found during the processing of the specified volume.
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	There was an invalid work area pointer.
16	A data set exists at other than the lowest index level specified.		System action: The backup operation ends. DFSMShsm processing continues.
20	There was a syntax error in the name.		Application Programmer Response: If <i>reascode</i> in message ARC1001I is 4, correct the problem, and issue a command to start the backup. If <i>reascode</i> is 8 or 12, notify the system programmer to take corrective action. If <i>reascode</i> is 16, notify the storage administrator to take corrective action.
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.		Source: DFSMShsm
28	The request was for a LOCATE by TTR, which is an invalid function.		<hr/> 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.
			Application 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

ARC1303I OBTAIN ERROR READING DATA SET VTOC ENTRY DURING BACKUP

Explanation: While DFSMShsm 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.

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.

Application 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.

Application 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.

Application 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 DFMSHsm.
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 DFMSHsm has requested. In an SMS environment, the data set is allocated to SMS-managed storage.
System action: The backup operation ends. DFMSHsm processing continues.	
Application Programmer Response: Reason codes received in message ARC1001I.	
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 DFMSDss and less than 64K tracks of data are actually in use, try backing up the data set using DFMSHsm as the data mover if the DFMSHsm 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 DFMSHsm-Owned Data Sets to Non-SMS-Managed Storage" under the section, "Specifying Commands that Define Your DFMSHsm Environment" in <i>z/OS DFMSHsm Implementation and Customization Guide</i> , for an explanation on coding the storage class routine.

Source: DFMSHsm

ARC1309I ERROR RENAMING BACKUP COPY

Explanation: In backing up a data set, DFMSHsm has been unable to create a backup version of a name that does not exist. In creating the backup version name, DFMSHsm 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 DFMSHsm Storage Administration Guide*, for a more detailed explanation on how to create the backup version name.

System action: Backup processing for the data set fails. DFMSHsm processing continues.

Application Programmer Response: Determine why backup versions are being created at the same time with identical names.

Source: DFMSHsm

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.

Application Programmer Response: See the message associated with the ending of the volume backup. These messages are ARC0703I, ARC0712I, and ARC0733I.

Source: DFMSHsm

ARC1311I ERROR CREATING OR UPDATING RECORD IN DFMSHSM CONTROL DATA SET

Explanation: An error occurred while DFMSHsm was creating a new entry in the DFMSHsm 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 8 on page 442.

System action: The operation ends. DFMSHsm processing continues.

Application 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 DFMSHsm job log SYSMSG data set. If *reascode* is 20, an internal DFMSHsm error occurred.

Source: DFMSHsm

**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, DFMSHsm 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. DFMSHsm processing continues.

Application 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: DFMSHsm

**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 LOGCALEND 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.

Application Programmer Response: Re-enter the command with consistent parameters.

Source: DFMSHsm

**ARC1315I CANNOT BACK UP PDS WITH MORE
THAN 1 NOTELIST IN MEMBER**

Explanation: DFMSHsm 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. DFMSHsm will not back up a PDS with more than one note list in any member user TTRs.

System action: The command ends. DFMSHsm processing continues.

Application Programmer Response: Use some other method of backup, if this PDS must be backed up.

Source: DFMSHsm

**ARC1316I ERROR READING PRIMARY COPY
DURING BACKUP**

Explanation: While DFMSHsm 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.

If an I/O error has occurred, an access method or hardware error message associated with this message can be found in the DFMSHsm 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 DFMSHsm 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

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length. See previously issued message ARC0901I for the member name.

System action: The backup operation ends. DFSMShsm processing continues.

Application 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.

Application Programmer Response: There may be an I/O error message associated with this problem in the data set defined in the DFSMShsm catalogued 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 for Catalogs*

System action: The backup operation ends. DFSMShsm processing continues.

Application 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.

Application 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 catalogued 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.

System action: The backup operation for the data set ends. DFSMShsm processing continues.

Application 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 Migration*, for a list of supported devices.

System action: The backup operation ends. DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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 8 on page 442.

System action: The backup operation ends. DFSMShsm processing continues.

Application 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.

Application 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

**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 catalogued.

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). 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.

System action: Processing of the data set fails. DFSMShsm processing continues.

Application 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.

Application Programmer Response: Reissue the command with the VOLUME parameter specified.

Source: DFSMShsm

ARC1331 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.

Application 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.

Application 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 Guide*.

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.

Application 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.	16	backup-while-open processing, but DFSMShsm is the datamover.
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.	17	An abend or error occurred and cleanup was not completed before continuing. A backup version should be successfully created during the next backup.
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.	18	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.
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:	90	Backup of this data set was bypassed because of a previous error. A backup version should be successfully created during the next backup.
	<ul style="list-style-type: none"> • 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. 	91	The management class attribute AUTO BACKUP = N prevents backup of the data set.
		92	The backup installation-wide exit (ARCSAEXT) indicates the data set should not be processed.
		93	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.
		94	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.
		95	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.
12	The backup-while-open candidate data set is not available to be backed up at the time of the request.	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)
14	The data set is eligible for	95	was specified.
			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.	6	Re-try backup on a level of DFSMS/DFSMShsm that does support large format sequential data sets.
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.	8	If a BACKDS or HBACKDS command is failing because the user is not authorized, perform one of the following:
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.	12	<ul style="list-style-type: none"> • 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.
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.	14	Retry the backup operation when the data set is available, for example, when the reorganization of a data set completes.
	System action: The BACKUP command processing of the indicated data set ends. DFSMShsm processing continues.	16	Specify the DFSMSdss parameter on the SETSYS DATAMOVER command.
	Application Programmer Response: Perform the action which corresponds to the reason code you received. The values for <i>reason-code</i> are:	17	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.
		18	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.
1	Specify DFSMSdss as the datamover for extended format data sets.	90	None.
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.	91	If the data set should be considered eligible for backup, it needs to be associated with a management class defined with AUTO BACKUP = Y.
2	See the system administrator to bring the data set under SMS management.	92	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.
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.	93	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.
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.		No response required. DFSMShsm processes the VSAM data set when it encounters the data set VTOC entry for the base data object.

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	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: <ol style="list-style-type: none">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: <ol style="list-style-type: none">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.

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.

Application 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.

Application 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.

Application 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. DFMSHsm processing continues.

Application Programmer Response: Change the security option for DFMSHsm 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 DFMSHsm.

Source: DFMSHsm

ARC1339I ERROR PROCESSING RACF PROTECTED DATA SET, BACKUP TERMINATED

Explanation: During a DFMSHsm 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 18 on page 454.

System action: The backup operation ends. DFMSHsm processing continues.

Application 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 DFMSHsm job log SYSSMSG data set. Respond to the associated message.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application 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 DFMSdss is not installed, the dump request is invalid. If the dump function is desired, DFMSdss must be a Version 2, Release 2.0 or subsequent releases.

Source: DFMSHsm

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.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm job log SYSSMSG data set. Message ARC1001I precedes this message, identifying the data set name in question.

System action: The backup command processing ends. DFMSHsm processing continues.

Application Programmer Response: Respond to the data management error message as indicated, and retry the command.

Source: DFMSHsm

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 DFMSHsm job log SYSSMSG data set.

System action: The backup command processing ends. DFMSHsm processing continues.

Application Programmer Response: Retry the backup command. If the problem still exists, notify the storage administrator.

Source: DFMSHsm

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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

Explanation: The ARCBDEXT exit for backup command volume processing abnormally ended (abended). 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. 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.

Application 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.

Application 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.

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- 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.
- 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.

Application 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.

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.

Application 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:

Retcode	Meaning
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 ARCPMPDS.
55	Data set backup to DASD is not allowed.
56	Data set backup to TAPE is not allowed.

System action: The data set is not backed up. DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC1359I DATA SET BACKUP COMMAND FAILED

Explanation: CC REQUIRED was specified on the data set backup command and the user was not RACF authorized to the STGADMIN.ADR.DUMP.CNCURRNT profile.

System action: DFMSHsm processing continues.

Application Programmer Response: Reissue the command without specifying CC or obtain proper authority to STGADMIN.ADR.DUMP.CNCURRNT before reissuing the command.

Source: DFMSHsm

ARC1360I ESTAE MACRO FAILURE DURING BACKUP

Explanation: DFMSHsm 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.

Application Programmer Response: Examine the return code from the previous ARC0304I message, and take appropriate action based on that return code explanation.

Source: DFMSHsm

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 DFMSHsm data.

System action: The tape volume specified in the previous ARC0120I message is not added to DFMSHsm control. DFMSHsm processing continues.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC1363I VOLUME DEALLOCATION ERROR DURING BACKUP

Explanation: An error was encountered during the backup process in deallocating a volume under DFMSHsm control.

System action: Any processing that requires the volume in error will not occur. DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm 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, DFMSHsm 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. DFMSHsm 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. DFMSHsm 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

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- 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.
- Application 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
- 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.
- 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.

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.

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.

Application 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.

Application 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 (abended) 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.

Application 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.

Application 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:
 - 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.

Application 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 for Catalogs* 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.

Application Programmer Response: Use the HSENCMD 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 for Catalogs* 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.

Application 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 CAMLST 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

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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.

Application 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.

Application Programmer Response: Reissue the command after the operator issues a RELEASE BACKUP or RELEASE DUMP command.

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.

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.

Application 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 ARC0503I 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.

Application Programmer Response: Notify the storage administrator. The storage administrator should review the ARC0503I message and its dynamic allocation codes to determine the type of failure and possible causes.

Source: DFSMShsm

ARC1378I UNCATALOGED DATA SET COULD NOT BE PROCESSED FOR BACKUP

Explanation: A request sent to DFSMShsm to back up an uncataloged data set failed because DFSMSdss was the data mover. 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.

The values for *reason-code* are:

- 0** User specified *volser* and unit *unitype* on the BACKDS or HBACKDS command which indicates backup of an uncataloged data set.
- 4** Data set is not cataloged.
- 8** Data set is cataloged, but not in an integrated catalog facility (ICF) catalog.

System action: Backup command processing of this data set ends. DFSMShsm processing continues.

Application 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.

Application 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

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.

Application 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 DFMSHsm (IDCAMS) is specified as the datamover. When a data set is recovered, the associated keyrange will be removed.

System action: The backup operation ends. DFMSHsm processing continues.

System programmer response: The data set can be successfully backed up and recovered without losing the keyranges by using DFMSDss as the datamover. In order to use DFMSDss as the datamover, do not use the "PATCH .DMVST.+0" command.

Source: DFMSHsm

ARC1386I DFSMSHSM SHUTDOWN WAS ISSUED WHILE DATA SET BACKUP WAS WAITING FOR A TAPE MOUNT

Explanation: DFMSHsm 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.

Application Programmer Response: Reissue the BACKUP after DFMSHsm is restarted.

Source: DFMSHsm

ARC1387I A DISCREPANCY WAS FOUND IN THE DATA SET VTOC ENTRY

Explanation: DFMSHsm 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.
- 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. DFMSHsm processing continues.

Application 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: DFMSHsm

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, DFMSHsm 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 DFMSHsm. After correcting these problems, either release data set backup or change the data set backup SETSYS values so that DFMSHsm uses new values for the number of allowed tasks.

Source: DFMSHsm

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.

Application 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.

Application 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 EOF tape mount request was refused.

System action: The backup operation ends.

Application 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 SDSP 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. |

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- 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.
- 24 Error reading MCP record.
- 26 Error updating MCP record.
- 52 GETMAIN error.
- 400 Invalid input index.

System action: BACKVOL command processing fails. DFSMShsm processing continues.

Application 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 catalogued 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.

Application 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.

Application 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.

Application 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

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.

Application 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 PLEXNAME = *hsmplex_name*, PROMOTE PRIMARYHOST = {YES | NO}, PROMOTE SSM = {YES | NO}, COMMONQUEUE RECALL BASE NAME = {*basename* | ****}

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

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.

PROMOTE PRIMARYHOST=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.

PROMOTE SSM=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.

System action: DFSMShsm continues processing.

Application 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	Structure_name
Recall	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.

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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 DFMSHsm host is enabled to exploit the function provided by the specified structure. If the connection was unsuccessful, the DFMSHsm host continues to process requests locally. DFMSHsm processing continues.

Application 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. DFMSHsm 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 I UNSUCCESSFUL}, RC = *retcode*, REASON = *reascode*

Explanation: DFMSHsm 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	Structure_name
Recall	SYSARC_ <i>basename</i> _RCL

Return Code	Response
X'00', X'04'	DFMSHsm successfully disconnected from the specified structure.
X'08'	Invocation error. An internal DFMSHsm 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', DFMSHsm discontinues use of the structure. For RC = X'08' or X'10', DFMSHsm continues to use the structure. For RC =

X'0C', no action is taken. DFMSHsm processing continues.

Application 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 I STRUCTURE FAILURE I DFMSHsm ABEND}

Explanation: This host unexpectedly lost its connection to the specified structure. DFMSHsm 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 DFMSHsm Storage Administration Guide for more information.

System action: For the cases of a connectivity loss or structure failure, DFMSHsm will attempt to reconnect when it is notified by the system that the structure is available. In the case of a DFMSHsm abend, DFMSHsm discontinues use of the structure.

Application Programmer Response: Determine the cause of the failure. If you do not want DFMSHsm 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:

Function	Structure_name
Recall	SYSARC_ <i>basename</i> _RCL

ARC1504I DISCONNECTION FROM STRUCTURE *structure_name* MAY BE DELAYED

Explanation: DFMSHsm 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.

Application 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.

Application 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.

Application 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 Guide*.

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:

Function	Structure_name
Recall	SYSARC_basename_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.

Application Programmer Response: Consider the reason code and reissue the command, if necessary.

Reason Code	Response
1	Wait for the connection complete message, ARC1501I. If <i>structure_name</i> of the ARC1501I message is the desired coupling facility, no action is required. Otherwise, use the SETSYS COMMONQUEUE (<i>function(DISCONNECT)</i>) 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(<i>function(DISCONNECT)</i>)

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- 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 basename.
- 4 Wait for the disconnect complete message ARC1502I, and then reissue the SETSYS COMMONQUEUE CONNECT command with the desired coupling facility structure base name.
- 5 DFSMShsm is in the process of handling a failed connection. Wait momentarily (one or two minutes) and reissue the command.

See *z/OS DFSMS Storage Administration Reference* for more information regarding the SETSYS COMMONQUEUE CONNECT and DISCONNECT commands and their associated parameters.

ARC1520I UNABLE TO PERFORM SECONDARY HOST PROMOTION FUNCTIONS, RC=*return-code*, REASON=*reason-code*

Explanation: DFSMShsm was unsuccessful in initializing or maintaining the necessary processes to perform secondary host promotion functions. 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.

System action: DFSMShsm continues processing. Secondary host promotion functions are unavailable.

Application 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 Contact IBM support.

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.

Application 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 I 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1523I THIS HOST HAS TAKEN BACK ITS {PRIMARY I 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1524I AN XCF FUNCTION COMPLETED UNSUCCESSFULLY FOR HOST *hostid*, ON SYSTEM *sysid*, RC=*return-code*

Explanation: While performing secondary host promotion functions, 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.

System action: DFSMShsm continues processing.

Application Programmer Response: Contact IBM support to determine the cause of the unsuccessful completion of the XCF function.

Source: DFSMShsm

ARC1525I UNABLE TO COMPLETE PROMOTION OF {AUTOBACKUP I 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.

Application 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 I CONNECTED I DISCONNECTING I UNCONNECTED I RETRY I FAILED}, CRQPLEX HOLD STATUS={NONE I ALL I RECALL(TAPE) I RECALL(TAPE(TSO))}, HOST COMMONQUEUE HOLD STATUS={NONE I CQ I CQ(RECALL) I 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

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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 DFSMS Storage Administration Reference* for more information.

If the connection status is anything other than CONNECTED, then ‘***’ is displayed for indeterminate values.

System action: DFSMShsm processing continues.

Application 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 DFSMS Storage Administration Reference* for more information.

If the connection status is anything other than CONNECTED, then ‘***’ is displayed for indeterminate values.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

ARC1542I WAITING MWES ON COMMON QUEUES: COMMON RECALL QUEUE=recall_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 queue. *recall_mwes* indicates the total number of MWEs on the common recall queue. *total_mwes* indicates the total number of MWEs that are waiting for processing on the common queues.

System action: DFSMShsm processing continues.

Application 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

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. *name* is the data set name. *userid* is the user identification of the initiator of this MWE. *request_number* is the request number that is nonzero only for requests that are received by DFSMShsm through the DFSMShsm supervisor call. *nmwe* is the number of MWEs ahead of this MWE on the functional queue.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

ARC1544I AUDIT COMMONQUEUE HAS COMPLETED, nerrors ERRORS WERE {DETECTED | CORRECTED} FOR STRUCTURE structure_name, RC = retcode

Explanation: The AUDIT COMMONQUEUE command has completed processing. If NOFIX was specified, the value *nerrors* indicates the number of errors that were detected in the structure. If FIX was specified, *nerrors* 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.

Application 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.

Application 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.

Application Programmer Response: Examine the abend code. If you are unable to determine the cause of the problem, contact IBM support.

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.

Application 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.

Application 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.

Application 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.

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- 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 command.
 - The required parameter, HSMHOST, was not specified.
 - The required host ID value was not specified.

System action: The command ends. DFSMShsm processing continues.

Application Programmer Response: If *reason-code* is 4, 8, 16, 28, 36, 37, 38, or 40 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 I
OFFLINECONTROLDATASET I
DIRECTORYCONTROLS I
MEDIACONTROLS I
VOLUMECONTROLS} WAS SPECIFIED
IN AUDIT BUT..... NO
SUBPARAMETERS WERE GIVE. 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.

Application Programmer Response: Reissue the AUDIT command specifying parameters and appropriate subparameters.

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.

Application 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.

Application 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.

Application 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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Wait until automatic space management, automatic backup, or automatic dump completes and reenter the DELVOL command.

Source: DFMSHsm

**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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Wait until automatic space management completes and reenter the DELVOL command.

Source: DFMSHsm

**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. DFMSHsm processing continues.

Application Programmer Response: Wait until the volume is available and reenter the DELVOL command.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Correct the problem described in the ARC0195I message and reissue the corrected command.

Source: DFMSHsm

**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 DFMSHsm does not delete partitioned data set members individually.

System action: The DELETE command ends. The data set is not deleted. DFMSHsm processing continues.

Application Programmer Response: Reissue the command with the data set name only.

Source: DFMSHsm

**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. DFMSHsm processing continues.

Application Programmer Response: Wait until automatic dump completes and reenter the DELVOL command.

Source: DFMSHsm

**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:

ARC1619I • ARC1635I

- 4 A wait-type ABACKUP or ARECOVER command issued when the function is held.
- 8 An ABACKUP or ARECOVER command issued when ABARS is disabled.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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}

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, there was an error retrieving the copy pool SMS definition.

System action: The fast replication operation ends. DFSMShsm processing continues.

Application Programmer Response: See the corresponding ARC0570I message. Correct the problem with the copy pool definition and reissue the command.

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.

Application Programmer Response: Review the AUDIT output. Rerun AUDIT for the tape volumes that failed.

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.

Application 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.

Application 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

ARC1700I DFSMSHSM COMMANDS ARE {RACF | AUTH} PROTECTED

Explanation: A QUERY command was issued with the SECURITY parameter. DFSMShsm issues this message to describe its current protection of DFSMShsm commands, displaying either RACF or AUTH. The values for RACF and AUTH are listed below:

RACF RACF or a similar product is being used to provide protection to all DFSMShsm commands, storage administrators, and end-users. All commands are protected by FACILITY class profiles.

AUTH Only storage administrator commands are protected. The method for protecting these commands is through the DFSMShsm AUTH command. User commands are not protected by AUTH or FACILITY class profiles.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

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.

Application Programmer Response: Contact your system programmer or security administrator to reactivate FACILITY class.

System programmer response: None.

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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1801I FAST REPLICATION {BACKUP | BACKUP DUMP | BACKUP DUMPONLY | 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 DUMPONLY, 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 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. *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, then the token is displayed in hexadecimal format and

preceded by an 'X'.
(TOKEN=X'*hex_token*').

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC1802I FAST REPLICATION {BACKUP | BACKUP DUMP | BACKUP DUMPONLY | PREPARE | RECOVERY | RECOVERY FROM DUMP | 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*

Explanation: The DFSMShsm Fast Replication Backup, Backup Dump, Backup DUMPONLY, Prepare, Recovery, Recovery FROMDUMP, or Data Set Recovery function for copy pool *cpname*, volume *volser*, or data set *dsname* has completed.

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.

System action: The operation ends. DFSMShsm processing continues.

Application 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, then do not reissue the FRRECOV * COPYPOOL command. Instead, issue individual FRRECOV * TOVOLUME(*volser*) FROMCOPYPOOL commands for each volume that failed.

| If individual data sets failed during recovery, then do not reissue a FRRECOV DSNAME command that specifies a partially qualified data set name. Instead, issue individual FRRECOV DSNAME commands for each data set that failed.

Source: DFSMShsm

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

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. DFSMShsm processing continues.

Application 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 all preceding related messages 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. Instead, issue individual FRRECOV TOVOLUME(*volser*) commands for each volume that failed.

Source: DFSMShsm

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.

| DFSMShsm processing continues.

| **Application 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 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 may contain residual data.

System action: The fast replication recovery ends. DFSMShsm processing continues.

Application 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

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	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.		specified for a copy pool defined with DASD backup versions = 0.
12	A CDS I/O error occurred.	62	FCINCREMENTAL or FCINCREMENLAST was specified in the FRBACKUP command for a version not eligible for FlashCopy incremental.
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.	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.
22	An error occurred while retrieving the SMS storage group or copy pool information from SMS.		
24	No volumes were processed.	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.
28	An enqueue or dequeue failure occurred.		
34	During FRRECOV COPYPOOL processing, DFSMSHsm did not find as many volume records as it expected.	98	An internal error occurred.
36	RACF failure.	99	An abend has occurred.
38	The volume specified in the TOVOLUME parameter does not have a fast replication backup copy.		System action: This fast replication processing ends. DFSMSHsm processing continues.
42	The version determined to be the version requested, is not of the format (dump copy/fast replication copy) requested.		Application Programmer Response: Review and resolve the cause of the problem and reissue the command.
44	The dump volume does not exist as a copy pool dump volume.	2	Issue the LIST COPYPOOL(<i>cpname</i>) 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.
46	The dump volume specified is for a different source volume.	4	Issue the QUERY COPYPOOL(<i>cpname</i>) command to determine which volumes are in a relationship. See <i>z/OS DFSMSHsm Storage Administration Guide</i> to determine what actions you can take.
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.	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.
50	The dump copies are incomplete for the DASD version to be replaced.		
52	Active dump tasks exist for oldest DASD version.		
54	Dump volume does not contain valid data.		
56	Copy pool <i>cpname</i> was created or converted for use in a z/OS V1R8 or later environment.	10	See message ARC1807I to determine why you could not select a target volume.
60	FCINCREMENTAL or FCINCREMENLAST cannot be		

12	See the corresponding ARC0184I message for additional information.		volumes for the volume that you are attempting to recover.
14	Issue the LIST COPYPOOL(<i>cpname</i>) 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.	46	Issue the LIST PVOL(<i>volser</i>) ALLDUMPS to find valid dump volumes for the volume that you are attempting to recover.
16	Determine the volume that you intend to recover, specify the <i>volser</i> for that volume as the TOVOLUME parameter and reissue the command. The LIST COPYPOOL(<i>cpname</i>) command can be used to determine which volumes are backed up as part of a copy pool backup version.	48	Issue the LIST COPYPOOL(<i>cpname</i>) 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.
22	See the corresponding ARC0570I message for additional information.	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.
24	No volumes were processed during the Fast Replication Recovery. Issue LIST COPYPOOL(<i>cpname</i>) to determine what should have been processed during this Fast Replication Recovery.		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.
28	Contact IBM Support.	52	Issue the LIST PVOL(<i>volser</i>) ALLDUMPS to find valid dump volumes for the volume that you are attempting to recover.
34	Records indicate that not all of your volumes may have been recovered. Issue the LIST COPYPOOL(<i>cpname</i>) 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.	54	The Fast Replication command for copy pool <i>cpname</i> cannot be processed by a host in a previous environment other than z/OS V1R8. If the command is FRBACKUP, issue the Fast Replication command for copy pool <i>cpname</i> in a z/OS V1R8 or later environment. If the command is FRRECOV, the version specified or determined does not have a valid DASD backup to recover from. You can recover from a different version with a VALID DASD backup copy or issue the FRRECOV command from a host in a V1R8 or later environment.
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.	56	If a copy pool incremental version is needed, the copy pool definition must
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(<i>cpname</i>) 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(<i>volser</i>) ALLDUMPS to find valid dump	60	

- be changed so that the number of DASD backup versions is greater than 0.
- 62** FCINCREMENTAL and FCINCREMENTALLLAST 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.
 - 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.
- 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.

Application Programmer Response: Issue the following patch to enable the ARC1809I message. This will help you determine why each copy pool backup volume was not selected.

PATCH.FRGCB.+9 BITS(.1.....)

The following values are assigned to variables listed in this message:

- num1* If *num1* is less than the number of volumes that are defined in the source storage group, then there are not enough 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 DUMONLY | RECOVERY | ***} OF {COPY POOL *cpname* | VOLUME *volser* | DATA SET *dname* | *****}**

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 *dname*, 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.

Application Programmer Response: See preceding messages to determine the failing volser or data sets and the corresponding return codes. Resolve the cause of the problem and reissue the command.

Source: DFSMShsm

**ARC1809I VOLUME *volser* IS NOT A FAST
REPLICATION CANDIDATE FOR
SOURCE VOLUME *volser2*, VER=*ver*,
RC=*retcode***

Explanation: While attempting to find a valid fast replication target volume for *volser2*, it was determined that volume *volser1* was not an eligible candidate. *ver* represents the backup version of the copy pool that is being processed.

If the PREPARE option was specified, a message for the same volume for multiple versions will be issued.

Retcode	Meaning
2	<i>volser1</i> is already paired with another source volume
4	<i>volser1</i> is not the same size as <i>volser2</i>
6	<i>volser1</i> is not an eligible candidate volume because of one of the following situations: <ul style="list-style-type: none"> • 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 ESS

System action: The fast replication operation ends. DFSMShsm processing continues.

Application 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.

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.

Application 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.

Application Programmer Response: See the z/OS DFSMS Storage Administration Reference for information about how to handle this situation.

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.
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 <i>cpname</i> should be dumped.

System action: DFSMShsm Autodump processing continues.

Application 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(<i>cpname</i>) 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.

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.

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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1815I {AUTO DUMP I FAST REPPLICATION BACKUP DUMP I FAST REPPLICATION BACKUP DUMPONLY I FRRECOV I FRDELETE I DELVOL I AUDIT} HAS FAILED FOR COPY POOL *cpname*, VERSION *vernum*. HOST *hostid* IS CURRENTLY PROCESSING A {DUMP I RECOVERY I DELETE I DELVOL I AUDIT} OPERATION INVOLVING THE COPY POOL VERSION.

Explanation: Processing for auto dump, FAST REPPLICATION BACKUP DUMP, FAST REPPLICATION BACKUP DUMPONLY, 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.

Application 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 REPPLICATION TASK ABENDED DURING FAST REPPLICATION {BACKUP I RECOVERY I ***}OF {COPY POOL *cpname* I VOLUME *volser* I *****}**

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.

Application 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.

Application 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.

Application Programmer Response: If dump processing for the version needs to be completed, issue

| an FRBACKUP COPYPOOL(*cpaname*) DUMPONLY command for the copy pool version. Issue a LIST COPYPOOL(*cpaname*) to determine which version.

| **Source:** DFSMShsm

ARC1820I THE FOLLOWING VOLUMES IN COPY POOL *cpaname*, 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. Those volumes that have an active background copy are listed.

| In the message text:

| *cpaname*
| The name of the specified copy pool.

| *ver* The version number of a DASD copy that has active FlashCopy background copy.

| The volumes are displayed in the following format:

| SGNAME FR_PRIMARY FR_BACKUP
| *sname* *pri_vols* *back_vols*

| *sname*
| 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 FlashCopy background copy.

| *back_vols*
| The volser of the volume that contains the backup copy.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC1821I NONE OF THE VOLUMES IN COPY POOL *cpaname*, 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.

| In the message text:

| *cpaname*
| 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1822I {FRBACKUP | FRRECOV | FRBACKUP DUMP OR DUMPONLY} OF COPY POOL *cpaname* 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(*cpaname*), FRBACKUP COPYPOOL(*cpaname*) PREPARE, or FRBACKUP COPYPOOL(*cpaname*) WITHDRAW is being processed.
| When FRBACKUP DUMP or DUMPONLY is listed, a FRBACKUP COPYPOOL(*cpaname*) DUMP, or FRBACKUP COPYPOOL(*cpaname*) DUMPONLY command is being processed.

| DFSMShsm is processing the copy pool specified by *cpaname*. *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 *cpaname* 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1823I MAXCOPYPOOL(FRBACKUP TASKS = *backup_tasks*, FRRECOV TASKS = *recover_tasks*, DSS TASKS = *dss_tasks*), FASTREPLICATION(DATASETRECOVERY = {PREFERRED | REQUIRED | NONE })

Explanation: A QUERY command was issued with the SETSYS parameter. DFSMShsm issues this message to describe the current parameter settings for fast replication processing.

backup_tasks is the maximum number of concurrent DFSMSdss invocations that DFSMShsm will process for each FRBACKUP COPYPOOL command.

recover_tasks is the maximum number of concurrent DFSMSdss invocations that DFSMShsm will process for each FRRECOV COPYPOOL command.

dss_tasks is the maximum number of volume pairs that DFSMShsm will pass to each DFSMSdss invocation to

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process in parallel for both backup and recover fast replication functions.

The maximum number of concurrent fast replication backup tasks is the product of *backup_tasks* and *dss_tasks*.

The maximum number of concurrent fast replication recover tasks is the product of *recover_tasks* and *dss_tasks*.

- | When the FASTREPLICATION(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.
- | When the FASTREPLICATION(DATASETRECOVERY) parameter is set to REQUIRED, data set recovery will fail if fast replication cannot be used.
- | When the FASTREPLICATION(DATASETRECOVERY) parameter is set to NONE, the system uses only traditional copy methods for data set recovery.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC1826I FRBACKUP = {HELD | NOT HELD } AND {ACTIVE | INACTIVE}, FRRECOV={HELD | NOT HELD } AND {ACTIVE | INACTIVE}, FRBACKUP DUMP = {HELD | HELD EOV | NOT HELD} AND {ACTIVE | INACTIVE}, FRRECOV(TAPE) = { HELD | HELD EOV | 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 EOV
| indicates that the operation is currently HELD at EOV
| level. The default is EOD level.
| When FRBACKUP is active, either a FRBACKUP
| COPYPOOL(*cpname*), FRBACKUP
| COPYPOOL(*cpname*) PREPARE, 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 EOV level
| depends upon if DUMP is held at EOD or EOV level,
| see message ARC0642I.
| When FRRECOVER(DATASET) is active, the system is
| processing FRRECOV DSNAME(*dsname*).

System action: DFSMShsm processing continues.

Application Programmer Response: None.

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.
| **Application Programmer Response:** None.
| **Source:** DFSMShsm

**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 DFSMShsm 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 DFSMShsm Storage Administration Guide* for
| more information.

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

**ARC1831I {BACKUP | DUMP | DUMP
| COPY(*dclass*) } VERSION NUMBER *bvn*
| OF COPY POOL *cpname* WAS {
| DELETED SUCCESSFULLY | NOT
| DELETED}**

| **Explanation:** 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 will be issued twice.
| One is for BACKUP and the another is for DUMP. If it is
| NOT DELETED, it may indicate a specific backup or
| dump version was requested but does not exist.

System action: DFSMShsm processing continues.

| **Application Programmer Response:** If the version or
| the specified copy of version is not deleted, 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
| command. Reissue the command if needed.

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.

Application 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 backup version was INVALIDATED, one or more of the source volumes associated with the backup version were in a FlashCopy relationship that was withdrawn. The backup version is marked as invalid and cannot be used to recover the copy pool.

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.

System action: DFSMShsm processing continues.

Application 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.

Application 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 HAS
FAILED FOR COPY POOL cpname,
RC=retcode**

Explanation: A FRDELETE COPYPOOL(*cpname*) TOKEN(*token*) command was issued to delete the backup version of copy pool *cpname* represented by the specified token. 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	An enqueue or dequeue failure occurred.
14	Another DFSMShsm function was processing the copy pool.
16	The FRDELETE command will not process copy pool <i>cpname</i> . It was created or converted for use in a z/OS V1R8 or later environment only.

System action: The fast replication processing ends.

DFSMShsm processing continues.

Application Programmer Response: Review and resolve the cause of the problem and reissue the command.

Retcode	Response
2	Issue the LIST COPYPOOL(<i>cpname</i>) 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(<i>cpname</i>) 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(<i>cpname</i>) 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(<i>cpname</i>) 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	Contact IBM Support.
14	See message ARC1815E to determine which function is currently processing the version. Reissue the FRDELETE command at a later time.
16	Issue the Fast Replication Delete command for copy pool <i>cpname</i> in a z/OS V1R8 or later environment.

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.
Application 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

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.

Application Programmer Response: If the function is disabled, issue the SETSYS BACKUP command to enable it. Then, retry the requested function.

Source: DFSMShsm

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.

Application Programmer Response: None.

Source: DFSMShsm

		Retcode	Meaning
ARC1842I	AUTO DUMP HAS COMPLETED FOR COPY POOL <i>cpname</i>, AT <i>time</i> ON <i>date</i>, MAXIMUM VOLUME RC=<i>max vol</i> <i>retcode</i>	2	The specified backup copy was already successfully dumped.
	Explanation: Automatic dump has completed dumping all copy pool volumes for copy pool <i>cpname</i> .	4	A backup copy cannot be dumped to more than five dump classes.
	<ul style="list-style-type: none"> • <i>cpname</i> indicates the name of the copy pool that was processed. • <i>time</i> indicates the time of day the function completed, expressed as hh:mm:ss (hours, minutes and seconds). • <i>date</i> indicates the date on which the function completed, expressed as yyyy/mm/dd (year, month and day). • <i>max vol retcode</i> reflects the highest return code received for an individual volume during automatic dump. 	6	A CDS I/O error occurred.
	System action: Automatic Dump continues. DFSMSHsm processing continues.	8	The specified dump classes were already successfully dumped.
	Application Programmer Response: If <i>max vol retcode</i> 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(<i>cpname</i>) DUMPONLY VERSION(<i>version</i>) command to have DFSMSHsm retry the volumes that failed.	10	A CDS record discrepancy was identified.
	Source: DFSMSHsm	12	A dump class was specified more than once on the command.
	ARC1844I FAST REPLICATION COMMAND FAILED FOR COPY POOL <i>cpname</i> - {DUMP CLASS ERROR}	14	A serialization error occurred.
	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.	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.
	System action: DFSMSHsm processing continues.	18	FRBACKUP DUMPONLY was attempted on a pre V1R8 release copy pool.
	Application Programmer Response: Take the corrective action according to previous message.	22	DFSMSHsm was shut down.
	Source: DFSMSHsm	24	The dump classes to be dumped to do not contain the same encryption or HWCOMPRESS settings.
	ARC1846E {AUTO DUMP FAST REPLICATION BACKUP DUMP FAST REPLICATION BACKUP DUMPONLY ****} HAS FAILED FOR {COPY POOL <i>cpname</i> ****}, RC=<i>retcode</i>	98	An internal error occurred.
	Explanation: Automatic Dump, Fast Replication Backup Dump, or FAST REPLICATION Backup DUMPONLY for copy pool <i>cpname</i> 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.)		System action: This Fast Replication processing ends. DFSMSHsm processing continues.
			Application Programmer Response: Review and resolve the cause of the problem and reissue the command.
		Retcode	Response
		2	For command dump: Issue the LIST COPYPOOL(<i>cpname</i>) 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(<i>cpname</i>) 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 message for additional information.
		8	Issue the LIST COPYPOOL(<i>cpname</i>) 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 Contact IBM support.
- | 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 DFMSHsm 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.

- | 98 Contact IBM support.

| **Source:** DFMSHsm

**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. DFMSHsm processing continues.

Application Programmer Response: Determine the cause of the storage shortage. After the storage shortage is resolved, you might need to restart DFMSHsm before it can process other fast replication commands.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application 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: DFMSHsm

**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:

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- ****: 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.

Application 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=*type*

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.

type indicates the source of the recovery:

- DISK: recovery was from disk.
- TAPE: recovery was from tape.

System action: DFSMShsm processing continues.

Application 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.

Application 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 DSNAME 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.

Application 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.

Application 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 <i>dsname</i> COULD NOT BE CATALOGED.	16	Multi-volume VSAM data sets with AIXs cannot be recovered.	
	RECATALOG THE DATA SET TO THE FOLLOWING VOLUMES: <i>volser</i> {DATA INDEX DATA/INDEX}	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.	
	Explanation: A Fast Replication data set recovery of a multivolume data set failed during post processing. DFSMShsm 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.	24	The data set was determined to be on a volume that is not part of a copypool.	
	System action: DFSMShsm processing continues.	28	An enqueue or dequeue failure occurred.	
	Application Programmer Response: The data set BCS catalog entry must be redefined. See z/OS DFSMS Access Method Services for Catalogs for information about re-cataloging data sets. See z/OS DFSMShsm Storage Administration Guide for information about Fast Replication data set recovery of multivolume data sets.	30	RACF failure.	
	Source: DFSMShsm	32	The version determined to be the version requested, is not of the format (dump copy/fast replication copy) requested.	
ARC1866I	FAST REPLICATION {RECOVERY} HAS FAILED FOR {DATA SET <i>dsname</i>}, RC=<i>retcode</i>	34	The dump volume is not a copy pool dump volume.	
	Explanation: A FRRECOV DSNAME command for data set <i>dsname</i> ended before normal termination of the function. If the request was initiated from TSO, <i>dsname</i> will equal '***'. See the corresponding ARC1000I or ARC1001I message for the data set name. The reason for the failure is explained as determined by the <i>retcode</i> .	36	The dump volume is not for the source volume that the data set is being recovered to.	
	Retcode	Meaning	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.
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.	40	The dump volume does not contain a valid copy.	
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.	42	While preparing for the recovery of the data set, the state of the version to be recovered changed from valid to invalid.	
6	No data sets were found that match the fully or partially qualified data set name <i>dsname</i> .	44	Data set is currently in use.	
8	A catalog error occurred.	46	Data set is no longer cataloged to the volume it resided on at the time of the backup.	
10	The FRRECOV command or an associated data set restore work element was canceled.	48	An internal error occurred.	
12	A multi-volume data set was not fully recovered from one or more volumes.		System action: The data set recovery ends for data set <i>dsname</i> . If a partially qualified data set name was specified on the FRRECOV command, other data set recoveries may continue processing. DFSMShsm processing continues.	
14	Data set <i>dsname</i> has been migrated.		Application Programmer Response: Review and resolve the cause of the problem, and reissue the command for data set <i>dsname</i> .	
		Retcode	Meaning	

2	None.		command was not RACF authorized to the command. See the associated ARC1710E message for additional information regarding this error.
4	For a VSAM data set, determine the cluster name which corresponds to the specified dsname. Reissue the command with the base cluster name.		Determine if the user requires this access and authorize the user to the command. Reissue the command.
	For a GDG data set, determine the GDG generation to be recovered. Reissue the command with the data set name for that generation.	32	Issue the LIST COPYPOOL(<i>cpname</i>) command to view the valid versions and media formats associated with this copy pool. Reissue the FRRECOV DSNAME command using an existing valid version for this copy pool.
6	Uncataloged data sets are not supported.		
8	Contact IBM support.		
10	None.	34	Issue the LIST COPYPOOL(<i>cpname</i>) command, to view the dump volumes associated with this copy pool.
12	Determine the cause of the error and reissue the command.		Reissue the FRRECOV DSNAME command using the dump volume for the source volume to which the data set is being recovered.
14	Migrated data sets are not supported by FRRECOV DSNAME 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 <i>z/OS DFSMS Using Data Sets</i> for information on rebuilding AIXs.	36	Issue the LIST COPYPOOL(<i>cpname</i>) command, to view the dump volumes associated with this copy pool. Reissue the FRRECOV DSNAME command using the dump volume for the source volume to which the data set is being recovered.
18	Issue the LIST COPYPOOL(<i>cpname</i>) command to obtain a list of valid versions for the copy pool. If necessary, reissue the FRRECOV DSNAME command specifying a valid existing version, generation, date, or token.		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 DSNAME command using VERSION and DCLASS to select the appropriate dump copy.
20	Determine which volume(s) the data set resides on. Issue LIST PVOL(<i>volser</i>) 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.	38	Issue the LIST COPYPOOL(<i>cpname</i>) 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 DSNAME command using a valid dump class for this copy pool.
22	See the corresponding ARC0184I message for additional information.	40	Issue the LIST COPYPOOL(<i>cpname</i>) command, to view the dump volumes associated with this copy pool.
24	This data set cannot be recovered using the FRRECOV DSNAME command. You will need to recover this data set with the RECOVER command.	42	Reissue the FRRECOV DSNAME command using the dump volume for the source volume to which the data set is being recovered.
28	Contact IBM Support.	44	Reissue the FRRECOV DSNAME command.
30	The user that issued the FRRECOV		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.
98	Contact IBM support.
	Source: DFMSHsm

**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. DFMSHsm processing continues.

Application Programmer Response: Reissue the command after the operator issues the appropriate RELEASE command.

Source: DFMSHsm

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: DFMSHsm processing continues.
	Source: DFMSHsm

**ARC1899I {FRBACKUP | FRRECOV} VOLUME
PAIR SET *setnum* IS {STARTING |
ENDING}**

Explanation: For fast replication processing, DFMSHsm passes sets of volume pairs to DFSMSdss to process in parallel. This message indicates that set

setnum is either starting or ending.

System action: DFMSHsm processing continues.

Source: DFMSHsm

**ARC1900I DFMSHSM 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 DFMSHsm job. If the error has occurred during a DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Notify the storage administrator of the abend.

Source: DFMSHsm

ARC2001I THE ARCMMSG DD FAILED TO OPEN

Explanation: The ARCPRPDO utility was unable to open the ARCMMSG file.

System action: DFMSHsm processing continues. All message output bound for ARCMMSG will be lost.

Application Programmer Response: Provide a DD statement for ARCMMSG if informational and error messages are desired for ARCPRPDO.

Source: DFMSHsm

ARC2002I OPEN OF DDNAME ARCPDO FAILED

Explanation: ARCPRPDO utility was unable to open the ARCPDO file.

System action: DFMSHsm processing ends with return-code 8.

Application Programmer Response: Provide a DD statement for ARCPDO.

Source: DFMSHsm

ARC2003I OPEN OF DDNAME SYSIN FAILED

Explanation: ARCPRPDO utility was unable to open SYSIN file.

System action: DFMSHsm processing ends with return-code 8.

Application Programmer Response: Provide a DD statement for SYSIN.

Source: DFSMShsm

ARC2004I OPEN OF DDNAME ARCPRT FAILED

Explanation: ARCPRPDO utility was unable to open ARCPRT file.

System action: DFSMShsm processing ends with *return-code* 8.

Application Programmer Response: Provide a DD statement for ARCPRT.

Source: DFSMShsm

ARC2005I OPEN OF DDNAME ARCOUP FAILED

Explanation: ARCPRPDO utility was unable to open file ARCOUP and copy was specified as an option.

System action: DFSMShsm processing ends with a *return-code* 8.

Application Programmer Response: Provide a DD statement for ARCOUP.

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: Correct control parameters in the SYSIN file.

Source: DFSMShsm

ARC2012I RECORD xxxxxxxx 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

ARC6005E • ARC6010E

Application Programmer Response: See *z/OS MVS System Messages, Vol 1 (ABA-AOM)* for a description of the DFSMSdss messages.

Source: DFMSHsm

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.

Application Programmer Response: Specify a tape unit type in the ABACKUP or ARECOVER command.

Source: DFMSHsm

ARC6006E VOLUME *volser* TO BE ADDED AS DFMSHSM {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. DFMSHsm processing continues.

Application Programmer Response: If this volume is to be ADDVOLed to DFMSHsm, the volume type must be compatible. If 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Reissue the command using all the required parameters.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

ARC6009I AGGREGATE BACKUP/RECOVERY MAXADDRESSPACE = *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 DFMSHsm allows to be in concurrent existence, as represented by *number*.

System action: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

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 DFMSHsm with a volume type that is incompatible with the volume type on the DEFINE command.

System action: The DEFINE command fails. DFMSHsm processing continues.

Application Programmer Response: Reissue the DEFINE command without this volume or DELVOL and then ADDVOL the volume with a compatible volume type.

Source: DFMSHsm

**ARC6011I {ARECOVERREPLACE I
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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**ARC6012I STOP COMMAND ISSUED AND
DFMSHSM 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: DFMSHsm will accept no new commands and will end processing as soon as all ABARS secondary address spaces have completed processing.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: See previous messages to determine the cause of the failure. Reissue the DEFINE ARPOOL command when the problem is resolved.

Source: DFMSHsm

ARC6015I

Explanation:

- | | |
|-----------------|---|
| ARC6015I | ARPOOL NAME = <i>agname</i>, |
| ARC6015I | (CONT.) ML1VOLS= <i>volser1...volsern</i>, |
| ARC6015I | (CONT.) L0VOLS = <i>volser1...volsern</i> |

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 DFMSHsm. 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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 DFMSdfp™ 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.

Application 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.

Application 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.

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.

Application 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.

Application 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.

Application Programmer Response: A programming or system problem is indicated.

Source: DFMSHsm

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.

Application Programmer Response: None.

Source: DFMSHsm

ARC6027I DFSMSHSM PRIMARY ADDRESS SPACE ISSUED 'command' TO CANCEL A SECONDARY ADDRESS SPACE. [AGGREGATE {BACKUP | RECOVERY} IS HELD.]

Explanation: The DFMSHsm 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 (abended) 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 DFMSHsm 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 DFMSHsm'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 DFMSHsm's work queue. DFMSHsm 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.

Application Programmer Response: In the case of a timing failure, verify that the procedure name used by DFMSHsm 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 DFMSHsm DISPLAY command for .ARCABRCB.+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 DFMSHsm 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: DFMSHsm

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 DFMSHsm 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. DFMSHsm processing continues.

Application Programmer Response: Correct conflicts and reissue this command.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Reissue the DEFINE command without this volume.

Source: DFMSHsm

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: DFMSHsm processing continues. This message is issued to the user that has entered the ABACKUP or ARECOVER command.

Application Programmer Response: None.

Source: DFMSHsm

ARC6031E SECONDARY ADDRESS SPACE START COMMAND FAILED. AGGREGATE BACKUP/RECOVERY IS HELD

Explanation: DFMSHsm 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 DFMSHsm functions are not affected.

Application 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: DFMSHsm

ARC6032E FAILURE IN CANCELLING A DFMSHSM 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 DFMSHsm 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.

Application 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 = unitype

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 *unitype*.

System action: DFSMShsm processing continues.

Application 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.

Application 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 (abended).

- *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.
- *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.

Application 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.

Application 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.

Application Programmer Response: None.

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.

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.

Application 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.

Application 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 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 - 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.
- *name* is the name of the SMS construct being processed.

System action: DFSMShsm ends ABACKUP processing for the specified aggregate group.

Application Programmer Response: Determine if the construct name has been misspelled or if the specified construct has been defined at all.

- Use the ISMF panels to determine the correct name of the construct. If the name was 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 appropriate construct.
- If the SMS construct has not been defined at all, use the appropriate ISMF panels to define the SMS construct. Reissue the ABACKUP command.

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.

Application 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.

- *agname* 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.

Application Programmer Response: If the RETCODE value is nonzero, see message ARC6*nnn* 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 *agname* - 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.
- *agname* is the name of the aggregate group being processed.

System action: DFSMShsm ends ABACKUP processing for the specified aggregate group.

Application 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 *agname* - 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.
- *agname* is the name of the aggregate group being processed.

ARC6058E • ARC6060I

System action: Aggregate backup fails.

Application 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

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.

Application 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 ARCBEEEXT is active and indicates that the data set should be bypassed, aggregate backup continues, bypassing this data set. If installation-wide exit ARCBEEEXT 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.

Application 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.
- *volser1,...volserN* are the volume serials of the volumes used to contain the data file information.

System action: DFSMShsm processing continues.

Application 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.
- *volser1*...*volsern* are the volume serials of the volumes used to contain the control file information.

System action: DFSMShsm processing continues.

Application 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.
- *volser1*...*volsern* are the volume serials of the volumes used for the accompany data sets.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC6065E AGGREGATE GROUP *agname*
 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.

- *agname* is the aggregate group that has been processed.

System action: DFSMShsm processing continues.

Application 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 *agname* -
 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.
- *agname* is the aggregate group that is being processed.

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System action: DFSMShsm processing continues.

Application 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 *agname*

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.

- *sdpname* 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.
- *agname* 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.

Application 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 *agname*

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

**ARC6073E ERROR OCCURRED IN ATTEMPTING
TO {ENQUEUE I 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.

Application 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.

Application 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

**ARC6075E 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.

Application 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

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**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.

Application 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.

Application 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.

Application 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.
- *agname* is the name of the aggregate group being processed.
- *return-code* is the SVC 26 return code.

System action: DFSMShsm processing continues.

Application 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 I 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.

Application 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 I
RECOVERY} FOR {AGGREGATE
GROUP agname I 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.

Application 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 I RECOVERY} FOR
{AGGREGATE GROUP agname I
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.

Application Programmer Response: None

Source: DFSMShsm

**ARC6083A ALLOCATION REQUEST FAILED FOR
{volser I data-set-name} DURING
AGGREGATE {BACKUP I RECOVERY}
FOR {AGGREGATE GROUP agname I
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.

Application Programmer Response: This message is intended to warn that the attributes of the VSAM data

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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.

Application 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.

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.

Application 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 | DFMSDSS DATA | INTERNAL I/O DATA | INSTRUCTION) FILE *data-set-name2* USING DFSMShsm DEFAULT ATTRIBUTES DURING AGGREGATE RECOVERY

Explanation: During aggregate recovery of DFHSM 2.6.0 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 catalogued.

- - 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.
- DFMSDSS DATA indicates that the GDG base was defined for the ABACKUP output DFMSDSS 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC6088E DEFINED FAILED FOR GDG BASE *gdgbasename1* FOR CONTROL | DFMSDSS DATA | INTERNAL I/O DATA | INSTRUCTION FILE *data-set-name2* - AGGREGATE RECOVERY FAILED

Explanation: During aggregate recovery of DFHSM 2.6.0 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.

- *gdgbase-name1* 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.
- DFMSDSS DATA indicates that the GDG base was required for the ABACKUP output DFMSDSS 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. DFMSHsm processing continues.

Application 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: DFMSHsm

ARC6089I *function-amsmsgtext*

Explanation: DFMSHsm 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 DFMSHsm intercepts the message for re-transmission to the ABARS activity log. This message is output if SETSYS ABARSACTLOGMSGLEVEL(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: DFMSHsm processing continues.

Application Programmer Response: See "IDC Messages in z/OS MVS System Messages, Vol 6 (GOS-IEA)" for a complete explanation of AMS messages.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application 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: DFMSHsm

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: DFMSHsm 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.

Application 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.

ARC6092I • ARC6096E

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 **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.

Application 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.

ARC6093E **{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.

Application 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.

Application 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 Guide* 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC6096E **ERROR FROM MACRO UCBLOCK 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 UCBLOCK function.

System action: DFSMShsm fails the ABACKUP command.

Application 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 UCBLOCK 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.

Application 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.

Application 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 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.

Application 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 DFMSHsm secondary address space and the DFMSHsm primary address space.

System action: DFMSHsm processing continues.

Issued By: This message is issued by both the DFMSHsm primary address space and the ABARS secondary address space, so it is entered into their respective activity logs. For the DFMSHsm 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.

Application Programmer Response: If the RETCODE value is nonzero, see message ARC6nnn in the ABARS secondary address space activity log for this aggregate recovery task, to determine the specific error condition that caused the failure.

Source: DFMSHsm

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.

Application 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: DFMSHsm

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.

Application 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: DFMSHsm

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; DFMSHsm processing continues.

Application 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: DFMSHsm

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; DFMSHsm processing continues.

Application 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: DFMSHsm

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: DFMSHsm processing continues.

Issued By: ABARS secondary address space. This message will go only to the activity log.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues.

Issued By: ABARS secondary address space. This message will only go to the activity log.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm 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.

Application 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: DFMSHsm

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.

ARC6112E • ARC6115I

- *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.

Application 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.

Application 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.

Application 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.

Application 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.

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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 7 on page 441.

System action: The aggregate backup verification processing continues. Aggregate backup will fail after the completion of the verification process.

Application Programmer Response: The system programmer or storage administrator responsible for DFMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFMSHsm

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.

Application Programmer Response: Recall the data set. Then reissue the ABACKUP command.

Source: DFMSHsm

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.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Reissue the ARECOVER command specifying PERCENTUTILIZED parameter with the associated *value* of 1 to 100 enclosed in parentheses.

Source: DFMSHsm

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 DFMSHsm 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.

Application Programmer Response: If your installation procedure specifies DFMSHsm 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: DFMSHsm

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.

Application 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: DFMSHsm

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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFMSHsm

**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.

Application Programmer Response: None.

Source: DFMSHsm

**ARC6154E SDSP *sdsppname* CANNOT BE {OPENED
I 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.

- *sdsppname* 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.

Application 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: DFMSHsm

**ARC6155E I/O ERROR OCCURRED IN READING
SDSP *sdsppname* 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 SDSP 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.

- *sdsppname* is the name of the SDSP 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.

Application 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: DFMSHsm

**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.

Application Programmer Response: See “ARC Return Codes and Reason Codes” on page 435 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.

Application 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 agname | 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 IGGOCL*nn* 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 *agname* 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 IGGOCL*nn*.
- *reascode* is the reason code associated with the catalog error.

System action: Aggregate backup or aggregate recovery fails.

Application 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 agname | 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 *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).
- *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.

Application 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 *agname* | 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.
- 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.

Application 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 DFMSHsm DELETE command for the data set, followed by a DFMSHsm 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 DFMSHsm secondary address space activity log for this aggregate group.

Source: DFMSHsm

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 ARCBEEEXT 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.

Application 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.

- *agname* 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.

Application 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 *agname* |
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 DFMSdss control cards received the error.
- FILTER indicates that the FILTER data set containing the list of data set names to be processed by DFMSdss 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 *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: Aggregate backup or aggregate recovery fails.

Application 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 I
DEALLOCATION I RETRIEVAL} FAILED
FOR {dsname I volser I ddname}
DURING AGGREGATE {BACKUP I
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 DFMSHsm 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.
- *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.

Application 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: DFMSHsm

**ARC6165E {CONTROL I DATA I
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.

Application Programmer Response: Rename or delete the data set whose name conflicts with the backup file name and reissue the ABACKUP command.

Source: DFMSHsm

**ARC6166I THE FOLLOWING DATA SETS WERE
SELECTED TO BE PROCESSED BY
AGGREGATE BACKUP FOR
AGGREGATE GROUP *agname* FOR
THE {INCLUDE/EXCLUDE I
ACCOMPANY/ACCOMPANYEXCLUDE I
ALLOCATE/ALLOCATEEXCLUDE I
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

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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.

Application 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 I ALLOCATE I ACCOMPANY} SELECTION DATA SET LIST FOR AGGREGATE GROUP *agname* 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.
- *agname* is the name of the aggregate group being processed.

System action: Aggregate backup fails.

Application 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. Seez/OS DFSMS Installation Exits for more details on this subject.

Source: DFSMShsm

ARC6168E CROSS MEMORY ERROR OCCURRED. REQUEST TYPE WAS {DISCONNECT I CDS I/O I PDA I/O} - AGGREGATE {BACKUP I RECOVERY} FAILED FOR {AGGREGATE GROUP *agname* I 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 *agname* 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.
 - 12 Invalid token in MASIP.

System action: Aggregate backup or aggregate recovery fails.

Application 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.

Application 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: DFMSHsm

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 *cdatasetname* 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:

GRP15 Value	Explanation
X'8'	Failure in the CSI routine. The return code <i>retcode</i> is set to 8 for all of the following reason codes <i>reascode</i> :
1	Insufficient storage for GETMAIN

- 2 Invalid entry type in CSIDTYPs
- 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 CSIUSRNL (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.

Application Programmer Response: Notify the system programmer.

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.

Source: DFMSdhp 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

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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.

Application 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: DFMSHsm

ARC6172E DATA SET *data-set-name* IS NOT SUPPORTED IN AN {INCLUDE I ALLOCATE I 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.

Application 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:

- *datasetname* 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.
- *datasetname* does not reside on a supported device.
- *datasetname* is in the ACCOMPANY list, but is migrated.
- *datasetname* is a z/FS data set.

For ARECOVER, ensure that the data set BLOCKSIZE is supported by executing ABARS release.

Source: DFMSHsm

ARC6173E {ALLOCATION I OPEN I I/O I LOCATE I OBTAIN} ERROR OCCURRED IN {READING I WRITING} THE {RESTART DATA SET I CONFLICT RESOLUTION DATA SET I 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. DFMSHsm processing continues.

Operator response: None.

Application 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.

System programmer response: None.

Source: DFMSHsm

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.

Application Programmer Response: None.

Source: DFMSHsm

ARC6176E SYNTAX ERROR IN SELECTION DATA SET
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.

Application Programmer Response: Edit the specified selection data set to correct the indicated error. Reissue the ABACKUP command.

Source: DFMSHsm

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.

- *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. DFMSHsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

- *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.

Application 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.

Application 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.

Application 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.

Application 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: DFMSHsm

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: DFMSHsm processing continues. Aggregate recovery continues to process the remaining data sets, but does not complete successfully.

Application Programmer Response: Activate SMS and reissue the ARECOVER command, or allocate the VSAM data set by other means.

Source: DFMSHsm

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: DFMSHsm processing ends after attempting to process all selection data sets.

Issued By: ABARS secondary address space.

Application Programmer Response: Redefine the specified selection data set to follow the required format specifications and reissue the ABACKUP command.

Source: DFMSHsm

ARC6192E *smsmsgtext*

Explanation: DFMSHsm 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 DFMSHsm 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.

Application 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: DFMSHsm

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.

Application Programmer Response: Redefine the specified aggregate group to include one or more selection data sets.

Source: DFMSHsm

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.

Application 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: DFMSHsm

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.

Application 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: DFMSHsm

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.

Application 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: DFMSHsm

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.

Application 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: DFMSHsm

ARC6198E ERROR OCCURRED WHILE CHECKING THE MCV RECORD FOR MIGRATION LEVEL 2 VOLUME *volser*. THE AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*.

Explanation: DFMSHsm 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: DFMSHsm

ARC6199E VOLUME *volser* IN CAPACITYMODE(EXTENDED), UNIT *unitname* NOT CAPABLE OF USING CAPACITYMODE(EXTENDED). THE AGGREGATE BACKUP FAILED FOR AGGREGATE GROUP *agname*.

Explanation: DFMSHsm 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.

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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: DFMSHsm

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: DFMSHsm 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: DFMSHsm

ARC6201E ML2 TAPE VOLUME *volser* NEEDED BY ABACKUP IS IN CAPACITYMODE(EXTENDED). THIS LEVEL OF DFMSHSM DOES NOT SUPPORT CAPACITYMODE SWITCHABLE DRIVES. THE ABACKUP FAILED FOR AGGREGATE GROUP *agname*.

Explanation: DFMSHsm 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 DFMSHsm.

System programmer response: Perform the ABACKUP operation with DFMSHsm MVS V1R5 or higher. An alternative is to recall the needed data sets and rerun ABACKUP.

Source: DFMSHsm

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: DFMSHsm

ARC6250I {NO | THE FOLLOWING} TAPE VOLSERS WILL BE REQUIRED DURING ABACKUP FOR AGGREGATE GROUP *agname* *volser* [,...*volser*n]

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.

System action: DFMSHsm 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.

Application Programmer Response: None.

Source: DFMSHsm

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: DFMSHsm processing continues. Aggregate backup fails.

Application Programmer Response: Issue an EXPIREBV ABARSVERSIONS command to roll off expired aggregate group versions. Reissue the ABACKUP command.

Source: DFMSHsm

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.

Application 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.

Application 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 IT IS IN USE BY ANOTHER DFMSHSM FUNCTION. 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.

Application 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.

Application 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.

Application 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.

- *data-set-name* is the name of the specified FILTEROUTPUTDATASET data set.

System action: ABACKUP processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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 DFMSHsm function. The operator's response is displayed in this message. The operator has responded N, therefore ABACKUP fails.

System action: DFMSHsm processing continues.

Application 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: DFMSHsm

**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: DFMSHsm processing continues. Aggregate recovery fails.

Application Programmer Response: Catalog all of the ABACKUP output files, then reissue the ARECOVER XMIT command.

Source: DFMSHsm

**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 DFMSHsm, under the heading Changing the Amount of Time ABACKUP Waits for an ML2 Volume to Become Available in *z/OS DFMSHsm Implementation and Customization Guide*.

System action: DFMSHsm processing continues.

Application Programmer Response: See the previous 409ARC6254A 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
DFMSHSM 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 DFMSHsm 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. DFMSHsm processing continues.

Issued By: ABARS secondary address space.

Application Programmer Response: If the INSTRUCTION/ACTIVITY LOG is needed, it may be retrieved manually by invoking DFSMSdss using JCL.

Source: DFMSHsm

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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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: DFMSHsm processing continues. No attempt is made to recover these data sets.

Application 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: DFMSHsm

ARC6283E RECOVERY TO ML2 VOLUMES IS DISABLED. AGGREGATE RECOVERY OF *data-set-name1* FAILED USING {AGGREGATE GROUP *agname1* 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: DFMSHsm processing continues. Aggregate recovery continues with recovery to ML2 volumes disabled.

Application Programmer Response: See the preceding ARC0113I and ARC0127I messages and their programmer response.

Source: DFMSHsm

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.

Application 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: DFMSHsm

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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 I NOARECOVERREPLACE.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC6296I	CONFLICT RESOLUTION ACTION <i>action</i> FROM THE {CONFLICT RESOLUTION DATA SET I DATASETCONFLICT PARAMETER I INSTALLATION-WIDE EXIT ARCCREXT} {IS INVALID I DID NOT RESOLVE THE CONFLICT I IS NOT AUTHORIZED} FOR DATA SET <i>data-set-name</i> FROM <i>listtype</i> LIST DURING AGGREGATE RECOVERY
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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 RENAMESOURCE:
 - RENAMESOURCE is not supported for migrated VSAM data sets, or for ACCOMPANY (tape) data sets.
- If the *action* is RENAMETARGET:
 - RENAMETARGET 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.agname.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 RENAMETARGET:
 - The user does not have RACF FACILITY class authorization to the:
`STGADMIN.ARC.ARECOVER.agname.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 RENAMESOURCE:
 - 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.
 - 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.

Application 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.

Application 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. DFSMShsm processing continues.

Application Programmer Response: Resolve the rename or like-named conflict error and reissue the ARECOVER command.

Source: DFSMShsm

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

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ARECOVER command. XMIT, VOLUMES, or UNIT may be specified only if DATASETNAME is also specified.

System action: DFSMShsm processing continues.

Application Programmer Response: Reissue the ARECOVER command.

Source: DFSMShsm

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. DFSMShsm processing continues.

Application Programmer Response: Reissue the ARECOVER command using proper command syntax.

Source: DFSMShsm

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. DFSMShsm processing continues.

Application Programmer Response: Reissue the command with a valid high level qualifier name.

Source: DFSMShsm

ARC6303E (ODD NUMBER I 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. DFSMShsm processing continues.

Application Programmer Response: Reissue the command with an even number of high level qualifiers consisting of no more than 30 pairs.

Source: DFSMShsm

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.

Application 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: *data-set-name2*

Explanation: *cat_entry_type data-set-name2*
cat_entry_type data-set-name1

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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: None.

Source: DFSMShsm

ARC6309E {CONFLICT RESOLUTION DATA SET | LISTOFNAMES DATA SET} *data-set-name1* FOR {AGGREGATE GROUP *agname* | 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 *agname* 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

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- | processing. The conflict resolution data set is ignored during the verification process.
- | For the LISTOFNAMES data set, ARECOVER processing fails.
- | **Operator response:** None.

Application 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.

- | **System programmer response:** None.

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.

Application 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.

- | **System programmer response:** None.

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.

Application 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.

- | **System programmer response:** None.

Source: DFSMShsm

**ARC6312I {CONFLICT RESOLUTION DATA SET I
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.

Application 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.

System programmer response: None.

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.

Application 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.

Application 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

**ARC6315E DASD UNIT IS INVALID FOR THE
SETSYS (ARECOVERML2UNIT I
ARECOVERUNITNAME I
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.

Application Programmer Response: Reissue the SETSYS command with a valid tape unit name subparameter.

Source: DFSMShsm

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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. DFMSHsm processing continues.

Application Programmer Response: Reissue the ARECOVER command with a valid data set name for the DATASETNAME parameter.

Source: DFMSHsm

**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. DFMSHsm processing continues.

Application Programmer Response: Reissue the command with a valid VERSION.

Source: DFMSHsm

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. DFMSHsm processing continues.

Application 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: DFMSHsm

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. DFMSHsm processing continues.

Application Programmer Response: Correct the source of the rename error and reissue the ARECOVER command.

Source: DFMSHsm

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.

Application Programmer Response: For specific error return codes and reason codes associated with the failure, see the previous message ARC6158E in the DFMSHsm secondary address space activity log for this aggregate recovery task. Correct the error and reissue the ARECOVER command.

Source: DFMSHsm

**ARC6321E AN ADDVOL FOR TAPE VOLUME *volser*
WAS REJECTED BY THE DFMSHSM
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.

Application Programmer Response: None.

Source: DFMSHsm

**ARC6322E USER {*userid* | *consoleid*} NOT
AUTORIZED 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. DFMSHsm 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.

Application 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: DFMSHsm

**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*.

- *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 DFMSHsm processing continues.

Application Programmer Response: The system programmer or storage administrator responsible for DFMSHsm should contact the RACF security administrator for help in resolving this problem.

Source: DFMSHsm

**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: DFMSHsm processing continues.

Application Programmer Response: None.

Source: DFMSHsm

**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.

Application 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: DFMSHsm

ARC6326I OPEN WILL BE RETRIED USING {STACK I 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.

Application 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.

Application 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.

Application Programmer Response: Recall the data set and reissue the ABACKUP command.

Source: DFSMShsm

ARC6360E DISPLAY {ABACKUP I ARECOVER} COMMAND REJECTED - REQUIRED PARAMETER {AGNAME I 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.

Application Programmer Response: Reissue the command using all the required parameters.

Source: DFSMShsm

ARC6361E {ABACKUP I ARECOVER} {AGNAME I 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.

Application 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.

Application 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 volser associated with the ARPOOL.

System action: DFSMShsm processing continues.

Application 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.

Application 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.

Application 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.

Application 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 - ARCBEEEXT, CR - ARCCREEXT, ED - ARCEDEXT, M2 - ARCM2EXT, SK - ARCSKEXT, TV - ARCTVEXT.

System action: DFSMShsm processing continues.

Application 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

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messages written) or reduced (only DFSMSdss attention and error messages are written).

System action: DFSMShsm processing continues.

Application Programmer Response: None.

Source: DFSMShsm

ARC6369I STORAGE REQUIREMENTS FOR AGGREGATE GROUP *agname*, ARE: L0=number {KIMIGIT}, ML1=number {KIMIGIT}, ML2=number{KIMIGIT}, TOTAL=number {KIMIGIT}

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 {KIMIGIT}* 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.

Application 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.

Application 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 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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. DFSMShsm processing continues.

Application 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: DFSMShsm

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** DFSMShsm 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. DFSMShsm processing continues.

Application 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: DFSMShsm

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: DFSMShsm processing continues.

Issued By: ABARS secondary address space.

Application Programmer Response: None.

Source: DFSMShsm

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.

Application 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.

Application 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 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application Programmer Response: See the z/OS DFSMShsm Storage Administration Guide, in the

section "Maintaining DFSMShsm Control Data Sets" for information to aid in problem resolution.

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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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 ABARSPROCNAME 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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.

Application 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

System action: ARECOVER processing fails.

DFSMShsm processing continues.

Operator response: None.

Application Programmer Response: Determine if the name of the *data-set-name1* is spelled correctly. Correct the error and reissue the ARECOVER command.

System programmer response: None.

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.

Application Programmer Response: None.

System 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.

Application 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

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

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.

Application 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.

Application Programmer Response: This is a programming error.

Source: DFSMShsm

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 DFMSHsm I/O in "ARC Return Codes and Reason Codes" on page 435.

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 DFMSHsm SUBSYSTEM IS NOT OPERATIONAL

User response: Contact the system program programmer to find out why DFMSHsm 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 alphabetic 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 *yyymmdd*. If *yyddd* is used, *ddd* must be 1 to 366. If *yyymmdd* 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

This appendix contains error return codes and reason codes from DFSMShsm.

Table 3. Return Codes for RECALL/RECOVER Functions for ARC1nnl 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.
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.

Table 3. Return Codes for RECALL/RECOVER Functions for ARC11nnI Error Messages (continued)

Retcode	Meaning
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	OBTAINT 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.
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.

Table 3. Return Codes for RECALL/RECOVER Functions for ARC11nnl Error Messages (continued)

Retcode	Meaning
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 4. 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	OBTAI 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.
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.

Table 4. Return Codes for MIGRATION Functions for ARC12nnI Error Messages (continued)

Retcode	Meaning
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 40 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.
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.

Table 4. Return Codes for MIGRATION Functions for ARC12nnl Error Messages (continued)

Retcode	Meaning
97	An internal DFMSHsm error during allocation of a source data set.
99	Unsupported data set organization.

Table 5. 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 catalogued in the master catalog.
30	Data set not catalogued, and the volume was not specified.
32	Request for an uncatalogued data set failed. Only a catalogued data set was found on the specified volume.
33	Cannot backup an ML2 data set.
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.

Table 5. Return Codes for BACKUP Functions for ARC13nnl Error Messages (continued)

Retcode	Meaning
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 DFMSHsm data.
45	Error deleting a DFMSHsm 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 DFMSHsm 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.
80	The backup control data set record is not found.
84	Failure during BACKVOL DUMP processing (ARCDRDSS).
92	DFMSHsm is shutting down.
96	Failure during BACKVOL DUMP processing (ARCDVOL).
97	An internal DFMSHsm allocation error.
99	Unsupported data set organization.

Table 6. 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(days), or DAYS(days) was specified on a MIGRATE command.
26	Space management request on an SMS-managed volume with neither days specified on MIGRATE(days) nor DAYS(days) 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 (volid) 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 7. 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 8. 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.
20	A logical I/O error occurred.
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 9. 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.
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.

Table 9. Return Codes for Message ARC0734I When the Action is EXBACKV (continued)

Code	Meaning	System Action	Programmer Response
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 10. 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 11 on page 445. 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.
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.

Table 10. Return Codes for Message ARC0734I When the Action is RECYCLE (continued)

Code	Meaning	System Action	Programmer Response
36	The OPEN macro was issued by DFSShsm to open the data set for output. OPEN processing was not successful.	See the system action for the specific reason code in Table 12 on page 446. Recycle processing ends for this task.	See the response for the specific reason code. in Table 12 on page 446.
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.
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 DFSShsm 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 EOVS.	The recycle task ends.	Investigate associated messages to determine why the requested CAPACITYMODE could not be maintained.

Table 11. 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.
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.

Table 11. Reason Codes for Message ARC0734I when the Action is RECYCLE and Return Code is 16 (continued)

Code	Meaning	System Action	Programmer Response
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 EOV or FEOV 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 12. 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.

Table 12. Reason Codes for Message ARC0734I when the Action is RECYCLE and Return Code is 36 (continued)

Code	Meaning	System Action	Programmer Response
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 13. 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 14. 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.
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.

Table 14. Status Codes for Messages ARC0528I and ARC0734I during Scratch Processing (continued)

Status Code	Meaning
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 *z/OS DFSMS Using Data Sets*.

Table 15. 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.
40	A DFSMShsm CDS read error was encountered.
44	A DFSMShsm CDS update error was encountered.
70	An error occurred deleting an SMS-managed data set.

Table 16. 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 DFSMShsm 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 DFSMShsm 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 TTOC 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	DFSMShsm 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 DFSMS Storage Administration Reference</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.
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.

Table 16. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
10	Security of the tape label cannot be determined or DFSMShsm never successfully wrote to the tape volume (the tape volume is empty.)	<p>Examine the tape label and contents. If the tape has no useful data, do the following:</p> <ul style="list-style-type: none"> • Use the PURGE parameter with the DELVOL command. • Reinitialize the volume. • Add the volume with the ADDVOL command. <p>Recycle of the connected set fails. Recycle processing continues with the next eligible connected set.</p>	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 DFSMS Storage Administration Reference</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.
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.
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.

Table 16. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
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.
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.

Table 16. Return Codes for Messages ARC0833I, ARC0834I and ARC0845I and Reason Codes for Message ARC0835I (continued)

Code	Meaning	System Action	Programmer Response
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.
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.
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.
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 17. 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.
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 publication.
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 publication.

Table 18. Reason Codes for Messages ARC1139I, ARC1239I, and ARC1339I

Reason code	Meaning
8	<p>One of the following conditions occurred:</p> <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 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.

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.

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<i>symbol2</i>	The character or symbol after the missing symbol, <i>symbol1</i> . Either <i>symbol1</i> is missing, or <i>symbol2</i> is not correct.
<i>detmod</i>	The name of the module that detected the error.
<i>input-line</i>	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:

<i>memname</i>	The name of the parmlib member containing a syntax error.
<i>line-number</i>	The number of the line in parmlib member <i>memname</i> that contains the syntax error.
<i>position-number</i>	The position of the error in the line. The position number is the number of columns in from the left.
<i>symbol</i>	The missing character or symbol that the system expects.
<i>yyy</i>	One or more correct symbols or characters to choose in place of <i>symbol</i> .
<i>detmod</i>	The name of the module that detected the error.
<i>input-line</i>	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:

<i>memname</i>	The name of the parmlib member containing a syntax error.
<i>symbol</i>	The next statement, keyword, or character after the syntax error (where the system begins processing the parmlib member again).
<i>line-number</i>	The number of the line in parmlib member <i>memname</i> where the system resumes processing.
<i>detmod</i>	The name of the module that detected the error.
<i>input-line</i>	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:

<i>symbol</i>	The statement, keyword, or character that should be removed from parmlib member <i>memname</i>
<i>memname</i>	The name of the parmlib member containing a syntax error.
<i>line-number</i>	The number of the line in parmlib member <i>memname</i> containing the statement, keyword, or character that should be removed.
<i>detmod</i>	The name of the module that detected the error.
<i>input-line</i>	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:

<i>symbol</i>	The statement, keyword, or character that the system assumed to be in place.
<i>memname</i>	The name of the parmlib member containing the error point.
<i>line-number</i>	The number of the line in parmlib member <i>memname</i> that contains the error point.
<i>detmod</i>	The name of the module that detected the error.
<i>input-line</i>	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:

<i>memname</i>	The name of the parmlib member containing the syntax errors.
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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.

Source: Shown in the message text.

Detecting Module: -

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.

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 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...J*]). **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 <i>symbol</i> is specified, the other named symbols may not be.
	THE FOLLOWING MUST ALSO BE SPECIFIED: When <i>symbol</i> is specified, the other named symbol must be.
	ALL OF THE FOLLOWING MUST ALSO BE SPECIFIED: When <i>symbol</i> is specified, the other named symbols must be.
	ONE OF THE FOLLOWING MUST ALSO BE SPECIFIED: When <i>symbol</i> is specified, one of the other named symbol(s) must be.
	ONE OR MORE OF THE FOLLOWING MUST ALSO BE SPECIFIED: When <i>symbol</i> is specified, at least one of the other named symbol(s) must be.
<i>yyy</i>	One or more correct symbols or characters that relate to <i>symbol</i> , as described in the <i>relation</i> field.
<i>detmod</i>	The name of the module that detected the error.
<i>input-line</i>	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

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.

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.

detmod The name of the module that detected the error.

System action: The system stops processing the statement.

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 *dname* **IS NOT CORRECT -** *error*. **DETECTING MODULE IS** *detmod*

Explanation: The system found an incorrectly specified data set name.

In the message text:

dname

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

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.

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

Source: Shown in the message text.

Detecting Module: Many.

Routing Code: 2

Descriptor Code: 4

ASA2005I **SUBSYSTEM** *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).

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

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*).

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

Routing Code: 2

Descriptor Code: 12

ASA2011I *ssname INITIALIZATION COMPLETE. COMPONENT ID=compid*

Explanation: Subsystem *ssname* has completed its initialization.

In the message text:

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*).

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

Routing Code: 2

Descriptor Code: 12

**ASA2326I *ssname* SUBSYSTEM 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.

System action: System initialization continues.

Source: Shown in the message text.

Detecting Module: Many.

Routing Code: 2

Descriptor Code: 12

**ASA2432I *ssname* PARMLIB MEMBER *memname*
READ. COMPONENT ID=*compid***

Explanation: Parmlib member *memname* 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.

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

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.

Source: Shown in the message text.

Detecting Module: Many.

Routing Code: 2

Descriptor Code: 4,10

Appendix. Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in z/OS enable users to:

- Use assistive technologies such as screen readers and screen magnifier software
- Operate specific or equivalent features using only the keyboard
- Customize display attributes such as color, contrast, and font size

Using assistive technologies

Assistive technology products, such as screen readers, function with the user interfaces found in z/OS. Consult the assistive technology documentation for specific information when using such products to access z/OS interfaces.

Keyboard navigation of the user interface

Users can access z/OS user interfaces using TSO/E or ISPF. Refer to *z/OS TSO/E Primer*, *z/OS TSO/E User's Guide*, and *z/OS ISPF User's Guide Vol I* for information about accessing TSO/E and ISPF interfaces. These guides describe how to use TSO/E and ISPF, including the use of keyboard shortcuts or function keys (PF keys). Each guide includes the default settings for the PF keys and explains how to modify their functions.

z/OS information

z/OS information is accessible using screen readers with the BookServer/Library Server versions of z/OS books in the Internet library at:

www.ibm.com/servers/eserver/zseries/zos/bkserv/

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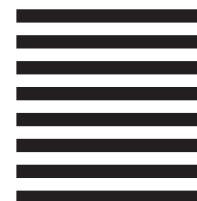
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