IBM

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Data Facility Hierarchical Storage Manager Version 2 Release 5.0

Diagnosis Reference Volume 4

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Data Facility
Hierarchical Storage Manager
Version 2 Release 5.0

Diagnosis Reference Volume 4

First Edition (December 1989)

This is a major revision of LY35-0080-1, which is now obsolete. This book was known as Volume 3 in DFHSM Version 2, Release 4.0. Significant changes are summarized under "Summary of Amendments." This edition applies to Version 2, Release 5, Modification Level 0 of the Data Facility Hierarchical Storage Manager, Licensed Program 5665-329, and all subsequent releases and modification levels until specified otherwise in new editions or technical newsletters.

Changes are made periodically to the information herein; before using this publication in connection with the operation of IBM systems, consult the latest *IBM System/370 and 4300 Processors Bibliography*, GC20-0001, for the editions that are applicable and current.

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Preface

This book is intended to help you diagnose DFHSM problems. It contains internal product information that is provided as additional guidance on diagnosing DFHSM. The information in this book must not be used for programming purposes.

This book describes the logic of Data Facility Hierarchical Storage Manager (DFHSM) routines. This information is for support personnel who require a detailed knowledge of the DFHSM organization and data areas.

Note: Any references to HSM in this book pertain to Version 1 Release 3 or earlier of the Hierarchical Storage Manager.

Trademarks

The following terms are trademarks of IBM and are used in this book:

- MVS/DFP
- MVS/ESA
- MVS/SP
- MVS/XA.

Major Divisions of This Book

- "Module Directory" on page 1 directs you from any load module, object module, or entry point to its operating system data set.
- "Data Areas and Data Area Cross-Reference" on page 37 describes the way the data areas and their corresponding cross-references are arranged.
- "Control Data Set Record Data Areas" on page 39 begins the description of these data areas.
- "Control Block Data Areas" on page 103 begins the description of these data areas.
- Appendix A, "Message-to-Module Cross-Reference" on page 229 lists all the DFHSM messages by identification number with the module or modules that issue the message or prompt a module to issue the message.
- Appendix B, "Diagnosing from Return Codes and Reason Codes" on page 277 describes how to diagnose from return codes and reason codes.
- Appendix C, "DFHSM Maintenance Commands" on page 333 explains four DFHSM commands that are used only for diagnosis and maintenance.

Corequisite Books

- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Diagnosis Reference Volume 1*, LY35-0101, describes the DFHSM design. This book contains restricted materials of IBM.
- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Diagnosis Reference Volume 2*, LY35-0102, describes the DFHSM design. This book contains restricted materials of IBM.

- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Diagnosis Reference Volume 3*, LY35-0103, describes the DFHSM design. This book contains restricted materials of IBM.

Prerequisite Books

You should understand general programming techniques, System/370 and the Data Facility Hierarchical Storage Manager before reading this publication. If you need information about DFHSM, read:

- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 General Information*, GH35-0092, which describes DFHSM.
- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 System Programmer's Command Reference*, SH35-0083, which describes the space manager, operator, and system programmer commands. It also gives examples of how to use the commands.
- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Installation and Customization Guide*, SH35-0084, which describes how to set up and install DFHSM. It contains information about the DFHSM data sets, procedures, and parameter library members, the user exits, the installation verification procedure, and the Version 2.5.0 starter set. It also explains migration and coexistence considerations when you change from HSM Release 3 to DFHSM Version 2.1.0 or when you change from DFHSM Version 2 Release 4.0 to DFHSM Version 2 Release 5.0.
- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 System Programmer's Guide*, SH35-0085, which describes the functions of DFHSM, the data compaction option, tape considerations, security and protection, using JES3 with DFHSM, and DFHSM procedures.
- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 User's Guide*, SH35-0093, which describes the DFHSM user tasks, and how to use the DFHSM user commands.

Related Books

The following books may be helpful to you:

- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Messages*, SH35-0094, which describes the messages issued by DFHSM.
- *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Diagnosis Guide*, LY35-0098, which describes how to diagnose failures in DFHSM.
- *Programming Systems General Information*, GC29-2228, which describes how to submit an Authorized Program Analysis Report (APAR).
- *MVS/ESA System Programming Library: Initialization and Tuning*, GC28-1828.
- *MVS/ESA System Programming Library: System Management Facilities (SMF)*, GC28-1819, which describes how to use System Management Facilities.
- *MVS/ESA Storage Management Library: Storage Management Reader's Guide*, GC26-4654.
- *MVS/ESA Basics of Problem Determination*, GC28-1839, and *MVS/ESA Diagnosis: System Reference*, LY28-1011, which provide information for use in debugging user or system programs.

- *MVS/ESA Diagnosis: Data Areas*:
  - Volume 1, LY28-1043
  - Volume 2, LY28-1044
  - Volume 3, LY28-1045
  - Volume 4, LY28-1046
  - Volume 5, LY28-1047

  which provides information on MVS data areas.
- *MVS/ESA Diagnosis: Special Analysis Techniques*, LY28-1840, and *MVS/ESA Diagnosis: Using Dumps and Traces*, LY28-1843, which provide additional information on debugging programs.
- *MVS/ESA JCL User's Guide*, GC28-1830, which describes how to use dynamic allocation and other job management services.
- *MVS/DFP Version 3 Release 2: Diagnosis Guide*, LY27-9570, and *MVS/DFP Version 3 Release 2: Diagnosis Reference*, LY27-9571, which provide information on diagnosing MVS/DFP errors.
- *MVS/DFP Version 3 Release 2: Managing Non-VSAM Data Sets*, SC26-4557, provides information on data set password protection.
- *MVS/DFP Version 3 Release 2: Managing VSAM Data Sets*, SC26-4568, which describes the codes in messages about VSAM errors.
- *MVS/DFP Version 3 Release 2: General Information*, GC26-4552, which provides an overview of MVS/DFP functions.
- *MVS/XA Storage Management Library: Storage Management Reader's Guide*, GC26-4265.
- *Resource Access Control Facility (RACF) General Information Manual*, GC28-0722, which describes how to use RACF.
- *TSO/E Version 2 Programming Guide*, SC28-1874, and *TSO/E Version 2 Programming Services*, SC28-1875, which describe how to write TSO command processors.
- *MVS Storage Management Library: Storage Management Reader's Guide*, GC26-4403.
- *MVS Storage Management Library: Focus on Storage Management*, GC26-4655.
- *MVS Storage Management Library: Leading an Effective Storage Administration Group*, GC26-4658.
- *MVS Storage Management Library: Migration Planning Guide*, GC26-4659.
- *MVS Storage Management Library: Managing Storage Pools*, GC26-4656.
- *MVS Storage Management Library: Managing Data Sets and Objects*, GC26-4657.

Summary of Changes

Version 2 Release 5.0

This book was known as Diagnosis Reference Volume 3 in DFHSM Version 2, Release 4.0.

This edition includes information associated with the following functional characteristics:

- Aggregate BACKUP and RECOVERY support.
- DFDSS data mover, including:
  - Expanded SDSP support
  - Reblock support for partitioned data sets
  - Multi-volume data set support (SMS-managed only)
  - PDSE support
  - CDS assurance.
- Expanded function of the AUDIT command.

This edition also includes miscellaneous editorial and technical modifications.

Version 2 Release 4.0

This edition includes information describing the logic contained in this release of the product. This edition also contains major technical, and editorial modifications.

Version 2 Release 3.0

This edition includes information associated with the following performance enhancements:

- Automatic and/or command invocation of DFDSS full volume dump
- Command invocation of DFDSS full volume and physical data set restore
- Support for 2K multiples for DASD blocking
- Expanded support for RACF 1.7 erase-on-scratch
- Free volume processing for level 1 and level 2 volumes
- Redefinition for backup cycle crossing midnight
- Volume pooling
- Defined third cycle time to start stopping time for backup and migration windows
- New exit called at initialization to anchor data in the MCVT
- DFHSM's four intercept modules can now be called in 31 bit addressing mode.

This version of the DFHSM Diagnosis Reference has been restructured into three volumes. It contains a number of new modules, as well as miscellaneous editorial and technical modifications.

Contents

Tables

Module Directory

This chapter consists of a module directory (Table 1) that directs you from any load module, object module, or entry point, to its operating system data set or functional description diagram. The module directory contains the following information:

Name: Gives the name of a load module, object module, or entry point used in DFHSM.

Type: Classifies the name as follows:

Name	*Meaning*
Load	Load Module
Object	Object Module
Entry	Entry Point
Nonexecutable	Nonexecutable Module

One name may have several classifications.

Object Module: Identifies the object module and control section (CSECT) that contains the name and also directs you to the microfiche listing that describes the name. The microfiche listings begin with a prolog commentary that describes the module. Each subroutine within a module also has comments. These comments supplement this publication.

DFHSM is written in PL/AS, a high-level language. Listings for microfiche consist of the PL/AS source code, a cross-reference and attribute table, and the assembly code. The programs that implement PL/AS are IBM proprietary.

Load Module: Identifies the load module that contains the object module.

Operating System Data Set: Identifies the operating system data set that contains the load module after system generation.

Table 1 (Page 1 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCABMSG	Entry Object	ARCABMSG	ARCCTL	SYS1.LINKLIB
ARCACASS	Entry Object	ARCACASS	ARCCTL	SYS1.LINKLIB
ARCACLN	Entry Object	ARCACLN	ARCCTL	SYS1.LINKLIB
ARCACREL	Entry Object	ARCACREL	ARCCTL	SYS1.LINKLIB
ARCACTL	Entry Object	ARCACTL	ARCCTL	SYS1.LINKLIB

Table 1 (Page 2 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCADEXT	Entry Load Object	ARCADEXT (not supplied)	ARCADEXT	SYS1.LINKLIB
ARCADS	See entry point HALTERDS			
ARCADVD	Entry Object	ARCADVD	ARCCTL	SYS1.LINKLIB
ARCADVSH	Entry Object	ARCADVSH	ARCCTL	SYS1.LINKLIB
ARCAGEI	Entry Object	ARCAGEI	ARCCTL	SYS1.LINKLIB
ARCAGEN	Entry Object	ARCAGEN	ARCCTL	SYS1.LINKLIB
ARCALCBV	Entry Object	ARCALCBV	ARCCTL	SYS1.LINKLIB
ARCALIST	Non-executable	ARCALIST	ARCCTL	SYS1.LINKLIB
ARCALNDR	Entry Object	ARCALNDR	ARCCTL ARCLISTM ARCPRLOG ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB SYS1.LINKLIB SYS1.CMDLIB
ARCALNDS	Entry Object	ARCALNDS	ARCCTL	SYS1.LINKLIB
ARCALNQV	Entry	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALOG	Entry Object	ARCALOG	ARCCTL	SYS1.LINKLIB
ARCALOLD	Entry Object	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALONQ	Entry	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALOUL	Entry Object	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALOVS	Entry	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALSDP	Entry Object	ARCALSDP	ARCCTL	SYS1.LINKLIB
ARCALSHR	Entry	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALSNQ	Entry Object	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALSNV	Entry Object	ARCALSNV	ARCCTL	SYS1.LINKLIB
ARCALSUL	Entry Object	ARCALOLD	ARCCTL	SYS1.LINKLIB
ARCALTDS	Entry Object	ARCALTDS	ARCCTL	SYS1.LINKLIB
ARCALTVD	Entry	ARCALVOL	ARCCTL	SYS1.LINKLIB
ARCALTVL	Entry	ARCALVOL	ARCCTL	SYS1.LINKLIB

Table 1 (Page 3 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCALVOL	Entry Object	ARCALVOL	ARCCTL	SYS1.LINKLIB
ARCAMDTP	Entry Object	ARCAMDTP	ARCCTL	SYS1.LINKLIB
ARCAMDTS	Entry Object	ARCAMDTS	ARCCTL	SYS1.LINKLIB
ARCAMSG	Entry Object	ARCAMSG	ARCCTL	SYS1.LINKLIB
ARCAPDAP	Entry Object	ARCAPDAP	ARCCTL	SYS1.LINKLIB
ARCARPOL	Entry Object	ARCARPOL	ARCCTL	SYS1.LINKLIB
ARCARVSH	Entry Object	ARCARVSH	ARCCTL	SYS1.LINKLIB
ARCASEND	Entry Object	ARCASEND	ARCCTL	SYS1.LINKLIB
ARCASSAS	Entry Object	ARCASSAS	ARCCTL	SYS1.LINKLIB
ARCASTAI	Entry Object	ARCASTAI	ARCCTL	SYS1.LINKLIB
ARCATIME	Entry Object	ARCATIME	ARCCTL	SYS1.LINKLIB
ARCATTEC	Entry Object	ARCATTEC	ARCCTL	SYS1.LINKLIB
ARCATTNW	Entry Load Object	ARCATTNW	ARCATTNW	SYS1.LPALIB
ARCAUDBC	Entry Object	ARCAUDBC	ARCCTL	SYS1.LINKLIB
ARCAUDBD	Entry Object	ARCAUDBD	ARCCTL	SYS1.LINKLIB
ARCAUDBV	Entry Object	ARCAUDBV	ARCCTL	SYS1.LINKLIB
ARCAUDDH	Entry	ARCAUDDS	ARCCTL	SYS1.LINKLIB
ARCAUDDS	Entry Object	ARCAUDDS	ARCCTL	SYS1.LINKLIB
ARCAUDIT	Entry Object	ARCAUDIT	ARCCTL	SYS1.LINKLIB
ARCAUDMC	Entry Object	ARCAUDMC	ARCCTL	SYS1.LINKLIB
ARCAUDSC	Entry Object	ARCAUDSC	ARCCTL	SYS1.LINKLIB
ARCAUDTC	Entry Object	ARCAUDTC	ARCCTL	SYS1.LINKLIB

Table 1 (Page 4 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCAUDTM	Entry Object	ARCAUDTM	ARCCTL	SYS1.LINKLIB
ARCAUDTV	Entry Object	ARCAUDTV	ARCCTL	SYS1.LINKLIB
ARCAUDVL	Entry Object	ARCAUDVL	ARCCTL	SYS1.LINKLIB
ARCAXMI	Entry Object	ARCAXMI	ARCCTL	SYS1.LINKLIB
ARCAXMR	Entry Object	ARCAXMR	ARCCTL	SYS1.LINKLIB
ARCAZRC	Entry Object	ARCAZRC	ARCCTL	SYS1.LINKLIB
ARCAZWC	Entry Object	ARCAZWC	ARCCTL	SYS1.LINKLIB
ARCBACK	Entry Object	ARCBACK	ARCCTL	SYS1.LINKLIB
ARCBAKDS	Entry Object	ARCBAKDS	ARCCTL	SYS1.LINKLIB
ARCBATTC	Entry Object	ARCBATTC	ARCCTL	SYS1.LINKLIB
ARCBCEBV	Entry Object	ARCBCEBV	ARCCTL	SYS1.LINKLIB
ARCBCLN	Entry Object	ARCBCLN	ARCCTL	SYS1.LINKLIB
ARCBDEBV	Entry Object	ARCBDEBV	ARCCTL	SYS1.LINKLIB
ARCBDEL	See entry point HBDELETE			
ARCBDEXT	Entry Load Object	ARCBDEXT (not supplied)	ARCBDEXT	SYS1.LINKLIB
ARCBDSN	Entry Object	ARCBDSN	ARCCTL	SYS1.LINKLIB
ARCBEEXT	Entry Load Object	ARCBEEXT (not supplied)	ARCBEEXT	SYS1.LINKLIB
ARCBEINT	Entry Object	ARCBEINT	ARCWCTL	SYS1.LINKLIB
ARCBELIG	Entry Object	ARCBELIG	ARCCTL	SYS1.LINKLIB
ARCBFULL	Entry Object	ARCBFULL	ARCCTL	SYS1.LINKLIB
ARCBGDBV	Entry Object	ARCBGDBV	ARCCTL	SYS1.LINKLIB

Table 1 (Page 5 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCBGEN	Entry Object	ARCBGEN	ARCCTL	SYS1.LINKLIB
ARCBINST	Non-executable	ARCBINST	ARCCTL	SYS1.LINKLIB
ARCBKMSG	Entry Object	ARCBKMSG	ARCCTL	SYS1.LINKLIB
ARCBMBC	Entry Object	ARCBMBC	ARCCTL	SYS1.LINKLIB
ARCBMBV	Entry Object	ARCBMBV	ARCCTL	SYS1.LINKLIB
ARCBMDS	Entry Object	ARCBMDS	ARCCTL	SYS1.LINKLIB
ARCBODS	Entry Object	ARCBODS	ARCCTL	SYS1.LINKLIB
ARCBROLV	Entry Object	ARCBROLV	ARCCTL	SYS1.LINKLIB
ARCBSPIL	Entry Object	ARCBSPIL	ARCCTL	SYS1.LINKLIB
ARCBUDS	Entry Object	ARCBUDS	ARCCTL	SYS1.LINKLIB
ARCBUFND	Entry	ARCEXVDS	ARCCTL	SYS1.LINKLIB
ARCBVBEG	Entry Object	ARCBVBEG	ARCCTL	SYS1.LINKLIB
ARCBVCAT	Entry Object	ARCBVCAT	ARCCTL	SYS1.LINKLIB
ARCBVCLN	Entry	ARCBSPIL	ARCCTL	SYS1.LINKLIB
ARCBVDS	Entry Object	ARCBVDS	ARCCTL	SYS1.LINKLIB
ARCBVEND	Entry Object	ARCBVEND	ARCCTL	SYS1.LINKLIB
ARCBVOL	Entry Object	ARCBVOL	ARCCTL	SYS1.LINKLIB
ARCBVOL2	Entry Object	ARCBVOL2	ARCCTL	SYS1.LINKLIB
ARCBVR23	Entry Object	ARCBVR23	ARCBVR23	SYS1.LINKLIB
ARCCABRC	Entry Object	ARCCABRC	ARCCTL	SYS1.LINKLIB
ARCCATBU	Entry Object	ARCCATBU	ARCCTL	SYS1.LINKLIB
ARCCBEXT	Entry Load Object	ARCCBEXT (not supplied)	ARCCBEXT	SYS1.LINKLIB
ARCCBS	Non-executable Object	ARCCBS	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB

Table 1 (Page 6 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCCBVR	Entry Object	ARCCBVR	ARCCTL	SYS1.LINKLIB
ARCCDEXT	Entry Load Object	ARCCDEXT (not supplied)	ARCCDEXT	SYS1.LINKLIB
ARCCDSLK	Entry	ARCULOCK	ARCCTL	SYS1.LINKLIB
ARCCDSUK	Entry	ARCULOCK	ARCCTL	SYS1.LINKLIB
ARCCDTUN	Entry Object	ARCCDTUN	ARCCTL ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB
ARCCFSR	Entry Object	ARCCFSR	ARCCTL	SYS1.LINKLIB
ARCCHKEL	Entry	ARCCHKUT	ARCCTL	SYS1.LINKLIB
ARCCHKPW	Entry Object	ARCCHKPW	ARCCTL	SYS1.LINKLIB
ARCCHKUT	Entry Object	ARCCHKUT	ARCCTL	SYS1.LINKLIB
ARCCIB	Entry Object	ARCCIB	ARCCTL	SYS1.LINKLIB
ARCCKBUP	Entry Object	ARCCKBUP	ARCCTL	SYS1.LINKLIB
ARCCKEOS	Entry Object	ARCCKEOS	ARCCTL	SYS1.LINKLIB
ARCCKEY	Entry Object	ARCCKEY	ARCCTL	SYS1.LINKLIB
ARCCKRNT	Entry Object	ARCCKRNT	ARCCTL	SYS1.LINKLIB
ARCCKVOL	Entry Object	ARCCKVOL	ARCCTL	SYS1.LINKLIB
ARCCLUSZ	Entry Object	ARCCLUSZ	ARCCTL	SYS1.LINKLIB
ARCCMCP	Entry Object	ARCCMCP	ARCCTL	SYS1.LINKLIB
ARCCMDPR	Entry Object	ARCCMDPR	ARCCTL	SYS1.LINKLIB
ARCCMHRD	Entry Object	ARCCMHRD	ARCCTL	SYS1.LINKLIB
ARCCMHWR	Entry	ARCCMHRD	ARCCTL	SYS1.LINKLIB
ARCCOPEN	Entry Object	ARCCOPEN	ARCCTL	SYS1.LINKLIB
ARCCP	Entry Object	ARCCP	ARCCTL	SYS1.LINKLIB
ARCCPABK	Entry Object	ARCCPABK	ARCCTL	SYS1.LINKLIB

Table 1 (Page 7 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCCPADS	Entry Object	ARCCPADS	ARCCTL	SYS1.LINKLIB
ARCCPADV	Entry Object	ARCCPADV	ARCCTL	SYS1.LINKLIB
ARCCPARV	Entry Object	ARCCPARV	ARCCTL	SYS1.LINKLIB
ARCCPAUD	Entry Object	ARCCPAUD	ARCCTL	SYS1.LINKLIB
ARCCPAUT	Entry Object	ARCCPAUT	ARCCTL	SYS1.LINKLIB
ARCCPBAK	Entry Object	ARCCPBAK	ARCCTL	SYS1.LINKLIB
ARCCPBD	Entry Object	ARCCPBD	ARCCTL	SYS1.LINKLIB
ARCCPCAN	Entry Object	ARCCPCAN	ARCCTL	SYS1.LINKLIB
ARCCPCDU	Entry Object	ARCCPCDU	ARCCTL	SYS1.LINKLIB
ARCCPCTP	Entry Object	ARCCPCTP	ARCCTL	SYS1.LINKLIB
ARCCPCTS	Entry Object	ARCCPCTS	ARCCTL	SYS1.LINKLIB
ARCCPCYC	Entry Object	ARCCPCYC	ARCCTL	SYS1.LINKLIB
ARCCPDDV	Entry Object	ARCCPDDV	ARCCTL	SYS1.LINKLIB
ARCCPDEF	Entry Object	ARCCPDEF	ARCCTL	SYS1.LINKLIB
ARCCPDIS	Entry Object	ARCCPDIS	ARCCTL	SYS1.LINKLIB
ARCCPDLV	Entry Object	ARCCPDLV	ARCCTL	SYS1.LINKLIB
ARCCPDUP	Entry Object	ARCCPDUP	ARCCTL	SYS1.LINKLIB
ARCCPEBV	Entry Object	ARCCPEBV	ARCCTL	SYS1.LINKLIB
ARCCPEMD	Entry Object	ARCCPEMD	ARCCTL	SYS1.LINKLIB
ARCCPFC	Entry Object	ARCCPFC	ARCCTL	SYS1.LINKLIB
ARCCPFVL	Entry Object	ARCCPFVL	ARCCTL	SYS1.LINKLIB
ARCCPHLD	Entry Object	ARCCPHLD	ARCCTL	SYS1.LINKLIB

Table 1 (Page 8 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCCPLMC	Entry Object	ARCCPLMC	ARCCTL	SYS1.LINKLIB
ARCCPLM2	Entry Object	ARCCPLM2	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCCPMIG	Entry Object	ARCCPMIG	ARCCTL	SYS1.LINKLIB
ARCCPON	Entry Object	ARCCPON	ARCCTL	SYS1.LINKLIB
ARCCPOP	Entry Object	ARCCPOP	ARCCTL	SYS1.LINKLIB
ARCCPPAT	Entry	ARCCPDIS	ARCCTL	SYS1.LINKLIB
ARCCPQAB	Entry Object	ARCCPQAB	ARCCTL	SYS1.LINKLIB
ARCCPQAC	Entry Object	ARCCPQAC	ARCCTL	SYS1.LINKLIB
ARCCPQAR	Entry Object	ARCCPQAR	ARCCTL	SYS1.LINKLIB
ARCCPQBS	Entry Object	ARCCPQBS	ARCCTL	SYS1.LINKLIB
ARCCPQCD	Entry Object	ARCCPQCD	ARCCTL	SYS1.LINKLIB
ARCCPQCL	Entry Object	ARCCPQCL	ARCCTL	SYS1.LINKLIB
ARCCPQCV	Entry Object	ARCCPQCV	ARCCTL	SYS1.LINKLIB
ARCCPQDT	Entry Object	ARCCPQDT	ARCCTL	SYS1.LINKLIB
ARCCPQRY	Entry Object	ARCCPQRY	ARCCTL	SYS1.LINKLIB
ARCCPQSS	Entry Object	ARCCPQSS	ARCCTL	SYS1.LINKLIB
ARCCPQST	Entry Object	ARCCPQST	ARCCTL	SYS1.LINKLIB
ARCCPQVT	Entry Object	ARCCPQVT	ARCCTL	SYS1.LINKLIB
ARCCPRBC	Entry Object	ARCCPRBC	ARCCTL	SYS1.LINKLIB
ARCCPRCY	Entry Object	ARCCPRCY	ARCCTL	SYS1.LINKLIB
ARCCPRES	Entry Object	ARCCPRES	ARCCTL	SYS1.LINKLIB
ARCCPRPT	Entry Object	ARCCPRPT	ARCCTL	SYS1.LINKLIB

Table 1 (Page 9 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCCPRST	Entry Object	ARCCPRST	ARCCTL	SYS1.LINKLIB
ARCCPRTN	Entry Object	ARCCPRTN	ARCCTL	SYS1.LINKLIB
ARCCPSCV	Entry Object	ARCCPSCV	ARCCTL	SYS1.LINKLIB
ARCCPSET	Entry Object	ARCCPSET	ARCCTL	SYS1.LINKLIB
ARCCPSPS	Entry Object	ARCCPSPS	ARCCTL	SYS1.LINKLIB
ARCCPSTR	Entry Object	ARCCPSTR	ARCCTL	SYS1.LINKLIB
ARCCPSWI	Entry Object	ARCCPSWI	ARCCTL	SYS1.LINKLIB
ARCCPSXT	Entry Object	ARCCPSXT	ARCCTL	SYS1.LINKLIB
ARCCRCB	Entry Object	ARCCRCB	ARCCTL	SYS1.LINKLIB
ARCCREXT	Entry Load Object	ARCCREXT (not supplied)	ARCCREXT	SYS1.LINKLIB
ARCCRINT	Entry Object	ARCCRINT	ARCWCTL	SYS1.LINKLIB
ARCCSDP	Entry	ARCOSDP	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCCTL	Entry Load Object	ARCCTL	ARCCTL	SYS1.LINKLIB
ARCCTL2	Entry	ARCCTL	ARCCTL	SYS1.LINKLIB
ARCCTTOC	Entry Object	ARCCTTOC	ARCCTL	SYS1.LINKLIB
ARCCUMC1	Entry Object	ARCCUMC1	ARCCTL	SYS1.LINKLIB
ARCCUNDT	Entry	ARCCDTUN	ARCCTL ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB
ARCCVSR	Entry Object	ARCCVSR	ARCCTL	SYS1.LINKLIB
ARCDADCE	Entry Object	ARCDADCE	ARCCTL	SYS1.LINKLIB
ARCDATTC	Entry Object	ARCDATTC	ARCCTL	SYS1.LINKLIB
ARCDAUTO	Entry Object	ARCDAUTO	ARCCTL	SYS1.LINKLIB
ARCDBAUT	Entry Object	ARCDBAUT	ARCCTL	SYS1.LINKLIB

Table 1 (Page 10 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCDBVR	Entry	ARCCBVR	ARCCTL	SYS1.LINKLIB
ARCDCDST	Entry Object	ARCDCDST	ARCCTL	SYS1.LINKLIB
ARCDCLOS	Entry Object	ARCDCLOS	ARCCTL	SYS1.LINKLIB
ARCDCMD	Entry Object	ARCDCMD	ARCCTL	SYS1.LINKLIB
ARCDCTL	Entry Object	ARCDCTL	ARCCTL	SYS1.LINKLIB
ARCDDCL	Entry Object	ARCDDCL	ARCCTL	SYS1.LINKLIB
ARCDDCR	Entry Object	ARCDDCR	ARCCTL	SYS1.LINKLIB
ARCDDS	Entry	ARCDMDS	ARCCTL	SYS1.LINKLIB
ARCDECD	Entry Object	ARCDECD	ARCCTL	SYS1.LINKLIB
ARCDECDH	Entry Object	ARCDECDH	ARCCTL	SYS1.LINKLIB
ARCDEDVC	Entry Object	ARCDEDVC	ARCCTL	SYS1.LINKLIB
ARCDELVS	Entry	ARCVSLOC	ARCCTL	SYS1.LINKLIB
ARCDEQ	Entry	ARCENQ	ARCCTL	SYS1.LINKLIB
ARCDFSR	Entry	ARCCFSR	ARCCTL	SYS1.LINKLIB
ARCDGEN	Entry Object	ARCDGEN	ARCCTL	SYS1.LINKLIB
ARCDGVSZ	Entry Object	ARCDGVSZ	ARCCTL	SYS1.LINKLIB
ARCDIDC	Entry Object	ARCDIDC	ARCCTL	SYS1.LINKLIB
ARCDINST	Non-executable	ARCDINST	ARCCTL	SYS1.LINKLIB
ARCDLVDV	Entry Object	ARCDLVDV	ARCCTL	SYS1.LINKLIB
ARCDMDS	Entry Object	ARCDMDS	ARCCTL	SYS1.LINKLIB
ARCDMY	Entry	ARCALNDR	ARCCTL ARCLISTM ARCPRLOG ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB SYS1.LINKLIB SYS1.CMDLIB
ARCDMY20	Entry	ARCALNDR	ARCCTL	
ARCDOPEN	Entry Object	ARCDOPEN	ARCCTL	SYS1.LINKLIB
ARCDRCB	Entry	ARCCRCB	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB

Table 1 (Page 11 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCDRDSS	Entry Object	ARCDRDSS	ARCCTL	SYS1.LINKLIB
ARCDRSTM	Entry Object	ARCDRSTM	ARCCTL	SYS1.LINKLIB
ARCDRSYN	Entry Object	ARCDRSYN	ARCCTL	SYS1.LINKLIB
ARCDRTMT	Entry Object	ARCDRTMT	ARCCTL	SYS1.LINKLIB
ARCDSDP	Entry	ARCOSDP	ARCCTL	SYS1.LINKLIB
ARCDSSUT	Entry Object	ARCDSSUT	ARCCTL	SYS1.LINKLIB
ARCDSSZ	Entry	ARCCLUSZ	ARCCTL	SYS1.LINKLIB
ARCDSTAI	Entry Object	ARCDSTAI	ARCCTL	SYS1.LINKLIB
ARCDTOBJ	Non-executable	ARCDTOBJ	ARCCTL	SYS1.LINKLIB
ARCDTSRC	Non-executable	ARCDTSRC	ARCCTL	SYS1.LINKLIB
ARCDTTOC	Entry	ARCCTTOC	ARCCTL	SYS1.LINKLIB
ARCDTTRM	Entry Object	ARCDTTRM	ARCCTL	SYS1.LINKLIB
ARCDTVSV	Entry Object	ARCDTVSV	ARCCTL	SYS1.LINKLIB
ARCDUDVL	Entry Object	ARCDUDVL	ARCCTL	SYS1.LINKLIB
ARCDUUIM	Entry Object	ARCDUUIM	ARCCTL	SYS1.LINKLIB
ARCDVBEG	Entry Object	ARCDVBEG	ARCCTL	SYS1.LINKLIB
ARCDVCLN	Entry Object	ARCDVCLN	ARCCTL	SYS1.LINKLIB
ARCDVOL	Entry Object	ARCDVOL	ARCCTL	SYS1.LINKLIB
ARCENCD	Entry Object	ARCENCD	ARCCTL	SYS1.LINKLIB
ARCENCDH	Entry Object	ARCENCDH	ARCCTL	SYS1.LINKLIB
ARCENQ	Entry Object	ARCENQ	ARCCTL	SYS1.LINKLIB
ARCENQF	Entry	ARCENQ	ARCCTL	SYS1.LINKLIB
ARCERP	Entry Object	ARCERP	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCESD	Non-executable Object	ARCESD	ARCCTL	SYS1.LINKLIB

Table 1 (Page 12 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCESTAE	Entry Object	ARCESTAE	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCESTAI	Entry Object	ARCESTAI	ARCCTL	SYS1.LINKLIB
ARCETOBJ	Non-executable	ARCETOBJ	ARCCTL	SYS1.LINKLIB
ARCETSRC	Non-executable	ARCETSRC	ARCCTL	SYS1.LINKLIB
ARCEXPDT	Entry	ARCFVBC	ARCCTL	SYS1.LINKLIB
ARCEXVDS	Entry Object	ARCEXVDS	ARCCTL	SYS1.LINKLIB
ARCFAIL	Entry Load Object	ARCFAIL	ARCADS ARCCTL ARCFAIL ARCLISTM ARCMCMD ARCQARC ARCRMDS ARCBDEL ARCHCAN	SYS1.CMDLIB SYS1.LINKLIB SYS1.LINKLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB
ARCFAILM	Non-executable Object	ARCFAILM	ARCADS ARCCTL ARCFAIL ARCLISTM ARCMCMD ARCQARC ARCRMDS ARCBDEL ARCHCAN	SYS1.CMDLIB SYS1.LINKLIB SYS1.LINKLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB
ARCFAIL2	Entry	ARCFAIL	ARCADS ARCCTL ARCFAIL ARCLISTM ARCMCMD ARCQARC ARCRMDS ARCBDEL ARCHCAN	SYS1.CMDLIB SYS1.LINKLIB SYS1.LINKLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB
ARCFDSRB	Entry Object	ARCFDSRB	ARCCTL	SYS1.LINKLIB
ARCFDVTE	Entry Object	ARCFDVTE	ARCCTL ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB
ARCFMAIN	Entry	ARCGMAIN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCFREE	Entry Object	ARCFREE	ARCCTL	SYS1.LINKLIB
ARCFRSDP	Entry	ARCALSDP	ARCCTL	SYS1.LINKLIB
ARCFVBC	Entry Object	ARCFVBC	ARCCTL	SYS1.LINKLIB

Table 1 (Page 13 of 36). Module Directory				
Name	**Type**	**Object Module**	**Load Module**	**Operating System Data Set**
ARCFVCVL	Entry Object	ARCFVCVL	ARCCTL	SYS1.LINKLIB
ARCFVSC	Entry Object	ARCFVSC	ARCCTL	SYS1.LINKLIB
ARCFVSFM	Entry	ARCFVSC	ARCCTL	SYS1.LINKLIB
ARCGATTC	Entry Object	ARCGATTC	ARCCTL	SYS1.LINKLIB
ARCGBCN	Entry Object	ARCGBCN	ARCCTL	SYS1.LINKLIB
ARCGCLN	Entry Object	ARCGCLN	ARCCTL	SYS1.LINKLIB
ARCGCTL	Entry Object	ARCGCTL	ARCCTL	SYS1.LINKLIB
ARCGDS	Entry Object	ARCGDS	ARCCTL	SYS1.LINKLIB
ARCGDSN	Entry Object	ARCGDSN	ARCCTL	SYS1.LINKLIB
ARCGDSSC	Entry Object	ARCGDSSC	ARCCTL	SYS1.LINKLIB
ARCGENLG	Entry Object	ARCGENLG	ARCCTL	SYS1.LINKLIB
ARCGINST	Non-executable	ARCGINST	ARCCTL	SYS1.LINKLIB
ARCGIVER	Entry Object	ARCGIVER	ARCCTL	SYS1.LINKLIB
ARCGMAIN	Entry Object	ARCGRAIN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCGMCN	Entry	ARCGBCN	ARCCTL	SYS1.LINKLIB
ARCGNVOB	Entry Object	ARCGNVOB	ARCCTL	SYS1.LINKLIB
ARCGODS	Entry Object	ARCGODS	ARCCTL	SYS1.LINKLIB
ARCGRACS	Entry Object	ARCGRACS	ARCCTL	SYS1.LINKLIB
ARCGRAIN	Entry Object	ARCGRAIN	ARCCTL	SYS1.LINKLIB
ARCGRCAT	Entry Object	ARCGRCAT	ARCCTL	SYS1.LINKLIB
ARCGRCLN	Entry Object	ARCGRCLN	ARCCTL	SYS1.LINKLIB
ARCGRDCL	Entry Object	ARCGRDCL	ARCCTL	SYS1.LINKLIB
ARCGRDEC	Entry Object	ARCGRDEC	ARCCTL	SYS1.LINKLIB

Table 1 (Page 14 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCGRDGN	Entry Object	ARCGRDGN	ARCCTL	SYS1.LINKLIB
ARCGRDPR	Entry Object	ARCGRDPR	ARCCTL	SYS1.LINKLIB
ARCGRDS	Entry Object	ARCGRDS	ARCCTL	SYS1.LINKLIB
ARCGRDVC	Entry Object	ARCGRDVC	ARCCTL	SYS1.LINKLIB
ARCGRDVL	Entry Object	ARCGRDVL	ARCCTL	SYS1.LINKLIB
ARCGREN	Entry Object	ARCGREN	ARCCTL	SYS1.LINKLIB
ARCGRFRV	Entry Object	ARCGRFRV	ARCCTL	SYS1.LINKLIB
ARCGRGDG	Entry Object	ARCGRGDG	ARCCTL	SYS1.LINKLIB
ARCGRLOC	Entry Object	ARCGRLOC	ARCCTL	SYS1.LINKLIB
ARCGRMAN	Entry Object	ARCGRMAN	ARCCTL	SYS1.LINKLIB
ARCGRMCP	Entry Object	ARCGRMCP	ARCCTL	SYS1.LINKLIB
ARCGRNEW	Entry Object	ARCGRNEW	ARCCTL	SYS1.LINKLIB
ARCGRNVS	Entry Object	ARCGRNVS	ARCCTL	SYS1.LINKLIB
ARCGROLD	Entry Object	ARCGROLD	ARCCTL	SYS1.LINKLIB
ARCGRQE	Entry Object	ARCGRQE	ARCCTL	SYS1.LINKLIB
ARCGRQE1	Entry Object	ARCGRQE1	ARCCTL	SYS1.LINKLIB
ARCGRQE2	Entry Object	ARCGRQE2	ARCCTL	SYS1.LINKLIB
ARCGRQE3	Entry Object	ARCGRQE3	ARCCTL	SYS1.LINKLIB
ARCGRTOV	Entry Object	ARCGRTOV	ARCCTL	SYS1.LINKLIB
ARCGRTVR	Entry Object	ARCGRTVR	ARCCTL	SYS1.LINKLIB
ARCGRVDS	Entry Object	ARCGRVDS	ARCCTL	SYS1.LINKLIB
ARCGRVOL	Entry Object	ARCGRVOL	ARCCTL	SYS1.LINKLIB

Table 1 (Page 15 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCGRVSU	Entry Object	ARCGRVSU	ARCCTL	SYS1.LINKLIB
ARCGSTAI	Entry Object	ARCGSTAI	ARCCTL	SYS1.LINKLIB
ARCGSTMP	Entry Object	ARCGSTMP	ARCCTL	SYS1.LINKLIB
ARCGVCAT	Entry Object	ARCGVCAT	ARCCTL	SYS1.LINKLIB
ARCGVCRT	Entry Object	ARCGVCRT	ARCCTL	SYS1.LINKLIB
ARCGVDS	Entry Object	ARCGVDS	ARCCTL	SYS1.LINKLIB
ARCGVDSN	Entry Object	ARCGVDSN	ARCCTL	SYS1.LINKLIB
ARCGVOL	Entry Object	ARCGVOL	ARCCTL	SYS1.LINKLIB
ARCGVTOC	Entry Object	ARCGVTOC	ARCCTL	SYS1.LINKLIB
ARCHCAN	See entry point HCANCEL			
ARCICTL	Entry	ARCISTAT	ARCCTL	SYS1.LINKLIB
ARCIDAY	Entry	ARCALNDR	ARCCTL ARCLISTM ARCPRLOG ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB SYS1.LINKLIB SYS1.CMDLIB
ARCILOG	Entry Object	ARCILOG	ARCCTL	SYS1.LINKLIB
ARCIMVDS	Entry Object	ARCIMVDS	ARCCTL	SYS1.LINKLIB
ARCINBAK	Entry Load Object	ARCINBAK	ARCCTL	SYS1.LINKLIB
ARCINEXT	Entry Object	ARCINEXT (not supplied)	ARCINEXT	SYS1.LINKLIB
ARCINIT	Entry Object	ARCINIT	ARCCTL	SYS1.LINKLIB
ARCIRCB	Entry	ARCCRCB	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCISTAT	Entry Object	ARCISTAT	ARCCTL	SYS1.LINKLIB
ARCITTOC	Entry Object	ARCITTOC	ARCCTL	SYS1.LINKLIB
ARCKALLC	Entry Object	ARCKALLC	ARCWCTL	SYS1.LINKLIB

Table 1 (Page 16 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCKBACK	Entry Object	ARCKBACK	ARCWCTL	SYS1.LINKLIB
ARCKBLDC	Entry Object	ARCKBLDC	ARCWCTL	SYS1.LINKLIB
ARCKBLDI	Entry Object	ARCKBLDI	ARCWCTL	SYS1.LINKLIB
ARCKBLKR	Entry Object	ARCKBLKR	ARCWCTL	SYS1.LINKLIB
ARCKCDIR	Entry Object	ARCKCDIR	ARCWCTL	SYS1.LINKLIB
ARCKCDSR	Entry Object	ARCKCDSR	ARCWCTL	SYS1.LINKLIB
ARCKCONS	Entry Object	ARCKCONS	ARCWCTL	SYS1.LINKLIB
ARCKDATE	Entry	ARCALNDR	ARCCTL ARCLISTM ARCPRLOG ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB SYS1.LINKLIB SYS1.CMDLIB
ARCKDAY	Entry	ARCALNDR	ARCCTL ARCLISTM ARCPRLOG ARCRMDS	SYS1.LINKLIB SYS1.CMDLIB SYS1.LINKLIB SYS1.CMDLIB
ARCKFILT	Entry Object	ARCKFILT	ARCWCTL	SYS1.LINKLIB
ARCKFIL1	Entry Object	ARCKFIL1	ARCWCTL	SYS1.LINKLIB
ARCKFIND	Entry Object	ARCKFIND	ARCWCTL	SYS1.LINKLIB
ARCKGDGR	Entry Object	ARCKGDGR	ARCWCTL	SYS1.LINKLIB
ARCKMITA	Entry Object	ARCKMITA	ARCWCTL	SYS1.LINKLIB
ARCKMOV	Entry Object	ARCKMOV	ARCWCTL	SYS1.LINKLIB
ARCKOTHR	Entry Object	ARCKOTHR	ARCWCTL	SYS1.LINKLIB
ARCKPAGC	Entry Object	ARCKPAGC	ARCWCTL	SYS1.LINKLIB
ARCKPAGG	Entry Object	ARCKPAGG	ARCWCTL	SYS1.LINKLIB
ARCKPAG1	Entry Object	ARCKPAG1	ARCWCTL	SYS1.LINKLIB
ARCKPAG2	Entry Object	ARCKPAG2	ARCWCTL	SYS1.LINKLIB

Table 1 (Page 17 of 36). Module Directory				
Name	**Type**	**Object Module**	**Load Module**	**Operating System Data Set**
ARCKPARS	Entry Object	ARCKPARS	ARCWCTL	SYS1.LINKLIB
ARCKSCAN	Entry Object	ARCKSCAN	ARCWCTL	SYS1.LINKLIB
ARCKSDSP	Entry Object	ARCKSDSP	ARCWCTL	SYS1.LINKLIB
ARCKSORT	Entry Object	ARCKSORT	ARCWCTL	SYS1.LINKLIB
ARCKVOLS	Entry Object	ARCKVOLS	ARCWCTL	SYS1.LINKLIB
ARCKVRFY	Entry Object	ARCKVRFY	ARCWCTL	SYS1.LINKLIB
ARCKWRIT	Entry Object	ARCKWRIT	ARCWCTL	SYS1.LINKLIB
ARCKWRTC	Entry Object	ARCKWRTC	ARCWCTL	SYS1.LINKLIB
ARCKWRTI	Entry Object	ARCKWRTI	ARCWCTL	SYS1.LINKLIB
ARCKWRTT	Entry Object	ARCKWRTT	ARCWCTL	SYS1.LINKLIB
ARCLBUC	Entry Object	ARCLBUC	ARCCTL	SYS1.LINKLIB
ARCLDCLS	Entry Object	ARCLDCLS	ARCCTL	SYS1.LINKLIB
ARCLDS	Entry Object	ARCLDS	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCLDVOL	Entry Object	ARCLDVOL	ARCCTL	SYS1.LINKLIB SYS1CMDLIB
ARCLHOST	Entry Object	ARCLHOST	ARCCTL	SYS1.LINKLIB
ARCLISTM	See entry point HLIST			
ARCLNX	Entry Object	ARCLNX	ARCCTL	SYS1.LINKLIB
ARCLOCK	Entry Object	ARCLOCK	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCLOCKC	Entry	ARCLOCK	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCLOCKT	Entry	ARCLOCK	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCLSPAC	Entry Object	ARCLSPAC	ARCCTL	SYS1.LINKLIB
ARCLSPAR	Entry	ARCLSPAC	ARCCTL	SYS1.LINKLIB

Table 1 (Page 18 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCLTTC	Entry Object	ARCLTTC	ARCCTL	SYS1.LINKLIB
ARCLVSR	Entry	ARCCVSR	ARCCTL	SYS1.LINKLIB
ARCMBBUF	Entry Object	ARCMBBUF	ARCCTL	SYS1.LINKLIB
ARCMBFSR	Entry Object	ARCMBFSR	ARCCTL	SYS1.LINKLIB
ARCMBUIM	Entry Object	ARCMBUIM	ARCCTL	SYS1.LINKLIB
ARCMCDST	Entry Object	ARCMCDST	ARCCTL	SYS1.LINKLIB
ARCMCKF1	Entry Object	ARCMCKF1	ARCCTL	SYS1.LINKLIB
ARCMCLN	Entry Object	ARCMCLN	ARCCTL	SYS1.LINKLIB
ARCMCLUS	Entry Object	ARCMCLUS	ARCCTL	SYS1.LINKLIB
ARCMCMD	See entry point HSENDCMD			
ARCMCPSV	Entry Object	ARCMCPSV	ARCCTL	SYS1.LINKLIB
ARCMCTL	Entry Object	ARCMCTL	ARCCTL	SYS1.LINKLIB
ARCMCVLT	Entry Object	ARCMCVLT	ARCCTL	SYS1.LINKLIB
ARCMDEXT	Entry Load Object	ARCMDEXT (not supplied)	ARCMDEXT	SYS1.LINKLIB
ARCMDSMV	Entry Object	ARCMDSMV	ARCCTL	SYS1.LINKLIB
ARCMDSN	Entry Object	ARCMDSN	ARCCTL	SYS1.LINKLIB
ARCMDSS	Entry Object	ARCMDSS	ARCCTL	SYS1.LINKLIB
ARCMDSUV	Entry Object	ARCMDSUV	ARCCTL	SYS1.LINKLIB
ARCMDSUX	Entry Object	ARCMDSUX	ARCCTL	SYS1.LINKLIB
ARCMELIG	Entry Object	ARCMELIG	ARCCTL	SYS1.LINKLIB
ARCMETRG	Entry Object	ARCMETRG	ARCCTL	SYS1.LINKLIB
ARCMEXP	Entry Object	ARCMEXP	ARCCTL	SYS1.LINKLIB

Table 1 (Page 19 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCMGACT	Entry Object	ARCMGACT	ARCCTL	SYS1.LINKLIB
ARCMGDI	Entry Object	ARCMGDI	ARCCTL	SYS1.LINKLIB
ARCMGEN	Entry Object	ARCMGEN	ARCCTL	SYS1.LINKLIB
ARCMGLM	Entry Object	ARCMGLM	ARCCTL	SYS1.LINKLIB
ARCMGL0	Entry Object	ARCMGL0	ARCCTL	SYS1.LINKLIB
ARCMGQCT	Entry Object	ARCMGQCT	ARCCTL	SYS1.LINKLIB
ARCMG2TP	Entry Object	ARCMG2TP	ARCCTL	SYS1.LINKLIB
ARCMHOLD	Entry Object	ARCMHOLD	ARCCTL	SYS1.LINKLIB
ARCMIGDS	Entry Object	ARCMIGDS	ARCCTL	SYS1.LINKLIB
ARCMINST	Non-executable	ARCMINST	ARCCTL	SYS1.LINKLIB
ARCMLCLN	Entry Object	ARCMLCLN	ARCCTL	SYS1.LINKLIB
ARCMLEV1	Entry Object	ARCMLEV1	ARCCTL	SYS1.LINKLIB
ARCMLEV2	Entry	ARCMLEV1	ARCCTL	SYS1.LINKLIB
ARCMMDS	Entry Object	ARCMMDS	ARCCTL	SYS1.LINKLIB
ARCMMEXT	Entry Object	ARCMMEXT (not supplied)	ARCCTL	SYS1.LINKLIB
ARCMMGDS	Entry Object	ARCMMGDS	ARCCTL	SYS1.LINKLIB
ARCMMVF1	Entry Object	ARCMMVF1	ARCCTL	SYS1.LINKLIB
ARCMPDS	Entry Object	ARCMPDS	ARCCTL	SYS1.LINKLIB
ARCMPVF1	Entry Object	ARCMPVF1	ARCCTL	SYS1.LINKLIB
ARCMRSLT	Entry Object	ARCMRSLT	ARCCTL	SYS1.LINKLIB
ARCMSACQ	Entry	ARCACREL	ARCCTL	SYS1.LINKLIB
ARCMSDP	Entry Object	ARCMSDP	ARCCTL	SYS1.LINKLIB
ARCMSDS	Entry Object	ARCMSDS	ARCCTL	SYS1.LINKLIB

Table 1 (Page 20 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCMSDSP	Entry Object	ARCMSDSP	ARCCTL	SYS1.LINKLIB
ARCMSG	Non-executable Object	ARCMSG	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCMSL2V	Entry Object	ARCMSL2V	ARCCTL	SYS1.LINKLIB
ARCMSMV	Entry Object	ARCMSMV	ARCCTL	SYS1.LINKLIB
ARCMSPV	Entry Object	ARCMSPV	ARCCTL	SYS1.LINKLIB
ARCMSREL	Entry	ARCACREL	ARCCTL	SYS1.LINKLIB
ARCMTTOC	Entry	ARCCTTOC	ARCCTL	SYS1.LINKLIB
ARCMVBEG	Entry Object	ARCMVBEG	ARCCTL	SYS1.LINKLIB
ARCMVCDS	Entry Object	ARCALIST	ARCCTL	SYS1.LINKLIB
ARCMVCLN	Entry Object	ARCMVCLN	ARCCTL	SYS1.LINKLIB
ARCMVDS	Entry Object	ARCMVDS	ARCCTL	SYS1.LINKLIB
ARCMVEXT	Entry Load Object	ARCMVEXT (not supplied)	ARCMVEXT	SYS1.LINKLIB
ARCMVOL	Entry Object	ARCMVOL	ARCCTL	SYS1.LINKLIB
ARCMVOLP	Entry Object	ARCMVOLP	ARCCTL	SYS1.LINKLIB
ARCMVTOC	Entry Object	ARCMVTOC	ARCCTL	SYS1.LINKLIB
ARCM2EXT	Entry Load Object	ARCM2EXT (not supplied)	ARCM2EXT	SYS1.LINKLIB
ARCM2INT	Entry Object	ARCM2INT	ARCWCTL	SYS1.LINKLIB
ARCNARV	Entry Object	ARCNARV	ARCWCTL	SYS1.LINKLIB
ARCNBLDC	Entry Object	ARCNBLDC	ARCWCTL	SYS1.LINKLIB
ARCNC	Entry Object	ARCNC	ARCCTL	SYS1.LINKLIB
ARCNCDSW	Entry Object	ARCNCDSW	ARCWCTL	SYS1.LINKLIB
ARCNC1	Entry	ARCNC	ARCCTL	SYS1.LINKLIB
ARCNC2	Entry	ARCNC	ARCCTL	SYS1.LINKLIB

Table 1 (Page 21 of 36). Module Directory				
Name	**Type**	**Object Module**	**Load Module**	**Operating System Data Set**
ARCNDBLK	Entry Object	ARCNDBLK	ARCWCTL	SYS1.LINKLIB
ARCNDEFG	Entry Object	ARCNDEFG	ARCWCTL	SYS1.LINKLIB
ARCNFIND	Entry Object	ARCNFIND	ARCWCTL	SYS1.LINKLIB
ARCNIDCW	Entry Object	ARCNIDCW	ARCWCTL	SYS1.LINKLIB
ARCNMOV	Entry Object	ARCNMOV	ARCWCTL	SYS1.LINKLIB
ARCNMOVR	Entry Object	ARCNMOVR	ARCWCTL	SYS1.LINKLIB
ARCNMVR1	Entry Object	ARCNMVR1	ARCWCTL	SYS1.LINKLIB
ARCNMVR2	Entry Object	ARCNMVR2	ARCWCTL	SYS1.LINKLIB
ARCNOTHR	Entry Object	ARCNOTHR	ARCWCTL	SYS1.LINKLIB
ARCNOTR1	Entry Object	ARCNOTR1	ARCWCTL	SYS1.LINKLIB
ARCNRDR	Entry Object	ARCNRDR	ARCWCTL	SYS1.LINKLIB
ARCNRDSI	Entry Object	ARCNRDSI	ARCWCTL	SYS1.LINKLIB
ARCNRECV	Entry Object	ARCNRECV	ARCWCTL	SYS1.LINKLIB
ARCNRTAP	Entry Object	ARCNRTAP	ARCWCTL	SYS1.LINKLIB
ARCNVOLS	Entry Object	ARCNVOLS	ARCWCTL	SYS1.LINKLIB
ARCNVRFY	Entry Object	ARCNVRFY	ARCWCTL	SYS1.LINKLIB
ARCNWRIT	Entry Object	ARCNWRIT	ARCWCTL	SYS1.LINKLIB
ARCOSDP	Entry Object	ARCOSDP	ARCCTL	SYS1.LINKLIB
ARCOSNAP	Entry	ARCPROPN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCPABQ	Entry Object	ARCPABQ	ARCCTL	SYS1.LINKLIB
ARCPAQ	Entry Object	ARCPAQ	ARCCTL	SYS1.LINKLIB
ARCPARQ	Entry Object	ARCPARQ	ARCCTL	SYS1.LINKLIB

Table 1 (Page 22 of 36). Module Directory

Name	Type	Object Module	Load Module	Operating System Data Set
ARCPARSE	Entry Object	ARCPARSE	ARCCTL	SYS1.LINKLIB
ARCPBQ	Entry Object	ARCPBQ	ARCCTL	SYS1.LINKLIB
ARCPDA	Entry Object	ARCPDA	ARCCTL ARCWCTL	SYS1.LINKLIB
ARCPDO	Entry Object	ARCPDO	ARCCTL	SYS1.LINKLIB
ARCPEDIT	Entry Load Object	ARCPEDIT	ARCPEDIT	SYS1.LINKLIB
ARCPMDQE	Entry Object	ARCPMDQE	ARCCTL	SYS1.LINKLIB
ARCPMQ	Entry Object	ARCPMQ	ARCCTL	SYS1.LINKLIB
ARCPMWE	Entry Object	ARCPMWE	ARCCTL	SYS1.LINKLIB
ARCPOQ	Entry Object	ARCPOQ	ARCCTL	SYS1.LINKLIB
ARCPRCLS	Entry	ARCPROPN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCPRCNF	Entry	ARCPROPN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCPRINT	Entry	ARCPROPN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCPRLOG	Entry Load Object	ARCPRLOG	ARCPRLOG	SYS1.LINKLIB
ARCPRODS	Entry	ARCPROPN	ARCLISTM ARCCTL	SYS1.CMDLIB SYS1.LINKLIB
ARCPROPD	Entry	ARCPROPN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCPROPN	Entry Object	ARCPROPN	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCPRQ	Entry Object	ARCPRQ	ARCCTL	SYS1.LINKLIB
ARCPSDS	Entry Object	ARCPSDS	ARCCTL	SYS1.LINKLIB
ARCQARC	See entry point HQUERY	ARCQARC	ARCCTL	SYS.1LINKLIB
ARCQEDIT	Entry Object	ARCQEDIT	ARCCTL	SYS1.LINKLIB
ARCQSORT	Entry Object	ARCQSORT	ARCCTL	SYS1.LINKLIB

Table 1 (Page 23 of 36). Module Directory				
Name	**Type**	**Object Module**	**Load Module**	**Operating System Data Set**
ARCRABQ	Entry Object	ARCRABQ	ARCCTL	SYS1.LINKLIB
ARCRACF	Entry Object	ARCRACF	ARCCTL	SYS1.LINKLIB
ARCRALOT	Entry Object	ARCRALOT	ARCCTL	SYS1.LINKLIB
ARCRARQ	Entry Object	ARCRARQ	ARCCTL	SYS1.LINKLIB
ARCRBVR	Entry	ARCCBVR	ARCCTL	SYS1.LINKLIB
ARCRCLN	Entry Object	ARCRCLN	ARCCTL	SYS1.LINKLIB
ARCRCTL	Entry Object	ARCRCTL	ARCCTL	SYS1.LINKLIB
ARCRCYDS	Entry Object	ARCRCYDS	ARCCTL	SYS1.LINKLIB
ARCRCYV	Entry Object	ARCRCYV	ARCCTL	SYS1.LINKLIB
ARCRDEXT	Entry Load Object	ARCRDEXT (not supplied)	ARCRDEXT	SYS1.LINKLIB
ARCRDIN	Entry Object	ARCRDIN	ARCCTL	SYS1.LINKLIB
ARCRDS	Entry Object	ARCRDS	ARCCTL	SYS1.LINKLIB
ARCRDSS	Entry Object	ARCRDSS	ARCCTL	SYS1.LINKLIB
ARCRELMV	Entry Object	ARCRELMV	ARCCTL	SYS1.LINKLIB
ARCREUIM	Entry Object	ARCREUIM	ARCCTL	SYS1.LINKLIB
ARCRGBUF	Entry Object	ARCRGBUF	ARCCTL	SYS1.LINKLIB
ARCRGUIM	Entry Object	ARCRGUIM	ARCCTL	SYS1.LINKLIB
ARCRMDS	Entry Load Object	ARCRMDS	ARCRMDS	SYS1.CMDLIB
ARCRMDSM	Non-executable Object	ARCRMDSM	ARCRMDS ARCADS ARCBDEL	SYS1.CMDLIB SYS1.CMDLIB SYS1.CMDLIB
ARCRMGDS	Entry Object	ARCRMGDS	ARCCTL	SYS1.LINKLIB
ARCRNVDS	Entry Object	ARCRNVDS	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCRNVRC	Entry Object	ARCRNVRC	ARCCTL	SYS1.LINKLIB
ARCROPIN	Entry Object	ARCROPIN	ARCCTL	SYS1.LINKLIB
ARCROQ	Entry	ARCPOQ	ARCCTL	SYS1.LINKLIB
ARCRPDS	Entry Object	ARCRPDS	ARCCTL	SYS1.LINKLIB
ARCRPT	Entry Object	ARCRPT	ARCCTL	SYS1.LINKLIB
ARCRRBLK	Entry Object	ARCRRBLK	ARCCTL	SYS1.LINKLIB
ARCRSDP	Entry	ARCOSDP	ARCCTL	SYS1.LINKLIB
ARCRSDS	Entry Object	ARCRSDS	ARCCTL	SYS1.LINKLIB
ARCRSTAT	Entry	ARCISTAT	ARCCTL	SYS1.LINKLIB
ARCRSTR	Entry Object	ARCRSTR	ARCCTL	SYS1.LINKLIB
ARCRUPF1	Entry Object	ARCRUPF1	ARCCTL	SYS1.LINKLIB
ARCRVDS	Entry Object	ARCRVDS	ARCCTL	SYS1.LINKLIB
ARCSACLN	Entry Object	ARCSACLN	ARCCTL	SYS1.LINKLIB
ARCSADVL	Entry Object	ARCSADVL	ARCCTL	SYS1.LINKLIB
ARCSAEXT	Object	ARCSAEXT (not supplied)	ARCSAEXT	SYS1.LINKLIB
ARCSAINT	Entry Object	ARCSAINT	ARCCTL	SYS1.LINKLIB
ARCSALSZ	Entry Object	ARCSALSZ	ARCCTL	SYS1.LINKLIB
ARCSASIC	Entry Object	ARCSASIC	ARCWCTL	SYS1.LINKLIB
ARCSBELG	Entry Object	ARCSBELG	ARCCTL	SYS1.LINKLIB
ARCSBVOL	Entry Object	ARCSBVOL	ARCCTL	SYS1.LINKLIB
ARCSCANV	Entry Object	ARCSCANV	ARCCTL	SYS1.LINKLIB
ARCSCPRM	Entry Object	ARCSCPRM	ARCCTL	SYS1.LINKLIB
ARCSDATE	Entry Object	ARCSDATE	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCSELBV	Entry Object	ARCSELBV	ARCCTL	SYS1.LINKLIB
ARCSELDV	Entry Object	ARCSELDV	ARCCTL	SYS1.LINKLIB
ARCSELMV	Entry Object	ARCSELMV	ARCCTL	SYS1.LINKLIB
ARCSELTV	Entry Object	ARCSELTV	ARCCTL	SYS1.LINKLIB
ARCSKEXT	Entry Load Object	ARCSKEXT (not supplied)	ARCSKEXT	SYS1.LINKLIB
ARCSKINT	Entry Object	ARCSKINT	ARCWCTL	SYS1.LINKLIB
ARCSLVOL	Entry Object	ARCSLVOL	ARCCTL	SYS1.LINKLIB
ARCSMBMQ	Entry Object	ARCSMBMQ	ARCCTL	SYS1.LINKLIB
ARCSMELG	Entry Object	ARCSMELG	ARCCTL	SYS1.LINKLIB
ARCSMEV	Entry Object	ARCSMEV	ARCCTL	SYS1.LINKLIB
ARCSMINT	Entry Object	ARCSMINT	ARCCTL	SYS1.LINKLIB
ARCSMPED	Entry Object	ARCSMPED	ARCCTL	SYS1.LINKLIB
ARCSMPMQ	Entry Object	ARCSMPMQ	ARCCTL	SYS1.LINKLIB
ARCSMSAD	Entry Object	ARCSMSAD	ARCCTL	SYS1.LINKLIB
ARCSMSVM	Entry Object	ARCSMSVM	ARCCTL	SYS1.LINKLIB
ARCSMVFI	Entry Object	ARCSMVFI	ARCCTL	SYS1.LINKLIB
ARCSMVOL	Entry Object	ARCSMVOL	ARCCTL	SYS1.LINKLIB
ARCSM570	Entry Object	ARCSM570	ARCCTL	SYS1.LINKLIB
ARCSPCNV	Entry Object	ARCSPCNV	ARCCTL	SYS1.LINKLIB
ARCSPPV	Entry	ARCMSPV	ARCCTL	SYS1.LINKLIB
ARCSVCIF	Entry Object	ARCSVCIF	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCSVCUT	Entry Object	ARCSVCUT	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCTCLOS	Entry Object	ARCTCLOS	ARCCTL	SYS1.LINKLIB
ARCTCOM	Entry Object	ARCTCOM	ARCCTL	SYS1.LINKLIB
ARCTDATE	Entry	ARCPROPN	ARCCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCTDEXT	Entry Load Object	ARCTDEXT (not supplied)	ARCTDEXT	SYS1.LINKLIB
ARCTECDM	Entry Object	ARCTECDM	ARCCTL	SYS1.LINKLIB
ARCTEOV	Entry Object	ARCTEOV	ARCCTL	SYS1.LINKLIB
ARCTEST	Entry Object	ARCTEST	ARCCTL	SYS1.LINKLIB
ARCTFULL	Entry Object	ARCTFULL	ARCCTL	SYS1.LINKLIB
ARCTLEV1	Entry Object	ARCTLEV1	ARCCTL	SYS1.LINKLIB
ARCTMIG	Entry Object	ARCTMIG	ARCCTL	SYS1.LINKLIB
ARCTMOD	Entry Object	ARCTMOD	ARCCTL	SYS1.LINKLIB
ARCTMT	Entry Object	ARCTMT	ARCCTL	SYS1.LINKLIB
ARCTMTC	Entry	ARCTMT	ARCCTL	SYS1.LINKLIB
ARCTMTX1	Entry	ARCTMT	ARCCTL	SYS1.LINKLIB
ARCTMTX2	Entry	ARCTMT	ARCCTL	SYS1.LINKLIB
ARCTOPEN	Entry Object	ARCTOPEN	ARCCTL	SYS1.LINKLIB
ARCTPDLV	Entry	ARCCPDLV	ARCCTL	SYS1.LINKLIB
ARCTPMSG	Entry Object	ARCTPMSG	ARCCTL	SYS1.LINKLIB
ARCTRES	Entry Object	ARCTRES	ARCCTL	SYS1.LINKLIB
ARCTVERR	Entry Object	ARCTVERR	ARCCTL	SYS1.LINKLIB
ARCTVEXT	Entry Load Object	ARCTVEXT (not supplied)	ARCTVEXT	SYS1.LINKLIB
ARCTVSC	Entry Object	ARCTVSC	ARCCTL	SYS1.LINKLIB
ARCTVSV	Entry Object	ARCTVSV	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCUBVR	Entry	ARCCBVR	ARCCTL	SYS1.LINKLIB
ARCUCTL	Entry	ARCISTAT	ARCCTL	SYS1.LINKLIB
ARCULEOC	Entry	ARCULP	ARCCTL	SYS1.LINKLIB
ARCULEO1	Entry	ARCULP	ARCCTL	SYS1.LINKLIB
ARCULEO2	Entry	ARCULP	ARCCTL	SYS1.LINKLIB
ARCULEO4	Entry	ARCULP	ARCCTL	SYS1.LINKLIB
ARCULOCK	Entry Object	ARCULOCK	ARCCTL	SYS1.LINKLIB
ARCULP	Entry Object	ARCULP	ARCCTL	SYS1.LINKLIB
ARCULP2	Entry	ARCULP	ARCCTL	SYS1.LINKLIB
ARCULVOL	Entry Object	ARCULVOL	ARCCTL	SYS1.LINKLIB
ARCULVRT	Entry Object	ARCULVRT	ARCCTL	SYS1.LINKLIB
ARCUMC1	Entry	ARCMSMV	ARCCTL	SYS1.LINKLIB
ARCUNLK	Entry	ARCLOCK	ARCCTL	SYS1.LINKLIB
ARCUNLKC	Entry	ARCLOCK	ARCCTL	SYS1.LINKLIB
ARCUSDS	Entry Object	ARCUSDS	ARCCTL	SYS1.LINKLIB
ARCUSTAT	Entry	ARCISTAT	ARCCTL	SYS1.LINKLIB
ARCUTTOC	Entry Object	ARCUTTOC	ARCCTL	SYS1.LINKLIB
ARCUUNLK	Entry	ARCULOCK	ARCCTL	SYS1.LINKLIB
ARCUVSR	Entry	ARCCVSR	ARCCTL	SYS1.LINKLIB
ARCVCUPD	Entry Object	ARCVCUPD	ARCCTL	SYS1.LINKLIB
ARCVERBU	Entry Object	ARCVERBU	ARCCTL	SYS1.LINKLIB
ARCVLOCK	Entry	ARCULOCK	ARCCTL	SYS1.LINKLIB
ARCVLSTC	Entry	ARCVSLOC	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCVSCAT	Entry	ARCVSCPW	ARCCTL	SYS1.LINKLIB
ARCVSCHK	Entry Object	ARCVSCHK	ARCCTL	SYS1.LINKLIB
ARCVSCPW	Entry Object	ARCVSCPW	ARCCTL	SYS1.LINKLIB
ARCVSLOC	Entry Object	ARCVSLOC	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCVUNLK	Entry	ARCULOCK	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCVVSC	Entry Object	ARCVVSC	ARCCTL	SYS1.LINKLIB
ARCWABND	Entry Object	ARCWABND	ARCWCTL	SYS1.LINKLIB
ARCWAIUM	Entry Object	ARCWAIUM	ARCWCTL	SYS1.LINKLIB
ARCWBLDB	Entry Object	ARCWBLDB	ARCWCTL	SYS1.LINKLIB
ARCWBSAM	Entry Object	ARCWBSAM	ARCWCTL	SYS1.LINKLIB
ARCWCATF	Entry Object	ARCWCATF	ARCWCTL	SYS1.LINKLIB
ARCWCGDG	Entry Object	ARCWCGDG	ARCWCTL	SYS1.LINKLIB
ARCWCLOC	Entry Object	ARCWCLOC	ARCWCTL	SYS1.LINKLIB
ARCWCLOS	Entry Object	ARCWCLOS	ARCWCTL	SYS1.LINKLIB
ARCWCMI	Entry Object	ARCWCMI	ARCWCTL	SYS1.LINKLIB
ARCWCNT	Entry Object	ARCWCNT	ARCWCTL	SYS1.LINKLIB
ARCWCNTF	Entry Object	ARCWCNTF	ARCWCTL	SYS1.LINKLIB
ARCWCNVM	Entry Object	ARCWCNVM	ARCWCTL	SYS1.LINKLIB
ARCWCOR	Entry Object	ARCWCOR	ARCWCTL	SYS1.LINKLIB
ARCWCTL	Entry Object	ARCWCTL	ARCWCTL	SYS1.LINKLIB
ARCWDEFD	Entry Object	ARCWDEFD	ARCWCTL	SYS1.LINKLIB
ARCWDEVT	Entry Object	ARCWDEVT	ARCWCTL	SYS1.LINKLIB
ARCWDSSI	Entry Object	ARCWDSSI	ARCWCTL	SYS1.LINKLIB
ARCWDSYS	Entry Object	ARCWDSYS	ARCWCTL	SYS1.LINKLIB
ARCWDTVV	Entry Object	ARCWDTVV	ARCWCTL	SYS1.LINKLIB
ARCWDUIM	Entry Object	ARCWDUIM	ARCWCTL	SYS1.LINKLIB
ARCWESTA	Entry Object	ARCWESTA	ARCWCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCWFREM	Entry Object	ARCWFREM	ARCWCTL	SYS1.LINKLIB
ARCWFSR	Entry Object	ARCWFSR	ARCWCTL	SYS1.LINKLIB
ARCWGLOC	Entry Object	ARCWGLOC	ARCWCTL	SYS1.LINKLIB
ARCWJRN	Entry	ARCILOG	ARCCTL	SYS1.LINKLIB
ARCWLOAD	Entry Object	ARCWLOAD	ARCWCTL	SYS1.LINKLIB
ARCWLOC	Entry Object	ARCWLOC	ARCWCTL	SYS1.LINKLIB
ARCWLOG	Entry	ARCILOG	ARCCTL	SYS1.LINKLIB
ARCWMSG	Entry Object	ARCWMSG	ARCWCTL	SYS1.LINKLIB
ARCWMSGO	Entry Object	ARCWMSGO	ARCWCTL	SYS1.LINKLIB
ARCWMSGS	Entry Object	ARCWMSGS	ARCWCTL	SYS1.LINKLIB
ARCWMSGW	Entry Object	ARCWMSGW	ARCWCTL	SYS1.LINKLIB
ARCWNQDQ	Entry Object	ARCWNQDQ	ARCWCTL	SYS1.LINKLIB
ARCWOBTN	Entry Object	ARCWOBTN	ARCWCTL	SYS1.LINKLIB
ARCWOPEN	Entry Object	ARCWOPEN	ARCWCTL	SYS1.LINKLIB
ARCWPDO	Entry Object	ARCWPDO	ARCWCTL	SYS1.LINKLIB
ARCWQSAM	Entry Object	ARCWQSAM	ARCWCTL	SYS1.LINKLIB
ARCWRACF	Entry Object	ARCWRACF	ARCWCTL	SYS1.LINKLIB
ARCWSDP	Entry	ARCOSDP	ARCCTL	SYS1.LINKLIB
ARCWSLOC	Entry Object	ARCWSLOC	ARCWCTL	SYS1.LINKLIB
ARCWSMS	Entry Object	ARCWSMS	ARCWCTL	SYS1.LINKLIB
ARCWTL	Entry	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCWTL3	Entry	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCWTO	Entry Object	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCWTOR	Entry	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCWTU	Entry	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCWTU2	Entry	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCWTU3	Entry	ARCWTO	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCWTVSV	Entry Object	ARCWTVSV	ARCWCTL	SYS1.LINKLIB
ARCWVSAM	Entry Object	ARCWVSAM	ARCWCTL	SYS1.LINKLIB
ARCWWTO	Entry Object	ARCWWTO	ARCWCTL	SYS1.LINKLIB
ARCW26DL	Entry Object	ARCW26DL	ARCWCTL	SYS1.LINKLIB
ARCW99AL	Entry Object	ARCW99AL	ARCWCTL	SYS1.LINKLIB
ARCW99DA	Entry Object	ARCW99DA	ARCWCTL	SYS1.LINKLIB
ARCW99RT	Entry Object	ARCW99RT	ARCWCTL	SYS1.LINKLIB
ARCXBEG	Entry Object	ARCXBEG	ARCCTL	SYS1.LINKLIB
ARCXCLN	Entry Object	ARCXCLN	ARCCTL	SYS1.LINKLIB
ARCXPIRE	Entry Object	ARCXPIRE	ARCCTL	SYS1.LINKLIB
ARCXPMCB	Entry Object	ARCXPMCB	ARCCTL	SYS1.LINKLIB
ARCXPROC	Entry Object	ARCXPROC	ARCCTL	SYS1.LINKLIB
ARCXSBV	Entry Object	ARCXSBV	ARCCTL	SYS1.LINKLIB
ARCXSTAI	Entry Object	ARCXSTAI	ARCCTL	SYS1.LINKLIB
ARCXWOUT	Entry Object	ARCXWOUT	ARCCTL	SYS1.LINKLIB
ARCYBDVL	Entry Object	ARCYBDVL	ARCCTL	SYS1.LINKLIB
ARCYCLN	Entry Object	ARCYCLN	ARCCTL	SYS1.LINKLIB
ARCYTDS	Entry Object	ARCYTDS	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCYVOLA	Entry Object	ARCYVOLA	ARCCTL	SYS1.LINKLIB
ARCZACER	Entry Object	ARCZACER	ARCCTL	SYS1.LINKLIB
ARCZAL2V	Entry Object	ARCZAL2V	ARCCTL	SYS1.LINKLIB
ARCZBDST	Entry Object	ARCZBDST	ARCCTL	SYS1.LINKLIB
ARCZCAT	Entry Object	ARCZCAT	ARCCTL	SYS1.LINKLIB
ARCZCDQR	Entry Object	ARCZCDQR	ARCCTL	SYS1.LINKLIB
ARCZCLNI	Entry Object	ARCZCLNI	ARCCTL	SYS1.LINKLIB
ARCZCOMP	Entry Object	ARCZCOMP	ARCCTL	SYS1.LINKLIB
ARCZCP31	Entry Object	ARCZCP31	ARCCTL	SYS1.LINKLIB
ARCZCSFT	Entry Object	ARCZCSFT	ARCCTL	SYS1.LINKLIB
ARCZDDSC	Entry Object	ARCZDDSC	ARCCTL	SYS1.LINKLIB
ARCZDEL	Entry Object	ARCZDEL	ARCCTL	SYS1.LINKLIB
ARCZEND	Entry Object	ARCZEND	ARCCTL	SYS1.LINKLIB
ARCZESDP	Entry Object	ARCZESDP	ARCCTL	SYS1.LINKLIB
ARCZEST	Entry Object	ARCZEST	ARCCTL ARCLISTM	SYS1.LINKLIB SYS1.CMDLIB
ARCZGCAT	Entry Object	ARCZGCAT	ARCCTL	SYS1.LINKLIB
ARCZGENM	Entry Object	ARCZGENM	ARCCTL	SYS1.LINKLIB
ARCZLOC	Entry Object	ARCZLOC	ARCCTL	SYS1.LINKLIB
ARCZLSRT	Entry Object	ARCZLSRT	ARCCTL	SYS1.LINKLIB
ARCZMDST	Entry Object	ARCZMDST	ARCCTL	SYS1.LINKLIB
ARCZMDXA	Entry Object	ARCZMDXA	ARCCTL	SYS1.LINKLIB
ARCZMVT	Entry Object	ARCZMVT	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCZNOTE	Entry Object	ARCZNOTE	ARCCTL	SYS1.LINKLIB
ARCZOBT	Entry Object	ARCZOBT	ARCCTL	SYS1.LINKLIB
ARCZPART	Entry Object	ARCZPART	ARCCTL	SYS1.LINKLIB
ARCZPONT	Entry Object	ARCZPONT	ARCCTL	SYS1.LINKLIB
ARCZPORD	Entry Object	ARCZPORD	ARCCTL	SYS1.LINKLIB
ARCZPOS	Entry Object	ARCZPOS	ARCCTL	SYS1.LINKLIB
ARCZQBLD	Entry Object	ARCZQBLD	ARCCTL	SYS1.LINKLIB
ARCZQMSG	Entry Object	ARCZQMSG	ARCCTL	SYS1.LINKLIB
ARCZQUE	Entry Object	ARCZQUE	ARCCTL	SYS1.LINKLIB
ARCZQVOL	Entry Object	ARCZQVOL	ARCCTL	SYS1.LINKLIB
ARCZREAD	Entry Object	ARCZREAD	ARCCTL	SYS1.LINKLIB
ARCZRLSE	Entry Object	ARCZRLSE	ARCCTL	SYS1.LINKLIB
ARCZRNXT	Entry	ARCZRNXT	ARCCTL	SYS1.LINKLIB
ARCZRPLS	Entry Object	ARCZRPLS	ARCCTL	SYS1.LINKLIB
ARCZSACS	Entry Object	ARCZSACS	ARCCTL	SYS1.LINKLIB
ARCZSACT	Entry Object	ARCZSACT	ARCCTL	SYS1.LINKLIB
ARCZSALT	Entry Object	ARCZSALT	ARCCTL	SYS1.LINKLIB
ARCZSAQM	Entry Object	ARCZSAQM	ARCCTL	SYS1.LINKLIB
ARCZSCLN	Entry Object	ARCZSCLN	ARCCTL	SYS1.LINKLIB
ARCZSCMC	Entry Object	ARCZSCMC	ARCCTL	SYS1.LINKLIB
ARCZSCON	Entry Object	ARCZSCON	ARCCTL	SYS1.LINKLIB
ARCZSCR	Entry Object	ARCZSCR	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCZSDEF	Entry Object	ARCZSDEF	ARCCTL	SYS1.LINKLIB
ARCZSDEL	Entry Object	ARCZSDEL	ARCCTL	SYS1.LINKLIB
ARCZSDMC	Entry Object	ARCZSDMC	ARCCTL	SYS1.LINKLIB
ARCZSFVV	Entry Object	ARCZSFVV	ARCCTL	SYS1.LINKLIB
ARCZSLKT	Entry Object	ARCZSLKT	ARCCTL	SYS1.LINKLIB
ARCZSLOC	Entry Object	ARCZSLOC	ARCCTL	SYS1.LINKLIB
ARCZSMCD	Entry Object	ARCZSMCD	ARCCTL	SYS1.LINKLIB
ARCZSMSG	Entry Object	ARCZSMSG	ARCCTL	SYS1.LINKLIB
ARCZSMVT	Entry Object	ARCZSMVT	ARCCTL	SYS1.LINKLIB
ARCZSSCD	Entry Object	ARCZSSCD	ARCCTL	SYS1.LINKLIB
ARCZSSGD	Entry Object	ARCZSSGD	ARCCTL	SYS1.LINKLIB
ARCZSSI	Entry Object	ARCZSSI	ARCCTL	SYS1.LINKLIB
ARCZSVCC	Entry Object	ARCZSVCC	ARCCTL	SYS1.LINKLIB
ARCZSVLD	Entry Object	ARCZSVLD	ARCCTL	SYS1.LINKLIB
ARCZSYNC	Entry Object	ARCZSYNC	ARCCTL	SYS1.LINKLIB
ARCZS1EL	Entry Object	ARCZS1EL	ARCCTL	SYS1.LINKLIB
ARCZTFVV	Entry Object	ARCZTFVV	ARCCTL	SYS1.LINKLIB
ARCZTMCD	Entry Object	ARCZTMCD	ARCCTL	SYS1.LINKLIB
ARCZTMVT	Entry Object	ARCZTMVT	ARCCTL	SYS1.LINKLIB
ARCZTODC	Entry Object	ARCZTODC	ARCCTL	SYS1.LINKLIB
ARCZTSGD	Entry Object	ARCZTSGD	ARCCTL	SYS1.LINKLIB
ARCZTVLD	Entry Object	ARCZTVLD	ARCCTL	SYS1.LINKLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
ARCZUDCR	Entry Object	ARCZUDCR	ARCCTL	SYS1.LINKLIB
ARCZUF1	Entry Object	ARCZUF1	ARCCTL	SYS1.LINKLIB
ARCZUPDT	Entry Object	ARCZUPDT	ARCCTL	SYS1.LINKLIB
ARCZVCNM	Entry Object	ARCZVCNM	ARCCTL	SYS1.LINKLIB
ARCZVCRW	Entry Object	ARCZVCRW	ARCCTL	SYS1.LINKLIB
ARCZVCUT	Entry Object	ARCZVCUT	ARCCTL	SYS1.LINKLIB
ARCZVDSC	Entry Object	ARCZVDSC	ARCCTL	SYS1.LINKLIB
ARCZVDSD	Entry Object	ARCZVDSD	ARCCTL	SYS1.LINKLIB
ARCZVLAT	Entry Object	ARCZVLAT	ARCCTL	SYS1.LINKLIB
ARCZVTOC	Entry Object	ARCZVTOC	ARCCTL	SYS1.LINKLIB
ARCZWRIT	Entry Object	ARCZWRIT	ARCCTL	SYS1.LINKLIB
DFQATAST	Entry Object	DFQATAST	DFQFMD01	SYS1.LINKLIB
DFQCOMN	Entry Object	DFQCOMN	DFQFMD01	SYS1.LINKLIB
DFQCOMP	Entry Object	DFQCOMP	DFQFMD01	SYS1.LINKLIB
DFQCRIT	Entry Object	DFQCRIT	DFQFMD01	SYS1.LINKLIB
DFQFCND1	Entry Object	DFQFCND1	DFQFCND1	SYS1.DFQLLIB
DFQFHA01	Entry Object	DFQFHA01	DFQFHA01	SYS1.DFQLLIB
DFQFHBCK	Entry Object	DFQFHBCK	DFQFHBCK	SYS1.DFQLLIB
DFQFHBD1	Entry Object	DFQFHBD1	DFQFHBD1	SYS1.DFQLLIB
DFQFHBO1	Entry Object	DFQFHBO1	DFQFHBO1	SYS1.DFQLLIB
DFQFHD01	Entry Object	DFQFHD01	DFQFHD01	SYS1.DFQLLIB
DFQFHM01	Entry Object	DFQFHM01	DFQFHM01	SYS1.DFQLLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
DFQFHRC1	Entry Object	DFQFHRC1	DFQFHRC1	SYS1.DFQLLIB
DFQFHRL1	Entry Object	DFQFHRL1	DFQFHRL1	SYS1.DFQLLIB
DFQFMACC	Entry Object	DFQFMACC	DFQFMACC	SYS1.DFQLLIB
DFQFMAOO	Entry Object	DFQFMAOO	DFQFMAOO	SYS1.DFQLLIB
DFQFMD01	Entry Object	DFQFMD01	DFQFMD01	SYS1.LINKLIB
DFQFRMAT	Entry Object	DFQFRMAT	DFQFMD01	SYS1.LINKLIB
DFQGETMR	Entry Object	DFQGETMR	DFQFMD01	SYS1.LINKLIB
DFQINMT	Entry Object	DFQINMT	DFQFMD01	SYS1.LINKLIB
DFQMTPRC	Entry Object	DFQMTPRC	DFQFMD01	SYS1.LINKLIB
DFQNVSAM	Entry Object	DFQNVSAM	DFQFMD01	SYS1.LINKLIB
DFQPFKEY	Entry Object	DFQPFKEY	DFQFMD01	SYS1.LINKLIB
DFQPRCRT	Entry Object	DFQPRCRT	DFQFMD01	SYS1.LINKLIB
DFQPRFIX	Entry Object	DFQPRFIX	DFQFMD01	SYS1.LINKLIB
DFQSORTS	Entry Object	DFQSORTS	DFQFMD01	SYS1.LINKLIB
DFQVLCRT	Entry Object	DFQVLCRT	DFQFMD01	SYS1.LINKLIB
DFQVLDSN	Entry Object	DFQVLDSN	DFQFMD01	SYS1.LINKLIB
HALTERDS	Entry	ARCADS	ARCADS	SYS1.CMDLIB
HBACKDS	Entry	ARCRMDS	ARCRMDS	SYS1.CMDLIB
HBDELETE	Entry	ARCBDEL	ARCBDEL	SYS1.CMDLIB
HCANCEL	Entry	ARCHCAN	ARCHCAN	SYS1.CMDLIB
HDELETE	Entry	ARCRMDS	ARCRMDS	SYS1.CMDLIB
HLIST	Entry	ARCLISTM	ARCLISTM	SYS1.CMDLIB
HMIGRATE	Entry	ARCRMDS	ARCRMDS	SYS1.CMDLIB
HQUERY	Entry	ARCQARC	ARCQARC	SYS1.CMDLIB
HRECALL	Entry	ARCRMDS	ARCRMDS	SYS1.CMDLIB
HRECOVER	Entry	ARCRMDS	ARCRMDS	SYS1.CMDLIB

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Name	Type	Object Module	Load Module	Operating System Data Set
HSENDCMD	Entry	ARCMCMD	ARCMCMD	SYS1.CMDLIB
IDATMSTP	Entry	IDATMSTP	IDA0192A	SYS1.LPALIB
IFG0EX0A	Entry Load Object	IFG0EX0A	IFG0EX0A	SYS1.LPALIB
IGGDARU2	Entry Object	IGGDARU2	ARCCTL	SYS1.LINKLIB
IGGDASU2	Entry Object	IGGDASU2	ARCCTL	SYS1.LINKLIB
IGG026DU	Entry Object	IGG026DU	IGC0002F	SYS1.LPALIB
IGG029DU	Entry Object	IGG029DU	IGC0002I	SYS1.LPALIB
IGG030DU	Entry Object	IGG030DU	IGC00030	SYS1.LPALIB
IGX00024	Entry Object Load	IGX00024	IGX00024	SYS1.LPALIB

Data Areas and Data Area Cross-Reference

DFHSM modules create, modify, and reference several data areas or control blocks that are internal to DFHSM.

This section contains detailed descriptions of the DFHSM data areas described in four columns as follows:

Offset

The numeric address of the field relative to the beginning of the area. The first number is the offset in decimal, followed (in parentheses) by its hexadecimal equivalent.

Bytes and Bit Pattern

The size (number of bytes) of the field.

Examples:

4 A four-byte field.

This column also shows the bit patterns of a byte when they are significant (as in a flag byte). When the column shows the state of the bits (0 or 1) in a flag byte, the pattern is as follows:

The eight bit-positions (0-7) in a byte. For ease of scanning, the high-order (leftmost) four bits are separated from the low-order four bits.

xx.. .... The description indicates that all bits represented by x are reserved.

1... .... The description is about this bit.

Bit settings that are significant are shown and described. Bit settings not shown are reserved. *Field Name*

A name that identifies a given field. Field names are accompanied by a description of their content, meaning, or use. In some cases, subfields occur below the field names. Fields that are reserved or have no name are indicated by an * in the field name column.

Description: Content, Meaning, Use

A description of the use of the field.

Data Area Cross-Reference

The Data Area Cross-Reference (located at the end of the data area itself) contains an alphabetized list of each field, and its offset. These lists provide field names, the numeric address of each field, first in decimal, followed (in parenthesis) by its hexadecimal equivalent. Some data areas contain fields and subfields that are repeated at more than one address. In such cases, the addresses of these fields are given in the 'Begin at Offset' column.

Control Data Set Record Data Areas

BCR – Backup Control Record

The backup control record is a record in the backup control data set that contains control information for backup processing. A copy is also maintained in the DFHSM work space. This record is 408 bytes long and its type is R.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	BCRKEY	BCRKEY contains the backup control record key, consisting of X'30', followed by BCR, followed by the 1-byte host identification character, and padded with blanks.
44 (2C)	20	BCRHDR	BCRHDR contains the control data set record header. (See MCK for details.)
64 (40)	4	BCRFLAGS	BCRFLAGS contains the DFHSM backup control flags:
	1...	BCRFGBR	When set to 1, automatic backup is in progress.
	.1..	BCRFGBF	When set to 1, automatic backup completed successfully today.
	..1.	BCRFBCBU	When set to 1, the backup control data set was backed up successfully today.
	...1	BCRFOCBU	When set to 1, the off-line control data set was backed up successfully today.
	.... 1...	BCRFNDBV	When set to 1, no DASD backup volumes were available.
	.... .1..	BCRFNTBV	When set to 1, no tape backup volumes were available.
	.... ..1.	BCRFRAB	When set to 1, automatic backup is to be restarted.
	1	BCRFMVBC	When set to 1, the multiple volume backup command task is in progress.
65 (41)	1...	BCRFNDSV	When set to 1, DFHSM ran out of DASD spill volumes during backup or recycle processing.
	.1..	BCRFNTSV	When set to 1, DFHSM ran out of tape spill volumes during backup or recycle processing.
	..1.	BCRFBL1	When set to 1, level 1 backup can be performed.
	...1	BCRFRBC	When set to 1, a multiple volume BACKVOL command task is to be restarted.
	.... 1...	BCRFREXC	When set to 1, automatic backup is to be restarted when the control data sets are exported.
	.... .1..	BCRFRBMD	When set to 1, automatic backup is to be restarted at the backup of migrated data sets.
	.... ..1.	BCRFRMBV	When set to 1, automatic backup is to be restarted at the movement of backup versions.
	1	BCRFRPVB	When set to 1, automatic backup is to be restarted at the backup of primary volumes.
66 (42)	xx	*	Reserved.
	1...	BCRFMBUP	When set to 1, the migration control data set is being backed up.
	.1..	BCRFBBUP	When set to 1, the backup control data set is being backed up.
	..1.	BCRFOBUP	When set to 1, the off-line control data set is being backed up.
	...1	BCRFBMDS	When set to 1, migrated data sets are being backed up.
	.... 1...	BCRFMBV	When set to 1, the backup versions are being moved from migration volumes to backup volumes.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... .1..	BCRFXBUP	When set to 1, the backup Control Data Set is running.
67 (43)	1	*	Reserved.
68 (44)	4	BCRCYCLE	BCRCYCLE contains the backup control record automatic backup cycle. Each bit, left to right, represents a day in the cycle. If a bit is set to 1, automatic backup is requested that day.
72 (48)	2	BCRCLEN	BCRCLEN contains the number of days in the backup cycle.
74 (4A)	2	BCRNVOL	BCRNVOL contains the number of volumes the computing system expects to have available for backup on each day in the cycle.
76 (4C)	4	BCRCDATE	BCRCDATE contains the date the backup cycle was defined. It is used to determine which day in the cycle the present day is. The date is obtained from the TIME macro in format X'00*yyddds*'.
80 (50)	4	BCRBDATE	BCRBDATE contains the start date of the last automatic backup that completed. The date is obtained from the TIME macro in format X'00*yyddds*'.
84 (54)	4	BCRTBLA	BCRTBLA contains the time ARCBGEN was last taken out of wait state. The time is obtained from the TIME macro in format X'*hhmmssth*'.
88 (58)	4	BCRDBLA	BCRDBLA contains the date ARCBGEN was last taken out of wait state. The date is obtained from the TIME macro in format X'00*yyddds*'.
92 (5C)	4	BCRBL1D	BCRBL1D contains the date that the level 1 functions of move backup versions and backup of migrated data sets were performed.
96 (60)	4	BCRTLAB	BCRTLAB contains the last automatic backup start time. The time is obtained from the TIME macro in hundredths of seconds.
100 (64)	4	BCRTCAB	BCRTCAB contains the current automatic backup start time.
104 (68)	6	BCRLVBSA	BCRLVBSA contains the serial number of the volume that is being backed up by the last automatic backup task started.
110 (6E)	6	BCRLVBSC	BCRLVBSC contains the serial number of the volume being backed up by the last backup task started by command.
116 (74)	90	BCRCBVOL	BCRCBVOL contains an array of serial numbers of volumes currently being backed up. The array is used for restart of automatic or command volume backup.
206 (CE)	2	*	Reserved.
208 (D0)	4	BCRBCDAY	BCRBCDAY contains the day in the backup cycle when automatic backup last started from the beginning.
212 (D4)	4	BCRDSAB	BCRDSAB contains the date that automatic backup last started from the beginning.
216 (D8)	2	BCRSKLN	BCRSKLN contains the length of BCRSKEY.
218 (DA)	44	BCRSKEY	BCRSKEY contains the key of the last BCDS record read for EXPIREBV processing.
262 (106)	2	BCRPEKLN	BCRPEKLN contains the length of BCRPEKEY.
264 (108)	44	BCRPEKEY	BCRPEKEY contains the planned ending key for the most recent EXPIREBV command.
308 (134)	9	BCRAUDKY	BCRAUDKY contains the character type and the first 8 bytes of the key of the record to be used to RESUME the AUDIT request.
308 (134)	1	BCRAUDTP	BCRAUDTP contains the character type of the record.
309 (135)	8	BCRAUDKS	BCRAUDKS contains the first 8 bytes of the record key.
317 (13D)	91	*	Reserved.

BCR Data Area Cross-Reference

Field	Offset
BCRAUDKS	309 (135)
BCRAUDKY	308 (134)
BCRAUDTP	308 (134)
BCRBCDAY	208 (D0)
BCRBDATE	80 (50)
BCRBL1D	92 (5C)
BCRCBVOL	116 (74)
BCRCDATE	76 (4C)
BCRCLEN	72 (48)
BCRCYCLE	68 (44)
BCRDBLA	88 (58)
BCRDSAB	212 (D4)
BCRFBBUP	66 (42)
BCRFBCBU	64 (40)
BCRFBL1	65 (41)
BCRFBMDS	66 (42)
BCRFGBF	64 (40)
BCRFGBR	64 (40)
BCRFLAGS	64 (40)
BCRFMBUP	66 (42)
BCRFMBV	66 (42)
BCRFMVBC	64 (40)
BCRFNDBV	64 (40)
BCRFNDSV	65 (41)
BCRFNTBV	64 (40)
BCRFNTSV	65 (41)
BCRFOBUP	66 (42)
BCRFOCBU	64 (40)
BCRFRAB	64 (40)
BCRFRBC	65 (41)
BCRFRBMD	65 (41)
BCRFREXC	65 (41)
BCRFRMBV	65 (41)
BCRFRPVB	65 (41)
BCRFXBUP	66 (42)
BCRHDR	44 (2C)
BCRKEY	0 (0)
BCRLVBSA	104 (68)
BCRLVBSC	110 (6E)
BCRNVOL	74 (4A)
BCRPEKEY	264 (108)
BCRPEKLN	262 (106)
BCRSKEY	218 (DA)
BCRSKLN	216 (D8)
BCRTBLA	84 (54)
BCRTCAB	100 (64)
BCRTLAB	96 (60)

BVR – Backup Cycle Volume Record

The backup cycle volume record is a record in the backup control data set that describes the backup volumes that are:

- Assigned for use on a particular day of the backup cycle
- To be used for spill processing
- Unassigned.

When backup volumes are unassigned, either the type was not specified, or a daily backup volume has not been associated to a particular day. The backup cycle volume record is 72 bytes long, plus 12 bytes for each volume description. This is a type R record.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	BVRKEY	BVRKEY contains the backup cycle volume record key, consisting of X'30', followed by BVR, followed by a 2-byte field containing the day in the backup cycle for a daily BVR, or an SP for the spill BVR, or a UN for the unassigned BVR, followed by a - and a 4-byte sequence number in character form (0000,...).
44 (2C)	20	BVRHDR	BVRHDR contains the control data set record header. (See MCK for details.)
64 (40)	1	BVRHSTID	BVRHSTID contains the identifier of the processor that is currently using this record.
65 (41)	1	BVRFLGS	BVRFLGS is a 1-byte field that contains the following flags:
	..xx xxxx	*	Reserved.
	1...	BVRFEXTN	When set to 1, an extension record exists.
	.1..	BVRFVALD	When set to 1, the BVR conversion module was successful. This bit is valid only for spill type BVRs with a sequence number of 0000.
66 (42)	2	BVRNVOLS	BVRNVOLS contains the number of volume entries in this control data set record.
68 (44)	4	*	Reserved.

The following information begins at offset 72 (48), and continues through the end of the backup-cycle-volume-record description. The information is repeated for each volume. The backup control data set maximum record length is 2040. This means that 164 entries can be put in each BVR.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	BVRVSN	BVRVSN contains the serial number of the backup volume.
6 (6)	2	BVREFLGS	BVREFLGS is a 2-byte field that contains the following flags:
	1...	BVRETAPE	When set to 1, this volume is a tape volume. When set to 0, this volume is a DASD volume.
	.1..	BVREFULL	When set to 1, this volume is full.
	..1.	BVREUSED	When set to 1, this volume has been selected as a backup or spill volume and is in use.
	...1	BVREDALY	When set to 1, this volume is a daily backup volume not assigned to a particular day in the backup cycle. Valid only in an unassigned BVR.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... 1...	BVREUNAV	When set to 1, DFHSM requested that this tape volume be mounted, but the volume was never mounted, or an I/O error occurred on the control data set record for the volume.
	.... .1..	BVRESPCL	If in a daily BVR and MCVTFNSP was set to 0 when this bit was set to 1, this volume was recently spilled. Otherwise, the volume was recently cleaned up.
	.... ..1.	BVRETSPW	When set to 1, the tape security is password protection.
	1	BVRETSDT	When set to 1, the tape security is expiration date protection.
7 (7)	1...	BVRETSRF	When set to 1, the type of tape security is RACF.
	.1..	BVREMPTY	When set to 1, this volume is empty. The BVRETAPE field must also be set to 1.
	..1.	BVRE1FT	When set to 1, the backup volume is a 3480 tape volume written in single-file format.
	...x xxxx	*	Reserved.
8 (8)	1	BVREHOST	BVREHOST contains the host identifier of the using host if BVREUSED is set to 1.
9 (9)	1	BVRTPDEN	BVRTPDEN contains the tape density.
	1111	BVREDEN	B'0000'—DFHSM 2.1 has never set this field. '0001'—Reserved. B'0010'—32 bytes/mm (800 BPI). B'0011'—63 bytes/mm (1600 BPI). '0100'—246 bytes/mm (6250 BPI). B'0101'—Reserved. B'0110'—Reserved. B'0111'—Reserved.
	 xxxx	*	Reserved.
10 (A)	2	*	Reserved.

BVR Data Area Cross-Reference

Field	Offset	Begin at Offset
BVREDALY	6 (6)	72 (48)
BVREDEN	9 (9)	72 (48)
BVREFLGS	6 (6)	72 (48)
BVREFULL	6 (6)	72 (48)
BVREHOST	8 (8)	72 (48)
BVREMPTY	7 (7)	72 (48)
BVRESPCL	6 (6)	72 (48)
BVRETAPE	6 (6)	72 (48)
BVRETSDT	6 (6)	72 (48)
BVRETSPW	6 (6)	72 (48)
BVRETSRF	7 (7)	72 (48)
BVREUNAV	6 (6)	72 (48)
BVREUSED	6 (6)	72 (48)
BVRE1FT	7 (7)	72 (48)
BVRFEXTN	65 (41)	
BVRFLGS	65 (41)	
BVRFVALD	65 (41)	
BVRHDR	44 (2C)	
BVRHSTID	64 (40)	
BVRKEY	0 (0)	
BVRNVOLS	66 (42)	
BVRTPDEN	9 (9)	72 (48)
BVRVSN	0 (0)	72 (48)

DCL — Dump Class Record

The dump class record defines the format of backup control data set dump class records. Each dump class record describes a dump class specified with the define command. This record is 172 bytes long. This is a type W record.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	1	DCLKEY	DCLKEY contains the DCL record type, which is X'22'.
1 (1)	8	DCLCID	DCLCID contains the dump class id from the define command.
9 (9)	35	*	Reserved.
44 (2C)	20	DCLHDR	The following 20 bytes contains DCL header information.
	2	DCLLEN	DCLLEN contains the DCL record length, calculated as the sum of DCLKEY + DCLHDR + DCLDATA.
46 (2E)	1	DCLETYPE	DCLETYPE contains the DCL entry type, which is the same as DCLTYPE (X'22').
47 (2F)	1	*	Reserved.
48 (30)	8	DCLTSLU	DCLTSLU contains a time stamp, in micro second format, that indicates when the DCL record was last updated.
56 (38)	8	DCLTSCR	DCLTSCR contains a time stamp, in micro second format, that indicates when the DCL record was created.
64 (40)	4	DCLDATA	DCLDATA contains the following data portion of the DCL record:
	1...	DCLFARUS	When set to 1, 'AUTOREUSE (Y)' was specified on the dumpclass definition.
	.1..	DCLFDSRE	When set to 1, 'DATASETRESTORE (Y)' was specified on the dumpclass definition.
	..1.	DCLFRSET	When set to 1, 'RESET (Y)' was specified on the dumpclass definition.
	...1	DCLFDAY	When set to 1, 'DAY' was specified on the dumpclass definition (day value recorded in DCLDAY#).
	.... 1...	DCLFDISP	When set to 1, 'DISPOSITION' was specified on the dump class definition (string given is in DCLDISP and its length is in DCLDISPL).
	.... .1..	DCLFDBLD	When set to 1, 'REMOVE' was specified for this dump class. But it was determined that the DCL record must be retained, since valid dump copies still exist in this dump class.
	.... ..1.	DCLFEXPD	When set to 1, 'TAPEEXPDT' was specified for this dump class. The value of the tape expiration date is stored in DCL_TAPE_EXPDT.
	1	DCLFVCPY	When set to 1, 'VTOCCOPIES' was specified for this dump class. The value of the VTOCCOPIES is stored in DCLVCPY#.
65 (41)	3	*	Reserved.
68 (44)	4	DCLFREQ	DCLFREQ indicates that 'FREQUENCY' was the value specified for the dump class.
72 (48)	2	DCLRETPD	DCLRETPD indicates that 'RETPD' was the value specified for the dump class.
74 (4A)	2	DCLDAY#	DCLDAY# contains the value specified for the 'day' parameter (only valid if DCLFDAY is also on).
76 (4C)	8	DCLUNIT	DCLUNIT contains the unit name specified for the 'UNIT' parameter.
84 (54)	20	DCLDISP	DCLDISP contains the value specified for the 'disposition' parameter (only valid if DCLFDISP is also on). If valid, length of string is recorded in DCLDISPL.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
104 (68)	2	DCLDISPL	DCLDISPL contains the length of the 'disposition' string in the DCLDISP field (only valid if DCLFDISP is also on).
106 (6A)	7	DCLEXPDT	DCLEXPDT contains the tape expiration date in one of two forms: 5-digits = blankblankYYDDD 7 digits = YYYYDDD **Note:** YYYY represents 19xx-21xx and DDD is the Julian date.
113 (71)	1	*	Reserved.
114 (72)	2	DCLVCPY#	DCLVCPY# contains the number of VTOCCOPIES to retain for this volume.
116 (74)	56	*	Reserved.

DCL Data Area Cross-Reference

Field	Offset
DCLCID	1 (1)
DCLDATA	64 (40)
DCLDAY#	74 (4A)
DCLDISP	84 (54)
DCLDISPL	104 (68)
DCLETYPE	46 (2E)
DCLEXPDT	106 (6A)
DCLFARUS	64 (40)
DCLFDAY	64 (40)
DCLFDBLD	64 (40)
DCLFDISP	64 (40)
DCLFDSRE	64 (40)
DCLFEXPD	64 (40)
DCLFLAGS	64 (40)
DCLFREQ	64 (40)
DCLFRSET	64 (40)
DCLFVCPY	64 (40)
DCLHDR	44 (2C)
DCLKEY	0 (0)
DCLLEN	44 (2C)
DCLRETPD	72 (48)
DCLTSCR	56 (38)
DCLTSLU	48 (30)
DCLTYPE	0 (0)
DCLUNIT	76 (4C)
DCLVCPY#	64 (40)

DCR – Dump Control Record

The dump control record describes the automatic dump environment. This record is maintained in storage while DFHSM is started, and it is periodically written to DASD when a field is changed. This record is 192 bytes long and its record type is R.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	DCRKEY	DCRKEY contains the dump control backup control data set record key.
	1	DCRTYPE	DCRTYPE contains the DCR record type, which is X'30'.
	3	DCRID	DCRID contains the DCR id, which is 'DCR'.
	1	DCRHID	DCRHID contains the host id.
	39	*	Reserved.
44 (2C)	20	DCRHDR	DCRHDR is a 20 byte field containing DCR header information.
	2	DCRLEN	DCRLEN contains the DCR record length, calculated as the sum of DCRKEY + DCRHDR + DCRDATA.
46 (2E)	1	DCRETYPE	DCRETYPE contains the entry type, which is the same as DCRTYPE (X'30').
47 (2F)	1	*	Reserved.
48 (30)	8	DCRTSLU	DCRTSLU contains a time stamp, in micro second format, that indicates when the DCR record was last updated.
56 (38)	8	DCRTSCR	DCRTSCR contains a time stamp, in micro second format, that indicates when the DCR record was created.
64 (40)	8	DCRDMPID	DCRDMPID contains a Macro identifier (set to DCRNAME).
72 (48)	2	DCR_AUTO_FLGS	DCR_AUTO_FLGS is a 2 byte field. It contains the following flags:
	1...	DCRFADR	When set to 1, automatic dump is currently running ('Y' day in cycle).
	.1..	DCRFLVLR	When set to 1, dump level functions are currently running ('N' day in cycle).
	..1.	DCRFREST	When set to 1, automatic dump is currently in the process of restarting the dumping of primary volumes.
	...1	DCRFADC	When set to 1, automatic functions completed the last time they ran. DCRLADSD contains the date these functions last began running. DCRLADCD contains their actual completion date.
	.... 1...	DCRFRSAD	When set to 1, automatic dump is eligible to restart ('Y' day in cycle).
	.... .1..	DCRFRSLV	When set to 1, level functions are eligible to restart ('N' days in cycle).
	.... ..1.	DCRFADCE	When set to 1, automatic expiration of dump copies is in progress.
	1	DCRFDPVL	When set to 1, automatic dump of primary volumes is in progress.
	1...	DCRFDEVC	When set to 1, automatic deletion of excess VTOC copy data sets is in progress.
	.1..	DCRFRACE	When set to 1, restart with the automatic expiration of dump copies.
	..1.	DCRFRPVL	When set to 1, restart with automatic dumping of primary volumes.
	...1	DCRFRDEV	When set to 1, restart with the deletion of excess dump VTOC copy data sets.
	 xxxx	*	Reserved.
74 (4A)	2	DCR_FLGS	DCR_FLGS contains Dump processing flags.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	1...	DCRF_BUILD_DVST	When set to 1, the DVST should be built or rebuilt.
	.1..	DCRF_DEBUG	When set to 1, the DCR contains autodump information in debug mode.
	..xx xxxx	*	Reserved.
76 (4C)	4	DCRCYCLE	DCRCYCLE contains the Dump cycle as defined with the define command. All 'Y' days are specified with one bit, all 'N' days with zero bits.
80 (50)	2	DCRCLEN	DCRCLEN contains the length of the dump cycle contained in the DCRCYCLE (maximum value = 31).
82 (52)	4	DCRCDATE	DCRCDATE contains the dump cycle start date, which is a Julian date in packed decimal format.
86 (56)	4	DCRSTRTM	DCRSTRTM contains the planned early start time defined when the automatic functions last started from the beginning, or restarted, whether they completed or not. The date is a Julian date in packed decimal format.
90 (5A)	4	DCRSTRDT	DCRSTRDT contains the date of the day in the cycle when the automatic functions last started from the beginning, or restarted, whether they completed or not. This is the date the early start time was on. It is a Julian date in packed decimal format.
94 (5E)	4	DCRCMPTM	DCRCMPTM contains the actual completion time for the automatic functions from the last time they ran to completion. This field is in packed decimal format - HHMMSSTH.
98 (62)	4	DCRCMPDT	DCRCMPDT contains the actual completion date for the automatic functions for the last time they completed their entire function. The date is a Julian date in packed decimal format.
102 (66)	4	DCRCHKTM	DCRCHKTM contains the time when the automatic functions start time was last checked. This field is in packed decimal format - HHMMSSTH.
106 (6A)	4	DCRCHK_DATE	DCRCHK_DATE contains the date when the automatic functions start time was last checked. The date is a Julian date in packed decimal format.
110 (6E)	4	DCRCHK_CYCLE_ DATE	DCRCHK_CYCLE_DATE contains the date of the day in the cycle when the start time of automatic functions was last checked. The date is a Julian date in packed decimal format.
114 (72)	2	DCRDCDAY	DCRDCDAY contains the day in the dump cycle of the last time that the automatic functions started from the beginning.
116 (74)	2	DCRCHKDY	DCRCHKDY contains the day in the dump cycle when the start time of automatic functions was last checked.
118 (76)	2	*	Reserved.
120 (78)	4	DCRDCDST_RC	DCRDCDST_RC contains the return code issued by ARCDCDST the last time it was called.
124 (7C)	4	DCRDCDST_REAS	DCRDCDST_REAS contains the reason code issued by ARCDCDST the last time it was called.
128 (80)	64	*	Reserved.

DCR Data Area Cross-Reference

Field	Offset
DCR_AUTO_FLAGS	72 (48)
DCR_FLGS	74 (4A)
DCRCDATE	82 (52)
DCRCHK_CYCLE_DATE	110 (6E)
DCRCHK_DATE	106 (6A)
DCRCHKDY	116 (74)
DCRCHKTM	102 (66)
DCRCLEN	80 (50)
DCRCMPDT	98 (62)
DCRCMPTM	94 (5E)
DCRCYCLE	76 (4C)
DCRDCDAY	114 (72)
DCRDCDST_RC	120 (78)
DCRDCDST_REAS	124 (7C)
DCRDMPID	64 (40)
DCRETYPE	46 (2C)
DCRF_BUILD_DVST	74 (4A)
DCRF_DEBUG	74 (4A)
DCRFADC	72 (48)
DCRFADCE	72 (48)
DCRFADR	72 (48)
DCRFDEVC	72 (48)
DCRFDPVL	72 (48)
DCRFLVLR	72 (48)
DCRFRACE	72 (48)
DCRFRDEV	72 (48)
DCRFREST	72 (48)
DCRFRPVL	72 (48)
DCRFRSAD	72 (48)
DCRFRSLV	72 (48)
DCRHDR	44 (2C)
DCRHID	0 (0)
DCRID	0 (0)
DCRKEY	0 (0)
DCRLEN	44 (2C)
DCRSTRDT	90 (5A)
DCRSTRTM	86 (56)
DCRTSCR	56 (38)
DCRTSLU	48 (30)
DCRTYPE	0 (0)

DGN – Dump Generation Record

The dump generation backup control data set record contains information about the dump generation of a given volume, when this volume has been processed by the full volume dump function. This record can describe up to five dump copies. Its length is 160 bytes plus 296 bytes for each dump copy. The maximum record length is 1640 bytes. This is a type G record.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	DGNKEY	DGNKEY contains the dump generation backup control data set record key.
	1	DGNTYPE	DGNTYPE contains the DGN record type, which is X'29'.
1 (1)	6	DGNSVSN	DGNSVSN contains the source volume serial number.
7 (7)	4	DGNTSDT	DGNTSDT contains a time stamp, in packed decimal format, that indicates when the full volume dump operation began.
11 (B)	4	DGNTSDD	DGNTSDD contains a date, in packed decimal format, that indicates when the full volume dump operation began.
15 (F)	29	*	Reserved.
44 (2C)	20	DGNHDR	DGNHDR is a 20 byte field containing DGN header information.
	2	DGNLEN	DGNLEN contains the DGN record length, calculated as the sum of DGNKEY + DGNHDR + DGNDATA.
46 (2E)	1	DGNETYPE	DGNETYPE contains the DGN entry type, which is the same as DGNTYPE (X'29').
47 (2F)	1	*	Reserved.
48 (30)	8	DGNTSLU	DGNTSLU contains a time stamp, in micro second format, that indicates when the DGN record was last updated.
56 (38)	8	DGNTSCR	DGNTSCR contains a time stamp, in micro second format, that indicates when the DGN record was created.
64 (40)	4	DGNDATA	DGNDATA contains data portion of the DGN record.
	1...	DGNFVTOC	When set to 1, this dump generation has a dump VTOC copy data set associated with it
	.1..	DGNFRSET	When set to 1, the reset option was specified for this dump generation.
	...1	DGNFCMD	When set to 1, generation created as a result of a command-initiated request.
	.... 1...	DGNFSMS	When set to 1, the dump generation is an SMS-managed generation.
	..x. .xxx	*	Reserved.
	3	*	Reserved.
68 (44)	4	DGNBLKS	DGNBLKS contains the number of 2K blocks that the VTOC copy data set occupies.
72 (48)	4	DGNRECS	DGNRECS contains the number of records that have been written to the VTOC copy data set.
76 (4C)	8	DGNBPRFX	DGNBPRFX contains the backup prefix at the time the full volume dump began. This field is the high level qualifier of the dump VTOC copy data set. Its length is recorded in DGNPFXL.
84 (54)	4	DGNPFXL	TDGNPFXL contains the length of the backup prefix that is stored in DGNBPRFX.
88 (58)	6	DGNML1VS	DGNML1VS contains the volume serial number of the migration level 1 volume where the dump copy resides. It is only valid if DGNFVTOC is also on.
94 (5E)	2	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
96 (60)	4	DGNSDEV	DGNSDEV contains the device type of the source volume.
100 (64)	4	DGNCYLDT	DGNCYLDT contains the cycle date when full-volume dump operation began (packed decimal representation).
104 (68)	8	*	Reserved.
112 (70)	44	*	Reserved.
156 (9C)	4	DGNCOPY#	DGNCOPY# contains the number of the copies described in the DGNCPYS array. This can only be a value between 1 and 5, inclusive.

The following array, beginning at offset 160 (A0), describes the one to five dump copies that exist for this generation.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	296	DGNDCPYS	DGNDCPYS is an array that describes each dump copy that exists for this dump generation.
	8	DGNDCL	DGNDCL indicates the dump class in which this dump copy was created.
8 (8)	8	DGNUNIT	DGNUNIT contains the unit names of target volumes.
16 (10)	4	DGNEXPDT	DGNEXPDT contains the expiration date of this dump copy. It is a Julian date, packed in decimal format. It was calculated when the dump copy was created, using the retention period from either the BACKVOL command or the dump class definition. This location will contain zeros if the retention period was none. The date is based on the cycle date, and not necessarily on the date the dump was created.
20 (14)	4	*	This field contains the following flags:
	1...	DGNFVCPY	When set to 1, a VTOCCOPY data set is created for this dump class generation.
	.1..	DGNFEXPD	When set to 1, an expiration date was specified in the field DGNTEXPD.
	..xx xxxx	*	Reserved.
21 (15)	3	*	Reserved.
24 (18)	7	DGNTEXPD	DGNTEXPD contains the tape expiration date.
31 (1F)	21	*	Reserved.
52 (34)	4	DGNNVSN	DGNNVSN contains the number of dump volume serial numbers that contain part of this dump copy.

The following volume list, beginning at offset 56 (38) within the DGNDCPYS array, contains 40 entries, each consisting of the following field:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	DGNDVSN	DGNDVSN is an array that is repeated 40 times. It contains the volume serial numbers that contain part of this dump copy.

DGN Data Area Cross-Reference

Field	Offset	Begin at Offset
DGNBLKS	68 (44)	
DGNBPFXL	84 (54)	
DGNBPRFX	76 (4C)	
DGNCOPY#	156 (9C)	
DGNCYLDT	100 (64)	
DGNDATA	64 (40)	
DGNDCL	0 (0)	160 (A0)
DGNDCPYS	0 (0)	160 (A0)
DGNDVSN	0 (0)	56 (38)
DGNETYPE	46 (2E)	
DGNEXPDT	16 (10)	160 (A0)
DGNFCMD	64 (40)	
DGNFEXPD	20 (14)	160 (A0)
DGNFRSET	64 (40)	
DGNFSMS	64 (40)	
DGNFVCPY	20 (14)	160 (A0)
DGNFVTOC	64 (40)	
DGNHDR	44 (2C)	
DGNKEY	0 (0)	
DGNLEN	44 (2C)	
DGNMLIVS	88 (58)	
DGNNVSN	52 (34)	160 (A0)
DGNRECS	72 (48)	
DGNSDEV	96 (60)	
DGNSVSN	1 (1)	
DGNTEXPD	24 (18)	160 (A0)
DGNTSCR	56 (38)	
DGNTSDD	11 (B)	
DGNTSDT	7 (7)	
DGNTSLU	48 (30)	
DGNTYPE	0 (0)	
DGNUNIT	8 (8)	160 (A0)

DSR – Daily Statistics Record

The daily statistics record contains DFHSM operation statistics for a day. It is a migration control data set record. The daily statistics record for the current day is also maintained in the DFHSM work space. This record is 1016 bytes long and its type is S.

When the daily statistics record is written to SMF, 20 bytes of additional information is added to the front of the record. The first 18 bytes are the standard SMF record header. Byte 18 (12) is set to a binary 1 to indicate that this is a daily statistics record, and byte 19 (13) is reserved. All the offsets for the daily statistics record are increased by 20 (14) bytes when the record is written to SMF.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	DSRKEY	DSRKEY contains the daily statistics record key, consisting of X'10', followed by DSR, followed by the date in format *yyddds*, and padded with blanks.
44 (2C)	20	DSRHDR	DSRHDR contains the control data set record header. (See MCK for details.)
64 (40)	4	DSRIPL	DSRIPL contains the number of DFHSM startups that day.
68 (44)	4	DSRABEND	DSRABEND contains the number of DFHSM subtask abnormal ends that day.
72 (48)	4	DSRSHUT	DSRSHUT contains the number of DFHSM shutdowns that day.
76 (4C)	4	DSRNMWE	DSRMNWE contains the number of management work elements received from the DFHSM SVC.
80 (50)	4	*	Reserved.
84 (54)	4	DSREJST	DSREJST contains today's total elapsed job step time, in milliseconds, from the address space control block (ASCB).
88 (58)	12	*	Reserved.
100 (64)	4	DSREVENT	DSREVENT contains the event count, used to determine when to write DSR to SMF.
104 (68)	4	DSRTIME	DSRTIME contains the time of day the daily statistics record was last written to the log. The time is obtained from the TIME macro in hundredths of seconds.
108 (6C)	2	DSRNVMG	DSRNVMG contains the number of volume migrations done that day.
110 (6E)	2	DSRNVMGF	DSRNVMGF contains the number of volume migrations forced because space was not available.
112 (70)	2	DSRNVBU	DSRNVBU contains the number of volumes backed up.
114 (72)	2	DSRNVRCY	DSRNVRCY contains the number of tape backup volumes recycled today.
116 (74)	2	DSRMVRCY	DSRMVRCY contains the number of tape migration level 2 volumes recycled today.
118 (76)	1	DSRFLAGS	DSRFLAGS is a one-byte field that contains the following flags:
	1...	DSRFNTAG	When set to 1, DSRNTAGE field is being used.
	.xxx xxxx	*	Reserved.
119 (77)	1	*	Reserved.
120 (78)	2	DSRDUMPS	DSRDUMPS contains the number of system-requested volume dumps.
122 (7A)	2	DSRDUMPU	DSRDUMPU contains the number of user-requested volume dumps.
124 (7C)	2	DSRDUMPF	DSRDUMPF contains the number of volume dumps that failed.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
126 (7E)	2	DSRDCOPS	DSRDCOPS contains the number of system-requested dump copies.
128 (80)	2	DSRDCOPU	DSRDCOPU contains the number of user-requested dump copies.
130 (82)	2	DSRDCOPF	DSRDCOPF contains the number of dump copies that failed.
132 (84)	4	DSRDTINQ	DSRDTINQ contains the amount of time that the dump requests waited in the queue.
136 (88)	4	DSRDTWV	DSRDTWV contains the amount of time the dump requests spent awaiting volume allocation.
140 (8C)	4	DSRDTINP	DSRDTINP contains the elapsed time each dump request took to process.
144 (90)	4	DSRDTOT	DSRDTOT contains the total elapsed time for all dump requests to be processed.
148 (94)	2	DSRREST	DSRREST contains the number of volume restores requested.
150 (96)	2	DSRRESTF	DSRRESTF contains the number of volume restores that failed.
152 (98)	2	DSRDSRES	DSRDSRES contains the number of data set restores requested.
154 (9A)	2	DSRDSRESF	DSRDSRESF contains the number of data set restores that failed.
156 (9C)	28	*	Reserved.

The following information, starting at offset 184 (B8) through the remainder of the daily statistics record description, is repeated once for each of the following functions in the order given: primary to level 1 migration, level 1 to level 2 migration, primary to level 2 migration, recall from level 1 to primary, recall from level 2 to primary, deletion of migrated data sets, daily backup, spill backup, recovery, recycle of backup volumes, data set deletion from user volumes, and recycle of level 2 tape migration volumes. Only data for data sets successfully processed is included.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	2	DSRNDS	DSRNDS contains the number of non-VSAM data sets processed.
2 (2)	6	*	Reserved.
8 (8)	4	DSRNTRKR	DSRNTRKR contains the number of tracks read.
12 (C)	4	DSRNTRKW	DSRNTRKW contains the number of tracks written.
16 (10)	4	DSRNBYTR	DSRNBYTR contains the number of bytes read below 1 gigabyte.
20 (14)	4	DSRNBYTW	DSRNBYTW contains the number of bytes written below 1 gigabyte.
24 (18)	2	DSRNDSF	DSRNDSF contains the number of failing requests.
26 (1A)	2	DSRNVOL	DSRNVOL contains the number of requests initiated by user commands.
28 (1C)	2	DSRNSYS	DSRNSYS contains the number of requests initiated automatically by the system.
30 (1E)	2	DSRTAGE	DSRTAGE contains the total age in days of the data sets processed.
32 (20)	4	DSRTTINQ	DSRTTINQ contains the total time, in seconds, that the requests were queued before processing started.
36 (24)	4	DSRTTWV	DSRTTWV contains the total time, in seconds, that the requests were queued waiting for volume mounts.
40 (28)	4	DSRTTINP	DSRTTINP contains the total elapsed time, in seconds, to process requests.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
44 (2C)	4	DSRTTOT	DSRTTOT contains the total time, in seconds, for requests from the time received to the time finished.
48 (30)	4	DSRNGBR	Number of gigabytes read.
52 (34)	4	DSRNGBW	Number of gigabytes written.
56 (38)	4	DSRNTAGE	DSRNTAGE contains the total age of the data sets processed.
60 (3C)	4	*	Reserved.

DSR Data Area Cross-Reference

Field	Offset	Begin at Offset
DSRABEND	68 (44)	
DSRDCOPF	130 (82)	
DSRDCOPS	126 (7E)	
DSRDCOPU	128 (80)	
DSRDSRES	152 (98)	
DSRDSRESF	154 (9A)	
DSRDTINQ	132 (84)	
DSRDTINP	140 (8C)	
DSRDTOT	144 (90)	
DSRDTWV	136 (88)	
DSRDUMPF	124 (7C)	
DSRDUMPS	120 (78)	
DSRDUMPU	122 (7A)	
DSREJST	84 (54)	
DSREVENT	100 (64)	
DSRHDR	44 (2C)	
DSRIPL	64 (40)	
DSRKEY	0 (0)	
DSRMVRCY	116 (74)	
DSRNBYTR	16 (10)	184 (B8)
DSRNBYTW	20 (14)	184 (B8)
DSRNDS	0 (0)	184 (B8)
DSRNDSF	24 (18)	184 (B8)
DSRNGBR	48 (30)	184 (B8)
DSRNGBW	52 (34)	184 (B8)
DSRNMWE	76 (4C)	
DSRNSYS	28 (1C)	184 (B8)
DSRNTRKR	8 (8)	184 (B8)
DSRNTRKW	12 (C)	184 (B8)
DSRNVBU	112 (70)	
DSRNVMG	108 (6C)	
DSRNVMGF	110 (6E)	
DSRNVOL	26 (1A)	184 (B8)
DSRNVRCY	114 (72)	
DSRREST	148 (94)	
DSRRESTF	150 (96)	
DSRSHUT	72 (48)	
DSRTAGE	30 (1E)	184 (B8)
DSRTIME	104 (68)	
DSRTTINP	40 (28)	184 (B8)
DSRTTINQ	32 (20)	184 (B8)
DSRTTOT	44 (2C)	184 (B8)
DSRTTWV	36 (24)	184 (B8)

DVL – Dump Volume Record

The dump volume record defines the format for control data set records generated from dump volumes. This record is 174 bytes long and its record type is Y.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	DVLKEY	DVLKEY contains the dump volume backup control data set record key.
	1	DVLTYPE	DVLTYPE contains the DVL record type, which is X'21'.
1 (1)	6	DVLVSN	DVLVSN contains the Dump volume serial number.
7 (7)	37	*	Reserved.
44 (2C)	20	DVLHDR	DVLHDR contains DVL header information.
	2	DVLLEN	DVLLEN contains the DVL record length, calculated as the sum of DVLKEY + DVLHDR + DVLDATA.
46 (2E)	1	DVLETYPE	DVLETYPE contains the DVL entry type, which is the same as DVLTYPE (X'21').
47 (2F)	1	*	Reserved.
48 (30)	8	DVLTSLU	DVLTSLU contains a time stamp, in micro second format, that indicates when the DVL record was last updated.
56 (38)	8	DVLTSCR	DVLTSCR contains a time stamp, in micro second format, that indicates when the DVL record was created.
64 (40)	8	DVLUNIT	DVLUNIT contains the unit name specified for the volume.
72 (48)	4	DVLFLAGS	DVLFLAGS is a 4 byte field containing the following flags:
	1...	DVLFWRIT	When set to 1, DFHSM has written on the volume.
	.1..	DVLFUSED	When set to 1, the volume is currently in use. The host using the record has stored its host id in DVLHID.
	..1.	DVLFUNAV	When set to 1, the volume is unavailable for output selection.
	...1	DVLFVALD	When set to 1, the volume contains part of a valid dump copy.
	.... 1...	DVLFTPSW	When set to 1, the volume is password-protected in the header label.
	.... .1..	DVLFTSED	When set to 1, the volume is expiration-date-protected in the header label.
	.... ..1.	DVLFTSRF	When set to 1, DFHSM has RACF protected the volume. When set to 0, see DVLFURAC to find out if the volume was RACF protected by the user.
	1	DVLFURAC	When set to 1, the user had already added the volume to the RACF tape volume set when DFHSM used it.
73 (49)	1...	DVLFUASN	When set to 1, the volume was not originally assigned a dump class when ADDVOLed (either its dumpclass was not specified on the ADDVOL command, or the volume ADDVOLed internally after being mounted in response to a mount scratch request).
	.1..	DVLTVEXT	When set to 1, the tape volume exit needs to be called at DELVOL time.
74 (50)	2	*	Reserved.
76 (4C)	4	DVLUCBTY	DVLUCBTY contains the UCB device type for the volume.
80 (50)	2	DVLVOLSQ	DVLVOLSQ contains the volume sequence number, signifying a volume's relative position within a set of volumes that comprise a dump copy.
82 (52)	1	DVLDEN	DVLDEN contains the volume's recording density.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
83 (53)	8	DVLDCLAS	DVLDCLAS contains the Dump class identification that the dump copy is part of, if the volume contains part of a valid dump copy; or, if the volume does not, then this is the dumpclass the volume was ADDVOLed to. If the volume is empty, and was not assigned to a specific dumpclass, then this field is hex 0.
91 (5B)	4	DVLEXPDT	DVLEXPDT contains the dump copy expiration date, which will be hex 0 if RETPD was 'NONE'. The date is a Julian date in packed decimal format.
95 (5F)	14	DVLDGNKY	DVLDGNKY is the DGN record key. It contains the following:
	6	DVLSVSN	DVLSVSN contains the VOLSER of the source volume that the dump copy was created from.
101 (65)	4	DVLTSDT	DVLTSDT contains a time stamp, in packed decimal format, that indicates when the dump copy was written.
105 (69)	4	DVLTSDD	DVLTSDD contains a date stamp, in packed decimal format, that indicates when the dump copy was written.
109 (6D)	1	DVLHID	DVLHID contains the host id for the host currently using this volume (only valid when DVLFUSED is also on).
110 (6E)	64	*	Reserved.

DVL Data Area Cross-Reference

Field	Offset
DVLDCLAS	83 (53)
DVLDEN	82 (52)
DVLDGNKY	95 (5F)
DVLEXPDT	91 (5B)
DVLETYPE	46 (2E)
DVLFLAGS	72 (48)
DVLFTPSW	72 (48)
DVLFTSED	72 (48)
DVLFTSRF	72 (48)
DVLFUASN	73 (49)
DVLFUNAV	72 (48)
DVLFURAC	72 (48)
DVLFUSED	72 (48)
DVLFVALD	72 (48)
DVLFWRIT	72 (48)
DVLHDR	44 (2C)
DVLHID	109 (6D)
DVLKEY	0 (0)
DVLLEN	44 (2C)
DVLSVSN	95 (5F)
DVLTSCR	56 (38)
DVLTSDD	105 (69)
DVLTSDT	101 (65)
DVLTSLU	72 (48)
DVLTVEXT	73 (49)
DVLTYPE	0 (0)
DVLUCBTY	76 (4C)
DVLUNIT	64 (40)
DVLVOLSQ	80 (50)
DVLVSN	1 (1)

L2CR – Migration Level 2 Control Record

The migration level 2 control record defines the structure of migration level 2 volumes and their associated key ranges. A copy is maintained in the DFHSM work space. It is a record in the migration control data set, with a length of 68 bytes plus 32 bytes for each key range definition. The maximum number of key ranges is 29 if the maximum record permitted in the MCDS is 1016 and 61 if the maximum record permitted is 2040. This record is type S.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	L2CRKEY	L2CRKEY contains the migration level 2 control record key, consisting of X'10', followed by L2CR, and padded with blanks.
44 (2C)	20	L2CRMCH	L2CRMCH contains the control data set record header. (See MCK for details.)
64 (40)	2	L2CRNVOL	L2CRNVOL contains the number of volumes in the level 2 structure.
66 (42)	1	*	Reserved.
67 (43)	1	L2CRNENT	L2CRNENT contains the number of level 2 key ranges. This area may be larger than the number of volumes if empty entries exist.

The following information, starting at offset 68 (44) through the end of the L2CR description, is repeated once for each key range in ascending alphameric order:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	L2CRLOKY	L2CRLOKY contains the low key for a key range. The data set high-level qualifier must be greater than or equal to this key to be migrated to the associated level 2 volume.
8 (8)	8	L2CRHIKY	L2CRHIKY contains the high key for a key range. The data set high-level qualifier must be less than this key to be migrated to the associated level 2 volume.
16 (10)	6	L2CRKRVL	L2CRKRVL contains the volume currently associated with this key range.
22 (16)	1	L2CRDEVT	L2CRDEVT contains the device type code as in the unit control block of the volume in the L2CRKRVL field.
23 (17)	1	*	This field contains the following flags:
	.xxx xxxx	*	Reserved.
	1...	L2CRMSS	When set to 1, the volume is a virtual volume.
24 (18)	8	*	Reserved.

L2CR Data Area Cross-Reference

Field	Offset	Begin at Offset
L2CRDEVT	22 (16)	68 (44)
L2CRHIKY	8 (8)	68 (44)
L2CRKEY	0 (0)	
L2CRKRVL	16 (10)	68 (44)
L2CRLOKY	0 (0)	68 (44)
L2CRMCH	44 (2C)	
L2CRMSS	23 (17)	68 (44)
L2CRNENT	67 (43)	
L2CRNVOL	64 (40)	

MCA – Migration Control Data Set Alias Entry Record

The migration control data set alias entry record describes the association of a name with the name of the user data set. This record type is an MCDS record and is 112 bytes long. The record is used in two ways. There is an alias entry record for each migrated data set, and the name being associated is the generated name of the data set containing the user's data. There is also an alias entry record for each object of a migrated VSAM data set, and the name being associated is that of the VSAM object. This record is type A.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the migration control data set record key, consisting of the name and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	1	MCAINTTP	MCAINTTP contains one of the following recall intercept types: D – data object I – index object R – path object G – AIX object M – generated name of migration data set (VSAM or non-VSAM)
65 (41)	1	MCAVSATP	MCAVSATP contains the VSAM association type: C—cluster G—AIX
66 (42)	2	*	Reserved.
68 (44)	44	MCAINTNM	MCAINTNM contains the MCDS data set record key which is the name of the user data set.

MCA Data Area Cross-Reference

Field	Offset
MCAINTNM	68 (44)
MCAINTTP	64 (40)
MCAVSATP	65 (41)
MCH	44 (2C)
MCK	0 (0)

MCB – Backup Control Data Set Data Set Record

The data set record for the backup control data set describes a data set that has been backed up, and identifies backup versions. This record type is a BCDS record. It is 144 bytes long, plus 64 bytes for each backup version description. There is a maximum of 13 versions. Part of the base portion (offset 64-143) describes the latest version made, such as dates, flags, counts, and size. This can be confusing and meaningless if several data sets have the same name. This record is type B.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the backup control data set data set record key, consisting of the data set name, and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	6	MCBVSN	MCBVSN contains the volume serial number of the volume containing the most recently created backup version.
70 (46)	2	MCBMBC	MCBMBC contains the maximum number of backup copies. -1 means use the system default.
72 (48)	4	MCBTLU	Time in packed decimal.
76 (4C)	4	MCBDLU	Date in packed decimal.
80 (50)	4	MCBTBU	MCBTBU contains the time when the latest backup version was made. The time is obtained from the TIME macro in hundredths of seconds. DFHSM does not use this field.
84 (54)	4	MCBDBU	MCBDBU contains the date when the latest backup version was made. The time is obtained from the TIME macro in format X'00*yyddds*'.
88 (58)	2	MCBDSORG	MCBDSORG contains the data set organization from the data set control block.
90 (5A)	2	MCBBLKSZ	MCBBLKSZ contains the maximum block size of the data set.
92 (5C)	1	MCBKEYLN	MCBKEYLN contains the key length of the data set.
93 (5D)	1	MCBRECFM	MCBRECFM contains the data set record format from the DSCB:
	...x xxxx	*	Reserved.
	11..	MCBRFTYP	These flags indicate a V, B, or F format.
	..1.	MCBRFTO	When set to 1, the track overflow feature is present.
94 (5E)	1	MCBDSIND	MCBDSIND contains the data set indicators from format 1 data set control block:
	x.x. x.xx	*	Reserved.
	.1..	MCBFRACF	When set to 1, the data set is RACF-indicated.
	...1	MCBFSCTY	When set to 1, the data set is password-protected.
	.... .1..	MCBFWSEC	When set to 1, the data set is write password-protected.
95 (5F)	1	MCBCOMPR	MCBCOMPR contains the percent of space saved if the data set was compacted.
96 (60)	4	MCBSIZE	MCBSIZE contains the size allocation, in tracks, on the user's volume.
100 (64)	4	MCBSIZEB	MCBSIZEB contains the size used, in bytes, on the user's volume.
104 (68)	4	MCBCSZ	MCBCSZ contains the size of the latest version of the data set in 2K blocks on the backup volume.
108 (6C)	2	*	Reserved.
110 (6E)	2	MCBFLGS	MCBFLGS is a 2-byte field that contains the following flags:
	...x xxxx	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	1...	MCBFASN	When set to 1, this record contains information about backup versions. When set to 0, this record does not contain information about backup versions.
	.1..	MCBFDBU	When set to 1, DFHSM found a current backup version during data set retirement processing. DFHSM scratches the user data set.
	..1.	MCBFSMS	When set to 1, the data set was an SMS-managed data set when it was last backed up.
111 (6F)	1	*	Reserved.
112 (70)	2	MCBGEN	MCBGEN contains the generation number of the latest backup version.
114 (72)	2	MCBNBC	MCBNBC contains the current number of backup versions for the cataloged data set.
116 (74)	2	MCBTBC	MCBTBC contains the total number of backup versions.
118 (76)	2	MCBFREQ	MCBFREQ contains the backup frequency in days. The data set will not be backed up automatically more frequently than this value. -1 means use the system default.
120 (78)	4	MCBDLRPB	MCBDLRPB is maintained only for non-VSAM cataloged data sets. It contains the date last referenced that existed at the time of backup. It is in the format X'00*yyddds*'.
124 (7C)	4	MCBCTID	MCBCTID contains the compaction table identification if the cataloged data set was compacted.
128 (80)	8	MCBVSPWD	MCBVSPWD contains the master password of the VSAM sphere at the time it was last backed up.
136 (88)	4	MCBSCRD	MCBSCRD contains the date when the data set was determined to not be cataloged (date is in packed decimal format).
140 (8C)	4	*	Reserved.

The following information, starting at offset 144 (90) through the remainder of the backup control data set data set record description, is repeated for each backup version:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCBBDSN	MCBBDSN contains the data set name of the backup version.
44 (2C)	6	MCBFRVOL	MCBFRVOL contains the serial number of the primary volume the data set resides on.
50 (32)	2	MCBBUIF	MCBBUIF contains the following backup version flags:
	1...	MCBFONL1	When set to 1, this backup version was made by the BACKDS or HBACKDS command, and is currently on a migration level 1 volume.
	.1..	MCBFCAT	When set to 1, the data set was cataloged as being on the MCBFRVOL volume when the backup version was made.
	..1.	MCBFVSDS	When set to 1, this data set is a VSAM data set.
	...1	MCBFTAPE	When set to 1, this backup version is on tape.
	.... 1...	MCBFDBUV	When set to 1, this is a retired data set.
	.... .1..	MCBFPROF	When set to 1, a backup profile exists for this backup version.
	.... ..1.	MCBFVSMS	When set to 1, this version of the data set is SMS-managed.
	1	MCBFEXPD	When set to 1, this version of the data set has expired. (This field is set to 1 only in an in-storage copy used by EXPIREBV.)
51 (33)	1	*	Reserved.
52 (34)	4	MCBCDATE	MCBCDATE contains the date that this backup version was made. The date is obtained from the TIME macro in format X'00*yyddds*'.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
56 (38)	8	*	Reserved.

MCB Data Area Cross-Reference

Field	Offset	Begin at Offset
MCBBDSN	0 (0)	144 (90)
MCBBLKSZ	90 (5A)	
MCBBUIF	50 (32)	144 (90)
MCBCDATE	52 (34)	144 (90)
MCBCOMPR	95 (5F)	
MCBCSZ	104 (68)	
MCBCTID	124 (7C)	
MCBDBU	84 (54)	
MCBDLRPB	120 (78)	
MCBDSIND	94 (5E)	
MCBDSORG	88 (58)	
MCBFASN	110 (6E)	
MCBFCAT	50 (32)	144 (90)
MCBFDBU	110 (6E)	
MCBFDBUV	50 (32)	144 (90)
MCBFEXPD	50 (32)	144 (90)
MCBFLGS	110 (6E)	
MCBFONLI	50 (32)	144 (90)
MCBFPROF	50 (32)	144 (90)
MCBFRACF	94 (5E)	
MCBFREQ	118 (76)	
MCBFRVOL	44 (2C)	144 (90)
MCBFSCTY	94 (5E)	
MCBFSMS	110 (6E)	
MCBFTAPE	50 (32)	144 (90)
MCBFVSDS	50 (32)	144 (90)
MCBFVSMS	50 (32)	144 (90)
MCBFWSEC	94 (5E)	
MCBGEN	112 (70)	
MCBKEYLN	92 (5C)	
MCBLKSZ	90 (5A)	
MCBMBC	70 (46)	
MCBNBC	114 (72)	
MCBRECFM	93 (5D)	
MCBRFTO	93 (5D)	
MCBRFTYP	93 (5D)	
MCBSCRD	136 (88)	
MCBSIZE	96 (60)	
MCBSIZEB	100 (64)	
MCBTBC	116 (74)	
MCBTBU	80 (50)	
MCBVSN	64 (40)	
MCBVSPWD	128 (80)	
MCH	44 (2C)	
MCK	0 (0)	

MCC – Backup Control Data Set Backup Version Record

The backup control data set record for a backup version describes a backup version of a data set. This record is 334 bytes long plus 6 times one less than the number of tape volumes used. This record is type C.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the backup control data set backup version record key, consisting of the data set name of a backup version and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	44	MCCADSN	MCCADSN contains the data set name of the original data set.
108 (6C)	6	MCCVSN	MCCVSN contains the volume serial number of the backup volume containing this version.
114 (72)	2	*	Reserved.
116 (74)	4	MCCUCBTY	MCCUCBTY contains the device type of the backup volume.
116 (74)	2	*	Reserved.
118 (76)	1	*	This field contains the following flags:
	.xxx xxxx	*	Reserved.
	1...	MCCTPDEV	When set to 1, this version is on a tape device.
119 (77)	1	*	Reserved.
120 (78)	4	MCCTSBUT	MCCTSBUT contains the time when the version was made. The time is obtained from the TIME macro in format X'*hhmmssth*'.
124 (7C)	4	MCCTSBUD	MCCTSBUD contains the date when the version was made. The date is obtained from the TIME macro in format X'00*yyddds*'.
128 (80)	2	MCCDSORG	MCCDSORG contains the data set organization from the data set control block.
	1	*	Reserved.
	xxxx .xxx	*	Reserved.
	.... 1...	MCCFVSDS	DSORG of VSAM.
130 (82)	2	MCCBLKSZ	MCCBLKSZ contains the maximum block size of the data set.
132 (84)	1	MCCKEYLN	MCCKEYLN contains the key length of the data set.
133 (85)	1	MCCRECFM	MCCRECFM contains the data set record format from the DSCB:
	...x xxxx	*	Reserved.
	11..	MCCRFTYP	These flags indicate a V, B, or F format.
	..1.	MCCRFTO	When set to 1, the track overflow feature is present.
134 (86)	2	MCCGEN	MCCGEN contains the backup version generation number.
136 (88)	4	MCCSIZE	MCCSIZE contains the size allocation, in tracks, on the user's volume.
140 (8C)	4	MCCSIZEB	MCCSIZEB contains the size used, in bytes, on the user's volume.
144 (90)	4	MCCCSZ	MCCCSZ contains the size of the data set in 2K blocks.
148 (94)	2	MCCVOLSQ	MCCVOLSQ contains the volume sequence of 3480 tape, written in the single-file format, in the volume set.
150 (96)	2	MCCFLGS	MCCFLGS is a 2-byte field that contains the following flags:
	xx..	*	Reserved.
	..1.	MCCFCAT	When set to 1, the data set was cataloged on the correct volume at the time that this backup version was made. When set to 0, the data set was cataloged on another volume or was not cataloged.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	...1	MCCF1ICD	When set to 1, the VSAM data set is cataloged in the Integrated Catalog Facility catalog.
	.... 1...	MCCF1ICC	When set to 1, this is an Integrated Catalog Facility catalog.
	.... .1..	MCCFTSP	When set to 1, the tape security option for the backup version is password.
	.... ..1.	MCCFTSD	When set to 1, the tape security option for the backup version is date.
	1	MCCFDELC	When set to 1, the backup version is no longer valid and should be scratched.
151 (97)	1...	MCCFEOS	When set to 1, backup version should be erased when it is scratched.
	.1..	MCCFD23	When set to 1, DFP 2.3.0 or higher was installed when this backup version was created.
	..1.	MCCFDMV	When set to 1, DFDSS was the data mover used when backup was processed.
	...1	MCCFPDSE	When set to 1, the data set backed up is a PDSE data set.
	.... 1...	MCCFNONQ	When set to 1, standard serialization not used during backup processing.
	xxx	*	Reserved.
152 (98)	1	MCCDSIND	MCCDSIND contains the data set indicators from format 1 data set control block:
	x.x. x.xx	*	Reserved.
	.1..	MCCFRACF	When set to 1, the data set is RACF-indicated.
	...1	MCCFSCTY	When set to 1, the data set is password-protected.
	.... .1..	MCCFWSEC	When set to 1, data set is write password-protected.
153 (99)	1	*	Reserved.
154 (9A)	6	MCCFRVOL	MCCFRVOL contains the serial number of the volume that the original data set was on when the backup version was made.
160 (A0)	4	MCCCTID	MCCCTID contains the identifier.
164 (A4)	4	MCCFRUCB	MCCFRUCB contains the UCB device type of the volume that the original data set was on.
168 (A8)	4	MCCTSLUT	MCCTSLUT contains zeros.
172 (AC)	4	MCCTSLUD	MCCTSLUD contains the date the VSAM data set was last updated or the date the backup version was created for the non-VSAM data set. The date is obtained from the TIME macro in format X'00*yyddds*'. DFHSM does not use this field.
176 (B0)	4	MCCVBSZB	MCCVBSZB contains the size, in bytes, of the VSAM base cluster.
180 (B4)	4	MCCVBCXZ	MCCVBCXZ contains the size, in 2K blocks, of the VSAM base cluster.
184 (B8)	4	MCCTPBLK	MCCTPBLK contains the total number of 16K blocks the backup version occupies on all volumes.
188 (BC)	4	MCCTERN	MCCTERN contains the TTOC entry for the TTOC extension record of the migration copy.
192 (C0)	4	MCCFBID	MCCFBID contains the file sequence number for positioning to a backup version on a tape backup volume.
196 (C4)	2	MCCNVSN	MCCNVSN contains the number of volumes, excluding the first, that contains the backup version.
198 (C6)	2	MCCNVSNO	MCCNVSNO contains the offset in this record from MCCADSN to the beginning of MCCAVSN(1).
200 (C8)	2	MCCDCLEN	MCCDCLEN contains the length of the data class name.
202 (CA)	30	MCCDCNAM	MCCDCNAM contains the data class name.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
232 (E8)	2	MCCSCLEN	MCCSCLEN contains the length of the storage class name.
234 (EA)	30	MCCSCNAM	MCCSCNAM contains the storage class name.
264 (108)	2	MCCMCLEN	MCCMCLEN contains the length of the management class name.
266 (10A)	30	MCCMCNAM	MCCMCNAM contains the management class name.
296 (128)	4	MCCEXPDT	MCCEXPDT contains the data set expiration date.
300 (12C)	1	MCCRECOR	MCCRECOR contains the VSAM data set record organization.
301 (12D)	1	MCCSMSFG	MCCSMSFG contains the following SMS-related flags:
	1...	MCCFGDG	When set to 1, the data set is a generation data set.
	.1..	MCCFROG	When set to 1, the data set is a rolled-off generation data set.
	..1.	MCCKEYRG	When set to 1, the data set is a VSAM keyrange data set.
	...1	MCCFMVOL	When set to 1, the data set is a multiple-volume data set.
	.... 1...	MCCFSMS	When set to 1, the data set is an SMS-managed data set.
	.... .1..	MCCFRBLK	When set to 1, the data set is a system-reblockable data set.
	.... ..1.	MCCFBWO	When set to 1, the data set may have been backed up while open.
	x	*	Reserved.
302 (12E)	8	MCCDLBU	MCCDLBU contains the date that the data set was last backed up.
310 (136)	16	MCCROWNR	Resource owner name.
320 (146)	8	MCCRDATA	Recovery data field

The following array exists if this backup version resides on more than one tape and is addressed by the MCCNVSNO field:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	MCCAVSN	MCCAVSN is an array containing volume serial numbers of additional volumes after the first one that contains the backup version. The first volume serial number is given in the MCCVSN field.

MCC Data Area Cross-Reference

Field	Offset	Begin at Offset	Field	Offset	Begin at Offset
MCCADSN	64 (40)		MCCFGDG	301 (12D)	
MCCAVSN	0 (0)	328 (148)	MCCFLGS	150 (96)	
MCCBLKSZ	130 (82)		MCCFMVOL	301 (12D)	
MCCCSZ	144 (90)		MCCFNONQ	151 (97)	
MCCCTID	160 (A0)		MCCFPDSE	151 (97)	
MCCDCLEN	200 (C8)		MCCFRACF	152 (98)	
MCCDCNAM	202 (CA)		MCCFRBLK	301 (12D)	
MCCDLBU	302 (12E)		MCCFROG	301 (12D)	
MCCDSIND	152 (98)		MCCFRUCB	164 (A4)	
MCCDSORG	128 (80)		MCCFRVOL	154 (9A)	
MCCEXPDT	296 (128)		MCCFSCTY	152 (98)	
MCCFBID	192 (C0)		MCCFSMS	301 (12D)	
MCCFBWO	301 (12D)		MCCFTSD	150 (96)	
MCCFCAT	150 (96)		MCCFTSP	150 (96)	
MCCFDELC	150 (96)		MCCFVSDS	128 (80)	
MCCFDMV	151 (97)		MCCFWSEC	152 (98)	
MCCFD23	151 (97)		MCCF1ICC	150 (96)	
MCCFEOS	151 (97)		MCCF1ICD	150 (96)	

Field	Offset	Begin at Offset
MCCGEN	134 (86)	
MCCKEYLN	132 (84)	
MCCKEYRG	301 (12D)	
MCCMCLEN	264 (108)	
MCCMCNAM	266 (10A)	
MCCNVSN	196 (C4)	
MCCNVSNO	198 (C6)	
MCCRDATA	320 (146)	
MCCRECFM	133 (85)	
MCCRECOR	300 (12C)	
MCCRFTO	133 (85)	
MCCRFTYP	133 (85)	
MCCROWNR	310 (136)	
MCCSCLEN	232 (E8)	
MCCSCNAM	234 (EA)	
MCCSIZE	136 (88)	
MCCSIZEB	140 (8C)	
MCCSMSFG	301 (12D)	
MCCTERN	188 (BC)	
MCCTPBLK	184 (B8)	
MCCTPDEV	118 (76)	
MCCTSBUD	124 (7C)	
MCCTSBUT	120 (78)	
MCCTSLUD	172 (AC)	
MCCTSLUT	168 (A8)	
MCCUCBTY	116 (74)	
MCCVBCXZ	180 (B4)	
MCCVBSZB	176 (B0)	
MCCVOLSQ	148 (94)	
MCCVSN	108 (6C)	
MCH	44 (2C)	
MCK	0 (0)	

MCD — Migration Control Data Set Data Set Record

The migration control data set data set record describes migration information for an individual data set. This record is 404 bytes long, plus six times one less than the number of tape volumes use. This record is type D.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the migration control data set data set record key, consisting of the data set name and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	6	MCDVSN	MCDVSN contains the volume serial number of the migration volume containing the data set.
70 (46)	2	MCDFLGS	MCDFLGS is a 2-byte field that contains the following flags:
	1...	MCDFASN	When set to 1, a migration copy exists.
	.1..	MCDFMIG	When set to 1, the data set is to be migrated.
	..1.	MCDFNOMG	When set to 1, the data set is prevented from migrating.
	...1	MCDFDEL	When set to 1, the data set was deleted.
	.... 1...	MCDFSDP	When set to 1, the data set is in a VSAM small-data-set-packing data set.
	.... .1..	MCDFL2	When set to 1, the data set is on level 2. When set to 0, the data set is on level 1.
	.... ..1.	MCDFNSCR	When set to 1, the data set has been recalled, but the migration copy is not yet scratched.
	1	MCDJES3	When set to 1, the record has been processed during DFHSM JES3 setup.
71 (47)	1...	MCDFMCO	When set to 1, an MCO record exists.
	.1..	MCDFMIGP	When set to 1, VSAM migration is in progress.
	..1.	MCDNOUPD	When set to 1, the discrete RACF profile was not updated. For data sets that are RACF-protected, the RACF profile indicates the volume serial number of the volume from which the data set migrated.
	...1	MCDRACND	When set to 1, the migrated cluster is RACF indicated; it can be recalled, but not deleted.
	.... 1...	MCDFEOS	When set to 1, the data set had the erase attribute specified when the MCDFNSCR bit was set to 1.
	.... .1..	MCDFSMVL	When set to 1, space management flags (MCDRECAL) are valid.
	.... ..1.	MCDFDUMD	When set to 1, this is a dummy MCD record.
	1	MCDFR3	When set to 1, the record was created by HSM Release 3 or a release of DFHSM.
72 (48)	1	MCDCOMPR	MCDCOMPR contains the percent of space saved if the data set is compacted.
73 (49)	1	MCDRV	MCDRV contains the version, release, and modification level of DFHSM that created this record in the following format (X'54' = V2.5.0): first 3 bits = version (B'010'for version 2) next 3 bits = release (B'101' for release 5) last 2 bits = modification level (B'00' for modification level 0)
74 (4A)	1	MCDOPTCD	MCDOPTCD contains the option code from the format 1 DSCB.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.xxx xxxx	*	Reserved.
	1...	MCDFICF	When set to 1, dataset is cataloged in an ICF catalog.
75 (4B)	1	*	Reserved.
76 (4C)	4	MCDDLC	MDDLC contains the date the data set was created. The date is obtained from the DSCB in format X'00*yyddds*'.
80 (50)	4	MCDTLR	MCDTLR contains the time when the data set was last used. The time is obtained from the TIME macro in format X'*hhmmssth*'.
84 (54)	4	MCDDLR	MCDDLR contains the date the data set was last referenced. The date is obtained from the TIME macro in format X'00*yyddds*'.
88 (58)	4	MCDTLU	MCDTLU contains the time when the VSAM data set was last updated. The time is obtained from the TIME macro in format X'*hhmmssth*'.
92 (5C)	4	MCDDLU	MCDDLU contains the date the VSAM data set was last updated. The date is obtained from the TIME macro in format X'00*yyddds*'.
96 (60)	4	MCDTMIG	MCDTMIG contains the time when the data set migrated. The time is obtained from the TIME macro in format X'*hhmmssth*'.
100 (64)	4	MCDDMIG	MCDDMIG contains the date when the data set migrated. The date is obtained from the TIME macro in format X'00*yyddds*'.
104 (68)	2	MCDDSORG	MCDDSORG contains the data set organization information from the data set control block.
	x.xx xxxx	*	Reserved.
	.1..	MCDFPSDS	When set to 1, the data set is a physical-sequential data set.
105 (69)	xxxx .xxx	*	Reserved.
	.... 1...	MCDFVSDS	When set to 1, the data set is a VSAM data set.
106 (6A)	2	MCDBLKSZ	MCDBLKSZ contains the maximum block size of the data set.
108 (6C)	1	MCDKEYLN	MCDKEYLN contains the key length of the data set.
109 (6D)	1	MCDRECFM	MCDRECFM contains the data set record format from the DSCB:
	...x xxxx	*	Reserved.
	11..	MCDRFTYP	These flags indicate a V, U, or F format (X'80' = F, X'40' = V, X'CO' = U).
	..1.	MCDRFTO	When set to 1, the track overflow feature is present.
110 (6E)	1	MCDDSIND	MCDDSIND contains the data set indicators from the format 1 data set control block:
	x.x. x..x	*	Reserved.
	.1..	MCDFRACF	When set to 1, the data set is RACF-indicated.
	...1	MCDFSCTY	When set to 1, the data set is password-protected.
	.... .1..	MCDFWSEC	When set to 1, the data set is write password-protected.
	.... ..1.	MCDFCHNG	When set to 1, the data set has been opened for other than read-only processing since the flag was last reset (data set needed backup at time of migration).
111 (6F)	1	MCDHID	MCDHID contains the identifier of the processor using the data set record.
112 (70)	4	MCDSIZE	MCDSIZE contains the size allocation, in tracks, on the user's volume.
116 (74)	4	MCDSIZEB	MCDSIZEB contains the size used, in bytes, on the user's volume.
120 (78)	4	MCDCSZ	MCDCSZ contains the size of the data set in 2K blocks on the migration volume.
124 (7C)	2	MCDNMIG	MCDNMIG contains the number of times the data set has migrated since this record was created.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
126 (7E)	2	MCDDAYS	MCDDAYS contains the number of days before the data set is eligible for migration.
128 (80)	6	MCDFRVSN	MCDFRVSN contains the volume serial number of the primary volume the data set resided on before migration, if currently migrated.
128 (80)	6	MCDOVSN	MCDOVSN contains the volume serial number of the primary volume where the data set was recalled.
134 (86)	1	*	This is a 1-byte field that contains the following flags:
	.... .x.x	*	Reserved.
	1..	MCDFMCL	When set to 1, an MCL record exists.
	.1..	MCDFNOD	When set to 1, this data set caused the migration volume (MCV) record to be ineligible for the DELVOL request.
	..1.	MCDFCMCL	When set to 1, an MCL record is created when the data set migrates.
	...1	MCDFBUWM	When set to 1, the data set was backed up while it was migrated.
	.... 1...	MCDFPDSE	When set to 1, the migrated data set is a PDSE data set.
	... ..1.	MCDFDSS	When set to 1, DFDSS was the data mover used for migration.
135 (87)	1	MCDMCL43	MCDMCL43 contains a unique character that is substituted for the 43rd character of the data set name. The resulting character string is used as the key for the MCL record.
136 (88)	4	MCDCTID	MCDCTID contains the compaction table identification if the cataloged data set was compacted.
140 (8C)	4	MCDUCBTY	MCDUCBTY contains the device type of the primary volume the data set was on.
144 (90)	4	MCDTRES	MCDTRES contains the time the data set was recalled or deleted. The time is obtained from the TIME macro in format X'*hhmmssth*'.
148 (94)	4	MCDDRES	MCDDRES contains the date the data set was recalled or deleted. The date is obtained from the TIME macro in format X'00*yyddds*'.
152 (98)	4	MCDMDEVT	MCDMDEVT contains the device type of the volume containing the migrated data set.
	xxxx xxxx	*	Reserved.
153 (99)	xxxx .xxx	*	Reserved.
	.... 1...	MCDFMVRT	When set to 1, the volume is a virtual volume.
154 (9A)	.x.x xxxx	*	Reserved.
	1...	MCDTPDEV	When set to 1, the volume is a tape device.
	..1.	MCDFMVDA	When set to 1, the volume is a DASD volume.
155 (9B)	xxxx xxxx	*	Reserved.
156 (9C)	1	MCDJDAYS	MCDJDAYS is used to change the default number of days to delay migration of the data set.
157 (9D)	3	MCDJDATE	MCDJDATE contains the last date that DFHSM will delay migration of the data set.
160 (A0)	3	MCDJVEXD	MCDJVEXD contains the last date that DFHSM will hold the volume serial numbers in MCDJVOLS.
163 (A3)	1	MCDPDEP	When MCDPDEP = 1, the volumes contained in MCDJVOLS were selected from the general pool. When MCDPDEP = 2, the volumes were selected from a user-defined pool.
164 (A4)	1	MCDJCT	MCDJCT contains the number of volumes that are eligible for directed recall of the data set.
165 (A5)	50	MCDJVOLS	MCDJVOLS is an array that contains information about five preselected volumes to which the data set can be recalled.

The following two fields (10 bytes) are repeated five times, starting at offset 215 (D7). They describe the volumes to which the data set may be recalled. MCDJCT indicates the number of entries that contain valid data.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	MCDJVSN	MCDJVSN contains the volume serial number of a preselected volume.
6 (6)	4	MCDJDEVT	MCDJDEVT contains the device type of a preselected volume.
215 (D7)	1	MCDRECAL	MCDRECAL contains the following volume selection attribute flags for recalling the data set:
	xx	*	Reserved.
	1...	MCDFDBA	When set to 0, the data set must be recalled to a volume that has the space management technique of MIGRATE.
	.1..	MCDFRBU	This flag is valid only when MCDFDBA = 1. When set to 1, the data set migrated from a volume that has the space management technique of DELETEIFBACKEDUP. When set to 0, the data set migrated from a volume that has the space management technique of DELETEBYAGE.
	..1.	MCDFBDCS	When set to 1, the data set migrated from a volume for which the backup device category was specified.
	...1	MCDFBDCT	This flag is valid only when MCDFBDCS = 1. When set to 1, the data set migrated from a volume that has a backup device category of tape. When set to 0, the data set migrated from a volume that has a backup device category of DASD.
	.... 1...	MCDFAM	When set to 1, the recall volume selected by DFHSM must have automatic space management requested in the same host.
	.... .1..	MCDFAB	When set to 1, the recall volume selected by DFHSM must have automatic backup requested in the same host.
216 (D8)	4	MCDEXPDT	MCDEXPDT contains the expiration date of the data set that existed when the data set migrated. (The user set this expiration date.) It is in the form of X'*ccyyddds*'. cc = 00, century is 1900 cc = 01, century is 2000
220 (DC)	44	MCDMCANM	MCDMCANM contains the name of the migration copy of the data set which is the key of the MCA record.
264 (108)	8	MCDVSPWD	MCDVSPWD contains the VSAM data set master password.
272 (110)	4	MCDFBID	MCDFBID contains the data set file block ID on a tape volume.
276 (114)	2	MCDNVSN	MCDNVSN contains the number of additional tape volumes.
278 (116)	2	MCDNVSNO	MCDNVSNO contains the offset from MCDVSN to MCDAVSN.
280 (118)	4	MCDTPBLK	MCDTPBLK contains the total number of 16K blocks that the migration copy occupies on all volumes.
284 (11C)	4	MCDTERN	MCDTERN contains the TTOC entry for the TTOC extension record of the migration copy.
288 (120)	2	MCDVOLSQ	MCDVOLSQ contains the volume sequence of a 3480 tape, written in single-file format, in the volume set.
290 (122)	2	*	Reserved.
292 (124)	2	MCDDCLEN	MCDDCLEN contains the length of the data class name.
294 (126)	30	MCDDCNAM	MCDDCNAM contains the data class name.
324 (144)	2	MCDSCLEN	MCDSCLEN contains the length of the storage class name.
326 (146)	30	MCDSCNAM	MCDSCNAM contains the storage class name.
356 (164)	2	MCDMCLEN	MCDMCLEN contains the length of the management class name.
358 (166)	30	MCDMCNAM	MCDMCNAM contains the management class name.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
388 (184)	8	MCDDLBU	MCDDLBU contains the date the data set was last backed up (STCK format).
396 (18C)	1	MCDRECOR	MCDRECOR contains the VSAM data set record organization.
397 (18D)	1	MCDSMSFG	MCDSMSFG contains the following SMS-related flags:
	xx	*	Reserved.
	1...	MCDFSMS	When set to 1, the data set is an SMS-managed data set.
	.1..	MCDFGDG	When set to 1, the data set is a generation data set.
	..1.	MCDFROG	When set to 1, the data set is a rolled-off generation data set.
	...1	MCDKEYRG	When set to 1, the data set is a VSAM keyrange data set.
	.... 1...	MCDFMVOL	When set to 1, the data set is a multiple-volume data set.
	.... .1..	MCDFRBLK	When set to 1, the data set is a system-reblockable data set.
398 (18E)	16	MCDROWNR	MCDROWNR contains the resource owner name.
414 (18E)	8	MCDRDATA	MCDRDATA contains the recovery data field.
422 (1A6)	2	*	Reserved.
424 (1A8)	4	*	Reserved.

The following array exists if this migration copy resides on more than one tape volume. The array is addressed by the MCDNVSNO field.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	MCDAVSN	MCDAVSN is an array that contains the volume serial numbers of additional volumes after the first one that contains the migration copy. The first volume serial number is given in the MCDVSN field.

MCD Data Area Cross-Reference

Field	Offset	Begin at Offset	Field	Offset	Begin at Offset
MCDAVSN	404 (194)	404 (194)	MCDFBUWM	134 (86)	
MCDBLKSZ	106 (6A)		MCDFCHNG	110 (6E)	
MCDCOMPR	72 (48)		MCDFCMCL	134 (86)	
MCDCSZ	120 (78)		MCDFDBA	215 (D7)	
MCDCTID	136 (88)		MCDFDEL	70 (46)	
MCDDAYS	126 (7E)		MCDFDSS	134 (86)	
MCDDCLEN	292 (124)		MCDFDUMD	71 (47)	
MCDDCNAM	294 (126)		MCDFEOS	71 (47)	
MCDDLBU	388 (184)		MCDFGDG	397 (18D)	
MCDDLC	76 (4C)		MCDFICF	74 (4A)	
MCDDLR	84 (54)		MCDFLGS	70 (46)	
MCDDLU	92 (5C)		MCDFL2	70 (46)	
MCDDMIG	100 (64)		MCDFMCL	134 (86)	
MCDDRES	148 (94)		MCDFMCO	71 (47)	
MCDDSIND	110 (6E)		MCDFMIG	70 (46)	
MCDDSORG	104 (68)		MCDFMIGP	71 (47)	
MCDEXPDT	216 (D8)		MCDFMVDA	154 (9A)	
MCDFAB	215 (D7)		MCDFMVOL	397 (18D)	
MCDFAM	215 (D7)		MCDFMVRT	153 (99)	
MCDFASN	70 (46)		MCDFNOD	134 (86)	
MCDFBDCS	215 (D7)		MCDFNOMG	70 (46)	
MCDFBDCT	215 (D7)		MCDFNSCR	70 (46)	
MCDFBID	272 (110)		MCDFPDSE	134 (86)	

Field	Offset	Begin at Offset
MCDFPSDS	104 (68)	
MCDFRACF	110 (6E)	
MCDFRBLK	397 (18D)	
MCDFRBU	215 (D7)	
MCDFROG	397 (18D)	
MCDFRVSN	128 (80)	
MCDFR3	71 (47)	
MCDFSCTY	110 (6E)	
MCDFSDP	70 (46)	
MCDFSMS	397 (18D)	
MCDFSMVL	71 (47)	
MCDFVSDS	104 (68)	
MCDFWSEC	110 (6E)	
MCDHID	111 (6F)	
MCDJCT	164 (A4)	
MCDJDATE	157 (9D)	
MCDJDAYS	156 (9C)	
MCDJDEVT	6 (6)	165 (A5)
MCDJES3	70 (46)	
MCDJVEXD	160 (A0)	
MCDJVOLS	165 (A5)	
MCDJVSN	0 (0)	165 (A5)
MCDKEYLN	108 (6C)	
MCDKEYRG	397 (18D)	
MCDMCANM	220 (DC)	
MCDMCL43	135 (87)	
MCDMCLEN	356 (164)	
MCDMCNAM	358 (166)	
MCDMDEVT	152 (98)	
MCDNMIG	124 (7C)	
MCDNOUPD	71 (47)	
MCDOVSN	128 (80)	
MCDNVSN	276 (114)	
MCDNVSNO	278 (116)	
MCDOPTCD	74 (4A)	
MCDPDEP	163 (A3)	
MCDRACND	71 (47)	
MCDRDATA	414 (19E)	
MCDRECAL	215 (D7)	
MCDRECFM	109 (6D)	
MCDRECOR	396 (18C)	
MCDRFTO	109 (6D)	
MCDRFTYP	109 (6D)	
MCDROWNR	398 (18E)	
MCDRV	73 (49)	
MCDSCLEN	324 (144)	
MCDSCNAM	326 (146)	
MCDSIZE	112 (70)	
MCDSIZEB	116 (74)	
MCDSMSFG	397 (18D)	
MCDSMSWA	292 (124)	
MCDTERN	284 (11C)	
MCDTLR	80 (50)	
MCDTLU	88 (58)	
MCDTMIG	96 (60)	
MCDTPBLK	280 (118)	
MCDTPDEV	154 (9A)	
MCDTRES	144 (90)	
MCDTSLR	80 (50)	
MCDTSLU	88 (58)	
MCDTSMIG	96 (60)	
MCDTSRES	144 (90)	
MCDUCBTY	140 (8C)	
MCDVOLSQ	288 (120)	
MCDVSN	64 (40)	
MCDVSPWD	264 (108)	
MCH	44 (C)	
MCK	0 (0)	

MCK – Control Data Set Key and Record Header

Each migration control data set, backup control data set, and offline control data set record begins with similar key and record header fields. The combined length of the key and record header is 64 bytes.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the control data set entry key.
	1	MCKTYPE	MCKTYPE contains the migration control data set, backup control data set, or offline control data set entry type. The MCKTYPE is equal to the first byte of the MCK except for record types A, B, C, and D. The possible migration control data set entry types are: X'00' = Data set (Code D) X'01' = User (Code U) X'02' = Free space on migration level 1 (Code 1) X'04' = Volume (Code V) X'07' = JES3 volume allocation count (Code N) X'10' = Statistics or control Code S) X'11' = Migrated copy name (Code A) X'12' = VSAM data set associations (Code O) Possible backup control data set entry types are: X'20' = Data set (Code B) X'21' = DVL (Code Y) X'22' = DCL (Code W) X'24' = Backup version entry (Code C) X'26' = Move backup copy (Code M) X'27' = Backup migrated data set (Code L) X'28' = Volume that has been backed up (Code P) X'29' = DGN (Code G) X'2C' = Backup volume (Code X) X'30' = Control (Code R) Possible offline control data set entry types are: X'32' = Tape table of contents (Code T)
1 (1)	43	MCKKEY2	MCKKEY2 contains the remainder of the control data set record key.
44 (2C)	20	MCH	MCH contains the control data set record header.
	2	MCHLEN	MCHLEN contains the total length of the record, including key and header fields.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
46 (2E)	1	MCHTYPE	MCHTYPE contains the migration control data set, backup control data set, or offline control data set entry type. The MCHTYPE is equal to the first byte of the MCK except for record types A, B, C, and D. The possible migration control data set entry types are: X'00' = Data set (Code D) X'01' = User (Code U) X'02' = Free space on migration level 1 (Code 1) X'04' = Volume (Code V) X'07' = JES3 volume allocation count (Code N) X'10' = Statistics or control Code S) X'11' = Migrated copy name (Code A) X'12' = VSAM data set associations (Code 0) Possible backup control data set entry types are: X'20' = Data set (Code B) X'21' = DVL (Code Y) X'22' = DCL (Code W) X'24' = Backup version entry (Code C) X'26' = Move backup copy (Code M) X'27' = Backup migrated data set (Code L) X'28' = Volume that has been backed up (Code P) X'29' = DGN (Code G) X'2C' = Backup volume (Code X) X'30' = Control (Code R) Possible offline control data set entry types are: X'32' = Tape table of contents (Code T)
47 (2F)	1	*	Reserved.
48 (30)	8	MCHTSLU	MCHTSLU contains the time of the last update of the record. The time is obtained from the TIME STCK macro in the 64-bit micro second clock format.
56 (38)	8	MCHTSCR	MCHTSCR contains the time of record creation. The time is obtained from the TIME STCK macro in the 64-bit micro second clock format.

MCK Data Area Cross-Reference

Field	Offset
MCH	44 (2C)
MCHLEN	44 (2C)
MCHTSCR	56 (38)
MCHTSLU	48 (30)
MCHTYPE	46 (2E)
MCK	0 (0)
MCKKEY2	1 (1)
MCKTYPE	0 (0)

MCL – Backup Control Data Set Backup Migrated Data Set Record

The backup control data set backup migrated data set record describes an updated data set that has migrated from a primary volume controlled by DFHSM automatic backup and needs to be backed up. If you want to know what records exist for backing up migrated data sets, you can print the records by using the Access Method Services utility and specifying the FROMKEY(X'27') and TOKEY(X'27') values. This record is 244 bytes long and its type is L.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the backup control data set updated data set record key consisting of a X'27' followed by the first 43 characters of the data set name. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the backup control data set migrated data set record header. (See MCK for details.)
64 (40)	1	MCLDSN43	MCLDSN43 contains the true 43rd character of the data set name to be backed up.
65 (41)	1	MCLDSN44	MCLDSN44 contains the 44th character of the data set name to be backed up.
66 (42)	6	MCLPVSN	MCLPVSN contains the volume serial number of the primary volume from which the data set migrated.
72 (48)	6	MCLONVOL	MCLONVOL contains the serial number of the volume that the migration copy resides on.
78 (4E)	2	MCLDSORG	MCLDSORG contains the data set organization bytes from the format 1 data set control block.
80 (50)	1	MCLDSIND	MCLDSIND contains the data set indicator byte from the format 1 data set control block, and the following flags:
	x.x. xxxx	*	Reserved.
	.1..	MCLFRACF	When set to 1, the data set name is RACF-protected.
	...1	MCLFSCTY	When set to 1, contains a password-protected flag.
81 (51)	1	MCLFLAGS	MCLFLAGS is a 1-byte field that contains the following flags:
	 xxxx	*	Reserved.
	1...	MCLFBDCS	When set to 1, this data set is to be backed up to a specific category of backup device (see MCLFBDCT).
	.1..	MCLFBDCT	When set to 1, this data set is to be backed up only to tape. When set to 0, this data set is to be backed up only to DASD. MCLFBDCT only applies when MCLFBDCS is set to 1.
	..1.	MCLFONL2	When set to 1, this data set currently resides on a migration level 2 volume. When set to 0, this data set currently resides on a migration level 1 volume.
	...1	MCLFSDSP	When set to 1, this data set currently resides in a small-data-set-packing data set.
82 (52)	44	MCLMDSN	MCLMDSN contains the migration data set name on the migration volume.
126 (7E)	2	*	Reserved.
128 (80)	2	MCLDCLEN	MCLDCLEN contains the length of the data class name.
130 (82)	30	MCLDCNAM	MCLDCNAM contains the data class name.
160 (A0)	2	MCLSCLEN	MCLSCLEN contains the length of the storage class name.
162 (A2)	30	MCLSCNAM	MCLSCNAM contains the storage class name.
192 (C0)	2	MCLMCLEN	MCLMCLEN contains the length of the management class name.
194 (C2)	30	MCLMCNAM	MCLMCNAM contains the management class name.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
224 (E0)	8	MCLDLBU	MCLDLBU contains the date that the data set was last backed up (STCK format).
232 (E8)	1	MCLSMSFG	MCLSMSFG contains the following SMS-related flags:
	.xxx xxxx	*	Reserved.
	1...	MCLFSMS	When set to 1, the data set is an SMS-managed data set.
233 (E9)	3	*	Reserved.
236 (EC)	8	*	Reserved.

MCL Data Area Cross-Reference

Field	Offset
MCH	44 (2C)
MCK	0 (0)
MCLDCLEN	128 (80)
MCLDCNAM	130 (82)
MCLDLBU	224 (E0)
MCLDSIND	80 (50)
MCLDSN43	64 (40)
MCLDSN44	65 (41)
MCLDSORG	78 (4E)
MCLFBDCS	81 (51)
MCLFBDCT	81 (51)
MCLFLAGS	81 (51)
MCLFONL2	81 (51)
MCLFRACF	80 (50)
MCLFSCTY	80 (50)
MCLFSDSP	81 (51)
MCLFSMS	232 (E8)
MCLMCLEN	192 (C0)
MCLMCNAM	194 (C2)
MCLMDSN	82 (52)
MCLONVOL	72 (48)
MCLPVSN	66 (42)
MCLSCLEN	160 (A0)
MCLSCNAM	162 (A2)
MCLSMSFG	232 (E8)

MCM – Backup Control Data Set Move Backup Version Record

The backup control data set move backup version record describes a data set that has been backed up by the BACKDS or HBACKDS command and is currently residing on a level 1 migration volume. If you want to know what records exist for moving backup versions, you can print the records by using the Access Method Services utility and specifying the FROMKEY(26) and TOKEY(26) values. Each record is 168 bytes long and its type is M.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the backup control data set BACKDS record key consisting of an X'26' followed by 43 characters from the backup version name. All characters except the fourth character of the second qualifier are used. The fourth character of the second qualifier is always a 'K'. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the backup control data set BACKDS record header. (See MCK for details.)
64 (40)	44	MCMODSN	MCMODSN contains the data set name of the original data set.
108 (6C)	44	MCMBDSN	MCMBDSN contains the data set name of the backup version.
152 (98)	6	MCMONVOL	MCMONVOL contains the serial number of the migration level 1 volume that the backup version currently resides on.
158 (9E)	2	MCMFLAGS	MCMFLAGS is a 2-byte field that contains the following flags:
	..xx xxxx	*	Reserved.
	1...	MCMFBDCS	When set to 1, this data set is to be backed up to a specific category of backup volume (see MCMFBDCT).
	.1..	MCMFBDCT	When set to 1, this data set is to be backed up only to tape. When set to 0, this data set is to be backed up only to DASD. MCMFBDCT only applies when MCMFBDCS is set to 1.
160 (A0)	8	*	Reserved.

MCM Data Area Cross-Reference

Field	Offset
MCH	44 (2C)
MCK	0 (0)
MCMBDSN	108 (6C)
MCMFBDCS	158 (9E)
MCMFBDCT	158 (9E)
MCMFLAGS	158 (9E)
MCMODSN	64 (40)
MCMONVOL	152 (98)

MCO – Migration Control Data Set VSAM Associations Record

The migration control data set VSAM associations record describes the objects belonging to a migrated VSAM data set that is eligible for automatic migration. The record is 292 bytes long, plus 216 bytes for each alternate index. This record is type O.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the VSAM associations record key. The MCO key is the same as the MCA key except the first character is replaced by X'12'. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	44	MCOORGNM	MCOORGNM contains the data set name of the original data set.
108 (6C)	1	MCOCTFLG	MCOCTFLG contains the following VSAM objects flags:
	1...	MCOCCAT	When set to 1, the base cluster is cataloged.
	.1..	MCOCDCAT	When set to 1, the base data object is cataloged.
	..1.	MCOCICAT	When set to 1, the base index is cataloged.
	...1	MCOCPCAT	When set to 1, the base path is cataloged.
	.... 1...	MCOGCAT	When set to 1, the AIX cluster is cataloged.
	.... .1..	MCOGDCAT	When set to 1, the AIX data object is cataloged.
	.... ..1.	MCOGICAT	When set to 1, the AIX index is cataloged.
	1	MCOGPCAT	When set to 1, the AIX path is cataloged.
109 (6D)	1	MCOAFLG	MCOAFLG contains the following MCA-related flags:
	1...	MCOFMVOL	When set to 1, the data set is a multiple-volume VSAM data set.
	.1..	MCOCDA	When set to 1, the base data MCA exists.
	..1.	MCOCIA	When set to 1, the base index MCA exists.
	...1	MCOCPA	When set to 1, the base path MCA exists.
	.... 1...	MCOGA	When set to 1, the AIX cluster MCA exists.
	.... .1..	MCOGDA	When set to 1, the AIX data MCA exists.
	.... ..1.	MCOGIA	When set to 1, the AIX index MCA exists.
	1	MCOGPA	When set to 1, the AIX path MCA exists.
110 (6E)	6	MCOCDVOL	MCOCDVOL contains the name of the base cluster volume.
116 (74)	44	MCOCDDSN	MCOCDDSN contains the data set name of the base data object.
160 (A0)	1	MCOCDOPT	MCOCDOPT is the data component options byte.
	..xx xxx.	*	Reserved.
	11..	MCOGDSHR	MCOGDSHR contains the share options of the base data component.
	1	MCOCDRAC	When set to 1, the base data object is RACF-indicated.
161 (A1)	1	MCOCRAC	MCOCRAC contains base cluster RACF indicators.
	.xxx xxxx	*	Reserved.
	1...	MCOCFPRC	When set to 1, the first base path is RACF-indicated.
162 (A2)	2	*	Reserved.
164 (A4)	4	MCOCDHUR	MCOCDHUR contains the high-used RBA for base data.
168 (A8)	4	MCOCDHAR	MCOCDHAR contains the high allocation RBA for base data.
172 (AC)	4	*	Reserved.
176 (B0)	44	MCOCIDSN	MCOCIDSN contains the base index data set name.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
220 (DC)	1	MCOCIOPT	MCOCIOPT is the index component options byte.
	..xx xxx.	*	Reserved.
	11..	MCOCISHR	MCOCISHR contains the share options of the base index component.
	1	MCOCIRAC	When set to 1, the base index object is RACF-indicated.
221 (DD)	3	*	Reserved.
224 (E0)	4	MCOCIHUR	MCOCIHUR contains the high-used RBA for the base index.
228 (E4)	4	MCOCIHAR	MCOCIHAR contains the high-allocation RBA for the base index.
232 (E8)	4	*	Reserved.
236 (EC)	2	MCOCPCT	MCOCPCT contains the number of paths on the base cluster.
238 (EE)	2	MCOGCT	MCOGCT contains the number of AIX clusters.
240 (F0)	44	MCOCPTH	MCOCPTH contains the name of the path on the base cluster.
284 (11C)	8	*	Reserved.

The following information starting at offset 292 (124) is related to an alternate index cluster (AIX) for the VSAM data set:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCOGDSN	MCOGDSN contains the data set name of the AIX.
44 (2C)	4	*	Reserved.
48 (30)	44	MCOGDDSN	MCOGDDSN contains the data set name of the AIX data object.
92 (5C)	1	MCOGDOPT	MCOGDOPT is the AIX data component options byte.
	..xx xxx.	*	Reserved.
	11..	MCOGDSHR	MCOGDSHR contains the share options of the AIX data component.
	1	MCOGDRAC	When set to 1, the AIX data object is RACF-indicated.
93 (5D)	1	MCOGRAC	MCOGRAC contains AIX cluster RACF indicators.
	..xx xxxx	*	Reserved.
	1...	MCOGCRAC	When set to 1, the AIX cluster is RACF-indicated.
	.1..	MCOGFPRC	When set to 1, the first AIX path is RACF-indicated.
94 (5E)	2	*	Reserved.
96 (60)	4	MCOGDHUR	MCOGDHUR contains the high-used RBA for AIX data.
100 (64)	4	MCOGDHAR	MCOGDHAR contains the high-allocation RBA for AIX data.
104 (68)	4	*	Reserved.
108 (6C)	44	MCOGIDSN	MCOGIDSN contains the data set name of the AIX index object.
152 (98)	1	MCOGIOPT	MCOGIOPT is the AIX index component options byte.
	..xx xxx.	*	Reserved.
	11..	MCOGISHR	MCOGISHR contains the share options of the AIX index component.
	1	MCOGIRAC	When set to 1, the AIX index object is RACF-indicated.
153 (99)	3	*	Reserved.
156 (9C)	4	MCOGIHUR	MCOGIHUR contains the high-used RBA for the AIX index.
160 (A0)	4	MCOGIHAR	MCOGIHAR contains the high-allocation RBA for the AIX index.
164 (A4)	6	*	Reserved.
170 (AA)	2	MCOGPCT	MCOGPCT contains the number of paths on an AIX cluster.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
172 (AC)	44	MCOGPTH	MCOGPTH contains the path name of the AIX.

MCO Data Area Cross-Reference

Field	Offset	Begin at Offset	Field	Offset	Begin at Offset
MCH	44 (2C)		MCOORGNM	64 (40)	
MCK	0 (0)				
MCOAFLG	109 (6D)				
MCOCCAT	108 (6C)				
MCOCDA	109 (6D)				
MCOCDCAT	108 (6C)				
MCOCDDSN	116 (74)				
MCOCDHAR	168 (A8)				
MCOCDHUR	164 (A4)				
MCOCDOPT	160 (A0)				
MCOCDRAC	160 (A0)				
MCOCDSHR	160 (A0)				
MCOCDVOL	110 (6E)				
MCOCFPRC	161 (A1)				
MCOCIA	109 (6D)				
MCOCICAT	108 (6C)				
MCOCIDSN	176 (B0)				
MCOCIHAR	228 (E4)				
MCOCIHUR	224 (E0)				
MCOCIOPT	220 (DC)				
MCOCIRAC	220 (DC)				
MCOCISHR	220 (DC)				
MCOCPA	109 (6D)				
MCOCPCAT	108 (6C)				
MCOCPCT	236 (EC)				
MCOCPTH	240 (F0)				
MCOCRAC	161 (A1)				
MCOCTFLG	108 (6C)				
MCOFMVOL	109 (6D)				
MCOGA	109 (6D)				
MCOGCAT	108 (6C)				
MCOGCRAC	93 (5D)	292 (124)			
MCOGCT	238 (EE)				
MCOGDA	109 (6D)				
MCOGDCAT	108 (6C)				
MCOGDDSN	48 (30)	292 (124)			
MCOGDHAR	100 (64)	292 (124)			
MCOGDHUR	96 (60)	292 (124)			
MCOGDOPT	92 (5C)	292 (124)			
MCOGDRAC	92 (5C)	292 (124)			
MCOGDSHR	92 (5C)	292 (124)			
MCOGDSN	0 (0)	292 (124)			
MCOGFPRC	93 (5D)	292 (124)			
MCOGIA	109 (6D)				
MCOGICAT	108 (6C)				
MCOGIDSN	108 (6C)	292 (124)			
MCOGIHAR	160 (A0)	292 (124)			
MCOGIHUR	156 (9C)	292 (124)			
MCOGIOPT	152 (98)	292 (124)			
MCOGIRAC	152 (98)	292 (124)			
MCOGISHR	152 (98)	292 (124)			
MCOGPA	109 (6D)				
MCOGPCAT	108 (6C)				
MCOGPCT	170 (AA)	292 (124)			
MCOGPTH	172 (AC)	292 (124			
MCOGRAC	93 (5D)	292 (124)			

MCP — Backup Control Data Set Eligible Volume Record

The backup control data set eligible volume record describes a primary, non-managed, or DFHSM-owned DASD volume that has been backed up or dumped by DFHSM. This record is 2028 bytes long. This record is type P.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the backup control data set eligible volume record key, consisting of X'28', followed by the 6-byte volume serial number, and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	8	MCPUNIT	MCPUNIT contains the unit name.
72 (48)	2	MCPFLGS	MCPFLGS is a 2-byte field that contains the following flags:
	.xxx x...	*	Reserved.
	1...	MCPFPUB	When set to 1, the volume is a primary volume. When set to 0, the volume is a migration volume.
	.... .1..	MCPFREL3	When set to 1, the MCP is in HSM Release 3 format.
	.... ..1.	MCPFPRV	When set to 1, no automatic recall is allowed to this volume unless it is in a pool.
	.... ..1.	MCPNOAR	Alias of MCPFPRV.
	1	MCPFBACK	When set to 1, automatic backup is allowed.
73 (49)	x	*	Reserved.
	1...	MCPFCVOL	When set to 1, an OS CVOL is on the volume.
	.1..	MCPFVSAM	When set to 1, the volume is owned by the VSAM catalog.
	..1.	MCPFVCAT	When set to 1, a VSAM catalog is on this volume.
	...1	MCPFOWND	When set to 1, it is a DFHSM-owned volume.
	.... 1...	MCPFICFC	When set to 1, the volume did not contain an ICF catalog.
	.... .1..	MCPFEXTN	When set to 1, the MCP record has been extended to support the volume dump data.
	.... ..1.	MCPFSMS	When set to 1, the volume was SMS-managed when last processed by the backup or dump functions.
74 (4A)	2	*	Reserved.
76 (4C)	4	MCPTSLBT	MCPTSLBT contains the time of the last backup from this volume. The time is obtained from the TIME macro in format X'*hhmmssth*'.
80 (50)	4	MCPTSLBD	MCPTSLBD contains the date of the last backup from this volume. The date is obtained from the TIME macro in format X'00*yyddds*'.
84 (54)	4	MCPTTRK	MCPTTRK contains the total number of tracks on the volume.
88 (58)	4	MCPFTRK	MCPFTRK contains the total number of free tracks on the volume.
92 (5C)	18	MCPHLQS	MCPHLQS is a two-element array containing the high-level qualifiers of VTOC and VCAT copy data sets and the length of the high-level qualifiers. The first element is for the latest VTOC and VCAT copy. The second element is for the next-latest VTOC and VCAT copy. The array is made up of the following two fields repeated twice, starting at offset 92 (5C).
0 (0)	1	MCPHLQL	MCPHLQL contains the length of high-level qualifier.
1 (1)	8	MCPHLQ	MCPHLQ contains the high-level qualifier.
110 (6E)	4	MCPUCBTY	MCPUCBTY contains the device type of the volume.
114 (72)	2	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
116 (74)	44	MCPVCDSN	MCPVCDSN contains the name of the VSAM catalog that owns this volume.
160 (A0)	6	MCPVCVSN	MCPVCVSN contains the serial number of the volume on which the catalog resides.
166 (A6)	16	*	The following two fields, starting at offset 166 (A6), are repeated four times. The first and second entries describe the latest VTOC and VCAT data sets respectively, and the third and fourth entries describe the next latest VTOC and VCAT data sets:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	2	MCPVOLSQ	MCPVOLSQ contains the volume sequence of a 3480 tape, written in single-file format, in the volume set.
2 (2)	2	MCPTPBLK	MCPTPBLK contains the total number of 16K blocks the backup version occupies on all volumes.
182 (B6)	2	*	Reserved.
184 (B8)	4	*	Reserved.
188 (BC)	112	MCPBUI	MCPBUI contains the following 28 bytes of information, beginning at offset 188 (BC), and is repeated four times. The first and second entries describe the latest VTOC and VCAT data sets respectively, and the third and fourth entries describe the next latest VTOC and VCAT data sets:
0 (0)	6	MCPVTOCV	MCPVTOCV contains the volume serial number of the backup volume containing the VTOC or VCAT copy.
6 (6)	8	MCPVTOCS	MCPVTOCS contains the time stamp of the old VTOC copy.
	4	MCPVTOCT	MCPVTOCT contains the time the backup was done. The time is obtained from the TIME macro in hundredths of seconds.
10 (A)	4	MCPVTOCD	MCPVTOCD contains the date the backup was done. The date is obtained from the TIME macro in format X'00*yyddds*'.
14 (E)	6	MCPNXTV	MCPNXTV contains the volume serial number of the second tape that contains the backup information when backup spans more than one tape volume.
20 (14)	4	MCPFBID	MCPFBID contains the file sequence number for positioning to the VTOC or VCAT backup version on tape.
24 (18)	1	MCPEFLGS	MCPEFLGS contains the BUI flags:
	x	*	Reserved.
	1...	MCPETAPE	When set to 1, this entry describes backup on tape. When set to 0, this entry describes backup to DASD.
	.1..	MCPECDWN	When set to 1, this is the first VCAT backup and it is down level.
	..1.	MCPETSP	When set to 1, the tape security option for the VTOC and VCAT copy is password.
	...1	MCPETSD	When set to 1, the tape security option for the VTOC and VCAT copy is date.
	.... 1...	MCPETTOC	When set to 1, the TTOC extension record is valid. The TTOC extension record is recorded in MCPTERN.
	.... .1..	MCPE1FT	When set to 1, the backup volume is a 3480 tape written in single-file format.
	.... ..1.	MCPEOML1	When set to 1, the backup VTOC copy data set is on an ML1 volume.
25 (19)	1	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
26 (1A)	2	MCPTERN	MCPTERN contains the TTOC extension record. The TTOC extension record is valid if MCPETTOC is set to 1.
300 (12C)	48	*	Reserved.
348 (15C)	1692	*	The following data contains information about full volume dumps, which are required to recover the volume.
348 (15C)	2	MCPDGNCT	MCPDGNCT contains the number of valid dump generations associated with this volume. Its range of values is 0 – 100, and this value is the number of valid entries in the MCPDGNNM array.
350 (15E)	2	*	Reserved.
352 (160)	24	*	Reserved.
376 (178)	14	MCPDGNNM	MCPDGNNM contains a 100-entry array of dump generation record keys. Each valid entry is a key to a DGN record that describes a dump generation of this volume.
0 (0)	6	MCPDSVSN	MCPDSVSN contains the volume serial number of the source volume that the dump copy was created from.
6 (6)	4	MCPDTSDT	MCPDTSDT contains the packed decimal time stamp for when the dump copy was written.
10 (A)	4	MCPDTSDD	MCPDTSDD contains the packed decimal date stamp for when the dump copy was written.
1776 (6F0)	8	*	Reserved.
1784 (6F8)	20	MCPEBUI	MCPEBUI is an array of four entries. The first and second describe the latest VTOC and VCAT data sets, respectively. The third and fourth describe the next-to-latest VTOC and VCAT data sets.
0 (0)	4	MCPRECCT	MCPRECCT contains the count of records written to the associated data set.
4 (4)	4	MCPBLKCT	MCPBLKCT contains the number of 2K blocks used by the VTOC copy data set.
8 (8)	12	*	Reserved.
1864 (748)	32	MCPLDCDT	MCPLDCDT is an array of five entries. An entry exists for each of the last five unique dump classes that this volume was dumped to. The entry contains dump class name, the time and date of the last dump of this volume to the dump class, and the expiration date of that dump.
0 (0)	8	MCPLDCLS	MCPLDCLS contains the dump class.
8 (8)	4	MCPLDTMS	MCPLDTMS contains the packed decimal time stamp for the last dump to this class.
12 (C)	4	MCPLDDTS	MCPLDDTS contains the packed decimal date stamp for the last dump to this class.
16 (10)	4	MCPLDEXP	MCPLDEXP contains the expiration date of the last dump to this class.
20 (14)	12	*	Reserved.
2024 (7E8)	16	*	Reserved.

MCP Data Area Cross-Reference

Field	Offset	Begin at Offset
MCH	44 (2C)	
MCK	0 (0)	
MCPBLKCT	4 (4)	1784 (6F8)
MCPBUI	188 (BC)	
MCPDEVCH	112 (70)	
MCPDGNCT	348 (15C)	
MCPDGNNM	376 (178)	
MCPDSVSN	0 (0)	376 (178)
MCPDTSDD	10 (A)	376 (178)
MCPDTSDT	6 (6)	376 (178)
MCPEBUI	1784 (6F8)	
MCPECDWN	24 (18)	188 (BC)
MCPEFLGS	24 (18)	188 (BC)
MCPEOML1	24 (18)	188 (BC)
MCPETAPE	24 (18)	188 (BC)
MCPETSD	24 (18)	188 (BC)
MCPETSP	24 (18)	188 (BC)
MCPETTOC	24 (18)	188 (BC)
MCPEIFT	24 (18)	188 (BC)
MCPFBACK	72 (48)	
MCPFBID	20 (14)	188 (BC)
MCPFCVOL	73 (49)	
MCPFEXTN	73 (49)	
MCPFICFC	73 (49)	
MCPFLGS	72 (48)	
MCPFNOAR	72 (48)	
MCPFOWND	73 (49)	
MCPFPRV	72 (48)	
MCPFPUB	72 (48)	
MCPFREL3	72 (48)	
MCPFSMS	73 (49)	
MCPFTRK	88 (58)	
MCPFVCAT	73 (49)	
MCPFVSAM	73 (49)	
MCPHLQ	1 (1)	92 (5C)
MCPHLQL	0 (0)	92 (5C)
MCPHLQS	92 (5C)	
MCPLDCDT	1864 (748)	
MCPLDCLS	0 (0)	1864 (748)
MCPLDDTS	12 (C)	1864 (748)
MCPLDEXP	16 (10)	1864 (748)
MCPLDTMS	8 (8)	1864 (748)
MCPNXTV	14 (E)	188 (BC)
MCPRECCT	0 (0)	1784 (6F8)
MCPTERN	26 (1A)	188 (BC)
MCPTPBLK	2 (2)	166 (A6)
MCPTSLB	76 (4C)	
MCPTSLBD	80 (50)	
MCPTSLBT	76 (4C)	
MCPTTRK	84 (54)	
MCPUCBTY	110 (6E)	
MCPUNIT	64 (40)	
MCPVCDSN	116 (74)	
MCPVCVSN	160 (A0)	
MCPVOLSQ	0 (0)	166 (A6)
MCPVTOCD	10 (A)	188 (BC)
MCPVTOCS	6 (6)	188 (BC)
MCPVTOCT	6 (6)	188 (BC)
MCPVTOCV	0 (0)	188 (BC)

MCR — Management Control Record

The management control record contains DFHSM control information that must be maintained between DFHSM startups. It is a migration control data set record with a copy also maintained in the DFHSM work space. This record is 198 bytes long and its type is S.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCRKEY	MCRKEY contains the management control record key, consisting of X'10', followed by MCR, followed by the 1-byte processor identification character, and padded with blanks. (See MCK for details.)
44 (2C)	20	MCRHDR	MCRHDR contains the control data set record header. (See MCK for details.)
64 (40)	2	MCRFLAGS	MCRFLAGS contains the following DFHSM control flags:
	1...	MCRFEMG	When set to 1, DFHSM is in emergency mode.
	.1..	MCRFGMR	When set to 1, daily space management (DSM) can be restarted.
	..1.	MCRFGMF	When set to 1, daily space management completed successfully for the DSM day specified by MCRGMST.
	...1	MCRFMCBU	When set to 1, migration catalog backed up successfully today.
	.... x...	*	Reserved.
	.... .1..	MCRFMCP	When set to 1, migration cleanup is running on the primary host processor.
	.... ..1.	MCRFL12P	When set to 1, migration from level 1 to level 2 is running on the primary host processor.
	x	*	Reserved.
	1...	MCRFRNDM	When set to 1, recall needs a volume assigned to data set migration.
	.1..	MCRFRNVM	When set to 1, recall needs a volume assigned to volume migration.
	..1.	MCRFML2	When set to 1, migration to DASD level 2 volumes is in process.
	...1	MCRFMCF	When set to 1, migration cleanup has run today on the primary host processor.
	.... 1...	MCRFL12F	When set to 1, level migration has run today on the primary host processor.
	.... .1..	MCRFGMPV	When set to 1, daily space management of primary volumes has started and has not yet completed.
	xx	*	Reserved.
66 (42)	2	*	Reserved.
68 (44)	4	MCRMDATE	Completion date of last daily space management.
72 (48)	4	MCRCDATE	MCRCDATE contains the date that migration cleanup last ran.
76 (4C)	4	MCRTDATE	Date of install of 2.3.1 and initialization of TTOC flags.
80 (50)	6	MCRGMVOL	MCRGMVOL contains the serial number of the current volume being processed by daily space management.
86 (56)	2	MCRCLEN	MCRCLEN contains the number of days in the migration cleanup cycle.
88 (58)	4	MCRCYCLE	MCRCYCLE contains the migration cleanup cycle. Each bit (left to right) represents a day in the cycle. If a bit is set to 1, migration cleanup is requested for that day.
92 (5C)	4	MCRMCDAT	MCRMCDAT contains the date the migration cleanup cycle was defined. It is used to determine which day in the cycle the present day is. The date is obtained from the TIME macro in the format X'00*yyddds*'.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
96 (60)	6	MCRDMVL	MCRDMVL contains the currently-selected tape volume serial number for data set migrations.
102 (66)	6	MCRVMVL	MCRVMVL contains the currently-selected tape volume serial number for volume or level migrations.
108 (6C)	6	MCRYVOL	MCRYMVL contains the currently-selected tape volume serial number for the recycle target volume.
114 (72)	2	*	Reserved.
116 (74)	8	MCRRKEY	MCRRKEY contains the high qualifier of the key for the control data set record last saved during migration cleanup or level migration.
124 (7C)	4	MCRNSPKT	MCRNSPKT contains the time when DFHSM will do the next space check for interval migration.
128 (80)	4	MCRNSPKD	MCRNSPKD contains the date when DFHSM will do the next space check for interval migration.
132 (84)	4	MCRGMST	MCRGMST contains the planned start time for daily space management. This time reflects when daily space management last started from the beginning.
136 (88)	4	MCRGMSD	MCRGMSD contains the date that corresponds to the planned start time for daily space management.
140 (8C)	4	MCRLGMST	MCRLGMST contains the actual daily space management start or restart time.
144 (90)	4	MCRLGMSD	MCRLGMSD contains the date that corresponds to the actual daily space management start or restart time.
148 (94)	4	MCRLGMET	MCRLGMET contains the time when daily space management successfully ended.
152 (98)	4	MCRLGMED	MCRLGMED contains the date when daily space management successfully ended.
156 (9C)	9	MCRAUDKY	MCRAUDKY contains the character type and the first 8 bytes of the key of the record to be used to RESUME the AUDIT request.
156 (9C)	1	MCRAUDTP	MCRAUDTP contains the character type of the record.
157 (9D)	8	MCRAUDKS	MCRAUDKS contains the first 8 bytes of the record key.
165 (A5)	33	*	Reserved.

MCR Data Area Cross-Reference

Field	Offset
MCRAUDKS	165 (A5)
MCRAUDKY	156 (9C)
MCRAUDTP	157 (9D)
MCRCDATE	72 (48)
MCRCLEN	86 (56)
MCRCYCLE	88 (58)
MCRDMVL	96 (60)
MCRFEMG	64 (40)
MCRFGMF	64 (40)
MCRFGMPV	65 (41)
MCRFGMR	64 (40)
MCRFLAGS	64 (40)
MCRFL12F	65 (41)
MCRFL12P	64 (40)
MCRFMCBU	64 (40)
MCRFMCF	65 (41)
MCRFMCP	64 (40)
MCRFML2	65 (41)
MCRFRNDM	65 (41)
MCRFRNVM	65 (41)
MCRGMSD	136 (88)
MCRGMST	132 (84)
MCRGMVOL	80 (50)
MCRHDR	44 (2C)
MCRKEY	0 (0)
MCRLGMED	152 (98)
MCRLGMET	148 (94)
MCRLGMSD	144 (90)
MCRLGMST	140 (8C)
MCRMCDAT	92 (5C)
MCRMDATE	68 (44)
MCRNSPKD	128 (80)
MCRNSPKT	124 (7C)
MCRRKEY	116 (74)
MCRTDATE	76 (4C)
MCRVMVL	102 (66)
MCRYVOL	108 (6C)

MCT — Backup Control Data Set Backup Volume Record

The backup control data set backup volume record describes a volume used for containing backup versions. This record is 192 bytes long and its type is X.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the backup control data set backup volume record key, consisting of X'2C', followed by the 6-byte volume serial number, and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the backup control data set backup volume record header. (See MCK for details.)
64 (40)	8	MCTUNIT	MCTUNIT contains the unit name.
72 (48)	10	*	Reserved.
82 (52)	2	MCTFLGS	MCTFLGS is a 2-byte field that contains the following flags:
	xxx	*	Reserved.
	1...	MCTFASN	When set to 1, the volume has been assigned to a day in the backup cycle or assigned to the spill BVR.
	.1..	MCTFULL	When set to 1, the volume is full.
	..1.	MCTFDAY	When set to 1, the volume is a daily backup volume. When set to 0, the volume is a spill backup volume. MCTFDAY only applies if MCTFTASN is set to 1.
	...1	MCTFTASN	When set to 1, the type is assigned. The volume is available only as the backup type set by MCTFDAY.
	.... 1...	MCTFMTTC	When set to 1, the DELVOL UNASSIGN command has been processed for a tape volume.
83 (53)	.... x.xx	*	Reserved.
	1...	MCTFWRIT	When set to 1, DFHSM has written on this volume.
	.1..	MCTFTSPW	When set to 1, this tape volume contains password-protected backup versions.
	..1.	MCTFTSED	When set to 1, this tape volume contains expiration-date-protected backup versions.
	...1	MCTFTSRF	When set to 1, this tape volume is RACF-protected.
	.... .1..	MCTF1FT	When set to 1, this is a 3480 tape volume written in single-file format.
84 (54)	16	*	Reserved.
100 (64)	4	MCTTSFBT	MCTTSFBT contains the time at the first backup to this backup volume. The time is obtained from the TIME macro in format X'*hhmmssth*'.
104 (68)	4	MCTTSFBD	MCTTSFBD contains the date of the first backup to this backup volume. The date is obtained from the TIME macro in format X'00*yyddds*'.
108 (6C)	4	MCTTSLBT	MCTTSLBT contains the time of the last backup to this backup volume. The time is obtained from the TIME macro in format X'*hhmmssth*'.
112 (70)	4	MCTTSLBD	MCTTSLBD contains the date of the last backup to this backup volume. The date is obtained from the TIME macro in format X'00*yyddds*'.
116 (74)	10	*	Reserved.
126 (7E)	2	MCTVOLSQ	MCTVOLSQ contains the volume sequence of a 3480 tape, written in single-file format, in the volume set.
128 (80)	4	MCTTTRK	MCTTTRK contains the total number of tracks on the volume.
132 (84)	4	MCTFTRK	MCTFTRK contains the number of free tracks on the volume.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
136 (88)	4	MCTUCBTY	MCTUCBTY contains the device type as indicated in the UCB.
	xxxx xxx.	*	Reserved.
	1	MCTC3480	When set to 1, DFHSM is in 3480 compatibility mode.
137 (89)	xxxx .xxx		Reserved.
	.... 1...	MCTRVDEV	When set to 1, the device is a virtual unit.
138 (8A)	1	MCTDEVT	MCTDEVT contains the following flags:
	.x.x xxxx	*	Reserved.
	1...	MCTTPDEV	When set to 1, this backup volume is a tape volume.
	..1.	MCTDADEV	When set to 1, this device is DASD.
139 (8B)	1	*	Reserved.
140 (8C)	20	*	Reserved.
160 (A0)	2	MCTLWM	MCTLWM contains the threshold of occupancy.
162 (A2)	2	*	Reserved.
164 (A4)	2	MCTFRAG	MCTFRAG contains the current fragmentation index of volume entropy.
166 (A6)	1	MCTDEN	MCTDEN contains the tape density of the MCT volume.
167 (A7)	1	MCTDAY	MCTDAY contains the day in the backup cycle if this is a daily backup volume assigned to a day in the cycle.
168 (A8)	4	MCTLFBID	For multiple tape, MCTLFBID contains the file sequence number of the last file written to this tape. For single file tape, MCTLFBID contains the file block id of the last block written to the tape. Note that for single-file tape, this field is written only when the file is closed.
172 (AC)	4	MCTTSLST	MCTTSLST contains the time the volume last spilled. The time is obtained from the TIME macro in format X'*hhmmssth*'.
176 (B0)	4	MCTTSLSD	MCTTSLSD contains the date the volume last spilled. The date is obtained from the TIME macro in format X'00*yyddds*'.
180 (B4)	4	MCTTSLCT	MCTTSLCT contains the time the volume was last cleaned up. The time is obtained from the TIME macro in format X'*hhmmssth*'.
184 (B8)	4	MCTTSLCD	MCTTSLCD contains the date the volume was last cleaned up. The date is obtained from the TIME macro in format X'00*yyddds*'.
188 (BC)	4	*	Reserved.

MCT Data Area Cross-Reference

Field	Offset
MCH	44 (2C)
MCK	0 (0)
MCTC3480	136 (88)
MCTDADEV	138 (8A)
MCTDAY	167 (A7)
MCTDEN	166 (A6)
MCTDEVT	138 (8A)
MCTFASN	82 (52)
MCTFDAY	82 (52)
MCTFLGS	82 (52)
MCTFMTTC	82 (52)
MCTFRAG	164 (A4)
MCTFTASN	82 (52)
MCTFTRK	132 (84)
MCTFTSED	83 (53)
MCTFTSPW	83 (53)
MCTFTSRF	83 (53)
MCTFULL	82 (52)
MCTFWRIT	83 (53)
MCTF1FT	83 (53)
MCTLFBID	168 (A8)
MCTLWM	160 (A0)
MCTMODEL	136 (88)
MCTRVDEV	137 (89)
MCTTPDEV	138 (8A)
MCTTSFBD	104 (68)
MCTTSFBT	100 (64)
MCTTSLBD	112 (70)
MCTTSLBT	108 (6C)
MCTTSLCD	184 (B8)
MCTTSLCT	180 (B4)
MCTTSLSD	176 (B0)
MCTTSLST	172 (AC)
MCTTTRK	128 (80)
MCTUCBTY	136 (88)
MCTUNIT	64 (40)
MCTVOLSQ	126 (7E)

MCU — Migration Control Data Set User Record

The migration control data set user record describes user attributes related to DFHSM processing. This record is 136 bytes long and its type is U.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the migration control data set user record key, consisting of X'01' followed by the 7-byte user identification, and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	6	MCUPMVSN	MCUPMVSN contains the volume serial number of the preferred migration volume to use.
70 (46)	2	MCUFLGS	MCUFLGS is a 2-byte field that contains the following flags:
	..xx xxxx	*	Reserved.
	1...	MCUFDBA	When set to 1, the user has space management authority.
	.1..	MCUCNTL	When set to 1, the user has authority to issue the AUTH command.
72 (48)	2	MCUNMDS	MCUNMDS contains the number of migrated data sets.
74 (4A)	2	MCUNMIG	MCUNMIG contains the number of migrations performed for this user.
76 (4C)	2	MCUNRES	MCUNRES contains the number of recall operations performed for this user.
78 (4E)	2	MCUMNBC	MCUMNBC contains the maximum number of backup copies per data set to maintain for this user.
80 (50)	4	MCUMTRKS	MCUMTRKS contains the number of tracks used by the migrated data set.
84 (54)	4	MCUMCTRK	MCUMCTRK contains the total number of tracks used.
88 (58)	4	MCUBYTES	MCUBYTES contains the number of bytes transferred for this user.
92 (5C)	2	MCUBFREQ	MCUBFREQ contains the specified backup frequency (in days).
94 (5E)	2	*	Reserved.
96 (60)	40	*	Reserved.

MCU Data Area Cross-Reference

Field	Offset
MCH	44 (2C)
MCK	0 (0)
MCUBFREQ	92 (5C)
MCUBYTES	88 (58)
MCUCNTL	70 (46)
MCUFDBA	70 (46)
MCUFLGS	70 (46)
MCUMCTRK	84 (54)
MCUMNBC	78 (4E)
MCUMTRKS	80 (50)
MCUNMDS	72 (48)
MCUNMIG	74 (4A)
MCUNRES	76 (4C)
MCUPMVSN	64 (40)

MCV — Migration Control Data Set Volume Record

The migration control data set volume record describes a primary or migration volume under DFHSM control. This record is 272 bytes long and its type is V.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	MCK contains the migration control data set key, consisting of X'04' followed by the 6-byte volume serial number, and padded with blanks. (See MCK for details.)
44 (2C)	20	MCH	MCH contains the control data set record header. (See MCK for details.)
64 (40)	8	MCVUNIT	MCVUNIT contains the unit name.
72 (48)	2	MCVFLGS	MCVFLGS is a 2-byte field that contains the following flags:
	1...	MCVFPUB	When set to 1, the volume is a primary volume. When set to 0, the volume is a migration volume.
	.1..	MCVFLEV2	When set to 1, the volume is a migration level 2 volume.
	..1.	MCVFAVL	When set to 1, a level 2 volume is available.
	...1	MCVFNOAM	When set to 1, the volume is not eligible for automatic migration.
	.... 1...	MCVFSDP	When set to 1, a VSAM small-data-set-packing data set is defined on the volume.
	.... .1..	MCVFPRV	When set to 1, no automatic recall is allowed to this volume unless the data set is a pooled data set and this volume is in its pool.
	.... .1..	MCVFNOAR	Alias for MCVFPRV.
	.... ..1.	MCVFBACK	When set to 1, automatic backup is allowed. When set to 0, no backup is allowed.
	1	MCVFFULL	When set to 1, the volume is full.
73 (49)	1...	MCVFNOCM	When set to 1, the volume is not eligible for command migration.
	.1..	MCVFWRIT	When set to 1, DFHSM has written on this tape volume.
	..1.	MCVFEMTY	When set to 1, the tape volume is empty.
	...1	MCVFUSED	When set to 1, the tape volume is being used.
	.... 1...	MCVFUNAV	When set to 1, the tape volume is unavailable.
	.... .1..	MCVFSELD	When set to 1, the tape volume is currently selected.
	.... ..1.	MCVFNDLV	When set to 1, a VSAM data set has migrated to this tape volume but the TTOC does not reflect the migration copy.
	1	MCVFVLTH	When set to 1, valid thresholds exist. When set to 0, data sets will migrate by age.
74 (4A)	2	MCVHWM	MCVHWM contains the high threshold of occupancy.
76 (4C)	4	MCVTSLMT	MCVTSLMT contains the time of last migration from this volume if primary, or to this volume if level 2 volume. This field is not valid for level 1 volumes. The time is obtained from the TIME macro in format X'*hhmmssth*'.
80 (50)	4	MCVTSLMD	MCVTSLMD contains the date of the last migration from this volume if this is a primary volume, or to this volume if this is a migration level 2 volume. This field is not valid for level 1 volumes. The date is obtained from the TIME macro in format X'00*yyddds*'.
84 (54)	4	MCVTTRK	MCVTTRK contains the total number of tracks on the volume.
88 (58)	4	MCVFTRK	MCVFTRK contains the number of free tracks on the volume.
92 (5C)	4	MCVUCBTY	MCVUCBTY contains the device type.
	1	*	This field contains UCB type flags.
93 (5D)	1	*	This field contains device option flags as follows:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	xxxx .xxx	*	Reserved.
	.... 1...	MCVRVDEV	When set to 1, the device is a virtual unit.
94 (5E)	1	MCVDEVT	MCVDEVT contains the device type byte of UCBTYPE as follows:
	.x.x xxxx	*	Reserved.
	1...	MCVTPDEV	When set to 1, the device is tape.
	..1.	MCVDSDEV	When set to 1, the device is DASD.
95 (5F)	1	MCVDEVT2	MCVDEVT2 contains the device type byte for the 3480 tape as follows:
	.xxx xxxx	*	Reserved.
	1...	MCVF3480	When set to 1, the device is a 3480 tape volume.
96 (60)	4	MCVBLK	MCVBLK contains the maximum block size for the device.
100 (64)	2	MCVNCYL	MCVNCYL contains the number of cylinders.
102 (66)	2	MCVNTRK	MCVNTRK contains the number of tracks per cylinder.
104 (68)	4	MCVTRKL	MCVTRKL contains the track length of the device.
108 (6C)	2	MCV2KPT	MCV2KPT contains the number of 2K blocks on a track.
110 (6E)	6	*	Reserved.
116 (74)	2	MCVLWM	MCVLWM contains the low threshold of occupancy for a primary volume.
118 (76)	4	*	Reserved.
122 (7A)	2	MCVMINAG	MCVMINAG contains the minimum data set age selected for data sets processed during the most recent volume space management if primary volumes are involved. If a command for a data set subsequently caused a data set to migrate from this volume, the value is 0.
124 (7C)	2	MCVNMDS	MCVNMDS contains the number of data sets processed during the most recent volume space management.
126 (7E)	2	MCVNTRKM	MCVNTRKM contains the number of tracks freed during the most recent volume space management.
128 (80)	2	MCVFRAG	MCVFRAG contains the current fragmentation index of volume entropy.
130 (82)	2	MCVDBADY	MCVDBADY contains the number of days a data set on this volume must be inactive before it is eligible for data set deletion or data set retirement processing.
		MCVMIGDY	MCVMIGDY contains the minimum migration age of this volume.
132 (84)	1	MCVTYPUS	MCVTYPUS contains the following flags to indicate how the tape is currently being used:
	xx	*	Reserved.
	1...	MCVFMIGD	When set to 1, data set migration is using the tape.
	.1..	MCVFMIGV	When set to 1, volume migration is using the tape.
	..1.	MCVFRECL	When set to 1, recall is using the tape.
	...1	MCVFRCYS	When set to 1, recycle is using this tape as a source volume.
	.... 1...	MCVFRCYT	When set to 1, recycle is using this tape as a target volume.
	.... .1..	MCVFDBAU	When set to 1, data set deletion or data set retirement is using this tape.
133 (85)	1	MCVTSEC	MCVTSEC contains the following flags to indicate the type of security for the tape volume:
	...x xxxx	*	Reserved.
	1...	MCVFTSPW	When set to 1, the tape contains password-protected migration data sets.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.1..	MCVFTSED	When set to 1, the tape contains expiration-date-protected migration data sets.
	..1.	MCVFTSRF	When set to 1, the tape is RACF-protected.
134 (86)	1	MCV3480F	MCV3480F is a 1-byte field that contains the following flags:
	..xx xxxx	*	Reserved.
	1...	MCVF1FT	When set to 1, the device is a 3480 tape written in single-file format.
	.1..	MCVDRAIN	When set to 1, the DRAIN attribute has been specified on the ADDVOL command.
135 (87)	1	MCVDEN	MCVDEN contains the density of the tape.
136 (88)	4	MCVLFBID	For multiple tape, MCVLFBID contains the file sequence number of the last file written to this tape. For single-file tape, this field contains the file block id of the last block written to the tape. Note that for single-file tape, this field is written only when the file is closed.
140 (8C)	2	MCVVOLSQ	MCVVOLSQ is the volume sequence of a 3480 tape, written in single-file format, in the volume set.
142 (8E)	2	*	Reserved.
144 (90)	4	MCVLSPCD	MCVLSPCD contains the date of the last LSPACE of this volume. The date is obtained from the TIME macro in the format X'00*yyddds*'.
148 (94)	4	MCVLSPCT	MCVLSPCT contains the time of the last LSPACE of this volume. The time is obtained from the TIME macro in the format X'*hhmmssth*'.
152 (98)	20	MCVMHFLG	MCVMHFLG contains the multiple-host processor volume attributes.
152 (98)	1	MCVHID	MCVHID is used for one of two functions. When a primary (DASD) volume is being processed by a volume function in a multiple processing unit environment, it contains the DFHSM processing-unit identifier. When the record represents an ML2 migration volume, and while the tape is in use, this field contains the identifier of the using processing-unit.
153 (99)	1	MCVCFLG	MCVCFLG contains the following primary volume attributes that are common to all hosts:
	xx	*	Reserved.
	1...	MCVFDBA	When set to 1, the space management technique is DELETEBYAGE or DELETEIFBACKEDUP. When set to 0, the space management technique is MIGRATE.
	.1..	MCVFRBU	When set to 1 and MCVFDBA is also set to 1, the space management technique is DELETEIFBACKEDUP. When set to 0 and MCVFDBA is set to 1, the space management attribute is DELETEBYAGE.
	..1.	MCVFBDCS	When set to 1, the backup device category is specified.
	...1	MCVFBDCT	When set to 1 and MCVFBDCS is also set to 1, the backup device category of this volume is tape. When set to 0 and MCVFBDCS is set to 1, the backup device category of this volume is DASD.
	.... 1...	MCVFSDPI	When set to 1, the SDSP is being used for input.
	.... .1..	MCVFSDPO	When set to 1, the SDSP is being used for output.
154 (9A)	2	*	Reserved.
156(9C)	16	MCVSMGMT	Host unique volume attribute entries, maximum of 8

The following 2 bytes of information, starting at offset 156 (9C), is repeated eight times, and contains volume attributes for primary volumes and can be different for different hosts.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	1	MCVSMHST	MCVSMHST contains the DFHSM host identifier that specifies the host for which these attributes apply.
	1	MCVUFLG	MCVUFLG contains primary volume attributes that may be unique to each host:
	...x xxxx	*	Reserved.
	1...	MCVFAM	When set to 1, automatic space management is requested for this volume on this host.
	.1..	MCVFAB	When set to 1, automatic backup is requested for this volume on this host.
	..1.	MCVFAD	When set to 1, perform automatic dump on this host.
172 (AC)	8	MCVSDPHI	Eight element array containing host IDs using the SDSP. Each element of the array is one byte long.
180 (B4)	2	*	Reserved.
182 (B6)	1	*	More flags.
	1...	MCVFMDY	When set to 1, the minimum migration age was specified on the ADDVOL command.
	.xxx xxxx	*	Reserved.
183 (B7)	3	*	Reserved
186 (BA)	2	MCVDCLCT	MCVDCLCT contains the number of dump classes specified on the ADDVOL command.
188 (BC)	40	MCVDCLAS	MCVDCLAS contains the 5-element array of 8-byte fields containing dump class IDs of the dump classes specified on the ADDVOL of the primary volume.
228 (E4)	8	MCVMLTMS	MCVMLTMS contains the time stamp for when automatic migration was last performed for the volume (STCK format).
236 (EC)	8	MCVBLTMS	MCVBLTMS contains the time stamp for when automatic backup was last performed for the volume (STCK format).
244 (F4)	8	MCVDLTMS	MCVDLTMS contains the time stamp for when automatic dump was last performed for the volume (STCK format).
252 (FC)	8	MCVIMTMS	MCVIMTMS contains the time stamp for when interval migration was last performed for the volume (STCK format).
260 (104)	1	MCVSMSFG	MCVSMSFG contains the following flags:
	 xxxx	*	Reserved.
	1...	MCVFSMS	When set to 1, the volume is an SMS-managed volume.
	.1..	MCVFAMIP	When set to 1, automatic migration is in process.
	..1.	MCVFABIP	When set to 1, automatic backup is in process.
	...1	MCVFADIP	When set to 1, automatic dump is in process.
261	11	*	Reserved.

MCV Data Area Cross-Reference

Field	Offset	Field	Offset
MCH	44 (2C)	MCVDEVT	94 (5E)
MCK	0 (0)	MCVDEV2	95 (5F)
MCVBLK	96 (60)	MCVDLTMS	228 (E4)
MCVBLTMS	236 (EC)	MCVDRAIN	134 (86)
MCVCFLG	153 (99)	MCVDSDEV	94 (5E)
MCVDBADY	130 (82)	MCVFAB	156 (9C)
MCVDCLAS	188 (BC)	MCVFABIP	260 (104)
MCVDCLCT	186 (BA)	MCVFAD	156 (9C)
MCVDEN	135 (87)	MCVFADIP	260 (104)

Field	Offset
MCVFAM	156 (9C)
MCVFAMIP	260 (104)
MCVFAVL	72 (48)
MCVFBACK	72 (48)
MCVFBDCS	153 (99)
MCVFBDCT	153 (99)
MCVFDBA	153 (99)
MCVFDBAU	132 (84)
MCVFEMTY	73 (49)
MCVFFULL	72 (48)
MCVFLEV2	72 (48)
MCVFLGS	72 (48)
MCVFMDY	182 (B6)
MCVFMIGD	132 (84)
MCVFMIGV	132 (84)
MCVFNDLV	73 (49)
MCVFNOAM	72 (48)
MCVFNOAR	72 (48)
MCVFNOCM	73 (49)
MCVFPRV	72 (48)
MCVFPUB	72 (48)
MCVFRAG	128 (80)
MCVFRBU	153 (99)
MCVFRCYS	132 (84)
MCVFRCYT	132 (84)
MCVFRECL	132 (84)
MCVFSDP	72 (48)
MCVFSDPI	153 (99)
MCVFSDPO	153 (99)
MCVFSELD	73 (49)
MCVFSMS	260 (104)
MCVFTRK	88 (58)
MCVFTSED	133 (85)
MCVFTSPW	133 (85)
MCVFTSRF	133 (85)
MCVFUNAV	73 (49)
MCVFUSED	73 (49)
MCVFVLTH	73 (49)
MCVFWRIT	73 (49)
MCVF1FT	134 (86)
MCVF3480	95 (5F)
MCVHID	152 (98)
MCVHWM	74 (4A)
MCVIMTMS	252 (FC)
MCVLFBID	136 (88)
MCVLSPCD	144 (90)
MCVLSPCT	148 (94)
MCVLWM	116 (72)
MCVMHFLG	152 (98)
MCVMIGDY	130 (82)
MCVMINAG	122 (7A)
MCVMLTMS	228 (E4)
MCVNCYL	100 (62)
MCVNMDS	124 (7C)
MCVNTRK	102 (66)
MCVNTRKM	126 (7E)
MCVRVDEV	93 (5D)
MCVSDPHI	172 (AC)
MCVSMGMT	156 (9C)
MCVSMHST	156 (9C)
MCVSMSFG	260 (104)
MCVTPDEV	94 (5E)
MCVTRKL	104 (68)
MCVTSEC	133 (85)
MCVTSLMD	80 (50)
MCVTSLMT	76 (4C)
MCVTTRK	84 (54)
MCVTYPUS	132 (84)
MCVUCBTY	92 (5C)

Field	Offset
MCVUFLG	156 (9C)
MCVUNIT	64 (40)
MCVVOLSQ	140 (8C)
MCV2KPT	108 (6C)
MCV3480F	134 (86)

MC1 – Migration Level 1 Free Space Record

The migration level 1 free space record is a record in the migration control data set that contains the free space for each available migration level 1 volume in a multiple-host processor environment. The record is 1012 bytes and contains fields for 78 entries. If more entries are needed than can be stored in one physical record, another physical record is created. The key of the first continuation record is L1VOL-01. This record is type 1.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	*	This field contains the migration level 1 free space record key consisting of X'02', L1VOL-00, and padded with blanks.
44 (2C)	20	*	This field contains the migration level 1 free space record header. (See MCK for detailed information.)
64 (40)	1	MC1CNT	MC1CNT contains the number of volume entries used in this physical record.
65 (41)	1	MC1FLG2	MC1FLG2 contains the following flags:
	.xxx xxxx	*	Reserved.
	1...	MC1FCONT	When set to 1, a continuation record exists.
66 (42)	6	*	Reserved.
72 (48)	4	MC1TSLU	MC1TSLU contains a time stamp of the last time this record was updated. This time is obtained from the TIME STCK macro in the 64-bit micro second clock format.

The following field is repeated 78 times, starting at offset 76:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	12	MC1VENT	MC1VENT contains information about the free space on migration level 1 volumes. The number of entries that actually contain data is given by the MC1CNT field.
0 (0)	6	MC1VSN	MC1VSN contains the volume serial number.
6 (6)	2	*	Reserved.
8 (8)	4	MC1FRESP	MC1FRESP contains the number of free tracks on the volume. Tracks that are a part of a VSAM suballocated space are not considered free.

MC1 Data Area Cross-Reference

Field	Offset	Begin at Offset
MC1CNT	64 (40)	
MC1FCONT	65 (41)	
MC1FLG2	65 (41)	
MC1FRESP	8 (8)	76 (4C)
MC1TSLU	72 (48)	
MC1VENT	0 (0)	76 (4C)
MC1VSN	0 (0)	76 (4C)

MHCR – Multiple-Host Processor Control Record

The multiple-host processor control record contains space usage data about the migration control data set, backup control data set, and offline control data set. All the processing units update this same record when DFHSM operates in a multiple-host processor environment. The multiple-host processor control record is a migration control data set record and is of variable length. This record is type S.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MHCRKEY	MHCRKEY contains the multiple-host processor control record key consisting of X'10' followed by a MHCR. and padded with blanks.
44 (2C)	20	MHCRMCH	MHCRMCH contains the standard control data set record header.
64 (40)	4	MHCRMSPC	MHCRMSPC contains the number of bytes of migration control data set free-space that have been used.
68 (44)	4	MHCRBSPC	MHCRBSPC contains the number of bytes of backup control data set free-space that have been used.
72 (48)	4	MHCROSPC	MHCROSPC contains the number of bytes of offline control data set free-space that have been used.
76 (4C)	4	MHCRBGND	MHCRBGND contains the date the MHCRNXTD field was calculated in the primary host. The date is obtained from the TIME macro in the format X'00*yyddds*'.
80 (50)	4	MHCRBGNT	MHCRBGNT contains the time the MHCRNXTD field was calculated in the primary host. The time of day is in hundredths of seconds.
84 (54)	4	MHCRENDD	MHCRENDD contains the date the free space calculation last ended on the primary host. The date is obtained from the TIME macro in the format X'00*yyddds*'.
88 (58)	4	MHCRENDT	MHCRENDT contains the time the free space calculation last ended on the primary host. The time of day is in hundredths of seconds.
92 (5C)	4	MHCRNXTD	MHCRNXTD contains the date the next freespace calculation should be done on the primary host. The date is obtained from the TIME macro in the format X'00*yyddds*'.
96 (60)	4	MHCRNXTT	MHCRNXTT contains the time the next free space calculations should be done on the primary host. The time of day is in hundredths of seconds.
100 (64)	Variable	MHCRCDSV	MHCRCDSV contains the CDSVERSIONBACKUP parameters table.

MHCR Data Area Cross-Reference

Field	Offset
MHCRBGND	76 (4C)
MHCRBGNT	80 (50)
MHCRBSPC	68 (44)
MHCRCDSV	100 (64)
MHCRENDD	84 (54)
MHCRENDT	88 (58)
MHCRKEY	0 (0)
MHCRMCH	44 (2C)
MHCRMSPC	64 (40)
MHCRNXTD	92 (5C)
MHCRNXTT	96 (60)
MHCROSPC	72 (48)

TTOC – Tape Table of Contents Record

The tape table of contents record is an offline control data set record that describes a tape volume and the data sets residing on that tape. The logical record can consist of multiple physical records; the first is called the base record and the others are called extension records. Each physical record is 156 bytes long plus 56 bytes for each data set on the volume that is described in this record. This record is type T.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	TTCKEY	Contains the tape table of contents record key consisting of X'32' followed by the characters SP (spill), UN (unassigned), L2 (migration level 2), or two digits (the number of the day in the backup cycle), followed by a '-', followed by the volume serial number of a tape, followed by a '-' and a 4-byte sequence number in character form (0000, ...).
44 (2C)	20	TTCHDR	TTCHDR contains the offline control data set record header. (See MCK for details.)
64 (40)	1	TTCHSTID	TTCHSTID contains the identifier of the processor currently using this tape table of contents if DFHSM is running in a multiple-host processor environment.
65 (41)	2	TTCFFLGS	TTCFFLGS is a 2-byte field that contains the following flags:
	1...	TTCFFULL	When set to 1, the volume is full.
	.1..	TTCFRACF	When set to 1, the volume contains RACF-protected data sets.
	..1.	TTCFURAC	When set to 1, the tape was already RACF-protected when DFHSM attempted to protect it.
	...1	TTCFUPWD	When set to 1, the volume contains a version that came from a password-protected user data set.
	.... 1...	TTCFYMSG	When set to 1, a message has been sent stating that the volume is eligible for recycle.
	.... .1..	TTCFFAIL	When set to 1, the volume failed recycle because of a problem with the volume.
	.... ..1.	TTCFYNO1	When set to 1, the first data set on a volume spans more than four volumes.
	1	TTCFYNO2	When set to 1, the last data set on the volume spans more than four volumes.
66 (42)	..xx xxxx	*	Reserved.
	1...	TTCFTSRF	When set to 1, the RACF or RACFINCLUDE security option is in effect.
	.1..	TTCCDDVL	When set to 1, the CDDID field on this tape contains a valid CDD eye-catcher.
67 (43)	1	*	Reserved.
68 (44)	8	TTCUNIT	TTCUNIT contains the unit name of the volume.
76 (4C)	2	TTCNUM	TTCNUM contains the number of base and extension records required to completely describe the volume. This field is valid only in the base record.
78 (4E)	2	TTCDSNUM	TTCDSNUM contains the number of data sets described by this physical record.
80 (50)	4	TTCTBLK	TTCTBLK contains the total number of blocks written on the tape. This field is valid only in the base record.
84 (54)	4	TTCVBLK	TTCVBLK contains the number of valid blocks of data on this volume. This field is valid only in the base record.
88 (58)	6	TTCPREVL	TTCPREVL contains the volume serial number of the preceding volume containing data belonging to the first data set on the tape.
94 (5E)	6	TTCSUCVL	TTCSUCVL contains the volume serial number of the following volume containing data belonging to the last data set on the tape.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
100 (64)	4	TTCLFBID	TTCLFBID contains the file sequence number of the last data set successfully written on the tape.
104 (68)	4	TTCFFBID	TTCFFBID contains the file sequence number of the first data set successfully written on the tape.
108 (6C)	6	TTCIMAGT	TTCIMAGT contains the volume serial number of the alternate volume.
114 (72)	42	*	Reserved.

The following information is repeated for each data set on the tape volume.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	TTCDSN	TTCDSN contains the data set name of a backup version or migration copy residing on the volume.
44 (2C)	4	TTCNBLKS	TTCNBLKS contains the number of 16K blocks that the data set occupies on this volume.
48 (30)	3	TTCDLR	TTCDLR contains the date the data set was last referenced.
	1	TTCYR	TTCYR contains the year of the last-referenced date.
	2	TTCDAY	TTCDAY contains the day of the last-referenced date.
51 (33)	1	*	Reserved.
52 (34)	1	TTCEFLGS	TTCEFLGS contains the following flags:
	...x xxxx	*	Reserved.
	1...	TTCEVSAM	TTCEVSAM contains a 1 if the data set is VSAM.
	.1..	TTCEVALD	TTCEVALD contains a 1 if the data set is valid.
	..1.	TTCERACF	TTCERACF contains a 1 if the data set is RACF-protected.
53 (35)	3	TTCEXPDT	TTCEXPDT contains the data set expiration date.
	1	TTCEYR	TTCEYR contains the year of the expiration date.
	2	TTCEDAY	TTCEDAY contains the day of the expiration date.

TTOC Data Area Cross-Reference

Field	Offset
TTCCDDVL	66 (42)
TTCDAY	49 (31)
TTCDLR	48 (30)
TTCDSN	0 (0)
TTCDSNUM	78 (4E)
TTCEDAY	53 (35)
TTCEFLGS	52 (34)
TTCERACF	52 (34)
TTCEVALD	52 (34)
TTCEVSAM	52 (34)
TTCEXPDT	53 (35)
TTCEYR	53 (35)
TTCFFAIL	65 (41)
TTCFFBID	104 (68)
TTCFFLGS	65 (41)
TTCFFULL	65 (41)
TTCFRACF	65 (41)
TTCFTSRF	66 (42)
TTCFUPWD	65 (41)
TTCFURAC	65 (41)
TTCFYMSG	65 (41)
TTCFYNO1	65 (41)
TTCFYNO2	65 (41)
TTCHDR	44 (2C)
TTCHSTID	64 (40)
TTCIMAGT	108 (6C)
TTCKEY	0 (0)
TTCLFBID	100 (64)
TTCNBLKS	44 (2C)
TTCNUM	76 (4C)
TTCPREVL	88 (58)
TTCSUCVL	94 (5E)
TTCTBLK	80 (50)
TTCUNIT	68 (44)
TTCVBLK	84 (54)
TTCYR	48 (30)

VAC – JES3 Volume Activity Count Record

The JES3 volume activity count record exists in a JES3 system and contains counts of the number of times a volume has been returned from DFHSM to JES3 setup as a candidate for recall of a migrated data set that has not been recalled. This record is contained in the MCDS. When more volume entries are requested than can fit in one physical record, another physical record is created. The key of the first continuation record is VOLCNT-1. This record is type N.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	MCK	Contains the JES3 volume activity count record key, consisting of X'07', VOLCNT-0, and padded with blanks.
44 (2C)	20	MCH	Contains the JES3 volume activity count record header. (See MCK for details.)
64 (40)	4	VACDATE	VACDATE contains the date last adjusted for jobs not run.
68 (44)	2	VACNV	VACNV contains the number of volume entries in the record.
70 (46)	1	VACFLGS	VACFLGS contains the following flags:
	.xxx xxxx	*	Reserved.
	1...	VACCONT	When set to 1, a continuation record exists.
71 (47)	5	*	Reserved.

The following field is repeated for each volume, starting at offset 76 (4C):

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	VACVOLS	VACVOLS contains information about the volumes to which a data set can be migrated. The maximum number of entries is 117.
	6	VACVSN	VACVSN contains the volume serial number.
	2	VACCOUNT	VACCOUNT contains the number of JES3 setups in progress for the volume.

VAC Data Area Cross-Reference

Field	Offset	Begin at Offset
MCH	44 (2C)	
MCK	0 (0)	
VACCONT	70 (46)	
VACCOUNT	0 (0)	76 (4C)
VACDATE	64 (40)	
VACFLGS	70 (46)	
VACNV	68 (44)	
VACVOLS	0 (0)	76 (4C)
VACVSN	0 (0)	76 (4C)

VSR — Volume Statistics Record

The volume statistics record contains volume statistics for a volume under DFHSM control. The volume statistics records are migration control data set records. A chain of the volume statistics records is also maintained in the DFHSM work space for the current day, containing statistics accumulated since the last update of the migration control data set copy. Each record is 1016 bytes long although only 848 bytes contain data. This record is type S.

When the volume statistics record is written to SMF, 20 bytes of additional information is added to the front of the record. The first 18 bytes are the standard SMF record header. Byte 18 (12) is set to a binary 2 to show that this is a volume statistics record, and byte 19 (13) is reserved. All the offsets for the volume statistics record are increased by 20 (14) bytes when the record is written to SMF.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	VSRKEY	VSRKEY contains the volume statistics record key, consisting of X'10' followed by a VSR, the 6-byte volume serial number of the volume, a 3-byte date in format X'*yyddds*', and padded with blanks.
44 (2C)	20	VSRHDR	VSRHDR contains the control data set record header. (See MCK for details.)
64 (40)	80	VSRDATA	VSRDATA contains the general volume statistics data.
64 (40)	1	VSRVTYP	VSRVTYP contains the volume type. P = primary M = migration B = daily backup S = spill backup O = offline (migration level 2)
65 (41)	1	VSRDEVT	VSRDEVT contains the unit type as in the UCBTYP field.
66 (42)	1	VSRNMIG	VSRNMIG contains the number of user-initiated migrations to or from this volume.
67 (43)	1	VSRNMIGF	VSRNMIGF contains the number of migrations to or from this volume that were forced by the system because of insufficient space.
68 (44)	2	VSRTDS	VSRTDS contains the total number of non-VSAM data sets processed for this volume.
70 (46)	2	VSRMINAG	VSRMINAG contains the minimum age of data sets that migrated from the volume.
72 (48)	4	VSRATRK	VSRATRK contains the total number of allocated tracks on the volume as of the last free space check prior to the creation of this VSR.
76 (4C)	4	VSRFTRK	VSRFTRK contains the total number of free tracks available for allocation for new data sets other than suballocated VSAM data sets. This value is accurate as of the last free space check prior to the creation of this VSR.
80 (50)	8	*	Reserved.
88 (58)	4	VSRFRAG	VSRFRAG contains the volume fragmentation entropy index.
92 (5C)	4	VSRTMIG	VSRTMIG contains the time in seconds spent doing system migrations for this volume.
96 (60)	4	VSRTBAK	VSRTBAK contains the time in seconds spent doing volume backups.
100 (64)	4	VSRTALC	VSRTALC contains the time in seconds doing volume allocations.
104 (68)	8	VSRUNIT	VSRUNIT contains the unit name.
112 (70)	1	VSRFLAGS	This field contains the following flags:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	xxx	*	Reserved.
	1...	VSRFCHNG	When set to 1, the VSR has been changed since it was last written to DASD.
	.1..	VSRFVDMP	When set to 1, a dump has been attempted on this volume.
	..1.	VSRFDMPF	When set to 1, the most recent dump attempted on this volume failed.
	...1	VSRFVRES	When set to 1, a restore has been attempted on this volume.
	.... 1...	VSRFRESF	When set to 1, the most recent restore attempted on this volume failed.
113 (71)	3	*	Reserved.
116 (74)	2	VSRDCOPR	VSRDCOPR contains the total number of dump copies requested for this volume.
118 (76)	2	VSRDCOPF	VSRDCOPF contains the total number of dump copies that failed for this volume.
120 (78)	2	VSRDSRES	VSRDSRES contains the total number of data set restores requested for this volume.
122 (7A)	2	VSRDSREF	VSRDSREF contains the total number of data set restores that failed for this volume.
124 (7C)	20	*	Reserved.

The following information, starting at offset 144 (90) through the end of the volume statistics record description, is repeated once for each of the following functions that may involve data sets on this volume: primary to level 1 migration, level 1 to level 2 migration, primary to level 2 migration, recall from level 1 to primary, recall from level 2 to primary, deletion of migrated data sets, daily backup, spill backup, recovery, recycle, and data set deletion.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
144 (90)	2	VSRNDS	VSRNDS contains the number of data sets processed for the function.
146 (92)	2	VSRNDSV	VSRNDSV contains the number of VSAM data sets processed.
148 (94)	4	VSRNTRKR	VSRNTRKR contains the number of tracks read. This field has no meaning for primary volumes.
152 (98)	4	VSRNTRKW	VSRNTRKW contains the number of tracks written. This field has no meaning for primary volumes.
156 (9C)	4	VSRNBYTR	VSRNBYTR contains the number of bytes read. This field has no meaning for primary volumes.
160 (A0)	4	VSRNBYTW	VSRNBYTW contains the number of bytes written. This field has no meaning for primary volumes.
164 (A4)	2	VSRNDSF	VSRNDSF contains the number of failing requests.
166 (A6)	2	VSRNVOL	VSRNVOL contains the number of requests initiated by commands.
168 (A8)	2	VSRNSYS	VSRNSYS contains the number of requests initiated automatically by DFHSM.
170 (AA)	2	VSRTAGE	VSRTAGE contains the total age, in days, of data sets processed.
172 (AC)	4	VSRTTINQ	VSRTTINQ contains the total time, in seconds, queued before processing started on requests.
176 (B0)	4	VSRTTINP	VSRTTINP contains the total elapsed time, in seconds, to process requests.
180 (B4)	4	VSRTTWV	VSRTTWV contains the total time, in seconds, that was required to mount this volume.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
184 (B8)	4	VSRTCPU	VSRTCPU contains the total CPU time, in hundredths of seconds, spent processing data sets on this volume.
184 (BC)	20	*	Reserved.

VSR Data Area Cross-Reference

Field	Offset
VSRATRK	72 (48)
VSRDATA	64 (40)
VSRDCOPF	118 (76)
VSRDCOPR	116 (74)
VSRDEVT	65 (41)
VSRDSREF	122 (7A)
VSRDSRES	120 (78)
VSRFCHNG	112 (70)
VSRFDMPF	112 (70)
VSRFLAGS	112 (70)
VSRFRAG	88 (58)
VSRFRESF	112 (70)
VSRFTRK	76 (4C)
VSRFVDMP	112 (70)
VSRFVRES	112 (70)
VSRHDR	44 (2C)
VSRKEY	0 (0)
VSRMINAG	70 (46)
VSRNBYTR	156 (9C)
VSRNBYTW	160 (A0)
VSRNDS	144 (90)
VSRNDSF	164 (A4)
VSRNDSV	146 (92)
VSRNMIG	66 (42)
VSRNMIGF	67 (43)
VSRNSYS	168 (A8)
VSRNTRKR	148 (94)
VSRNTRKW	152 (98)
VSRNVOL	166 (A6)
VSRTAGE	170 (AA)
VSRTALC	100 (64)
VSRTBAK	96 (60)
VSRTCPU	184 (B8)
VSRTDS	68 (44)
VSRTMIG	92 (5C)
VSRTTINP	176 (B0)
VSRTTINQ	172 (AC)
VSRTTWV	180 (B4)
VSRUNIT	104 (68)
VSRVTYP	64 (40)

Control Block Data Areas

ABRCB — Aggregate Backup and Recovery Control Block

The aggregate backup and recovery control block defines data used in controlling aggregate backup and aggregate recovery processing.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	ABRCNAME	Control block name.
8 (8)	4	ABRCASCB	Pointer to DFHSM ASCB.
12 (C)	4	ABRCKNAX	New DFHSM AX value.
16 (10)	4	ABRCKOAX	Old DFHSM AX value.
20 (14)	4	ABRCMSAS	Maximum secondary address space allowed.
24 (18)	4	ABRCNSAS	Number of secondary address spaces active.
28 (1C)	4	*	Reserved. This field is repeated four times.
44 (2C)	8	ABRCKNAM	Secondary address space procedure name (SETSYS procedure name).
52 (34)	4	ABRCKNEP	Pointer to ABARS subtask ECB list.
56 (38)	4	ABRCKNEL	ABARS subtask ECB list. This field is repeated 17 times.
124 (7C)	4	*	Reserved.
128 (80)	4	ABRCFCBR	ABRCFCBR is a 4 byte field that contains the following flags:
	1...	ABRCFXMA	When set to 1, cross memory is authorized.
	.1..	ABRCFNRH	When set to 1, aggregate recovery is held.
	..1.	ABRCFKBH	When set to 1, aggregate backup is held.
	...1	ABRCFRPL	When set to 1, SETSYS replace is specified.
	.... 1...	ABRCFDSS	When set to 1, DFDSS is at a sufficient level.
	.... .1..	ABRCFFDI	When set to 1, function is disabled.
	.... ..1.	ABRCFD32	When set to 1, DFP 3.2.0 is installed.
	1	ABRCFSWP	When set to 1, DFHSM was swappable.
	1...	ABRCFSXA	When set to 1, XA is in system.
	.1..	ABRCFCTA	When set to 1, ARCACTL task abnormally ended.
	..1.	ABRCFTRM	When set to 1, ARCACTL termination in progress
	...x xxxx	*	Reserved.
130 (82)	2	*	Reserved.
132 (84)	8	ABRCTUNT	Target unit type for ARECOVER.
140 (8C)	4	*	Reserved. This field is repeated twice.

The following array contains information specific to each of the possible 15 subtasks.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
148 (94)	52	ABRCKSAS	15 element array, 1 element for each of the 15 possible subtasks.
148 (94)	4	ABRCMSCP	pointer to MASCB in ECSA.
152 (98)	4	ABRCTCBK	pointer to ARCAGEN's TCB.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
156 (9C)	4	ABRCRCBK	pointer to ARCAGEN's RCB.
160 (A0)	4	ABRCMWEP	pointer to active MWE for subtask.
164 (A4)	4	ABRCSCEC	ACTL's subtask common ECB posted.
	1...	*	Wait bit.
	.1..	ABRCSCPC	Posted bit.
168 (A8)	4	*	Reserved.
172 (AC)	4	ABRCSTEC	AGEN's communication ECB posted by ARCACTL to indicate work requested.
	1...	*	Wait bit.
	.1..	ABRCSTPC	Posted bit.
176 (B0)	4	ABRCSSID	ASID of secondary address space.

The following flags are set in the following order: If the secondary address space is requesting disconnect, ARCAGEN will turn the bit ABRCFSRD on. If ARCACTL approves the disconnect request, it will turn ABRCFDOK on. If ABRCFDOK = ON and ABRCFSRD = OFF, ARCATIME has cancelled the secondary storage space.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
180 (B4)	4	ABRCFST	Subtask flags.
	1...	ABRCFSRD	When set to 1, Disconnect is requested by ARCAGEN.
	.1..	ABRCFDOK	When set to 1, Disconnect approved by ARCACTL.
	..1.	ABRCFSTA	When set to 1, ARCAGEN subtask abnormally ended, needs detach/reattach.
	...1	ABRCFSSR	When set to 1, MGCR issued to start secondary address space (used for retry).
	.... 1...	ABRCFSSC	When set to 1, ARCATIME has issued MGCR to cancel secondary storage space.
	.... .1..	ABRCFSAB	When set to 1, secondary address space has encountered non-recoverable abnormal end.
	.... ..1.	ABRCFRCA	When set to 1, a recursive abend occurred.
184 (B8)	4	ABRCATTC	ARCATIME's TCB pointer, posted upon completion of ARCATIME.
188 (BC)	4	ABRCABCC	ARCAGEN abend code.
192 (C0)	4	ABRCABN@	ARCAGEN abend address.
196 (C4)	4	*	Reserved.
928 (3A0)	4	*	Reserved.
932 (3A4)	4	ABRCDSEC	ARCCTL's ABARS termination ECB (posted by ARCACTL upon termination).
	1...	*	Wait bit.
	.1..	ABRCDSPC	Posted bit.
936 (3A8)	4	ABRCDTEC	ARCACTL's termination ECB (posted by ARCCTL for shutdown).
	1...	*	Wait bit.
	.1..	ABRCDTPC	Posted bit.
940 (3AC)	4	ABRCDWEC	ARCACTL's work-to-do ECB.
	1...	*	Wait bit.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.1..	ABRCDWPC	Posted bit.
944 (3B0)	4	*	Reserved. This field is repeated four times.
960 (3C0)	8	ABRCAPTR	Pointer to ARVE's
960 (3C0)	4	ABRCAVQH	ARVE queue head.
964 (3C4)	4	ABRCAVQT	ARVE queue tail.
968 (3C8)	4	ABRCASCT	Start time for secondary address space, value is hex representation of seconds (i.e. x'1E' = 30 seconds).
972 (3CC)	4	*	Reserved. This field is repeated twice.
980 (3D4)	4	ABRCRCBP	Pointer to ARCACTL's RCB
984 (3D8)	4	ABRCTCBP	Pointer to ARCACTL's TCB
988 (3DC)	4	ABRCABQH	Pointer to ABACKUP queue head
992 (3E0)	4	ABRCABQT	Pointer to ABACKUP queue tail
996 (3E4)	4	ABRCARQH	Pointer to ARECOVER queue head
1000 (3E8)	4	ABRCARQT	Pointer to ARECOVER queue tail
1004 (3EC)	20	*	Reserved.

ABRCB Data Area Cross-Reference

Field	Offset
ABRCABCC	188 (BC)
ABRCABN@	192 (C0)
ABRCABQH	988 (3DC)
ABRCABQT	992 (3E0)
ABRCAPTR	960 (3C0)
ABRCARQH	996 (3E4)
ABRCARQI	1000 (3E8)
ABRCASCB	8 (8)
ABRCASTC	968 (3C8)
ABRCATTC	184 (B8)
ABRCAVQH	960 (3C0)
ABRCAVQT	964 (3C4)
ABRCB	0 (0)
ABRCDSEC	932 (3A4)
ABRCDSPC	932 (3A4)
ABRCDTEC	936 (3A8)
ABRCDTPC	936 (3A8)
ABRCDWEC	940 (3AC)
ABRCDWPC	940 (3AC)
ABRCFCBR	128 (80)
ABRCFCTA	129 (81)
ABRCFDOK	180 (B4)
ABRCFDSS	128 (80)
ABRCFD32	128 (80)
ABRCFFDI	128 (80)
ABRCFKBH	128 (80)
ABRCFNRH	128 (80)
ABRCFRCA	180 (B4)
ABRCFRLP	128 (80)
ABRCFSAB	180 (B4)
ABRCFSRD	180 (B4)
ABRCFSSC	180 (B4)
ABRCFSSR	180 (B4)
ABRCFST	180 (B4)
ABRCFSTA	180 (B4)
ABRCFSWP	128 (80)
ABRCFSXA	129 (81)
ABRCFTRM	129 (81)
ABRCFXMA	128 (80)
ABRCKNAM	44 (2C)
ABRCKNAX	12 (C)
ABRCKNEL	56 (38)
ABRCKNEP	52 (34)
ABRCKOAX	16 (10)
ABRCKSAS	148 (94)
ABRCMSAS	20 (14)
ABRCMSCP	148 (94)
ABRCMWEP	160 (A0)
ABRCNAME	0 (0)
ABRCNSAS	24 (18)
ABRCRCBK	156 (9C)
ABRCRCBP	980 (3D4)
ABRCSCEC	164 (A4)
ABRCSCPC	164 (A4)
ABRCSSID	176 (B0)
ABRCSTEC	172 (AC)
ABRCSTPC	172 (AC)
ABRCTCBK	152 (98)
ABRCTCBP	984 (3D8)
ABRCTUNT	132 (84)

ALWE — Activity Log Work Element

The Activity Log Work Element describes a function for ARCALOG to perform, and provides message text, if required.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	ALWEPTRS	ALWEPTRS contains the pointers to chain ALWEs.
	4	ALWEFWD	ALWEFWD contains the forward pointer to the next ALWE.
4 (4)	4	ALWEBWD	ALWEBWD contains the backward pointer to the previous ALWE.
8 (8)	8	ALWEID	ALWEID contains the ALWE macro identifier.
16 (10)	1	ALWEFUNC	ALWEFUNC contains the ALWE function. 1 = write a message 2 = close/deallocate allocate/open 3 = switch activity log type.
17 (11)	3	*	Reserved.
20 (14)	4	ALWEDCBP	ALWEDCBP contains the Activity Log DCB address.
24 (18)	1	ALWEAUCC	ALWEAUCC contains the carriage control character.
25 (19)	3	*	Reserved.
28 (1C)	16	*	Reserved.
44 (2C)	4	ALWEARGL	ALWEARGL contains the length of the data to be printed.
48 (30)	*	ALWEARGD	ALWEARGD contains the data to be printed.

ALWE Data Area Cross-Reference

Field	Offset
ALWEARGD	48 (30)
ALWEARGL	44 (2C)
ALWEAUCC	24 (18)
ALWEBWD	4 (4)
ALWEDCBP	20 (14)
ALWEFUNC	16 (10)
ALWEFWD	0 (0)
ALWEID	8 (8)
ALWEPTRS	0 (0)

ARVE — Aggregate Recovery Volume Entry

The aggregate recovery volume entry record describes the volumes used during aggregate recovery of non-SMS data sets for a specific aggregate group.

The following 60 bytes contain the aggregate recovery volume control block header information.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	ARVEQPTR	Queue pointers.
0 (0)	4	ARVEFWD	ARVEFWD is a pointer to the next queue entry.
4 (4)	4	ARVEBWD	ARVEBWD is a pointer to the previous queue entry.
8 (8)	8	ARVENAME	ARVENAME is the control block name.
16 (10)	1	ARVENVOL	ARVENVOL contains the number of volumes in the entry
17 (11)	3	*	Reserved.
20 (14)	30	ARVEAGNM	ARVEAGNM contains the pool name.
50 (32)	2	*	Reserved.
52 (34)	1	ARVESUBP	ARVESUBP contains the entry subpool.
53 (35)	3	ARVESIZE	ARVESIZE contains the entry size.
56 (38)	4	*	Reserved.
60 (3C)		ARVEEND	End of the fixed length header area.

The following 16 bytes of information begin at offset 60 (3C) and are repeated for each volume defined to the pool.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	ARVENTRY	ARVENTRY contains volume table information.
0 (0)	6	ARVEVOL	ARVEVOL contains the volume serial number.
6 (6)	1	ARVETYP	ARVETYP contains the volume type: L = level 0 volume M = migration volume
7 (7)	1	*	Reserved.
8 (8)	2	ARVEFLGS	ARVEFLGS contains the following option and control flags:
	1...	ARVEFFUL	When set to 1, the volume is full.
	.1..	ARVEFUSE	When set to 1, the volume was used by ARECOVER
	..1.	ARVEFADV	When set to 1, the volume was ADDVOLed to DFHSM
	...x xxxx	*	Reserved.
10 (A)	6	*	Reserved.

ARVE Data Area Cross-Reference

Field	Offset	Begin at Offset
ARVEAGNM	20 (14)	
ARVEBWD	4 (4)	
ARVEEND	60 (3C)	
ARVEFADV	8 (8)	60 (3C)
ARVEFFUL	8 (8)	60 (3C)
ARVEFLGS	8 (8)	60 (3C)
ARVEFUSE	8 (8)	60 (3C)
ARVEFWD	0 (0)	
ARVENAME	8 (8)	
ARVENTRY	0 (0)	60 (3C)
ARVENVOL	16 (10)	60 (3C)
ARVEQPTR	0 (0)	
ARVESIZE	53 (35)	
ARVESUBP	52 (34)	
ARVETYP	6 (6)	60 (3C)
ARVEVOL	0 (0)	

BGCB — Backup Global Control Block

The backup global control block is 56 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	BGCBID	BGCBID contains the control block identification.
8 (8)	4	BGCDTCBP	BGCDTCBP contains the address of the ARCBDSN task TCB.
12 (C)	4	BGCVTCBP	BGCVTCBP contains the address of the ARCBGEN task TCB.
16 (10)	4	BGCBSLKP	BGCBSKLP contains the address of the Storage Management Subsystem (SMS) lock token for automatic backup.
20 (14)	4	BGCBDMCP	BGCBDMCP contains the address of the default MC.
24 (18)	4	BGCMCLSP	BGCMCLSP contains the address of the backup function's list of MCs. (A header record on this list contains the number of MC entries.)
28 (1C)	4	BGCMCLSL	BGCMCLSL contains the length of the area of the backup function's list of MCs. (Used in freeing storage of the MC list.)
32 (20)	4	BGC_FLAGS	BGC_FLAGS contains 1 bit of automatic backup quiesce time data, and 3 additional bytes of reserved space.
	1...	BGCFQBAK	When set to 1, automatic backup quiesce time has been reached.
	.xxx xxxx	*	Reserved.
	3	*	Reserved.
36 (24)	1	BGCBTSVL	BGCBTSVL contains data pertaining to trace processing of an SMS volume: X'FF' = issue 734I message for all extracted list entries, otherwise X'FF' = 734I message according to SETSYS ACTLOGMSGLVL.
37 (25)	19	*	Reserved.

BGCB Data Area Cross-Reference

Field	Offset
BGCBDMCP	20 (14)
BGCBID	0 (0)
BGCBSLKP	16 (10)
BGCBTSVL	36 (24)
BGCDTCBP	8 (8)
BGC_FLAGS	32 (20)
BGCFQBAK	32 (20)
BGCMCLSL	28 (1C)
BGCMCLSP	24 (18)
BGCVTCBP	12 (C)

BTCB — Backup Task Control Block

The backup task control block is used to pass parameters to a volume backup subtask. A backup task control block for each backup subtask resides in the DFHSM work space. This control block is 200 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	BTCBTECB	BTCBTECB contains the backup task termination ECB.
	x.xx xxxx	*	Reserved.
	.1..	BTCBTCMP	Complete bit.
1 (1)	3	*	Reserved.
4 (4)	4	BTCBWECB	BTCBWECB contains the backup task work-to-do ECB.
	x.xx xxxx	*	Reserved.
	.1..	BTCBWCMP	Complete bit.
5 (5)	3	BTCBWECD	Completion code.
8 (8)	4	BTCBFLGS	BTCBFLGS is a 4-byte field that contains the following flags:
	1...	BTCBFACT	When set to 1, the backup task is active.
	.1..	BTCBFCLN	When set to 1, the BTCB has been cleaned up.
	..1.	BTCBFTOT	When set to 1, total backup is requested.
	...1	BTCBFAUT	When set to 1, the task is for automatic backup. When set to 0, the task is for command backup.
	.... 1...	BTCBFNHV	When set to 1, the volume is not managed by DFHSM.
	.... .1..	BTCBF1FT	When set to 1, the target backup volume is a 3480 tape volume written in single-file format.
	.... ..1.	BTCBFMBC	When set to 1, spill processing is being performed. When set to 0, move backup versions processing is being performed.
	1	BTCBFEND	When set to 1, volume backup is ended.
9 (9)	.xxx xxxx	*	Reserved.
	1...	BTCBETRM	When set to 1, SMS volume ended early during automatic backup.
10 (A)	2	*	Reserved.

The following 20 bytes of information begin at offset 12 (C) and are repeated 3 times. The first entry concerns ARCBUDS, the second ARCBVDS, and the third ARCBMBV (for spill processing).

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	BTCBSTCB	BTCBSTCB contains address of data set level subtask TCB.
4 (4)	4	BTCBSWEC	BTCBSWEC contains work to do ECB for data set level.
	x.xx xxxx	*	Reserved.
	.1..	BTCBSWCP	BTCBSWCP contains a complete bit.
5 (5)	3	BTCBSWCD	BTCBSWCD contains a completion code.
8 (8)	4	BTCBSTEC	BTCBSTEC contains a termination ECB for data set level.
	x.xx xxxx	*	Reserved.
	.1..	BTCBSTCP	BTCBSTCP contains a complete bit.
9 (9)	3	BTCBSTCD	BTCBSTCD contains a completion code.
12 (C)	4	BTCBSRCB	BTCBSRCB contains the address of data set level subtask RCB.
16 (10)	4	BTCBPLP	BTCBPLP contains the address of ARCBVDSP parameter list.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
72 (48)	4	BTCBTCB	BTCBTCB contains the address of the TCB of the task.
76 (4C)	4	BTCBMWE	BTCBMWE contains the address of the management work element currently being processed.
80 (50)	8	BTCBBID	BTCBBID contains the identifier, ARCBVOL*x* where *x* is 1 to F, ARCBMDS or ARCBMBC.
88 (58)	4	BTCBRPLP	BTCBRPLP contains the address of the RPL if a DFHSM control data set record entry is held.
92 (5C)	4	BTCBRCBP	BTCBRCBP contains the address of the recovery control block of the task.
96 (60)	8	BTCBTVDD	BTCBTVDD contains the ddname of the tape backup volume being used by the task.
104 (68)	4	BTCBTVTP	BTCBTVTP contains the address of the mounted volume table entry describing the tape backup volume being used by the task.
108 (6C)	8	BTCBDVDD	BTCBDVDD contains the ddname of the DASD backup volume being used by the task.
116 (74)	4	BTCBDVTP	BTCBDVTP contains the address of the mounted volume table entry describing the DASD backup volume being used by the task.
120 (78)	8	BTCBSVDD	BTCBSVDD contains the ddname of the spill backup volume being used by the task.
128 (80)	4	BTCBSVTP	BTCBSVTP contains the address of the mounted volume table entry of the spill backup volume being used by the task.
132 (84)	4	BTCBMVTP	BTCBMVTP contains the address of the mounted volume table entry for the volume being backed up by this task.
136 (88)	4	BTCBDAY	BTCBDAY contains the number of the current day in the backup cycle.
140 (8C)	4	BTCBRC	BTCBRC contains the return code from the volume backup operation. If BTCBRC = 0, the operation completed successfully. If BTCBRC = 4, there was an error reading the backup cycle volume record (BVR), and no more volume backups should be started. If BTCBRC = 8, the backup subtask ended abnormally.
144 (90)	4	BTCBFREQ	BTCBFREQ contains the value of the frequency parameter for volume backup. If this field contains -1, the DFHSM default frequency is used.
148 (94)	4	BTCBECBA	BTCBECBA contains the address of the ECB this task is waiting for when the task is waiting for a backup volume to become free.
152 (98)	4	BTCBMCPP	Address in storage MCP.
156 (9C)	8	BTCBSTRT	Starting time and date of volume backup.
156 (9C)	4	BTCBTIME	Time in packed decimal.
160 (A0)	4	BTCBDATE	Date in packed decimal.
164 (A4)	4	BTCBFVPP	Address of fast VTOC/VVDS services access parameter list.
168 (A8)	4	BTCBNBDS	Number of data sets backed up.
172 (AC)	4	BTCBBDT	Binary date (00YYDDD).
172 (AC)	2	BTCBBYR	Current year (YY in binary).
174 (AE)	2	BTCBBDAY	Current day (DD in binary).
176 (B0)	1	BTCBFGBV	Type of backup volume needed.
	...x xxxx	*	Reserved.
	1...	BTCBFDA	On = DASD backup volume required.
	.1..	BTCBFTP	On = Tape backup volume required.
	..1.	BTCBFANY	On = Any backup volume (tape or DASD) is okay.
177 (B1)	23	*	Reserved.
200 (C8)	0	*	Body (WORD) keep length a 4 byte multiple.

BTCB Data Area Cross-Reference

Field	Offset	Begin at Offset
BTCBBDAY	174 (AE)	12 (C)
BTCBBDT	172 (AC)	12 (C)
BTCBBYR	172 (AC)	12 (C)
BTCBDATE	160 (A0)	12 (C)
BTCBDAY	136 (88)	12 (C)
BTCBDVDD	108 (6C)	12 (C)
BTCBDVTP	116 (74)	12 (C)
BTCBECBA	148 (94)	12 (C)
BTCBETRM	9 (9)	
BTCBFACT	8 (8)	
BTCBFANY	176 (B0)	12 (C)
BTCBFAUT	8 (8)	
BTCBFCLN	8 (8)	
BTCBFDA	176 (B0)	12 (C)
BTCBFEND	8 (8)	
BTCBFGBV	176 (B0)	12 (C)
BTCBFLGS	8 (8)	
BTCBFMBC	8 (8)	
BTCBFNHV	8 (8)	
BTCBFREQ	144 (90)	12 (C)
BTCBFTOT	8 (8)	
BTCBFTP	176 (B0)	12 (C)
BTCBFVPP	164 (A4)	12 (C)
BTCBF1FT	8 (8)	
BTCBID	80 (50)	12 (C)
BTCBMCPP	152 (98)	12 (C)
BTCBMVTP	132 (84)	12 (C)
BTCBMWE	76 (4C)	12 (C)
BTCBNBDS	168 (A8)	12 (C)
BTCBPLP	16 (10)	12 (C)
BTCBRC	140 (8C)	12 (C)
BTCBRCBP	92 (5C)	12 (C)
BTCBRPLP	88 (58)	12 (C)
BTCBSRCB	12 (C)	12 (C)
BTCBSTCB	0 (0)	12 (C)
BTCBSTCD	9 (9)	12 (C)
BTCBSTCP	8 (8)	12 (C)
BTCBSTEC	8 (8)	12 (C)
BTCBSTRT	156 (9C)	12 (C)
BTCBSVDD	120 (78)	12 (C)
BTCBSVTP	128 (80)	12 (C)
BTCBSWCD	5 (5)	12 (C)
BTCBSWCP	4 (4)	12 (C)
BTCBSWEC	4 (4)	12 (C)
BTCBTCB	72 (48)	12 (C)
BTCBTCMP	4 (4)	
BTCBTECB	0 (0)	
BTCBTIME	156 (9C)	12 (C)
BTCBTVDD	36 (24)	12 (C)
BTCBTVTP	104 (68)	12 (C)
BTCBWCMP	4 (4)	
BTCBWECB	4 (4)	
BTCBWECD	5 (5)	

CDD — Common Data Set Descriptor Record

The common data set descriptor record contains information necessary to recall or recover a data set. This record is the first record in the migrated or backup copy of a data set. It is 180 bytes long for non-VSAM data sets and 198 bytes plus 46 for each AIX for VSAM data sets.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	CDDDSN	If the data set is non-VSAM, CDDDSN contains the original data set name. If for a backup version of a VSAM data set, CDDDSN contains the cluster name. If the data set is a migrated VSAM data set, CDDDSN contains the base data object for a base cluster, and contains the AIX cluster name for an AIX.
44 (2C)	71	CDDDSCB	CDDDSCB contains a format 1 data set control block information except for the first extent.
105 (69)	10	CDDEXT1	CDDEXT1 is a subfield of CDDDSCB and contains the DSCB information for the first extent.
115 (73)	4	CDDUCBTY	CDDUCBTY contains the device type of the source device.
119 (77)	1	*	Reserved.
120 (78)	4	CDDSUSED	CDDSUSED contains the size used on the user's volume in units of tracks, if the CDDFUSIZ field is set to 1.
124 (7C)	6	CDDID	CDDID contains the constant '*CDD**'.
130 (82)	10	*	Reserved.
140 (8C)	4	CDDCTID	This field contains the compaction table identification.
144 (90)	2	CDDFLGS	CDDFLGS is a 2-byte field that contains the following flags:
	1...	CDDFNCAT	When set to 1, the backup version is for an uncataloged data set.
	.1..	CDDFMIG	When set to 1, the common data set descriptor record describes a migrated data set. When set to 0, it describes a backup version.
	..1.	CDDFONL1	When set to 1, the backup version resulted from BACKDS or HBACKDS command processing.
	...1	CDDFVBCL	When set to 1, CDDDSN contains a VSAM base cluster name.
	.... 1...	CDDFDSS	When set to 1, DFDSS is data mover.
	.... .1..	CDDFBPTH	When set to 1, the VSAM base cluster has a path defined on it.
	.... .1..	CDDSUL	When set to 1, the non-VSAM data set contains standard user labels.
	.... ..1.	CDDFBNOI	When set to 1, a VSAM cluster has no index (I) component.
	1	CDDFUSIZ	When set to 1, the CDDSUSED field is valid.
145 (91)	1	*	Reserved.
146 (92)	2	*	Reserved.
148 (94)	4	CDDTSLRT	CDDTSLRT contains the time the data set was last referenced. The time is obtained from the TIME macro in format X'*hhmmssth*'.
152 (98)	4	CDDTSLRD	CDDTSLRD contains the date the data set was last referenced. The date is obtained from the TIME macro in format X'00*yyddds*'.
156 (9C)	4	CDDTSLUT	CDDTSLUT contains the time the data set was last updated. The time is obtained from the TIME macro in format X'*hhmmssth*'.
160 (A0)	4	CDDTSLUD	CDDTSLUD contains the date the data set was last updated. The date is obtained from the TIME macro in format X'00*yyddds*'.
164 (A4)	4	CDDTSLMT	CDDTSLMT contains the time the data set was migrated or backed up. The time is obtained from the TIME macro in format X'*hhmmssth*'. CDDTSLBT is a synonym for CDDTSLMT.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
168 (A8)	4	CDDTSLMD	CDDTSLMD contains the date the data set was migrated or backed up. The date is obtained from the TIME macro in format X'00*yyddds*'. CDDTSLBD is a synonym for CDDTSLMD.
172 (AC)	4	CDDSIZE	CDDSIZE contains the size, in tracks, of the space allocated on the user's volume.
176 (B0)	4	CDDDBLK	CDDDBLK contains the number of directory blocks for a partitioned data set.

The following fields exist only for the base cluster of a VSAM data set:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
180 (B4)	8	CDDPW	CDDPW contains the master password of the VSAM data set.
188 (BC)	6	*	Reserved.
194 (C2)	2	CDDNAIX	CDDNAIX contains the number of AIX cluster entries that follow.
196 (C4)	2	*	Reserved.

The following fields exist for each AIX, starting at offset 198 (C6):

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
198 (C6)	46	CDDENTRY	CDDENTRY contains information about an AIX cluster.
0 (0)	1	CDDENTYP	CDDENTYP contains the VSAM catalog record type.
1 (1)	1	*	Reserved.
2 (2)	44	CDDAIXNM	CDDAIXNM contains the name of the AIX cluster.

CDD Data Area Cross-Reference

Field	Offset	Begin At Offset	Field	Offset	Begin At Offset
CDDAIXNM	200 (C8)	198 (C6)	CDDTSLMD	168 (A8)	
CDDCTID	140 (8C)		CDDTSLMT	164 (A4)	
CDDDBLK	176 (B0)		CDDTSLRD	152 (98)	
CDDDSCB	44 (2C)		CDDTSLRT	148 (94)	
CDDDSN	0 (0)		CDDTSLUD	160 (A0)	
CDDENTRY	198 (C6)		CDDTSLUT	156 (9C)	
CDDENTYP	0 (0)	198 (C6)	CDDUCBTY	115 (73)	
CDDEXTI	105 (69)				
CDDFBNOI	144 (90)				
CDDFBPTH	144 (90)				
CDDFDSS	144 (90)				
CDDFLGS	144 (90)				
CDDFMIG	144 (90)				
CDDFNCAT	144 (90)				
CDDFONLI	144 (90)				
CDDFUSIZ	144 (90)				
CDDFVBCL	144 (90)				
CDDID	124 (72)				
CDDNAIX	194 (C2)				
CDDPW	180 (B4)				
CDDSIZE	172 (AC)				
CDDSUL	144 (90)				
CDDSUSED	120 (78)				

CDSV – CDSVERSIONBACKUP Parameters Table

The CDSVERSIONBACKUP parameters table contains the parameters specified with the SETSYS command or the appropriate defaults. This table is used if a failure occurs while DFHSM is reading the MHCR. It is 260 bytes long.

Note: A FIXCDS S MHCR command will not display the first 16 bytes of this table.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	CDSVNAME	CDSVNAME contains the name of the table, which is ARCCDSVB.
8 (8)	5	CDSVDATE	CDSVDATE contains the date when the control data sets were last updated.
13 (D)	3		Reserved.
16 (F)	35	CDSVMHLQ	CDSVMHLQ contains the set of initial characters of the MCDS backup data set name.
51 (33)	35	CDSVBHLQ	CDSVBHLQ contains the set of initial characters of the BCDS backup data set name.
86 (56)	35	CDSVOHLQ	CDSVOHLQ contains the set of initial characters of the OCDS backup data set name.
121 (79)	35	CDSVJHLQ	CDSVJHLQ contains the set of initial characters of the journal backup data set name.
156 (9C)	8	CDSVCFQN	CDSVCFQN contains the final qualifier of the backup data set name.
156 (9C)	1	CDSVCFQH	CDSVCFQH contains the first character (V) of the final qualifier of the backup data set name.
157 (9D)	7	CDSVCFQV	CDSVCFQV contains the version number of the final qualifier of the backup data set name.
164 (A4)	1	CDSVFLGS	CDSVFLGS contains the following flags:
	1...	CDSVDVTY	When set to 0, the backup device category is tape. When set to 1, the backup device category is DASD.
	.1..	CDSVRPFL	When set to 1, a tape retention period was specified.
	..1.	CDSVEDFL	When set to 1, a tape expiration date was specified.
	...x xxxx	*	Reserved.
165 (A5)	1	CDSVTDEN	CDSVTDEN contains the tape density.
166 (A6)	2	CDSVTCNT	CDSVTCNT contains the number of cataloged tape backup data sets.
168 (A8)	4	CDSVDVCT	CDSVDVCT contains the number of DASD backup versions.
172 (AC)	8	CDSVUNIT	CDSVUNIT contains the tape unit name.
180 (B4)	4	CDSVRTPD	CDSVRTPD contains the tape retention period.
184 (B8)	5	CDSVEXPD	CDSVEXPD contains the tape expiration date.
184 (B8)	2	CDSVYEAR	CDSVYEAR contains the year of the expiration date.
186 (BA)	3	CDSVDAY	CDSVDAY contains the day of the expiration date.
189 (BD)	3	*	Reserved.
192 (C0)	1	CDSVMLEN	CDSVMLEN contains the length of the backup data set for the MCDS.
193 (C1)	1	CDSVBLEN	CDSVBLEN contains the length of the backup data set for the BCDS.
194 (C2)	1	CDSVOLEN	CDSVOLEN contains the length of the backup data set for the OCDS.
195 (C3)	1	CDSVJLEN	CDSVJLEN contains the length of the backup data set for the journal.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
196 (C4)	1	CDSVULEN	CDSVULEN contains the length of the tape unit.
197 (C5)	63	*	Reserved.

CDSV Data Area Cross-Reference

Field	Offset
CDSVBHLQ	51 (33)
CDSVBLEN	193 (C1)
CDSVCFQH	156 (9C)
CDSVCFQN	156 (9C)
CDSVCFQV	157 (9D)
CDSVDATE	8 (8)
CDSVDAY	186 (BA)
CDSVDVCT	168 (A8)
CDSVDVTY	164 (A4)
CDSVEDFL	164 (A4)
CDSVEXPD	184 (B8)
CDSVFLGS	164 (A4)
CDSVJHLQ	121 (79)
CDSVJLEN	195 (C3)
CDSVMHLQ	16 (F)
CDSVMLEN	192 (C0)
CDSVNAME	0 (0)
CDSVOHLQ	86 (56)
CDSVOLEN	194 (C2)
CDSVRPFL	164 (A4)
CDSVRTPD	180 (B4)
CDSVTCNT	166 (A6)
CDSVTDEN	165 (A5)
CDSVULEN	196 (C4)
CDSVUNIT	172 (AC)
CDSVYEAR	184 (B8)

COMNM — Compaction Names Table

The compaction names table contains the names that are to be associated with specific compaction and decompaction tables. A field in each element of the compaction technique table points to the names. It is 12 bytes long plus 8 bytes for each name to be associated with a specific compaction table.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	1	COMNMSP	COMNMSP contains the subpool from which the storage was obtained.
1 (1)	3	COMNMSIZ	COMNMSIZ contains the size of the obtained storage.
4 (4)	2	COMNMNUM	COMNMNUM contains the number of names in the compaction technique table.
6 (6)	2	*	Reserved.
8 (8)	4	*	Reserved.

The following field is repeated for each name in the list, starting at offset 12 (C):

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	COMNAME	COMNAME contains the data set compaction control qualifier be associated with a specific compaction table.

COMNM Data Area Cross-Reference

Field	Offset	Begin at Offset
COMNAME	0 (0)	12 (C)
COMNMNUM	4 (4)	
COMNMSIZ	1 (1)	
COMNMSP	0 (0)	

CRD – Common Record Descriptor

The common record descriptor heads each source record within the migration or backup copy of a user's data set and describes the characteristics of the source data set records. It is 12 bytes long for a partitioned data set and 8 bytes long for all others.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	1	CRDFLG	CRDFLG contains the common record descriptor flags:
	1...	CRDFCOMP	When set to 1, the record is compacted.
	.1..	CRDFROC	When set to 1, the first record on the cylinder is in the offline control data set.
	..1.	CRDFROT	When set to 1, the first record on the track is in the offline control data set.
	...1	CRDFEOD	When set to 1, this is the end of the data set. The record contains no data.
	.... 1...	CRDFTO	When set to 1, this record is from a track overflow segment.
	.... .1..	CRDFCNT	When set to 1, the count field is in the first 8 bytes of data.
	.... ..1.	CRDFLAB	When set to 1, this record contains a standard user label.
	x	*	Reserved.
1 (1)	3	CRDLEN	CRDLEN contains the length of the common record descriptor plus the length of the actual data record that follows it in the 2K record.
4 (4)	4	CRDOLEN	CRDOLEN contains the original record length of an individual record.

The following is appended only for partitioned data sets:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
8 (8)	1	CRDFLG2	CRDFLG2 contains partitioned data set flags:
	1...	CRDFNL	When set to 1, the record is a note list. When set to 0, the data is a note list.
	.1..	CRCFNLD	When set to 1, the note list is a dummy record.
	..xx xxxx	*	Reserved.
9 (9)	3	CRDTTR	CRDTTR contains the original record location TTR of this partitioned data set record.

CRD Data Area Cross-Reference

Field	Offset	Field	Offset
CRDFCNT	0 (0)	CRDFROT	0 (0)
CRDFCOMP	0 (0)	CRDFTO	0 (0)
CRDFEOD	0 (0)	CRDLEN	1 (1)
CRDFLAB	0 (0)	CRDOLEN	4 (4)
CRDFLG	0 (0)	CRDTTR	9 (9)
CRDFLG2	8 (8)		
CRDFNL	8 (8)		
CRDFNLD	8 (8)		
CRDFROC	0 (0)		

CTT — Compaction Technique Table

The compaction technique table defines which compaction table is to be used for a data set. The table is 16 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	CTTNMPTR	CTTNMPTR is an address of the names to be associated with the specified compaction table.
4 (4)	4	CTTENCDP	CTTENCDP is an address of the compaction code tables for the specified compaction table.
8 (8)	4	CTTDECDP	CTTDECDP is an address of the decompaction code tables for the specified compaction table.
12 (C)	4	CTTCTID	CTTCTID contains the ID of the compaction table. The ID is 0 if the data set is not to be compacted.

CTT Data Area Cross-Reference

Field	Offset
CTTCTID	12 (C)
CTTDECDP	8 (8)
CTTENCDP	4 (4)
CTTNMPTR	0 (0)

DL2AT — DASD Level 2 Available Table

The DASD level 2 available table is a list of DASD migration level 2 volumes that were available to be associated with a key range when DFHSM created the table. The table is 26 bytes plus 8 bytes for each volume in the list.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	DL2BID	DL2BID contains the DASD level 2 table block ID, 'DL2*'.
4 (4)	4	DL2MAXVL	DL2MAXVL contains the maximum number of volume entries.
8 (8)	4	DL2FRSTI	DL2FRSTI contains the index to the first valid entry in the table.
12 (C)	4	DL2LASTI	DL2LASTI contains the index to the last valid entry in the table.
16 (10)	10	*	Reserved.

The following fields are repeated for each volume in the list:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	DL2VLSER	DL2VLSER contains the DASD volume serial number.
6 (6)	1	*	Reserved.
7 (7)	1	DL2FLAGS	DL2AT flags.
	.xxx xxxx	*	Reserved.
	1...	DL2DRAIN	When set to 1, the DRAIN attribute has been specified on the ADDVOL command for this volume.

DL2AT Data Area Cross-Reference

Field	Offset	Begin at Offset
DL2BID	0 (0)	
DL2DRAIN	7 (7)	26 (1A)
DS2FLAGS	0 (0)	26 (1A)
DL2FRSTI	8 (8)	
DL2LASTI	12 (C)	
DL2MAXVL	4 (4)	
DL2VLSER	0 (0)	26 (1A)

DVT — Device Table

A device table entry describes the device-dependent characteristics needed by DFHSM and exists for each DASD device type supported by DFHSM. Each entry is 48 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	DVTUNIT	DVTTUNIT contains the EBCDIC unit name field for the device.
8 (8)	4	DVTUCBTY	DVTUCBTY contains the UCB device type field for the device.
12 (C)	4	DVTTPC	DVTTPC contains the number of tracks on one cylinder of a volume mounted on the device.
16 (10)	4	DVTCYL	DVTCYL contains the number of cylinders on a volume mounted on the device.
20 (14)	4	DVT2KPT	DVT2KPT contains the number of 2048-byte blocks of data that form one track of a volume mounted on the device.
24 (18)	4	DVTMBLK	DVTMBLK contains the maximum block size used by the access methods when writing data to one track on a volume mounted on the device.
28 (1C)	4	DVTTRKSZ	DVTTRKSZ contains the number of bytes that can be written on one track on a volume mounted on the device.
32 (20)	4	DVTTCAP	DVTTCAP contains the maximum track capacity.
36 (24)	4	DVTUCYL	DVTUCYL contains the number of usable cylinders on a volume.
40 (28)	4	DVTOBSZ	DVTOBSZ contains the optimum block size for 2K blocking in units of 1024.
44 (2C)	4	*	Reserved.

DVT Data Area Cross-Reference

Field	Offset
DVTCYL	16 (10)
DVTMBLK	24 (18)
DVTOBSZ	40 (28)
DVTTCAP	32 (20)
DVTTPC	12 (C)
DVTTRKSZ	28 (1C)
DVTUCBTY	8 (8)
DVTUCYL	36 (24)
DVTUNIT	0 (0)
DVT2KPT	20 (14)

EXT — User Exit Table

The user exit table contains information that indicates whether a defined exit is to be taken and where the exit is loaded in storage. The address of the table is stored in the MCVT field MCVTEXTP. The user exit table is 104 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	EXTSTGE	EXTSTGE contains a description of the storage used by this table.
0 (0)	1	EXTSUBP	EXTSUBP contains the subpool number of this table.
1 (1)	3	EXTNENT	EXTNENT contains the number of entries.
4 (4)	4	*	Reserved.
8 (8)	8	EXTMV	EXTMV contains the space management volume exit entry.
	1	EXTMVUSE	EXTMVUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
	3	*	Reserved.
12 (C)	4	EXTMVPTR	EXTMVPTR contains the exit address.
16 (10)	8	EXTMD	EXTMD contains the data set migration exit entry.
	1	EXTMDUSE	EXTMDUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
17 (11)	3	*	Reserved.
20 (14)	4	EXTMDPTR	EXTMDPTR contains the exit address.
24 (18)	8	EXTAD	EXTAD contains the data set deletion exit entry.
	1	EXTADUSE	EXTADUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
25 (19)	3	*	Reserved.
28 (1C)	4	EXTADPTR	EXTADPTR contains the exit address.
32 (20)	8	EXTRD	EXTRD contains the recall exit entry.
	1	EXTRDUSE	EXTRDUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
33 (21)	3	*	Reserved.
36 (24)	4	EXTRDPTR	EXTRDPTR contains the exit address.
40 (28)	8	EXTBD	EXTBD contains the data set backup exit entry.
	1	EXTBDUSE	EXTBDUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
41 (29)	3	*	Reserved.
44 (2C)	4	EXTBDPTR	EXTBDPTR contains the exit address.
48 (30)	8	EXTCD	EXTCD contains the data set reblock exit entry.
	1	EXTCDUSE	EXTCDUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
49 (31)	3	*	Reserved.
52 (34)	4	EXTCDPTR	EXTCDPTR contains the exit address.
56 (38)	8	EXTTD	EXTTD contains the tape data set exit entry.
	1	EXTTDUSE	EXTTDUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
57 (39)	3	*	Reserved.
60 (3C)	4	EXTTDPTR	EXTTDPTR contains the exit address.
64 (40)	8	EXTTV	EXTTV contains the tape volume exit entry.
	1	EXTTVUSE	EXTTVUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
65 (41)	3	*	Reserved.
68 (44)	4	EXTTVPTR	EXTTVPTR contains the exit address.
72 (48)	8	EXTCB	EXTCB contains the control data set backup exit entry.
	1	EXTCBUSE	EXTCBUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
73 (49)	3	*	Reserved.
76 (4C)	4	EXTCBPTR	EXTCBPTR contains the exit address.
80 (50)	8	EXTMM	Second level migration data set exit contains the subsequent migration exit.
	1	EXTMMUSE	EXTMMUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
81 (51)	3	*	Reserved.
84 (54)	4	EXTMMPTR	EXTMMPTR contains the exit address.
88 (58)	8	EXTIN	EXTIN contains the initialization exit.
	1	EXTINUSE	EXTINUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
89 (59)	3	*	Reserved.
92 (5C)	4	EXTINPTR	EXTINPTR contains the exit address.
96 (60)	8	EXTSA	Space management and backup exit contains the see all exit.
	1	EXTSAUSE	EXTSAUSE contains a Y if the exit is to be taken, and an N if the exit is not to be taken.
97 (61)	3	*	Reserved.
100 (64)	4	EXTSAPTR	EXTSAPTR contains the exit address.

EXT Data Area Cross-Reference

Field	Offset
EXTAD	24 (18)
EXTADPTR	28 (1C)
EXTADUSE	24 (18)
EXTBD	40 (28)
EXTBDPTR	44 (2C)
EXTBDUSE	40 (28)
EXTCB	72 (48)
EXTCBPTR	76 (4C)
EXTCBUSE	72 (48)
EXTCD	48 (30)
EXTCDPTR	52 (34)
EXTCDUSE	48 (30)
EXTIN	88 (58)
EXTINPTR	92 (5C)
EXTINUSE	88 (58)
EXTMD	16 (10)
EXTMDPTR	20 (14)
EXTMDUSE	32 (20)
EXTMM	80 (50)
EXTMMPTR	84 (54)
EXTMMUSE	80 (50)
EXTMV	8 (8)
EXTMVPTR	12 (C)
EXTMVUSE	8 (8)
EXTNENT	1 (1)
EXTRD	32 (20)
EXTRDPTR	36 (24)
EXTRDUSE	32 (20)

Field	Offset
EXTSA	96 (60)
EXTSAPTR	100 (64)
EXTSAUSE	96 (60)
EXTSTGE	0 (0)
EXTSUBP	0 (0)
EXTTD	56 (38)
EXTTDPTR	60 (3C)
EXTTDUSE	56 (38)
EXTTV	64 (40)
EXTTVPTR	68 (44)
EXTTVUSE	64 (40)

FSR — Function Statistics Record

The function statistics record is a control block that contains statistics for a particular function performed on one data set. It is maintained in the DFHSM work space until the data set processing has completed. The control block has a length of 1224 bytes. Only the first 288 bytes are used unless tape volumes are used for the function.

When the function statistics record is written to SMF, its first 18 bytes are replaced with the standard 18-byte SMF record header. The function statistics record is then written to SMF.

Note: When a DFHSM function executes, only selected fields within the FSR record get set. Which fields are actually set depends on the function being performed and the method used to request the function. The fields which are set are required by the DFHSM REPORT command.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	2	FSRLEN	FSRLEN contains the function statistics record length.
2 (2)	2	*	Reserved.
4 (4)	1	FSRFLG	FSRFLG contains the operating environment.
5 (5)	1	FSRRTY	FSRRTY contains the system management facility record identification associated with function statistics records.
6 (6)	8	*	Reserved.
14 (E)	4	FSRSID	FSRSID contains the system identification from the computing system.
18 (12)	8	FSRJBN	FSRJBN contains the job name requesting the function.
26 (1A)	4	FSRRST	FSRRST contains the reader start time. The time is obtained from the TIME macro in hundredths of seconds.
30 (1E)	4	FSRRSD	FSRRSD contains the reader start date. The date is obtained from the TIME macro in format X'00*yyddds*'.
34 (22)	8	FSRUID	FSRUID contains the ID of the user requesting the function.
42 (2A)	1	FSRTYPE	FSRTYPE contains the DFHSM function type. The function types are as follows: 1 = Primary to level 1 migration 2 = Level 1 to level 2 migration, or level 1 to level 1 migration, or level 2 to level 2 migration 3 = Primary to level 2 migration 4 = Recall from level 1 to primary 5 = Recall from level 2 to primary 6 = Delete a migrated data set 7 = Daily backup 8 = Spill backup 9 = Recovery 10 = Recycle backup volume 11 = Data set deletion-by-age 12 = Recycle migration volume 13 = Full volume dump 14 = Volume or data set restore.
43 (2B)	1	*	Reserved.
44 (2C)	44	FSRDSN	FSRDSN contains the data set name.
88 (58)	6	FSRTVOL	FSRTVOL contains the receiving volume from the management work element.
94 (5E)	4	FSRDEVT	FSRDEVT contains the receiving device type as defined by the UCB.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
98 (62)	6	FSRFVOL	FSRFVOL contains the serial number of the original volume from the management work element.
104 (68)	4	FSRGEN	FSRGEN contains the backup copy generation number if FSRFDAT is set to 0.
	4	FSRDATE	FSRDATE contains the backup date if FSRFDAT is set to 1. The date is obtained from the TIME macro in format X'00*yyddds*'.
108 (6C)	4	FSRRC	FSRRC contains the return code from the management work element. Use this field along with the FSRTYPE field to find out what function was running. Then, see message ARC0734I to determine what the return code means.
112 (70)	4	FSRREAS	FSRREAS contains the reason code from the management work element.
116 (74)	4	FSRABCC	FSRABCC contains the abnormal end code if there is one.
120 (78)	2	FSRDARC	FSRDARC contains the dynamic allocation return code.
122 (7A)	8	FSRGRP	FSRGRP contains the RACF group name.
130 (82)	1	FSRRACF	FSRRACF contains the RACF flags from the ACEEFLG1 field of the attachment environment element.
131 (83)	1	*	Reserved.
132 (84)	4	FSRRQN	FSRRQN contains the DFHSM request number.
136 (88)	4	FSRDATR	FSRDATR contains the date the user made the request. The date is obtained from the TIME macro in format X'00*yyddds*'.
140 (8C)	4	FSRTIMR	FSRTIMR contains the time the user made the request. The time is obtained from the TIME macro in format X'*hhmmssth*'.
144 (90)	4	FSRTIMS	FSRTIMS contains the time when the request processing was started. The time is obtained from the TIME macro in format X'*hhmmssth*'.
148 (94)	4	FSRTIME	FSRTIME contains the time when the request processing was completed. The time is obtained from the TIME macro in format X'*hhmmssth*'.
152 (98)	4	FSRTIMA	FSRTIMA contains the time when the data set allocations were completed. The time is obtained from the TIME macro in format X'*hhmmssth*'. **Note:** The value of FSRTIMA minus the value of FSRTIMS equals the mount time.
156 (9C)	4	FSRDLU	FSRDLU contains the data set last reference date for migration or the last change date for backup. The date is obtained from the TIME macro in format X'00*yyddds*'.
160 (A0)	4	FSRDLM	FSRDLM contains the date that the data set was last moved, that it migrated, was backed up, or was recalled. The date is obtained from the TIME macro in format X'00*yyddds*'.
164 (A4)	4	FSRBYTR	FSRBYTR contains the number of bytes read.
168 (A8)	4	FSRBYTW	FSRBYTW contains the number of bytes written.
172 (AC)	2	FSRTRKR	FSRTRKR contains the number of tracks read. If this field contains a negative value, the data set is migrating to an SDSP or is a VSAM data set. DFHSM does not record the number of tracks read.
174 (AE)	2	FSRTRKW	FSRTRKW contains the number of tracks written. If this field contains a negative value, the data set is migrating to an SDSP or is a VSAM data set. DFHSM does not record the number of tracks written.
176 (B0)	2	FSRDORG	FSRDORG contains the data set organization from the Format 1 DSCB.
177 (B1)		*	Additional information about the data set organization.
	.... 1...	FSRFVSDS	When set to 1, dataset is a VSAM dataset.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
178 (B2)	2	FSRFLG2	FSRFLG2 is a 2-byte field that contains the following flags:
	1...	FSRFMNT	When set to 1, the volume is mounted.
	.1..	FSRTSO	When set to 1, it is TSO requested. When set to 0, it is batch requested.
	..1.	FSRUSER	When set to 1, it is a data set request from a user address space. When set to 0, it is system requested.
	...1	FSRWAIT	When set to 1, a wait was requested. When set to 0, the user did not wait for the request to complete.
	.... 1...	FSRFDAT	When set to 1, the FSRDATE has the date when the function statistics record was created. When set to 0, the FSRDATE contains the generation number.
	.... .1..	FSRFRSV	When set to 1, the user specified the volume for a recall of a data set.
	.... ..1.	FSRFML2	When set to 1, the user specified migration directly to level 2.
	1	FSRFFRV	When set to 1, the user specified the FROM volume for a data set recovery.
	1...	FSRFREP	When set to 1, the user specified the REPLACE parameter for a data set recovery.
	.1..	FSRFDSRE	When set to 1, the statistics associated with a data set restore from a full-volume dump are being requested.
	..1.	FSRFAPIN	When set to 1, APPLYINCREMENTAL has been requested following a full-volume restore.
	...1	FSRFEXT	When set to 1, extent reduction has been requested.
	.... 1...	FSRFCNVT	When set to 1, conversion has been requested.
	.... .1..	FSRFROG	When set to 1, the GDS has been rolled off.
	.... ..1.	FSRFDSS	When set to 1, dataset moved by DFDSS.
	x	*	Reserved.
180 (B4)	4	*	Reserved.
184 (B8)	2	FSRAGE	FSRAGE contains the data set age in days since the last reference for a migration, since last update for a backup, since migration was done for a recall, or since last update for a recovery.
186 (BA)	1	FSRRECFM	FSRRECFM contains the record format from the DSCB.
187 (BB)	1	FSROPTCD	FSROPTCD contains the I/O option codes from the data set control block.
188 (BC)	16	*	Reserved.
204 (CC)	36	*	Reserved.
240 (F0)	2	FSRNENT1	FSRNENT1 contains the number of tape volumes used for backup or recovery, or the number of recycle input tapes for recycle processing, depending on the function type specified in the FSRTYPE field. The tape volume entries follow the fixed portion of the control block.
242 (F2)	2	FSRNENT2	FSRNENT2 contains the number of output recycle tape entries that follow the FSRNENT1 entry.
244 (F4)	2	FSRDCOPR	FSRDCOPR contains the number of dump copies requested.
246 (F6)	2	FSRDCOPF	FSRDCOPF contains the number of attempted dump copies that failed.
248 (F8)	8	FSRDCLAS(5)	FSRDCLAS contains the names of dump classes.
288 (120)	12	*	Reserved.

The following tape volume entries, starting at offset 300 (12C), are valid for each tape volume used as indicated in the FSRNENT1 and FSRNENT2 fields. The entries for the FSRNENT1 field are first.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	FSRTPVOL	FSRTPVOL contains the volume serial numbers.
6 (6)	2	*	Reserved.
8 (8)	4	FSRTBYBK	FSRTBYBK contains one of the following: • For backup processing, the bytes written. • For recycle output processing, the blocks written. • For recovery processing, the bytes read. • For recycle input processing, the blocks read. • For migration processing, the bytes written. • For recall processing, the bytes read.

FSR Data Area Cross-Reference

Field	Offset	Begin at Offset
FSRABCC	116 (74)	
FSRAGE	184 (B8)	
FSRBYTR	164 (A4)	
FSRBYTW	168 (A8)	
FSRDARC	120 (78)	
FSRDATE	104 (68)	
FSRDATR	136 (88)	
FSRDCLAS	248 (F8)	
FSRDCOPF	246 (F6)	
FSRDCOPR	244 (F4)	
FSRDEVT	94 (5E)	
FSRDLM	160 (A0)	
FSRDLU	156 (9C)	
FSRDORG	176 (B0)	
FSRDSN	44 (2C)	
FSRFAPIN	178 (B2)	
FSRFCNVT	178 (B2)	
FSRFDAT	178 (B2)	
FSRFDSRE	178 (B2)	
FSRFDSS	178 (B2)	
FSRFEXT	178 (B2)	
FSRFFRV	178 (B2)	
FSRFLG	4 (4)	
FSRFLG2	178 (B2)	
FSRFML2	178 (B2)	
FSRFMNT	178 (B2)	
FSRFREP	179 (B3)	
FSRFROG	178 (B2)	
FSRFRSV	178 (B2)	
FSRFVOL	98 (62)	
FSRFVSDS	177 (B1)	
FSRGEN	104 (68)	
FSRGRP	122 (7A)	
FSRJBN	18 (12)	
FSRLEN	0 (0)	
FSRNENT1	240 (F0)	
FSRNENT2	242 (F2)	
FSROPTCD	187 (BB)	
FSRRACF	130 (82)	
FSRRC	108 (6C)	
FSRREAS	112 (70)	
FSRRECFM	186 (BA)	
FSRRQN	132 (84)	
FSRRSD	30 (1E)	
FSRRST	26 (1A)	
FSRRTY	5 (5)	
FSRSID	14 (E)	
FSRTBYBK	8 (8)	300(12C)
FSRTIMA	152 (98)	
FSRTIME	148 (94)	
FSRTIMR	140 (8C)	
FSRTIMS	144 (90)	
FSRTPVOL	0 (0)	300(12C)
FSRTRKR	172 (AC)	
FSRTRKW	174 (AE)	
FSRTSO	178 (B2)	
FSRTVOL	88 (58)	
FSRTYPE	42 (2A)	
FSRUID	34 (22)	
FSRUSER	178 (B2)	
FSRWAIT	178 (B2)	

GTCB – Recovery Task Control Block

The recovery task control block passes parameters to a recovery subtask. Each control block is 160 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	GTCBBID	GTCBBID contains the block identifier 'GTCB2300'.
8 (8)	8	GTCBTASK	GTCBTASK contains the recovery task identifier ARCGVOL, ARCGDSN, or ARCGRVOL.
16 (10)	4	GTCBPLP	GTCBPLP contains the address of the data set processor subtask parameter list (GDSP).
20 (14)	4	GTCB_TASKTCBP	GTCB_TASKTCBP contains pointers to the TCBs, element 1 for the pointer to ARCGVOL's TCB, element 2 for the pointer to ARCGDSN's TCB, and element 3 for the pointer to ARCGRVOL's TCB.
24 (18)	4	GTCB_TASKRCBP	GTCB_TASKRCBP contains the pointer to the RCBs, element 1 for the pointer to ARCGVOL's RCB, element 2 for the pointer to ARCGDSN's RCB, and element 3 for the pointer to ARCGRVOL's RCB.
28 (1C)	4	GTCB_TASKTECB	GTCB_TASKTECB contains termination ECBs, element 1 for ARCGVOL termination ECB, element 2 for ARCGDSN's termination ECB, and element 3 for ARCGRVOL's termination ECB.
	1	*	Reserved.
29 (1D)	3	GTCB_TASKTCMP	GTCB_TASKTCMP contains the task completion code.
32 (20)	4	GTCBRDSP	GTCBRDSP contains the pointers to the DDSSPs.
36 (24)	4	GTCB_FLAGS	GTCB_FLAGS contains the following flags:
	.xxx xxxx	*	Reserved.
	1...	GTCB_DUMPLOG	When set to 1, the message is to be issued to dump the activity log, instead of backup the activity log.
37 (25)	3	*	Reserved.
40 (28)	8	GTCB_SDSP_DDN	GTCB_SDSP_DDN contains the SDSP DD name used for serialization of an SDSP on a migration level 1 volume.
48 (30)	16	*	Reserved.

The following four fields (beginning at offset 64), GTCBTCBP, GTCBWECB, GTCBTECB, and GTCBRCBP are repeated twice, first for ARCGDS, and second for ARCGVDS.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	GTCBTCBP	GTCBTCBP contains the pointer to the TCB.
4 (4)	4	GTCBWECB	GTCBWECB contains the following flags:
	x.xx xxxx	*	Reserved.
	.1..	GTCBWPOST	When set to 1, contains the post bit.
5 (5)	3	GTCBWCMP	GTCBWCMP contains the task completion code.
8 (8)	4	GTCBTECB	GTCBTECB contains the following flags:
	x.xx xxxx	*	Reserved.
	.1..	GTCBTPOST	When set to 1, contains the post bit.
9 (9)	3	GTCBTCMP	GTCBTCMP contains the task completion code.
12 (C)	4	GTCBRCBP	GTCBRCBP contains the pointer to the RCB.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
16 (10)	28	*	Reserved.
152 (98)	4	GTCBRC	GTCBRC contains the return code.
156 (9C)	4	GTCBREAS	GTCBREAS contains the reason code.

GTCB Data Area Cross-Reference

Field	Offset	Begin at Offset
GTCB_DUMPLOG	36 (24)	
GTCB_FLAGS	36 (24)	
GTCB_SDSP_DDN	40 (28)	
GTCB_TASKRCBP	24 (18)	
GTCB_TASKTCBP	20 (14)	
GTCB_TASKTCMP	29 (1D)	
GTCB_TASKTECB	28 (1C)	
GTCBBID	0 (0)	
GTCBPLP	16 (10)	
GTCBRC	152 (98)	
GTCBRCBP	12 (C)	64 (40)
GTCBRDSP	32 (20)	
GTCBREAS	156 (9C)	
GTCBTASK	8 (8)	
GTCBTCBP	0 (0)	64 (40)
GTCBTCMP	9 (9)	64 (40)
GTCBTECB	8 (8)	64 (40)
GTCBTPOST	8 (8)	64 (40)
GTCBWCMP	5 (5)	64 (40)
GTCBWECB	4 (4)	64 (40)
GTCBWPOST	4 (4)	64 (40)

MASCB — Multiple Address Space Control Block

The multiple address space control block defines data that must be commonly accessible to both the primary address space and its associated secondary address spaces.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	MASCBID	MASCB macro identifier.
8 (8)	4	*	Reserved.
12 (C)	4	MASCBLEN	MASCB length.
16 (10)	4	*	Reserved.
20 (14)	4	MASPASCB	Address of primary ASCB.
24 (18)	4	*	Reserved.
28 (1C)	4	MASSASCB	Address of secondary address space ASCB.
32 (20)	4	*	Reserved.
36 (24)	4	MASPECB	Primary address space ECB.
	1...	MASFPECW	When set to 1, primary address space waiting on task.
	.1..	MASFPECP	When set to 1, primary address space posted.
40 (28)	4	MASPPECB	Primary address space PDA ECB.
	1...	MASFPW	When set to 1, primary address space waiting on task.
	.1..	MASFPP	When set to 1, primary address space posted.
44 (2C)	4	MASSECB	secondary address space ECB
	1...	MASFECBW	When set to 1, secondary address space waiting.
	.1..	MASFECBP	When set to 1, secondary address space posted.
48 (30)	4	MASSPECB	secondary address space PDA ECB.
52 (34)	4	MASPMASP	Address of primary MASIP area.
56 (38)	4	*	Reserved.
60 (3C)	4	MASSMASP	Address of secondary address space MASIP area.
64 (40)	4	*	Reserved.
68 (44)	4	MASPAXV	AX value of primary.
72 (48)	4	*	Reserved.
76 (4C)	1	MASPPDRL	Trace record length in k (1024) bytes.
77 (4D)	3	*	Reserved.
80 (50)	4	MASSPDAP	Address of secondary address space parameter list.
84 (54)	4	MASPECBL	Primary address space ECB list. This field is repeated twice.
92 (5C)	4	MASPECLP	Address of MASPECBL.
96 (60)	4	*	Reserved.
100 (64)	1	MASPPDRW	Number of records in PDA wrap.
101 (65)	3	*	Reserved for alignment.
104 (68)	4	*	Reserved.
108 (6C)	8	MASPSNME	Step name used to start secondary address space.
116 (74)	4	*(2)	Reserved.
124 (7C)	4	MASCBFLG	MASCB flags.
	1...	*	Reserved.
	.1..	MASFSWT	When set to 1, secondary address space is unable to establish interface, address space ended.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	..1.	MASFNPD	When set to 1, PDA is disabled.
	...1	MASFIED	When set to 1, interface established.
	.... 1...	MASFSDIS	When set to 1, secondary address space is disconnected.
128 (80)	4	*	Reserved. This field is repeated five times.

MASCB Data Area Cross-Reference

Field	Offset
MASCBFLG	124 (7C)
MASCBID	0 (0)
MASCBLEN	12 (C)
MASFECBP	44 (2C)
MASFECBW	44 (2C)
MASFIED	124 (7C)
MASFNPD	124 (7C)
MASFPECP	36 (24)
MASFPECW	36 (24)
MASFPP	40 (28)
MASFPW	40 (28)
MASFSDIS	124 (7C)
MASFSVRF	124 (7C)
MASPASCB	20 (14)
MASPAXV	68 (44)
MASPECB	36 (24)
MASPECBL	84 (54)
MASPECLP	92 (5C)
MASPMASP	52 (34)
MASPPDRL	76 (4C)
MASPPDRW	100 (64)
MASPPECB	40 (28)
MASPSNME	108 (6C)
MASSASCB	28 (1C)
MASSECB	44 (2C)
MASSMASP	60 (3C)
MASSPDAP	80 (50)
MASSPECB	48 (30)

MASIP — Multiple Address Space Interface Parameter List

The multiple address space interface parameter list (MASIP) defines data that needs to be shared between address spaces in a cross memory environment. It is 1120 (460) bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	MASIPID	Parameter list ID.
8 (8)	4	*	Reserved. This field is repeated twice.
16 (10)	4	MASILEN	Length of MASI parameter list.
20 (14)	4	*	Reserved. This field is repeated twice.
28 (1C)	4	MASIFUN	Function ID number.
32 (20)	4	*	Reserved. This field is repeated twice.
40 (28)	4	MASITOKN	Token = address of MASCB.
44 (2C)	4	*	Reserved. This field is repeated twice.
52 (34)	4	MASSDATA	Pointer to secondary address space data area.
56 (38)	4	*	Reserved. This field is repeated twice.
64 (40)	4	MASSDATL	Length of secondary address space data area.
68 (44)	4	*	Reserved. This field is repeated twice.
76 (4C)	44	MASIACTN	Default activity log name.
120 (78)	20	*	Reserved for activity log name expansion.
140 (8C)	4	*	Reserved. This field is repeated twice.
148 (94)	30	MASIAGNM	Aggregate group name.
178 (B2)	2	*	Reserved for alignment.
180 (B4)	4	*	Reserved.
184 (B8)	1	MASISMFI	SMF record number. (zero if none)
185 (B9)	3	*	Reserved for alignment.
188 (BC)	4	*	Reserved. This field is repeated twice.
196 (C4)	4	MASIFLGS	MASIP flags.
	1...	MASFTERM	When set to 1, OK to disconnect.
	.1..	MASFNREQ	When set to 1, new request list follows.
	..1.	MASFABN	When set to 1, secondary address space abnormally ended.
	...1	MASFS1DP	When set to 1, SYS1DUMP specified.
	.... 1...	MASIFTYP	When set to 0, SYSOUT output log type specified. When set to 1, DASD output log type specified.
	.... .1..	MASIFEXD	When set to 1, EXIT dump requested.
	.... ..1.	MASIFSMS	When set to 1, SMS active in primary.
	1	MASIFMSG	When set to 1, output message to operator.
	1...	MASIFRAC	When set to 1, TAPESECURITY is RACF or RACFINCLUDE.
	.1..	MASIFD25	When set to 1, DFDSS is at release 2.5.0 or greater.
	..1.	MASIFDSC	When set to 1, DFDSS compress option has been specified.
	...1	MASIFTHC	When set to 1, TAPEHARDWARE compact has been specified.
	 xxxx	*	Reserved.
198 (C6)	2	*	Reserved.
200 (C8)	1	MASISCLS	Activity log sysout class.
201 (C9)	3	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
204 (CC)	4	*	Reserved. This field is repeated twice.
212 (D4)	4	MASIRC	Return code for function failure.
216 (D8)	4	*	Reserved. This field is repeated twice.
224 (E0)	4	MASIREAS	Reason code for function failure.
228 (E4)	4	*	Reserved. This field is repeated twice.
236 (EC)	8	MASIAUID	DFHSM authorized userid.
244 (F4)	30	MASIDEST	Destination.
274 (112)	2	*	Reserved for alignment.
276 (114)	4	*	Reserved. This field is repeated eight times.

The following information, starting at offset 308 (134), defines the data areas for the Request parameter list (REQPARM). This area is 100 (64) bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	REQID	Function request ID.
4 (4)	4	*	Reserved.
8 (8)	8	REQUID	Functions requestor's userid.
16 (10)	4	REQTSTIM	Time MWE queued (packed decimal)
20 (14)	4	REQTSDAT	Date MWE queued (packed decimal)
24 (18)	8	REQJBN	Job name.
32 (20)	4	REQRST	Reader start time.
36 (24)	4	REQRSD	Reader start date.
40 (28)	8	REQGROUP	RACF group name.
48 (30)	1	REQRACF	Same as ACEEFLG1 (RACF) flag.
49 (31)	3	*	Reserved.
52 (34)	4	REQFLAGS	Flags.
	1...	REQFTSOR	When set to 1, interactive request from TSO.
	.1..	REQFNOW	When set to 1, MWE is a non-wait.
56 (38)	4	REQRQN	Request number for MWE.
60 (3C)	4	*	Reserved. This field is repeated 10 times.

The following information, starting at offset 408 (198), defines the data areas for the Problem Determination Aid parameter list (REQPDA). This area is 68 (44) bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	PDACRTDP	Pointer to secondary address space continuous running trace (CRT) table data.
4 (4)	4	*	Reserved. This field is repeated five times.
12 (18)	4	PDACRTDL	Length of secondary address space continuous running trace table.
28 (1C)	4	*	Reserved. This field is repeated 10 times.

The following information, starting at offset 476 (1DC), defines the data areas for the Aggregate backup command parameter list (ABPARM). This area is 68 (44) bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	ABUNIT	Unit name for ABACKUP command.
8 (8)	4	*	Reserved. This field is repeated four times.
24 (18)	4	ABFLGS	Flags.
	1...	ABFVER	When set to 1, display function requested.
	.1..	ABF3480X	When set to 1, device specified in ABACKUP command is a 3480X.
	..xx xxxx	*	Reserved.
25 (19)	3	*	Reserved.
28 (1C)	4	*	Reserved. This field is repeated 10 times.

The following information, starting at offset 544 (220), defines the data areas for the Aggregate recovery command parameter list (ARPARM). This area is 292 (124) bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	ARDSNAME	Data set name of control file.
44 (2C)	20	*	Reserved for data set name expansion.
64 (40)	8	ARUNIT	Unit name for ARECOVER command.
72 (48)	4	*	Reserved. This field is repeated twice.
80 (50)	1	ARNVOLS	Number of volumes for control file.
81 (51)	3	*	Reserved for alignment.
84 (54)	8	ARMIGPFX	DFHSM migration prefix.
92 (5C)	4	*	Reserved.
96 (60)	44	ARMENTY	Entity for RACF profiles.
140 (8C)	4	*	Reserved. This field is repeated twice.
148 (94)	4	ARFLAGS	Flags.
	1...	ARFVERFY	When set to 1, user requested display.
	.1..	ARFREPL	When set to 1, user requested replace.
	..1.	ARFXMIT	When set to 1, user requested XMIT.
	...x xxxx	*	Reserved.
149 (95)	3	*	Reserved.
152 (98)	4	*	Reserved. This field is repeated twice.
160 (A0)	6	ARVOLID	Volume serial numbers for control file. This field is repeated 15 times.
250 (FA)	2	*	Reserved for alignment.
252 (FC)	8	ARTUNT	Target unit for tape data sets.
260 (104)	4	*	Reserved. This field is repeated eight times.

The following information, starting at offset 836 (344), defines the data areas for the CDS I/O parameter list (CDIOPARM). This area is 284 (11C) bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	44	CDIDKEY	CDS record key.
44 (2C)	20	*	Reserved.
64 (40)	44	CDIOBDSN	VSAM base cluster name.
108 (6C)	20	*	Reserved.
128 (80)	4	CDIODPTR	Pointer to DFHSM CDS 'D' record area.
132 (84)	4	*	Reserved. This field is repeated twice.
140 (8C)	4	CDIODLEN	Length of CDS 'D' record if valid.
152 (98)	4	CDIOOPTR	Pointer to DFHSM CDS 'O' record area.
156 (9C)	4	*	Reserved. This field is repeated twice.
164 (A4)	4	CDIOOLEN	Length of CDS 'O' record if valid.
168 (A8)	4	*	Reserved. This field is repeated twice.
176 (B0)	4	CDIOAPTR	Pointer to DFHSM CDS 'A' record area.
180 (B4)	4	*	Reserved. This field is repeated twice.
188 (BC)	4	CDIOAFLD	CDS 'A' record fields.
188 (BC)	1	CDIOACNT	Number of 'A' records returned.
189 (BD)	3	CDIOALEN	Combined length of 'A' records.
192 (C0)	4	*	Reserved. This field is repeated twice.
200 (C8)	4	CDIOARVP	Pointer to DFHSM 'ARVE' entry area.
204 (CC)	4	*	Reserved. This field is repeated twice.
212 (D4)	4	CDIOARVL	Length of 'ARVE' if valid.
216 (D8)	4	*	Reserved. This field is repeated twice.
224 (E0)	4	CDIOFLGS	Flags.
	1...	CDIOFDSN	When set to 1, get CDS data-related records.
	.1..	CDIOFDVB	When set to 1, get ARVE entry.
	..1.	CDIOFRD	When set to 1, read. When set to 0, write.
	...1	CDIOFSF	When set to 1, migrated data set resides on a 3480 single file format tape.
	.... 1...	CDIOFSDP	When set to 1, data set migrated to a SDSP.
	.... .1..	CDIOFAPV	When set to 1, CDIOAPTR valid.
	.... ..1.	CDIOFDPV	When set to 1, CDIODPTR valid.
	1	CDIOFOPV	When set to 1, CDIOOPTR valid.
	1...	CDIOFARV	When set to 1, CDIOARVR valid.
	.1..	CDIOFAER	When set to 1, error 'A' record.
	..1.	CDIOFDER	When set to 1, error 'D' record.
	...1	CDIOFOER	When set to 1, error 'O' record.
	.... 1...	CDIOFRCV	When set to 1, ARECOVER read request.
	.... .1..	CDIOFBDN	When set to 1, base data set name returned.
	.... ..1.	CDIOFVSM	When set to 1, data set is VSAM.
228 (E4)	4	*	Reserved. This field is repeated twice.
236 (EC)	4	CDIOFBID	Data set file block ID on a single file tape volume.
240 (F0)	4	*	Reserved. This field is repeated 10 times.

MASIP Data Area Cross Reference

Field	Offset	Begin at Offset
ABFLGS	24 (18)	476 (1DC)
ABFVER	24 (18)	476 (1DC)
ABF3480X	24 (18)	476 (1DC)
ABUNIT	0 (0)	476 (1DC)
ARDSNAME	0 (0)	544 (220)
ARFLAGS	148 (94)	544 (220)
ARFREPL	148 (94)	544 (220)
ARFVERFY	148 (94)	544 (220)
ARFXMIT	148 (94)	544 (220)
ARMENTY	96 (60)	544 (220)
ARMIGPFX	84 (54)	544 (220)
ARNVOLS	80 (50)	544 (220)
ARTUNT	252 (FC)	544 (220)
ARUNIT	64 (40)	544 (220)
ARVOLID	160 (A0)	544 (220)
CDIDKEY	0 (0)	836 (344)
CDIOACNT	188 (BC)	836 (344)
CDIOAFLD	188 (BC)	836 (344)
CDIOALEN	189 (BD)	836 (344)
CDIOAPTR	176 (B0)	836 (344)
CDIOARVL	212 (D4)	836 (344)
CDIOARVP	200 (C8)	836 (344)
CDIOBDSN	64 (40)	836 (344)
CDIODLEN	140 (8C)	836 (344)
CDIODPTR	128 (80)	836 (344)
CDIOFAER	225 (E1)	836 (344)
CDIOFAPV	224 (E0)	836 (344)
CDIOFARV	225 (E1)	836 (344)
CDIOFBDN	225 (E1)	836 (344)
CDIOFBID	236 (EC)	836 (344)
CDIOFDBV	224 (E0)	836 (344)
CDIOFDER	225 (E1)	836 (344)
CDIOFDPV	224 (E0)	836 (344)
CDIOFDSN	224 (E0)	836 (344)
CDIOFLGS	224 (E0)	836 (344)
CDIOFOER	225 (E1)	836 (344)
CDIOFOPV	224 (E0)	836 (344)
CDIOFRCV	225 (E1)	836 (344)
CDIOFRD	224 (E0)	836 (344)
CDIOFSDP	224 (E0)	836 (344)
CDIOFSF	224 (E0)	836 (344)
CDIOFVSM	225 (E1)	836 (344)
CDIOOLEN	164 (A4)	836 (344)
CDIOOPTR	152 (98)	836 (344)
MASFABN	196 (C4)	
MASFNREQ	196 (C4)	
MASFS1DP	196 (C4)	
MASFTERM	196 (C4)	
MASIACTN	76 (4C)	
MASIAGNM	148 (94)	
MASIAUID	236 (EC)	
MASIDEST	244 (F4)	
MASIFDSC	216 (D8)	
MASIFD25	216 (D8)	
MASIFEXD	196 (C4)	
MASIFLGS	196 (C4)	
MASIFMSG	196 (C4)	
MASIFRAC	216 (D8)	
MASIFSMS	196 (C4)	
MASIFTHC	216 (D8)	
MASIFTYP	196 (C4)	
MASIFUN	28 (1C)	
MASILEN	16 (10)	
MASIPID	0 (0)	
MASIRC	212 (D4)	
MASIREAS	224 (E0)	
MASISCLS	200 (C8)	
MASISMFI	184 (B8)	
MASITOKN	40 (28)	
MASSDATA	52 (34)	
MASSDATL	64 (40)	
PDACRTDL	24 (18)	408 (198)
PDACRTDP	0 (0)	408 (198)
REQFLAGS	52 (34)	308 (134)
REQFNOW	52 (34)	308 (134)
REQFTSOR	52 (34)	308 (134)
REQGROUP	40 (28)	308 (134)
REQID	0 (0)	308 (134)
REQJBN	24 (18)	308 (134)
REQRACF	48 (30)	308 (134)
REQRQN	56 (38)	308 (134)
REQRSD	36 (24)	308 (134)
REQRST	32 (20)	308 (134)
REQTSDAT	20 (14)	308 (134)
REQTSTIM	16 (10)	308 (134)
REQUID	8 (8)	308 (134)

MCVT – Management Communication Vector Table

The management communication vector table describes information commonly needed by the DFHSM modules during processing and contains pointers to DFHSM tables and queues. This table resides in the DFHSM work space and is 1150 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	MCVTFLGS	MCVTFLGS contains the following fields:
	1...	MCVTFTST	When set to 1, logging is in test mode.
	.1..	MCVTFNLG	When set to 1, logging to the log data set is inhibited.
	..1.	MCVTFSLG	When set to 1, the logging task is to stop at the first opportunity.
	...1	MCVTFPLG	When set to 1, the ARCILOG task has previously been initialized.
	.... 1...	MCVTF1FT	When set to 1, 3480 tape written in single-file format.
	.... .1..	MCVTFOPB	When set to 1, the operator task is busy.
	.... ..1.	MCVTFINI	When set to 1, DFHSM has been started.
	1	MCVTFATL	When set to 1, an error has been detected that will force DFHSM shutdown.
1 (1)	1...	MCVTFMTO	When set to 1, the migration time-of-day timer indicates that automatic migration is to begin.
	.1..	MCVTFHMG	When set to 1, the migration subtask is held.
	..1.	MCVTFHRS	When set to 1, the recall subtask is held.
	...1	MCVTFMTC	When set to 1, the migration time-of-day has been changed by the SETSYS command.
	.... 1...	MCVTFCDO	Set to one, if only changed non-VSAM or Integrated Catalog Facility VSAM data sets are to be considered for incremental backup.
	.... .1..	MCVTFLSW	When set to 1, the log data sets are to be switched.
	.... ..1.	MCVTFEMG	When set to 1, DFHSM is in emergency mode.
	1	MCVTFSVC	When set to 1, the DFHSM SVC call has been made for DFHSM initialization.
2 (2)	1...	MCVTFHBU	When set to 1, the backup and recovery subtask is held.
	.1..	MCVTFPBU	Set to one, if backup profiles are to be created.
	..1.	MCVTFBTO	When set to 1, the backup time-of-day timer indicates automatic backup is to begin.
	...1	MCVTFHLG	When set to 1, logging is held.
	.... 1...	MCVTFBTC	When set to 1, backup time-of-day has been changed by the SETSYS command.
	.... .1..	MCVTNOCI	When set to 1, data sets should not be exported by control interval.
	.... ..1.	MCVTFFTO	When set to 1, output is always to be sent to the operator terminal.
	.... ..1.	MCVTFMVF	Alias for MCVTFFTO.
	1	MCVTFJRN	When set to 1, journaling is being done.
3 (3)	1...	MCVTFJRO	When set to 0, speed is the journal option. When set to 1, recovery is the option.
	.1..	MCVTFJCI	When set to 1, control data set journaling is inhibited because a DFHSM error prevents it.
	..1.	MCVTFMSP	When set to 1, the monitor space option indicates that LSPAC messages are to be sent to the operator terminal.
	...1	MCVTFMIP	When set to 1, DFHSM startup command messages are to be sent to the operator terminal.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... 1...	MCVTFREQ	When set to 1, DFHSM must request permission from the operator before beginning automatic functions.
	.... .1..	MCVTFNOL	When set to 1, logging function disabled.
	.... ..1.	MCVTFDMJ	When set to 1, a journal entry is potentially holding SYSZTIOT and SYSZTIOT is needed by another function. Some functions that require SYSZTIOT include: 1. The re-initialization function when log or journal data sets are being opened 2. The journal reset function 3. The ARCILOG task termination cleanup function. Note: When MCVTFDMJ is set to 1, SPEED is in effect.
	1	MCVTFTPS	MCVTFTST = ON and this flag off indicates DFHSM running in tape simulation mode.
4 (4)	4	MCVTQCT	MCVTQCT contains the address of the DFHSM queue control table in the system common service area.
8 (8)	2	MCVTCSP	MCVTCSP contains the common storage area subpool number.
10 (A)	1	*	This byte contains the following flags:
	1...	MCVTFSID	When set to 1, all DFHSM dumps are written to a system dump data set.
	.1..	MCVTCVBK	When set to 1, the SETSYS CDSVERSIONBACKUP command is in effect.
	..1.	MCVTCMDB	When set to 1, the BACKVOL CONTROLDATASETS command was issued.
	...1	MCVTMBKF	When set to 1, DFHSM is currently backing up the MCDS.
	.... 1...	MCVTBBKF	When set to 1, DFHSM is currently backing up the BCDS.
	.... .1..	MCVTOBKF	When set to 1, DFHSM is currently backing up the OCDS.
	.... ..1.	MCVTJBKF	When set to 1, DFHSM is currently backing up the journal data set.
	1	MCVTMRFF	When set to 1, an MHCR read failure occurred while DFHSM was backing up the control data sets or the journal data set.
11 (B)	1	MCVTRV	MCVTRV contains the version, release and modification level of DFHSM in the following format (X'54' = v2.5.0): 3 bits - version (B'010' for version 2) 3 bits - release (B'101' for release 5) 2 bits - modification (B'00' for modification level 0)
12 (C)	4	MCVTCEP	MCVTCEP contains the address of the communications ECB for the operator.
16 (10)	4	MCVTCIBP	MCVTCIBP contains the address of a chain of console command input buffer addresses.
20 (14)	4	MCVTLDCB	MCVTLDCB contains the address of the log DCB.
24 (18)	4	MCVTLBUF	MCVTLBUF contains the address of the log buffer control data.
28 (1C)	2	MCVTSMDS	Small data set size definition in 2K blocks.
30 (1E)	1	MCVTDCMP	MCVTDCMP contains the default percent of space savings assumed when allocating a data set that will be compacted.
31 (1F)	1	MCVTCOMP	MCVTCOMP contains the percent of space savings needed to compact a data set after the initial compaction.
32 (20)	4	MCVTLECB	MCVTLECB contains the ECB indicating when the log buffer is full.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
36 (24)	4	MCVTMWEH	MCVTMWEH contains the address of the beginning of the general management work element queue.
40 (28)	4	MCVTMWET	MCVTMWET contains the address of the end of the general management work element queue.
44 (2C)	2	MCVTDBUG	MCVTDBUG contains the debug options:
	1...	MCVTDBMV	When set to 1, debug mode performs volume functions without moving data.
	.xxx xxxx	*	Reserved.
45 (2D)	1	MCVTFDMP	When set to 1, an exit abnormal end will continue abnormal end processing.
	xxxx xxx.	*	Reserved.
46 (2E)	2	MCVTRACE	MCVTRACE contains the trace options.
	1...	MCVTRCAT	When set to 1, changes to the control data sets are traced in the log data set.
	.1..	MCVTFTRC	When set to 1, the problem determination aid trace function is active.
	..xx xxxx	*	Reserved.
47 (2F)	1	*	Reserved.
48 (30)	4	MCVTECBL	MCVTECBL contains the address of the ECB list for which DFHSM waits for work to do.
52 (34)	4	MCVTOPQH	MCVTOPQH contains the address of the beginning of the operator management work element queue.
56 (38)	4	MCVTOPQT	MCVTOPQT contains the address of the end of the operator management work element queue.
60 (3C)	4	MCVTRSQH	MCVTRSQH contains the address of the beginning of the recall task management work element queue.
64 (40)	4	MCVTRSQT	MCVTRSQT contains the address of the end of the recall task management work element queue.
68 (44)	4	MCVTMGQH	MCVTMGQH contains the address of the beginning of the migration task management work element queue.
72 (48)	4	MCVTMGQT	MCVTMGQT contains the address of the end of the migration task management work element queue.
76 (4C)	4	MCVTOECB	MCVTOECB contains the operator task ECB.
80 (50)	4	*	Defined as follows:
	1	MCVTVSLK	When set to 1, VSAM lock is wanted.
81 (51)	1	*	The following fields describe whether or not the recall attributes must match.
	1...	MCVTFRAT	When set to 1, the recall attributes do not have to match.
	.1..	MCVTFRAM	When set to 1, the automatic space management attributes do not have to match.
	..1.	MCVTFRAB	When set to 1, the automatic backup attributes do not have to match during recall.
	...1	MCVTFRAD	When set to 1, the backup device categories do not have to match during recall.
	.... 1...	MCVTFRRA	When set to 1, DFHSM can reblock to any DASD during recall or recovery (REBLOCKTOANY).
	.... .1..	MCVTFRRB	When set to 1, DFHSM can reblock during or recovery to a target DASD other than a 3330, 3330-1, 3350, or a 3330V when the target DASD volume is different than the source volume (REBLOCKTOBASE).

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... ..1.	MCVTFRRU	When set to 1, DFHSM can reblock during recall or recovery to any DASD when the source and target volumes are different device types (REBLOCKTOUNLIKE).
	1	MCVTFRUP	When set to 1, DFHSM can recall data sets to primary volumes whose recall attributes do not match the volume the data set migrated from.
82 (52)	1	*	This field contains the following flags:
	1...	MCVTMNTS	When set to one, no timer set in migration.
	.1..	MCVTTSOO	When set to one, MSYSIN/MSYSOUT are open reserved.
	..xx xxxx	*	Reserved.
83 (53)	1	MCVTFDEL	MCVTFDEL contains flags to control the deletion of certain types of data sets.
	1...	MCVTFGDG	When set to 1, DFHSM ignores the expiration date at roll-off of a generation data group.
	.1..	MCVTFPW	When set to 1, DFHSM allows password-protected generation data group to migrate, and ignores the password at roll-off.
	..xx xxxx	*	Reserved.
84 (54)	4	MCVTOMWE	MCVTOMWE contains the address of the management work element for the active command.
88 (58)	4	MCVTMECB	MCVTMECB contains the migration task ECB.
92 (5C)	4	MCVTCVRT	Address of control data set volume reserve table.
96 (60)	4	MCVTTRCT	MCVTTRCT contains the pointer to trace table, if available.
100 (64)	4	MCVTRSDP	MCVTRSDP is the serialization field for SDSP data set recalls. Contains 0 if no recall is currently being processed from an SDSP or if the new method of serializing the SDSP is used. Contains -1 when a recall is currently being processed from an SDSP.
104 (68)	4	MCVTMRT	MCVTMRT contains the maximum number of recall tasks.
108 (6C)	4	MCVTRTCB	MCVTRTCB contains the address of the list of recall task control blocks.
112 (70)	4	MCVTOABE	MCVTOABE contains the operator task termination ECB.
116 (74)	4	MCVTLABE	MCVTLABE contains the log task termination ECB.
120 (78)	4	MCVTMABE	MCVTMABE contains the migration task termination ECB.
124 (7C)	4	MCVTSHEC	MCVTSHEC contains the DFHSM shutdown ECB:
	.1..	MCVTSHUT	When set to 1, DFHSM shutdown has been requested.
	x.xx xxxx	*	Reserved.
125 (7D)	3	*	Reserved.
128 (80)	4	MCVTCPPL	MCVTCPPL contains the address of the command processor parameter list.
132 (84)	2	MCVTCSIL	MCVTCSIL contains the DFHSM inactive limit for common service area storage allocation. This limit is a percent of the specified maximum limit (see field MCVTCSHL). After this percent of the specified maximum limit is allocated and DFHSM is inactive, no MWEs are added to the common storage area queue. The default is 30% of the maximum limit common service area usage.
134 (86)	2	MCVTCSAL	MCVTCSAL contains the DFHSM active limit for common service area allocation. The active limit is a percentage of the specified maximum limit (see field MCVTCSHL). The default is 90% of the specified maximum limit. After the specified percentage of common service area is allocated and DFHSM is active, only batch WAIT MWEs are added to the common service area queue.
136 (88)	2	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
138 (8A)	2	MCVTCSNL	MCVTCSNL defines the threshold number of management work elements to allow for each address space. When the number of NOWAIT MWEs on the common service area queue exceeds this threshold, field MWEFDNOW is set to 1 to indicate that the common service area storage area allocated to the MWE is to be released when ARCCTL copies the MWE into the address space of DFHSM. The default is 4 MWEs for each address space.
140 (8C)	4	MCVTMVQH	MCVTMVQH contains the address of the first DFHSM mounted volume table entry.
144 (90)	4	MCVTMVQT	MCVTMVQT contains the address of the last DFHSM mounted volume table entry.
148 (94)	4	MCVTMTOD	MCVTMTOD contains the earliest start time for general migration in 24-hour clock *hhmm* format.
152 (98)	4	MCVTDAYS	MCVTDAYS contains the number of days a data set must be unreferenced before it migrates during daily space management.
156 (9C)	4	MCVTLTCB	MCVTLTCB contains the address of the log task TCB.
160 (A0)	4	MCVTOTCB	MCVTOTCB contains the address of the operator task TCB.
164 (A4)	4	MCVTMTCB	MCVTMTCB contains the address of the migration task TCB.
168 (A8)	4	MCVTCACB	MCVTCACB contains the address of the DFHSM migration control data set access control block.
172 (AC)	4	MCVTMBC	MCVTMBC contains the maximum number of backup versions to be kept for a data set.
176 (B0)	4	MCVTCSHL	MCVTCSHL contains the maximum amount of common service area storage (in bytes) to be allocated to all management work elements. After the limit is reached, no MWEs are added to the common service area queue. The default is 100K bytes.
180 (B4)	4	MCVTSECB	MCVTSECB contains the DFHSM SVC communication ECB.
184 (B8)	4	MCVTRLEH	MCVTRLEH contains the address of the beginning of the retained level element list.
188 (BC)	4	MCVTRLET	MCVTRLET contains the address of the end of the retained level element list.
192 (C0)	7	MCVTAUID	MCVTAUID contains the authorized user identification.
199 (C7)	1	MCVTAUIL	MCVTAUIL contains the length of the authorized user identification.
200 (C8)	1	MCVTMCFL	MCVTMCFL contains the following migration control flags:
	.1..	MCVTFSDP	When set to 1, small data set packing can be used in migration.
	..1.	MCVTFHAM	When set to 1, automatic migration is held.
	...1	MCVTJ3WT	When set to 1, the user wants to wait for the prevent migration process (set only by the PATCH command).
	.... 1...	MCVTFINT	When set to 1, interval migration is requested.
	.... .1..	MCVTFGMR	When set to 1, daily space management is currently running.
	.... ..1.	MCVTFIMR	When set to 1, interval migration is currently running.
	x... ...x	*	Reserved.
201 (C9)	1	MCVTRCFL	MCVTRCFL contains the following recall control flags:
	1...	MCVTFRCV	When set to 0, recall to the volume the user's catalog is on. When set to 1, see MCVTFRPV.
	.1..	MCVTFRPV	When MCVTFRCV is set to 1 and MCVTFRPV is set to 1, nonpooled data sets can be recalled to either private or storage volumes. Otherwise, only volumes mounted as storage can be used.
	..1.	MCVTFHRX	When set to 1, recall is held for those management work elements for which the ARCRDEXT user exit is to be taken.
	...x xxxx	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
202 (CA)	1	MCVTBCFL	MCVTBCFL contains the following backup control flags:
	.1..	MCVTBFEN	When set to 1, backup is enabled. When set to 0, backup is disabled.
	..1.	MCVTFHAB	When set to 1, automatic backup is held.
	...1	MCVTBFGB	When set to 1, automatic backup is needed.
	.... 1...	MCVTFBTI	When set to 1, the automatic backup timer popped.
	x... .xxx	*	Reserved.
203 (CB)	1	*	This byte contains the following long-running command and compaction flags:
	1...	MCVTFHAU	When set to 1, the audit function is held.
	.1..	MCVTFHLT	When set to 1, the list function is held.
	..1.	MCVTFHRP	When set to 1, the report function is held.
	...1	MCVTFHRY	When set to 1, the recycle function is held.
	.... x...	*	Reserved.
	.... .1..	MCVTFCBD	When set to 1, the data set is eligible to be compacted when it is backed up to DASD.
	.... ..1.	MCVTFCBT	When set to 1, the data set is eligible to be compacted when it is backed up to tape.
	1	MCVTFHOP	When set to 1, the operator command queue is held.
204 (CC)	4	MCVTELAG	MCVTELAG contains the frequency in days that listing data sets are to be scratched.
208 (D0)	4	MCVTSUT	MCVTSUT contains the address of the space usage table (SUT).
212 (D4)	8	MCVTQUAL	MCVTQUAL contains the current module name qualifier used in addresses for DISPLAY and PATCH commands.
220 (DC)	4	MCVTDLOG	MCVTDLOG contains the address of the activity log DCB for the DISPLAY, FIXCDS, and PATCH commands.
224 (E0)	4	MCVTONTB	MCVTONTB contains the address of the trap element table.
228 (E4)	4	MCVTL1AG	MCVTL1AG contains the number of days that a data set must be unreferenced before migration from level 1 to level 2.
232 (E8)	4	MCVTL2CR	MCVTL2CR contains the address of the in-storage copy of the level 2 control record.
236 (EC)	4	MCVT80MX	Maximum number of blocks that can be written to a 3480 single-file tape permits short tapes to be written and copied.
240 (F0)	2	MCVTTYPT	MCVTTYPT contains the number of log buffers written before a TYPE=T CLOSE is issued in ARCILOG for the log data set.
242 (F2)	1	MCVTTOCE	MCVTTOCE requests a trace of Open/Close/EOV tape processing.
243 (F3)	1	MCVTDOCE	MCVTDOCE requests a trace of Open/Close/EOV DASD processing.
244 (F4)	2	MCVTSMFI	MCVTSMFI contains the system management facility record number or zero if no system management facility recording is being done.
246 (F6)	2	*	Reserved.
248 (F8)	4	MCVTBACB	MCVTBACB contains the address of the access control block for the backup control data set.
252 (FC)	8	*	Reserved.
260 (104)	4	MCVTVSAH	MCVTVSAH contains the address of the beginning of the VSAM allocation queue.
264 (108)	4	MCVTVSAT	MCVTVSAT contains the address of the end of the VSAM allocation queue.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
268 (10C)	4	MCVTBABE	MCVTBABE contains the backup and recovery task termination ECB.
272 (110)	4	MCVTBECB	MCVTBECB contains the backup and recovery work ECB.
276 (114)	4	MCVTCVBP	MCVTCVBP contains the address of the CDSVERSIONBACKUP parameters. This pointer is non-zero if MCVTCVBK is set to 1.
280 (118)	4	MCVTBTCB	MCVTBTCB contains the address of the backup and recovery task TCB.
284 (11C)	4	MCVTBUQH	MCVTBUQH contains the backup management work element queue head.
288 (120)	4	MCVTBUQT	MCVTBUQT contains the backup management work element queue end.
292 (124)	4	MCVTBTOD	MCVTBTOD contains the earliest start time for automatic backup. The time is in 24-hour clock *hhmm* format.
296 (128)	4	MCVTSID	MCVTSID contains the system identification from the system management facility control table.
300 (12C)	2	MCVTXLIM	MCVTXLIM contains the maximum extents allowed before automatic extent reduction. If the value is 0, the function is not in use.
302 (12E)	2	MCVTNSDP	MCVTNSDP contains the maximum used size in KB of a data set that may be eligible to migrate into a small data set packing.
304 (130)	4	MCVTMTEN	MCVTMTEN contains the latest time of day that automatic migration is allowed to start. The time is in 24-hour *hhmm* format.
308 (134)	4	MCVTBTEN	MCVTBTEN contains the latest time of day that automatic backup is allowed to start. The time is in 24-hour *hhmm* format.
312 (138)	4	MCVTBFRE	MCVTBFRE contains the default backup frequency in days.
316 (13C)	4	MCVTRECB	MCVTRECB contains the recall control task work ECB.
320 (140)	4	MCVTRCTC	MCVTRCTC contains the address of the TCB for the recall control task.
324 (144)	4	MCVTRABE	MCVTRABE contains the ECB for recall control task termination.
328 (148)	1	MCVTHCLS	MCVTHCLS contains the default SYSOUT print class.
329 (149)	1	MCVTHCPY	MCVTHCPY contains the default number of SYSOUT copies.
330 (14A)	1	MCVTJ3D	MCVTJ3D contains the default number of days (3) from the current date that DFHSM will delay migration of a data set and hold volumes.
331 (14B)	1	MCVTJ3V	MCVTJ3V contains the default number of volumes (5) that will be returned to JES3 as candidate volumes for recall.
332 (14C)	8	MCVTHFRM	MCVTHFRM contains the default hard-copy special forms to be used. Blanks mean no special form.
340 (154)	4	MCVTJCBP	MCVTJCBP contains the address of the beginning of the journal data set DCB.
344 (158)	4	MCVTJEQH	MCVTJEQH contains the address of the beginning of the journal entry queue.
348 (15C)	4	MCVTJEQT	MCVTJEQT contains the address of the end of the journal entry queue.
352 (160)	4	MCVTVSQH	MCVTVSQH contains the address of the beginning of the volume statistics record queue.
356 (164)	4	MCVTVSQT	MCVTVSQT contains the address of the end of the volume statistics record queue.
360 (168)	4	MCVTDSRP	MCVTDSRP contains the address of the daily statistics record.
364 (16C)	4	MCVTRCLG	MCVTRCLG contains the address of the log task recovery control block.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
368 (170)	4	MCVTRCOP	MCVTRCOP contains the address of the operator task recovery control block.
372 (174)	4	MCVTRCMC	MCVTRCMC contains the address of the migration control task recovery control block.
376 (178)	4	MCVTRCMG	MCVTRCMG contains the address of the volume migration recovery control block.
380 (17C)	4	MCVTRCMN	MCVTRCMN contains the address of the user migration recovery control block.
384 (180)	4	MCVTRCRC	MCVTRCRC contains the address of the recall control task recovery control block.
388 (184)	4	MCVTRCBU	MCVTRCBU contains the address of the backup control task recovery control block.
392 (188)	4	MCVTRCBG	MCVTRCBG contains the address of the volume backup recovery control block.
396 (18C)	4	MCVTRCBN	MCVTRCBN contains the address of the user backup RCB.
400 (190)	4	*	Reserved.
404 (194)	3	MCVTMHF	MCVTMHF contains the following multiple-host processor shareability flags:
	1...	MCVTSHR	When set to 1, the control data sets are being shared among multiple processors.
	.1..	MCVTL1	When set to 1, this processor is to perform level 1 functions.
	..1.	MCVTCMD	When set to 1, the DFHSM initialization commands in the ARCCMD*xx* member of the data set specified to DFHSM by the HSMPARM DD statement are being processed.
	...1	MCVTFNUR	When set to 1, global data set serialization is provided by system.
	.... ..1.	MCVTSSES	When set to 1, the JES2 or JES3 subsystem supported by DFHSM in its most recent initialization has been established.
	.... xx.x	*	Reserved.
	2	*	Reserved.
407 (197)	1	MCVTHOST	MCVTHOST contains the identification character uniquely identifying this DFHSM processor.
408 (198)	4	MCVTUCAT	MCVTUCAT contains the address of the migration control data set unit control block.
412 (19C)	4	MCVTUBAC	MCVTUBAC contains the address of the backup control data set unit control block.
416 (1A0)	4	MCVTUJRN	MCVTUJRN contains the address of the journal data set unit control block.
420 (1A4)	4	MCVTOACB	MCVTOACB contains the address of the offline control data set ACB.
424 (1A8)	4	MCVTUOFF	MCVTUOFF contains the address of the offline control data set unit control block.
428 (1AC)	8	MCVTUNIT	MCVTUNIT contains the default tape unit name to be used when mounting scratch backup tapes.
436 (1B4)	1	MCVTDEN	MCVTDEN contains the default tape density to be used when mounting scratch backup tapes.
437 (1B5)	1	MCVTPSEC	MCVTPSEC contains the following tape security flags:
	1...	MCVTFTSP	When set to 1, the tape security technique is password.
	.1..	MCVTFTSD	When set to 1, the tape security technique is expiration date.
	..1.	MCVTFTSI	When set to 1, the tape security technique allows password-protected data on a expiration date-protected tape.
	...1	MCVTFTSR	When set to 1, the tape security technique is RACF.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... 1...	MCVTFSRI	When set to 1, the tape security technique allows password-protected data on a RACF-protected tape. This flag is valid only if the MCVTFTSR flag is also set to 1.
	xxx	*	Reserved.
438 (1B6)	2	MCVTYPCT	MCVTYPCT contains the maximum percentage of valid data on a backup tape for it to be eligible for recycle processing.
440 (1B8)	4	MCVTYATT	MCVTYATT contains the address of the recycle attach list.
444 (1BC)	4	MCVTYRCB	MCVTYRCB contains the address of the recycle RCB.
448 (1C0)	4	MCVTAATT	MCVTAATT contains the address of the audit attach list.
452 (1C4)	4	MCVTARCB	MCVTARCB contains the address of the audit RCB.
456 (1C8)	2	MCVTMTST	MCVTMTST contains the number of minutes to wait during the mount wait time before checking for DFHSM shutdown. The value is set at 5 minutes.
458 (1CA)	2	MCVTMTWT	MCVTMTWT contains the number of minutes to wait for a tape mount before prompting the operator.
460 (1CC)	2	MCVTMBVE	MCVTMBVE contains the maximum number of backup volume entries to permit in one BVR block.
462 (1CE)	2	MCVTBMLR	MCVTBMLR contains the size in bytes of the maximum length logical record that is allowed to be written to the backup control data set.
464 (1D0)	4	MCVTUUDT	MCVTUUDT contains an address of the user unit device table.
468 (1D4)	4	MCVTTTXA	MCVTTTXA contains the tape timer exit addressability.
472 (1D8)	4	MCVTTCBB	MCVTTCBB contains the address of the backup task control block structure.
476 (1DC)	2	MCVTNABT	MCVTNABT contains the number of active volume backup tasks.
478 (1DE)	2	MCVTMBTU	MCVTMBTU contains the current maximum number of volume backup tasks allowed to run concurrently.
480 (1E0)	2	MCVTMBTS	MCVTMBTS contains the latest maximum number of concurrent volume backup task specified in the SETSYS command.
482 (1E2)	2	MCVTIAGE	MCVTIAGE contains the data integrity age. In a single-host processor environment, this age is 1 day. In a multiple-host processor environment, this age is 2 days. If global data set level serialization has been provided (MCVTFNUR is set to 1), this age is 0 days.
484 (1E4)	4	*	Reserved.
488 (1E8)	4	MCVTASEP	MCVTASEP contains an address of a list of backup task ECBs that indicate a wait for a spill volume.
492 (1EC)	4	MCVTAECP	MCVTAECP contains an address of a list of backup task ECBs that indicate a wait for a daily backup volume (tape or DASD).
496 (1F0)	4	MCVTTECP	MCVTTECP contains an address of a list of backup task ECBs that indicate a wait for a tape daily backup volume.
500 (1F4)	4	MCVTDECP	MCVTDECP contains an address of a list of backup task ECBs that indicate a wait for a DASD daily backup volume.
504 (1F8)	4	MCVTDSEP	MCVTDSEP contains an address of a list of backup task ECBs that indicate a wait for a DASD spill volume.
508 (1FC)	4	MCVTTSEP	MCVTTSEP contains an address of a list of backup task ECBs that indicate a wait for a tape spill volume.
512 (200)	4	*	Reserved.
516 (204)	4	*	Reserved.
520 (208)	4	MCVTCBAU	MCVTCBAU contains the address of the TCB for the active audit task.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
524 (20C)	4	MCVTCBLT	MCVTCBLT contains the address of the TCB for the active list task.
528 (210)	4	MCVTCBRP	MCVTCBRP contains the address of the TCB for the active report task.
532 (214)	4	MCVTCBRY	MCVTCBRY contains the address of the TCB for the active recycle task.
536 (218)	4	MCVTECAU	MCVTECAU contains the ECB that indicates completion of the audit MWE:
	.1..	MCVTFCAU	When set to 1, the audit function has completed.
	x.xx xxxx	*	Reserved.
	3	*	Reserved.
540 (21C)	4	MCVTECLT	MCVTECLT contains the ECB that indicates completion of list MWE:
	.1..	MCVTFCLT	When set to 1, the list function has completed.
	x.xx xxxx	*	Reserved.
	3	*	Reserved.
544 (220)	4	MCVTECRP	MCVTECRP contains the ECB that indicates completion of report MWE:
	.1..	MCVTFCRP	When set to 1, the report function has completed.
	x.xx xxxx	*	Reserved.
	3	*	Reserved.
548 (224)	4	MCVTECRY	MCVTECRY contains the ECB that indicates completion of recycle MWE:
	.1.. ...	MCVTFCRY	When set to 1, the recycle function has completed.
	x.xx xxxx	*	Reserved.
	3	*	Reserved.
552 (228)	2	MCVTCLNR	MCVTCLNR contains the number of days MCD records are retained after migrated data sets are recalled or deleted.
554 (22A)	2	MCVTCLNS	MCVTCLNS contains the number of days before statistics records are deleted.
556 (22C)	4	MCVTEXTP	MCVTEXTP contains an address of the user exit table that indicates which user exits are to be processed.
560 (230)	1	MCVTFUSB	MCVTFUSB contains the following usability flags:
	1...	MCVTFUNB	When set to 1, unload virtual backup and level 2 volumes.
	.1..	MCVTFSAB	When set to 1, automatic backup of primary volumes is skipped when automatic backup is run.
	..1.	MCVTFSCR	When set to 1, make the recycle tape volume a scratch tape volume. When set to 0, make the recycle tape volume an unassigned backup volume.
	...1	MCVTFSWP	When set to 1, MVS can swap DFHSM tasks.
	.... 1...	MCVTFNEB	When set to 1, backup cannot be enabled.
	.... .1..	MCVTFCNV	When set to 1, conversion is requested in the SETSYS command.
	.... ..1.	MCVTFNSP	When set to 1, no spill processing is requested in the SETSYS command.
	1	MCVTFNSW	When set to 1, do not allow swap of DFHSM primary address space.
561 (231)	1	MCVTFUSL	MCVTFUSL contains the following flags:
	1...	MCVTFCUS	When set to 1, the command activity log has been used.
	.1..	MCVTFMUS	When set to 1, the migration activity log has been used.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	..1.	MCVTFBUS	When set to 1, the backup activity log has been used.
	...1	MCVTFDUS	When set to 1, the dump activity log has been used.
	.... 1...	MCVTFSPL	When set to 1, LOGSW = YES is specified in the startup procedure.
	.... .1..	MCVTFSPS	When set to 1, STARTUP = YES is specified in the startup procedure.
	.... ..1.	MCVTFSPE	When set to 1, EMERG = YES is specified in the startup procedure.
	x	*	Reserved.
562 (232)	2	MCVTCMDX	MCVTCMDX contains the *xx* used to specify the ARCCMD*xx* parameter member used.
564 (234)	4	MCVTCDCB	MCVTCDCB contains the DCB address of the command activity log.
568 (238)	4	MCVTMDCB	MCVTMDCB contains the DCB address of the migration activity log.
572 (23C)	4	MCVTBDCB	MCVTBDCB contains the DCB address of the backup activity log.
576 (240)	4	MCVTYDCB	MCVTYDCB contains the DCB address of a data set for recycle messages.
580 (244)	4	*	Reserved.
584 (248)	2	MCVTNARV	MCVTNARV contains the number of primary volumes on the MVT chain that can be used in recall selection.
586 (24A)	2	MCVTMTL2	MCVTMTL2 contains the maximum number of virtual migration level 2 volumes that are mounted in parallel during migration cleanup. If 0, there is no limit.
588 (24C)	1	*	This byte contains DFHSM internal processing flags:
	1...	MCVTFMVD	When set to 1, the MCDS has been verified since the volume containing the MCDS was reserved.
	.1..	MCVTFBVD	When set to 1, the BCDS has been verified since the volume containing the BCDS was reserved.
	..1.	MCVTFOVD	When set to 1, the OCDS has been verified since the volume containing the OCDS was reserved.
	...1	MCVTFJRP	When set to 1, journal reset pending by ARCILOG during BACKVOL CDS command.
	 xxxx	*	Reserved.
589 (24D)	3	*	Reserved.
592 (250)	4	MCVTMTB	MCVTMTB contains the address of the migration task control block.
596 (254)	4	MCVTML2H	MCVTML2H contains the address of the first level 2 DASD MVT entry.
600 (258)	4	MCVTML2T	MCVTML2T contains the address of the last level 2 DASD MVT entry.
604 (25C)	4	MCVTRDKN	MCVTRDKN contains how often the MCDS key is recorded in the MCR during the primary host function during daily space management. Also used to determine how often DFHSM resources should be freed and reacquired when held for extended periods of time.
608 (260)	8	*	Reserved.
616 (268)	4	MCVTMVQS	MCVTMVQS contains the address of the last MVT on the MVT chain at the time DFHSM initialization ended.
620 (26C)	4	MCVTRLES	MCVTRLES contains the address of the RLE or RLE chain at the time DFHSM initialization ended.
624 (270)	4	MCVTVACH	MCVTVACH contains the address of the first in-storage volume activity count record.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
628 (274)	4	MCVTVACT	MCVTVACT contains the address of the last in-storage volume activity count record.
632 (278)	4	MCVTTMRT	MCVTTMRT contains the maximum number of tape recall tasks.
636 (27C)	2	MCVTRTRY	MCVTRTRY contains the number of retries ARCRCTL will try to get a volume for recall before notifying the operator.
638 (27E)	2	MCVTRTM1	MCVTRTM1 contains the frequency of the retry interval (in minutes) - (see MCVTRTRY).
640 (280)	2	MCVTRTM2	MCVTRTM2 contains the delay in seconds before rescan of recall queue when waiting for the possibility of another recall to arrive that will use the same tape that is already mounted.
642 (282)	1	MCVTSDSP	When set to X'FF', use the SDSP serialization method of allowing multiple recall tasks to access concurrently the same SDSP.
643 (283)	1	MCVTFDIS	This byte contains disaster backup processing flags:
	1...	MCVTFTCP	When set to 1, the PARTIALTAPE (MARKFULL) parameter is in effect.
	.1..	MCVTFCTH	When set to 1, the tape copy function is held.
	..1.	MCVTFCUH	When set to 1, the tape replace function is held.
	...1	MCVTFTNF	When set to 1, the tapecopy and dump functions will generate a new form for dataset names.
	 xxxx	*	Reserved.
644 (284)	4	*	Reserved.
648 (288)	4	MCVTCBYD	MCVTCBYD contains an address of the task control block of the ARCRCYDS task.
652 (28C)	4	*	Reserved.
656 (290)	4	*	Reserved.
660 (294)	1	MCVT4FLG	MCVT4FLG contains process control flags:
	1...	MCVTFNDF	When set to 1, do not use the DEFER parameter on the allocation request because a failure occurred previously.
	.1..	MCVTFDFP	When set to 1, the correct level of DFP is installed on this system.
	..1.	MCVTFSVO	When set to 1, the SETSYS SELECTVOLUME option is SPECIFIC. When set to 0, the SETSYS SELECTVOLUME option is SCRATCH.
	...1	MCVTFCMD	When set to 1, DFHSM compacts the data set when it migrates to DASD.
	.... 1...	MCVTFCMT	When set to 1, DFHSM compacts the data set when it migrates to tape.
	.... .1..	MCVTFL2V	When set to 1, tape migration level 2 volumes are defined in this host processor.
	.... ..1.	MCVTPREL	When set to 1, support exists for DADSM partial release.
	x	*	Reserved.
661 (295)	1	*	This field contains the following flags:
	1...	MCVTFITW	When set to 1, the dynamic allocation option for input tape volumes is to wait for a unit to become available. When set to 0, the option is NOWAIT.
	.1..	MCVTFOTW	When set to 1, the dynamic allocation option for output tape volumes is to wait for a unit to become available. When set to 0, the option is NOWAIT.
	..1.	MCVTFYTW	When set to 1, the dynamic allocation option for input and output tape volumes during recycle processing is to wait for a unit to become available. When set to 0, the option is NOWAIT.
	...x xxxx	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
662 (296)	1	*	This field contains the following flags:
	1...	MCVTFRDK	When set to 1, check whether daily space management should be restarted.
	.1..	MCVTFRDI	When set to 1, daily space management is being restarted from the point of interruption. It is not started from the beginning.
	..1.	MCVTFQSP	When set to 1, the migration control task is being dispatched to check the space on a volume. This is done as a result of a QUERY SPACE command.
	...x xxxx	*	Reserved.
663 (297)	1	*	Reserved.
664 (298)	1	MCVTL2TS	MCVTL2TS contains the type of level 2 support in this host processor. 0 = DASD level 2 volumes or no level 2 volumes 1 = direct to tape environment 2 = tape level 2 volumes
665 (299)	1	MCVTMTYP	SETSYS TAPEMIGRATION tape type. 0 = tape(ANY) 1 = tape(*unit*)
666 (29A)	1	MCVTFMDS	Patch byte for JES3 main device scheduling (MDS):
	1...	MCVTJ25T	When set to 1, scheduling is for tapes only, DFHSM must be run with SETSYS JES2.
	.xxx xxxx	*	Reserved.
667 (29B)	1	MCVTMDEN	MCVTMDEN contains the default tape density if a scratch tape is being allocated for migration.
668 (29C)	8	MCVTMUNT	MCVTMUNT contains the default unit name if a scratch tape is being allocated for migration.
676 (2A4)	2	MCVTL2YP	MCVTL2YP contains the maximum percent of valid data on a tape migration volume for the tape to be eligible for recycling.
678 (2A6)	2	*	Reserved.
680 (2A8)	4	MCVTTVTP	MCVTTVTP contains the address of the tape migration level 2 volume table.
684 (2AC)	4	MCVTDL2P	MCVTDL2P contains the address of the DASD migration level 2 volume table.
688 (2B0)	8	MCVTBPFX	MCVTBPFX contains the qualifier to be prefixed to the backup version when the data set is backed up.
696 (2B8)	2	MCVTBPFL	MCVTBPFL contains the length of the backup version qualifier.
698 (2BA)	8	MCVTMPFX	MCVTMPFX contains the qualifier to be prefixed to the migration copy when the data set is migrated.
706 (2C2)	2	MCVTMPFL	MCVTMPFL contains the length of the migration copy qualifier.
708 (2C4)	4	*	RACF support flags:
	1...	MCVTFRAL	When set to 1, do not put RACF indicator on DFHSM migration copies and backup versions.
	.1..	MCVTRPRO	When set to 1, use additional RACF tape volume list profiles.
	..xx xxxx	*	Reserved.
	3	*	Reserved.
712 (2C8)	4	MCVTGCBP	MCVTGCBP contains the address of recovery task control block.
716 (2CC)	4	MCVTYCBP	MCVTYCBP contains the address of recycle task control block.
720 (2D0)	4	MCVTMSRA	MCVTMSRA contains the migration control data set synchronization record storage area.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
724 (2D4)	4	MCVTBSRA	MCVTBSRA contains the backup control data set synchronization record storage area.
728 (2D8)	4	MCVTOSRA	MCVTOSRA contains the offline control data set synchronization record storage area.
732 (2DC)	4	MCVTBQWT	Backup queue MWE in between processing.
736 (2E0)	4	MCVTCTBP	MCVTCTBP contains the address of the tape copy task control block.
740 (2E4)	4	MCVTCDBP	MCVTCDBP contains the address of the tape replace task control block.
744 (2E8)	8	MCVTMTUN	MCVTMTUN contains the unit name specified with SETSYS TAPEMIGRATION(DIRECT(TAPE(*unit*)) or SETSYS TAPEMIGRATION(ML2TAPE(TAPE(*unit*)) command.
752 (2F0)	8	MCVTBTUN	MCVTBTUN contains the unit name specified on the SETSYS BACKUP(TAPE(*unit*)) command.
760 (2F8)	8	MCVTSTUN	MCVTSTUN contains the unit name specified on the SETSYS SPILL(TAPE(*unit*)) command.
768 (300)	8	MCVTYBUN	MCVTYBUN contains the unit name specified on the SETSYS RECYCLEOUTPUT(BACKUP(*unit*)) command.
776 (308)	8	MCVTYMUN	MCVTYMUN contains the unit name specified on the SETSYS RECYCLEOUTPUT(MIGRATION(*unit*)) command
784 (310)	1	MCVTMTDE	MCVTMTDE contains the density associated with unit name in MCVTMTUN.
785 (311)	1	MCVTBTDE	MCVTBTDE contains the density associated with unit name in MCVTBTUN.
786 (312)	1	MCVTSTDE	MCVTSTDE contains the density associated with unit name in MCVTSTUN.
787 (313)	1	MCVTYBDE	MCVTYBDE contains the density associated with unit name in MCVTYBUN.
788 (314)	1	MCVTYMDE	MCVTYMDE contains the density associated with unit name in MCVTYMUN.
789 (315)	2	*	Reserved.
791 (317)	1	MCVTFBVS	MCVTFBVS contains backup volume selection flags:
	1...	MCVTFBDA	When set to 1, volume backup processing can output to a tape or DASD daily backup volume.
	.1..	MCVTFBDD	When set to 1, volume backup processing can output only to a DASD daily backup volume.
	..1.	MCVTFBDT	When set to 1, volume backup processing can output only to a tape daily backup volume.
	...1	MCVTFBSA	When set to 1, spill processing can output to any type of spill backup volume.
	.... 1...	MCVTFBSD	When set to 1, spill processing can output only to a DASD spill backup volume.
	.... .1..	MCVTFBST	When set to 1, spill processing can output only to a tape spill backup volume.
	xx	*	Reserved.
792 (318)	4	MCVTCTBE	This field contains the tape copy function completion ECB:
	.1..	MCVTCTBF	When set to 1, the tape copy function is completed.
	x.xx xxxx	*	Reserved.
	3	*	Reserved.
796 (31C)	4	MCVTCDBE	This field contains the tape replace function ECB:
	.1..	MCVTCDBF	When set to 1, the tape replace function is completed.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	x.xx xxxx	*	Reserved.
797 (31D)	3	*	Reserved.
800 (320)	1	*	Reserved.
801 (321)	7	MCVTACTN	MCVTACTN contains the new activity log high-level qualifier.
808 (328)	4	MCVAWEC	MCVAWEC contains the ARCALOG work-to-do ECB.
812 (32C)	4	MCVTDECB	MCVTDECB contains the ARCDCTL work-to-do ECB.
816 (330)	4	MCVTGECB	MCVTGECB contains the ARCGCTL work-to-do ECB.
820 (334)	4	MCVTATEC	MCVTATEC contains the ARCALOG termination ECB.
824 (338)	4	MCVTDABE	MCVTDABE contains the ARCDCTL termination ECB.
828 (33C)	4	MCVTGABE	MCVTGABE contains the ARCGCTL termination ECB.
832 (340)	4	MCVTAIEC	MCVTAIEC contains the ARCALOG initialization complete ECB.
836 (344)	4	MVCTTAEC	MCVTTAEC contains the termination ALOG task ECB.
840 (348)	4	MCVTDHCL	MCVTDHCL contains the close dump log ECB.
844 (34C)	4	MCVTRCPD	MCVTRCPD contains the ARCPDO task RCB pointer.
848 (350)	4	MCVTPTCB	MCVTPTCB contains the ARCPDO task TCB pointer.
852 (354)	4	MCVTRCAL	MCVTRCAL contains the address of the ARCALOG RCB.
856 (358)	4	MCVTRCDC	MCVTRCDC contains the address of the ARCDCTL RCB.
860 (35C)	4	MCVTRCGC	MCVTRCGC contains the address of the ARCGCTL RCB.
864 (360)	4	MCVTRCDG	MCVTRCDG contains the address of the ARCDGEN RCB.
868 (364)	4	MCVTATCB	MCVTATCB contains the address of the ARCALOG task TCB.
872 (368)	4	MCVTDTCB	MCVTDTCB contains the address of the ARCDCTL task TCB.
876 (36C)	4	MCVTGTCB	MCVTGTCB contains the address of the ARCGCTL task TCB.
880 (370)	8	MCVTALQP	MCVTALQP contains the activity log work element queue pointers.
	4	MCVTALQH	MCVTALQH contains the address of the activity log work element head.
884 (374)	4	MCVTALQT	MCVTALQT contains the address of the activity log work element tail.
888 (378)	4	MCVTDDCB	MCVTDDCB contains the address of the dump activity log DCB.
892 (37C)	4	MCVTDSTP	MCVTDSTP contains the address of the dump volume selection table.
896 (380)	4	MCVTDTCP	MCVTDTCP contains the address of the dump task control blocks.
900 (384)	4	MCVTTCDG	MCVTTCDG contains the address of the ARCDGEN TCB.
904 (38C)	4	MCVTPABE	MCVTPABE contains the ARCPDO termination ECB.
908 (38C)	1	MCVTPDRL	MCVTPDRL contains the PDA trace record size.
909 (38D)	1	MCVTPDRW	MCVTPDRW contains the number of records in the PDA trace wrap buffer.
910 (38E)	1	MCVTPDBF	MCVTPDBF contains the maximum number of blocks in the PDQ free pool.
911 (38F)	1	*	Reserved.
912 (390)	1	MCVTBUFS	MCVTBUFS contains the number of buffers for ARCDOPEN.
913 (391)	3	*	Reserved.
916 (394)	4	MCVTDTOD	MCVTDTOD contains the earliest start time for automatic dump.
920 (398)	4	MCVTDTEN	MCVTDTEN contains the latest start time for automatic dump.
924 (39C)	4	MCVTDTSS	MCVTDTSS contains the time at which no more full volume dumps will be started during automatic dump.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
928 (3A0)	4	MCVTBTSS	MCVTBTSS contains the time at which no more volume backups will be started during automatic backup.
932 (3A4)	4	MCVTMTSS	MCVTMTSS contains the time at which no more volume migration will be started during automatic migration.
936 (3A8)	8	*	Reserved.
944 (3B0)	2	MCVTPFAC	MCVTPFAC contains the priority factor for the migration order.
946 (3B2)	2	MCVTPRCO	MCVTPRCO contains the priority cutoff for migration order.
948 (3B4)	2	MCVTMDTS	MCVTMDTS contains the maximum number of dump tasks allowed to run concurrently.
950 (3B6)	2	MCVTNADT	MCVTNADT contains the number of currently active dump tasks.
952 (3B8)	2	MCVTDUIM	MCVTDUIM controls tracing of the dump user-interface module. When set to 1, ARCERP is called each time ARCDUUIM is called to interface between DFHSM and DFDSS. When set to 2, ARCERP is called each time ARCDUUIM is called to interface between DFHSM and DFDSS and again each time ARCDUUIM exits its interface between DFHSM and DFDSS.
954 (3BA)	2	MCVTRUIM	MCVTRUIM controls tracing of the restore user-interface module. When set to 1, ARCERP is called each time ARCRUUIM is called to interface between DFHSM and DFDSS. When set to 2, ARCERP is called each time ARCRUUIM is called to interface between DFHSM and DFDSS and again each time ARCRUUIM exits its interface beween DFHSM and DFDSS.
956 (3BC)	1	MCVTPDFL	MCVTPDFL contains the problem determination function switches:
	1...	MCVTFNPD	When set to 1, the problem determination function is disabled.
	.1..	MCVTFPDH	When set to 1, the problem determination function is held.
	..1.	MCVTFSPD	When set to 1, a shutdown of the problem determination has been requested.
	...1	MCVTFPSW	When set to 1, a problem determination data set swap has been requested.
	.... 1...	MCVTFNPQ	When set to 1, trace output queuing is disallowed.
	.... .1..	MCVTFPDT	When set to 1, problem determination task has ended.
	xx	*	Reserved.
957 (3BD)	3	*	Reserved.
960 (3C0)	1	MCVTLLVL	MCVTLLVL contains one of the following activity logging levels: R - reduced F - full E - exception only
961 (3C1)	1	MCVTLCLS	MCVTLCLS contains the activity log system output class.
962 (3C2)	1	MCVTDIOO	MCVTDIOO contains the dump I/O optimization option.
963 (3C3)	1	*	This field contains the following flags:
	1...	MCVTALLX	When set to 1, ALLEXCP option is suppressed.
	.1..	MCVTALLD	When set to 1, ALLDATA option is suppressed.
	..1.	MCVTDSSC	When set to 1, DFDSS compression has been selected.
	...x xxxx	*	Reserved.
964 (3C4)	4	*	Reserved.
968 (3C8)	8	*	Reserved.
976 (3D0)	2	*	This field contains the following flags:
	1...	MCVTSCR	When set to 1, scratch expired data sets.
	.1..	MCVTFGED	When set to 1, recover is held at the end of the data set.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	..1.	MCVTFHTR	When set to 1, the tape recovery function is held.
	...1	MCVTFHTS	When set to 1, the tape recall function is held.
	.... 1...	MCVTFHTI	When set to 1, the interactive tape recall function is held.
	.... .1..	MCVTF389	When set to 1, message ARC0389 has been issued to the operator.
	.... ..1.	MCVTFMEV	When set to 1, migration is held at end of volume.
	1	MCVTFAMV	When set to 1, automatic migration is held at end of volume.
	1...	MCVTFBEV	When set to 1, backup is held at end of volume.
	.1..	MCVTFABV	When set to 1, automatic backup is held at end of volume.
	..1.	MCVTFGEV	When set to 1, recovery is held at end of volume.
	...1	MCVTFHDI	When set to 1, dump held immediately.
	.... 1...	MCVTFADI	When set to 1, automatic dump held immediately.
	.... .1..	MCVTFHDV	When set to 1, dump held at end of volume.
	.... ..1.	MCVTFADV	When set to 1, automatic dump held at end of volume.
	x	*	Reserved.
978 (3D2)	2	*	Contains erase-on-scratch, activity log, and miscellaneous indicators:
	1...	MCVTEOSS	When set to 1, erase-on-scratch is supported by the system.
	.1..	MCVTFEOS	When set to 1, erase-on-scratch support is allowed for erasure of backup versions and migration copies.
	..1.	MCVTFLDA	When set to 1, activity log type is DASD. When set to 0, activity log type is SYSOUT.
	...1	MCVTFYR2	When set to 1, DFP support for dates beyond 1999 is available on the system.
	.... 1...	MCVTFALI	When set to 1, an I/O error has been detected during writing to a DASD activity log.
	.... .1..	MCVTFODB	When set to 1, optimum DASD blocking has been requested.
	.... ..1.	MCVTFSY2	When set to 1, MVS support for dates beyond 1999 is available on the system.
	x	*	Reserved.
	1...	MCVTFMSG	When set to 1, send messages to the operator for test.
	.1..	MCVTFD23	When set to 1, DFP 2.3.0 or higher is installed.
	..xx xxxx	*	Reserved.
980 (3D4)	2	*	Contains volume dump and restore indicators:
	1...	MCVTFCKD	When set to 1, check if any dump-related functions need to be processed.
	.1..	MCVTFQDM	When set to 1, a dump management work element has been added to the backup queue.
	..1.	MCVTFMDT	When set to 1, the maximum number of volume dump tasks has been increased.
	...1	MCVTFSDS	When set to 1, a sufficient level of DFDSS is on the system to support volume dump and restore.
	.... 1...	MCVTFDTS	When set to 1, timer has been set by ARCDCTL to expire at the automatic dump start time.
	.... .1..	MCVTFDTE	When set to 1, timer set by ARCDCTL (to expire at the automatic dump start time) has popped.
	.... ..1.	MCVTFNXA	When set to 1, this system is not running at a minimum system level of MVS/XA.
	x	*	Reserved.
	1	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
982 (3D6)	2	*	Reserved.
984 (3D8)	4	MCVTUSR1	MCVTUSR1 is used by installation exits.
988 (3DC)	4	MCVTUSR2	MCVTUSR2 is used by installation exits.
992 (3EO)	4	MCVTUSR3	MCVTUSR3 is used by installation exits.
996 (3E4)	4	MCVTUSR4	MCVTUSR4 is used by installation exits.
1000 (3E8)	4	*	Reserved.
1004 (3EC)	8	*	Reserved.
1012 (3F4)	4	MCVTSMQH	MCVTSMQH contains the address of the SMS MVT chain head.
1016 (3F8)	4	MCVTSMQT	MCVTSMQT contains the address of the SMS MVT chain tail.
1020 (3FC)	4	MCVTSAQP	MCVTSAQP contains the address of the SAQ area.
1024 (400)	4	MCVTSP00	MCVTSP00 contains the address of the DFP module IGDCSP00.
1028 (404)	4	MCVTMGCP	MCVTMGCP contains the address of the migration global control block.
1032 (408)	4	MCVTBGCP	MCVTBGCP contains the address of the backup global control block.
1036 (40C)	4	MCVTDGCP	MCVTDGCP contains the address of the dump global control block.
1040 (410)	4	MCVTEGCP	MCVTEGCP contains the address of the expire backup version global control block.
1044 (414)	4	MCVTMMTM	MCVTMMTM contains the minimum time between automatic migration processing of SMS volume (binary number in seconds).
1048 (418)	4	MCVTMBTM	MCVTMBTM contains the minimum time between automatic backup processing of SMS volume (binary number in seconds).
1052 (41C)	4	MCVTMDTM	MCVTMDTM contains the minimum time between automatic dump processing of SMS volume (binary number in seconds).
1056 (420)	4	MCVTIMTM	MCVTIMTM contains the minimum time between interval migration processing of an SMS-managed volume (binary number in seconds).
1060 (424)	2	MCVTDAID	MCVTDAID contains the subpool number for the SMS data buffer.
1062 (426)	2	MCVTSPID	MCVTSPID contains the subpool number for the SMS message buffer.
1064 (428)	8	MCVTNTUN	MCVTNTUN contains the unit name for the value specified with ROUTETOTAPE.
1072 (430)	1	MCVTNTDE	MCVTNTDE contains the density of the unit name specified with ROUTETOTAPE.
1073 (431)	3	MCVTSFLG	MCVTSFLG contains the following SMS-related flags:
	1...	MCVTFSMS	When set to 1, SMS is installed.
	.1..	MCVTFMLA	When set to 1, multiple level alias support is installed.
	.1..	MCVTFD24	When set to 1, a level of DFP higher than 2.3.0 is installed (same as MCVTFMLA above).
	..1.	MCVTNRTP	When set to 1, SETSYS TAPEMIGRATION NONE (ROUTETOTAPE) was specified.
	...1	MCVTFSRS	When set to 1, the DFP system reblockable function is available.
	.... 1...	MCVTFDSS	When set to 1, SMS support is installed on the version of DFDSS being used.
	.... .1..	MCVTFOEM	When set to 1, the OEM field in the format 1 DSCB is to be restored upon recall or recover. (This flag is only functional if the MCVTFD24 flag is set to 0.)
	xx	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
1074 (432)	2	*	Reserved.
1076 (434)	4	MCVTRERL	MCVTRERL contains the read error limit as a percentage of MCVTRDKN.
1080 (438)	8	MCVTTSUN	Unit name for TSO tape simulation.
1088 (440)	4	MCVTL1SD	Space delta to cause MC1
1092 (444)	4	*	Reserved
1096 (448)	4	MCVTABRP	Address of ABRCB
1100 (44C)	3	MCVTDFLG	This field contains the following PDSE/DMV related flags:
	1...	MCVTDSLD	When set to 1, DFDSS needs to be loaded or reloaded.
	.1..	MCVTDS25	When set to 1, DFDSS 2.5.0 or higher is installed on the system.
	..1.	MCVTFDDM	When set to 1, DFDSS is to be used as the primary data mover.
	...1	MCVTFPDE	When set to 1, partitioned data sets extended (PDSES) are supported by the system.
	.... 1...	MCVTFD32	When set to 1, DFP 3.2.0 or higher is installed on the system
	xxx	*	Reserved
1103 (44F)	1	MCVTLDIO	DFDSS logical data set dump I/O optimization option.
1104 (450)	4	*	Reserved.
1108 (454)	3	MCVTDSSM	DFDSS message number to cause a DFDSS ABEND.
1111 (457)	40	*	Reserved.

MCVT Data Area Cross-Reference

Field	Offset	Field	Offset
MCVTAATT	448 (1C0)	MCVTBTDE	785 (311)
MCVTABRP	1096 (448)	MCVTBTEN	308 (134)
MCVTACTN	801 (321)	MCVTBTOD	292 (124)
MCVTAECP	492 (1EC)	MCVTBTSS	928 (3A0)
MCVTAIEC	832 (340)	MCVTBTUN	752 (2F0)
MCVTALLD	963 (3C3)	MCVTBUQH	284 (11C)
MCVTALLX	963 (3C3)	MCVTBUQT	288 (120)
MCVTALQH	880 (370)	MCVTCACB	168 (A8)
MCVTALQP	880 (370)	MCVTCBAU	520 (208)
MCVTALQT	884 (374)	MCVTCBLT	524 (20C)
MCVTARCB	452 (1C4)	MCVTCBRP	528 (210)
MCVTASEP	488 (1E8)	MCVTCBRY	532 (214)
MCVTATCB	868 (364)	MCVTCBYD	648 (288)
MCVTATEC	820 (334)	MCVTCDBE	796 (31C)
MCVTAUID	192 (C0)	MCVTCDBF	796 (31C)
MCVTAUIL	199 (C7)	MCVTCDBP	740 (2E4)
MCVTAWEC	808 (328)	MCVTCDCB	564 (234)
MCVTBABE	268 (10C)	MCVTCEP	12 (C)
MCVTBACB	248 (F8)	MCVTCIBP	16 (10)
MCVTBBKF	10 (A)	MCVTCLNR	552 (228)
MCVTBCFL	202 (CA)	MCVTCLNS	554 (22A)
MCVTBDCB	572 (23C)	MCVTCMD	404 (194)
MCVTBECB	272 (110)	MCVTCMDB	10 (A)
MCVTBFEN	202 (CA)	MCVTCMDX	562 (232)
MCVTBFGB	202 (CA)	MCVTCOMP	31 (1F)
MCVTBFRE	312 (138)	MCVTCPPL	128 (80)
MCVTBGCP	1032 (408)	MCVTCSAL	134 (86)
MCVTBMLR	462 (1CE)	MCVTCSHL	176 (B0)
MCVTBPFL	696 (2B8)	MCVTCSIL	132 (84)
MCVTBQWT	732 (2DC)	MCVTCSNL	138 (8A)
MCVTBSRA	724 (2D4)	MCVTCSP	8 (8)
MCVTBTCB	280 (118)	MCVTCTBE	792 (318)

Field	Offset
MCVTCTBF	792 (318)
MCVTCTBP	736 (2E0)
MCVTCVBK	10 (A)
MCVTCVBP	276 (114)
MCVTCVRT	92 (5C)
MCVTDABE	824 (338)
MCVTDAID	1060 (424)
MCVTDAYS	152 (98)
MCVTDBMV	44 (2C)
MCVTDBUG	44 (2C)
MCVTDCMP	30 (1E)
MCVTDDCB	888 (378)
MCVTDECB	812 (32C)
MCVTDFLG	1100 (44C)
MCVTDECP	500 (1F4)
MCVTDEN	436 (1B4)
MCVTDGCP	1036 (40C)
MCVTDHCL	840 (348)
MCVTDIOO	962 (3C3)
MCVTDLOG	220 (DC)
MCVTDL2P	684 (2AC)
MCVTDOCE	243 (F3)
MCVTDSEP	504 (1F8)
MCVTDSLD	1100 (44C)
MCVTDSRP	360 (168)
MCVTDSSM	1108 (454)
MCVTDSTP	892 (37C)
MCVTDS25	1100 (44C)
MCVTDTCB	872 (368)
MCVTDTCP	896 (380)
MCVTDTEN	920 (398)
MCVTDTOD	916 (394)
MCVTDTSS	924 (39C)
MCVTDUIM	952 (3B8)
MCVTECAU	536 (218)
MCVTECBL	48 (30)
MCVTECLT	540 (21C)
MCVTECRP	544 (220)
MCVTECRY	548 (224)
MCVTEGCP	1040 (410)
MCVTELAG	204 (CC)
MCVTEOSS	978 (3D2)
MCVTEXTP	556 (22C)
MCVTFABV	976 (3D0)
MCVTFADI	976 (3D0)
MCVTFADV	976 (3D0)
MCVTFALI	978 (3D2)
MCVTFAMV	976 (3D0)
MCVTFATL	0 (0)
MCVTFBDA	789 (315)
MCVTFBDD	789 (315)
MCVTFBDT	789 (315)
MCVTFBEV	976 (3D0)
MCVTFBSA	789 (315)
MCVTFBSD	789 (315)
MCVTFBST	789 (315)
MCVTFBTC	2 (2)
MCVTFBTI	202 (CA)
MCVTFBTO	2 (2)
MCVTFBUS	561 (231)
MCVTFBVD	588 (24C)
MCVTFBVS	791 (317)
MCVTFCAU	536 (218)
MCVTFCBD	203 (CB)
MCVTFCBT	203 (CB)
MCVTFCDO	1 (1)
MCVTFCKD	980 (3D4)
MCVTFCLT	540 (21C)
MCVTFCMD	660 (294)

Field	Offset
MCVTFCMT	660 (294)
MCVTFCNV	560 (230)
MCVTFCRP	544 (220)
MCVTFCRY	548 (224)
MCVTFCTH	643 (283)
MCVTFCUH	643 (283)
MCVTFCUS	561 (231)
MCVTFDDM	1100 (44C)
MCVTFDEL	83 (53)
MCVTFDFP	660 (294)
MCVTFDIS	643 (283)
MCVTFDMJ	3 (3)
MCVTFDMP	45 (2D)
MCVTFDSS	1073 (431)
MCVTFDTE	980 (3D4)
MCVTFDTS	980 (3D4)
MCVTFDUS	561 (231)
MCVTFD23	979 (3D3)
MCVTFD24	1073 (431)
MCVTFD32	1100 (44C)
MCVTFEMG	1 (1)
MCVTFEOS	978 (3D2)
MCVTFFTO	2 (2)
MCVTFGDG	83 (53)
MCVTFGED	976 (3D0)
MCVTFGEV	976 (3D0)
MCVTFGMR	200 (C8)
MCVTFHAB	202 (CA)
MCVTFHAM	200 (C8)
MCVTFHAU	203 (CB)
MCVTFHBU	2 (2)
MCVTFHDI	976 (3D0)
MCVTFHDV	976 (3D0)
MCVTFHLG	2 (2)
MCVTFHLT	203 (CB)
MCVTFHMG	1 (1)
MCVTFHOP	203 (CB)
MCVTFHRP	203 (CB)
MCVTFHRS	1 (1)
MCVTFHRX	201 (C9)
MCVTFHRY	203 (CB)
MCVTFHTI	976 (3D0)
MCVTFHTR	976 (3D0)
MCVTFHTS	976 (3D0)
MCVTFIMR	200 (C8)
MCVTFINI	0 (0)
MCVTFINT	200 (C8)
MCVTFITW	661 (295)
MCVTFJCI	3 (3)
MCVTFJRN	2 (2)
MCVTFJRO	3 (3)
MCVTFJRP	588 (24C)
MCVTFLDA	978 (3D2)
MCVTFLGS	0 (0)
MCVTFLSW	1 (1)
MCVTFL2V	660 (294)
MCVTFMDS	666 (29A)
MCVTFMDT	980 (3D4)
MCVTFMEV	976 (3D0)
MCVTFMIP	3 (3)
MCVTFMLA	1073 (431)
MCVTFMSG	978 (3D2)
MCVTFMSP	3 (3)
MCVTFMTC	1 (1)
MCVTFMTO	1 (1)
MCVTFMUS	561 (231)
MCVTFMVD	588 (24C)
MCVTFMVF	2 (2)
MCVTFNDF	660 (294)

Field	Offset
MCVTFNEB	560 (230)
MCVTFNLG	0 (0)
MCVTFNOL	3 (3)
MCVTFNPD	956 (3BC)
MCVTFNPQ	956 (3BC)
MCVTFNSP	560 (230)
MCVTFNSW	560 (230)
MCVTFNUR	404 (194)
MCVTFODB	978 (3D2)
MCVTFOPB	0 (0)
MCVTFOTW	661 (295)
MCVTFOVD	588 (24C)
MCVTFPBU	2 (2)
MCVTFPDE	1100 (44C)
MCVTFPDH	956 (3BC)
MCVTFPDT	956 (3BC)
MCVTFPLG	0 (0)
MCVTFPSW	956 (3BC)
MCVTFPW	83 (53)
MCVTFQDM	980 (3D4)
MCVTFQSP	662 (296)
MCVTFRAB	81 (51)
MCVTFRAD	81 (51)
MCVTFRAL	708 (2C4)
MCVTFRAM	81 (51)
MCVTFRAT	81 (51)
MCVTFRCV	201 (C9)
MCVTFRDI	662 (296)
MCVTFRDK	662 (296)
MCVTFREQ	3 (3)
MCVTFRPV	201 (C9)
MCVTFRRA	81 (51)
MCVTFRRB	81 (51)
MCVTFRRU	81 (51)
MCVTFRUP	81 (51)
MCVTFSAB	560 (230)
MCVTFSCR	560 (230)
MCVTFSDP	200 (C8)
MCVTFSDS	980 (3D4)
MCVTFSLG	0 (0)
MCVTFSMS	1073 (431)
MCVTFSPD	956 (3BC)
MCVTFSPE	561 (231)
MCVTFSPL	561 (231)
MCVTFSPS	561 (231)
MCVTFSRI	437 (1B5)
MCVTFSRS	1073 (431)
MCVTFSVC	1 (1)
MCVTFSVO	660 (294)
MCVTFSWP	560 (230)
MCVTFSY2	978 (3D2)
MCVTFS1D	10 (A)
MCVTFTCP	643 (283)
MCVTFTNF	643 (283)
MCVTFTPS	3 (3)
MCVTFTRC	46 (2E)
MCVTFTSD	437 (1B5)
MCVTFTSI	437 (1B5)
MCVTFTSP	437 (1B5)
MCVTFTSR	437 (1B5)
MCVTFTST	0 (0)
MCVTFUNB	560 (230)
MCVTFUSB	560 (230)
MCVTFUSL	561 (231)
MCVTFYR2	978 (3D2)
MCVTFYTW	661 (295)
MCVTF1FT	0 (0)
MCVTF389	976 (3D0)
MCVTGABE	828 (33C)

Field	Offset
MCVTGCBP	712 (2C8)
MCVTGECB	816 (330)
MCVTGTCB	876 (36C)
MCVTHCLS	328 (148)
MCVTHCPY	329 (149)
MCVTHFRM	332 (14C)
MCVTHOST	407 (197)
MCVTIAGE	482 (1E2)
MCVTIMTM	1056 (420)
MCVTJBKF	10 (A)
MCVTJCBP	340 (154)
MCVTJEQH	344 (158)
MCVTJEQT	348 (15C)
MCVTJ25T	666 (29A)
MCVTJ3D	330 (14A)
MCVTJ3V	331 (14B)
MCVTJ3WT	200 (C8)
MCVTLABE	116 (74)
MCVTLBUF	24 (18)
MCVTLCLS	961 (3C1)
MCVTLDCB	20 (14)
MCVTLDIO	1103 (44F)
MCVTLECB	32 (20)
MCVTLLVL	960 (3C0)
MCVTLTCB	156 (9C)
MCVTLI	404 (194)
MCVTLIAG	228 (E4)
MCVTLISD	1088 (440)
MCVTL2CR	232 (E8)
MCVTL2TS	664 (298)
MCVTL2YP	676 (2A4)
MCVTMABE	120 (78)
MCVTMBC	172 (AC)
MCVTMBKF	10 (A)
MCVTMBTM	1048 (418)
MCVTMBTS	480 (1E0)
MCVTMBTU	478 (1DE)
MCVTMBVE	460 (1CC)
MCVTMCFL	200 (C8)
MCVTMDCB	568 (238)
MCVTMDEN	667 (29B)
MCVTMDTM	1052 (41C)
MCVTMDTS	948 (3B4)
MCVTMECB	88 (58)
MCVTMGCP	1028 (404)
MCVTMGQH	68 (44)
MCVTMGQT	72 (48)
MCVTMHF	404 (194)
MCVTML2H	596 (254)
MCVTML2T	600 (258)
MCVTMMTM	1044 (414)
MCVTMNTS	82 (52)
MCVTMPFL	706 (2C2)
MCVTMPFX	698 (2BA)
MCVTMRFF	10 (A)
MCVTMRT	104 (68)
MCVTMSRA	720 (2D0)
MCVTMTB	592 (250)
MCVTMTCB	164 (A4)
MCVTMTDE	784 (310)
MCVTMTEN	304 (130)
MCVTMTL2	586 (24A)
MCVTMTOD	148 (94)
MCVTMTSS	932 (3A4)
MCVTMTST	456 (1C8)
MCVTMTUN	744 (2E8)
MCVTMTWT	458 (1CA)
MCVTMTYP	665 (299)
MCVTMUNT	668 (29C)

Field	Offset
MCVTMVQH	140 (8C)
MCVTMVQS	616 (268)
MCVTMVQT	144 (90)
MCVTMWEH	36 (24)
MCVTMWET	40 (28)
MCVTNABT	476 (1DC)
MCVTNADT	950 (3B6)
MCVTNARV	584 (248)
MCVTNOCI	2 (2)
MCVTNRTP	1073 (431)
MCVTNSDP	302 (12E)
MCVTNTDE	1072 (430)
MCVTNTUN	1064 (428)
MCVTOABE	112 (70)
MCVTOACB	420 (1A4)
MCVTOBKF	10 (A)
MCVTOECB	76 (4C)
MCVTOMWE	84 (54)
MCVTONTB	224 (E0)
MCVTOPQH	52 (34)
MCVTOPQT	56 (38)
MCVTOSRA	728 (2D8)
MCVTOTCB	160 (A0)
MCVTPABE	904 (388)
MCVTPDBF	910 (38E)
MCVTPDFL	956 (3BC)
MCVTPDRL	908 (38C)
MCVTPDRW	909 (38D)
MCVTPFAC	944 (3B0)
MCVTPRCO	946 (3B2)
MCVTPREL	660 (294)
MCVTPSEC	437 (1B5)
MCVTPTCB	848 (350)
MCVTQCT	4 (4)
MCVTQUAL	212 (D4)
MCVTRABE	324 (144)
MCVTRACE	46 (2E)
MCVTRCAL	852 (354)
MCVTRCAT	46 (2E)
MCVTRCBG	392 (188)
MCVTRCBN	396 (18C)
MCVTRCBU	388 (184)
MCVTRCDC	856 (358)
MCVTRCDG	864 (360)
MCVTRCFL	201 (C9)
MCVTRCGC	860 (35C)
MCVTRCLG	364 (16C)
MCVTRCMC	372 (174)
MCVTRCMG	376 (178)
MCVTRCMN	380 (17C)
MCVTRCOP	368 (170)
MCVTRCPD	844 (34C)
MCVTRCRC	384 (180)
MCVTRCTC	320 (140)
MCVTRDKN	604 (25C)
MCVTRECB	316 (13C)
MCVTRERL	1076 (434)
MCVTRLEH	184 (B8)
MCVTRLES	620 (26C)
MCVTRLET	188 (BC)
MCVTRPRO	708 (2C4)
MCVTRSDP	100 (64)
MCVTRSQH	60 (3C)
MCVTRSQT	64 (40)
MCVTRTCB	108 (6C)
MCVTRTM1	638 (27E)
MCVTRTM2	640 (280)
MCVTRTRY	636 (27C)
MCVTRUIM	954 (3BA)
MCVTRV	11 (B)
MCVTSAQP	1020 (3FC)
MCVTSCR	976 (3D0)
MCVTSDSP	642 (282)
MCVTSECB	180 (B4)
MCVTSFLG	1073 (431)
MCVTSHEC	124 (7C)
MCVTSHR	404 (194)
MCVTSHUT	124 (7C)
MCVTSID	296 (128)
MCVTSMDS	28 (1C)
MCVTSMFI	244 (F4)
MCVTSMQH	1012 (3F4)
MCVTSMQT	1016 (3F8)
MCVTSPID	1062 (426)
MCVTSP00	1024 (400)
MCVTSSES	404 (194)
MCVTSTDE	786 (312)
MCVTSTUN	760 (2F8)
MCVTSUT	208 (D0)
MCVTTAEC	836 (344)
MCVTTCBB	472 (1D8)
MCVTTCDG	900 (384)
MCVTTECP	496 (1F0)
MCVTTMRT	632 (278)
MCVTTOCE	242 (F2)
MCVTTRCT	96 (60)
MCVTTSEP	508 (1FC)
MCVTTSOO	82 (52)
MCVTTSUN	1080 (438)
MCVTTTXA	468 (1D4)
MCVTTVTP	680 (2A8)
MCVTTYPT	240 (F0)
MCVTUBAC	412 (19C)
MCVTUCAT	408 (198)
MCVTUJRN	416 (1A0)
MCVTUNIT	428 (1AC)
MCVTUOFF	424 (1A8)
MCVTUSR1	984 (3D8)
MCVTUSR2	988 (3DC)
MCVTUSR3	992 (3E0)
MCVTUSR4	996 (3E4)
MCVTUUDT	464 (1D0)
MCVTVACH	624 (270)
MCVTVACT	628 (274)
MCVTVSAH	260 (104)
MCVTVSAT	264 (108)
MCVTVSLK	80 (50)
MCVTVSQH	352 (160)
MCVTVSQT	356 (164)
MCVTXLIM	300 (12C)
MCVTYATT	440 (1B8)
MCVTYBDE	787 (313)
MCVTYBUN	768 (300)
MCVTYCBP	716 (2CC)
MCVTYDCB	576 (240)
MCVTYMDE	788 (314)
MCVTYMUN	776 (308)
MCVTYPCT	438 (1B6)
MCVTYRCB	444 (1BC)
MCVT4FLG	660 (294)
MCVT8OMX	236 (EC)

MDQE — Migratable Data Set Queue Element

The migratable data set queue element is 212 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	MDQEFWD	MDQEFWD contains a forward pointer.
4 (4)	4	MDQEBWD	MDQEBWD contains a backward pointer.
8 (8)	2	MDQEFLGS	MDQEFLGS is a 2-byte field that contains the following flags:
	1...	MDQEFSDP	When set to 1, the data set is targeted for a small-data-set-packing data set.
	.1..	MDQEFCOM	When set to 1, the data set is eligible for compaction.
	..1.	MDQEFEXT	When set to 1, the data set is being migrated and recalled for data set extent reduction only.
	...1	MDQEFRFV	When set to 1, the data set is RACF-protected in a RACF 1.5 or later environment.
	.... 1...	MDQEFVOL	When set to 1, the data set is being migrated by a volume request.
	.... .1..	MDQEFRTM	When set to 1, migration of data set to SDSP failed because its size exceeds 255 VSAM record keys.
	.... ..1.	MDQEFVTC	When set to 1, data set is a VTOC copy data set.
	1	MDQEFTAP	When set to 1, the device type is tape. When set to 0, the device type is DASD.
	1...	MDQEFBKR	When set to 1, the data set needs to be backed up.
	.1..	MDQEFPRC	When set to 1, the MDQE has already been processed.
	..1.	MDQEFMIG	When set to 1, the data set is a migration candidate.
	...1	MDQEFGDG	When set to 1, the data set is a generation data set.
	.... 1...	MDQEFROG	When set to 1, the data set is a rolled-off generation data set.
	.... .1..	MDQEFCNV	When set to 1, conversion processing has been requested.
	.... ..1.	MDQEFLEV	When set to 1, the target migration level is ML2. When set to 0, the target migration level is ML1.
	1	MDQEFDSS	When set to 1, DFDSS is the data mover.
10 (A)	2	MDQERC	MDQERC contains the return code.
12 (C)	44	MDQEDSN	MDQEDSN contains the data set name.
56 (38)	96	MDQEDSCB	MDQEDSCB contains the Format 1 DSCB.
152 (98)	4	MDQEAGE	MDQEAGE contains the number of days since the data set was last referenced.
156 (9C)	4	MDQESIZE	MDQESIZE contains the data set size in tracks.
160 (A0)	4	MDQEUSED	MDQEUSED contains the number of tracks the data set uses.
164 (A4)	4	MDQESDAP	MDQESDAP is the address of the SDATA control block.
168 (A8)	4	MDQEPRTY	MDQEPRTY contains the migration priority.
172 (AC)	4	MDQESWAP	MDQESWAP contains the address of the SMS work area (SMSWA).
176 (B0)	8	MDQELBKD	MDQELBKD contains the last backup date.
184 (B8)	4	MDQEPTRK	MDQEPTRK contains the number of tracks released.
188 (BC)	4	MDQE1VSZ	Size of data on this volume.
192 (C0)	2	MDQEFLG1	Additional flags.
	.xxx xxxx	*	Reserved.
	1...	MDQEFMLV	When set to 1, data set is a multivolume data set.

193 (C1)	1	*	Reserved.
194 (C2)	14	*	Reserved.
208 (D0)	4	MDQERBA	RBA for VVDS entry for SMS.

MDQE Data Area Cross-Reference

Field	Offset
MDQEAGE	152 (98)
MDQEBWD	4 (4)
MDQEDSCB	56 (38)
MDQEDSN	12 (C)
MDQEFBKR	8 (8)
MDQEFCNV	8 (8)
MDQEFCOM	8 (8)
MDQEFDSS	9 (9)
MDQEFEXT	8 (8)
MDQEFGDG	8 (8)
MDQEFLEV	8 (8)
MDQEFLGS	8 (8)
MDQEFLG1	192 (C0)
MDQEFMIG	8 (8)
MDQEFMLV	192 (C0)
MDQEFPRC	8 (8)
MDQEFRFV	8 (8)
MDQEFROG	8 (8)
MDQEFRTM	8 (8)
MDQEFSDP	8 (8)
MDQEFTAP	8 (8)
MDQEFVOL	8 (8)
MDQEFVTC	8 (8)
MDQEFWD	0 (0)
MDQELBKD	176 (B0)
MDQEPRTY	168 (A8)
MDQEPTRK	184 (B8)
MDQERBA	208 (D0)
MDQERC	10 (A)
MDQESDAP	164 (A4)
MDQESIZE	156 (9C)
MDQESWAP	172 (AC)
MDQEUSED	160 (A0)
MDQE1VSZ	188 (BC)

MGCB — Migration Global Control Block

The migration global control block is 56 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	MGCBID	Control block ID.
8 (8)	16	MGCSMSDA	SMS data array (one for each volume migration task).
8 (8)	4	MGCSMSLP	Address of SMS lock token for migration.
12 (C)	4	MGCDMCPT	Address of default MC definition area for migration.
16 (10)	4	MGCMCLSP	Address of migration's list of MC's (header record on list contains number of entries).
20 (14)	4	MGCMCLSL	Length of area of migration's list of MC's (used for freeing storage of MC list).
24 (18)	4	MGCVTCBP	Pointer to HGEN task TCB.
28 (1C)	4	MGCDTCBP	Pointer to HDSN task TCB.
32 (20)	4	MGCFBFLGS	Flags for all tasks.
32 (20)	1	MGCFSTOP	Migration stop flags.
	1...	MGCFATRM	When set to 1, auto migration ended before completion.
	.1..	MGCFQMIG	When set to 1, auto migration quiesced.
	..xx xxxx	*	Reserved.
33 (21)	1	MGCFSDEV	Flags used to indicate a migration function which has been stopped because a target resource type was unavailable.
	1...	MGCFSML1	When set to 1, migration to ML1 DASD has been stopped.
	.1..	MGCFSTAP	When set to 1, migration to tape has been stopped.
	..xx xxxx	*	Reserved.
34 (22)	1	MGCBTSVL	Trace volume processing if an SMS-managed volume. x'00' = Issue ARC0734I according to SETSYS ACTLOGMSGLVL. x'FF' = Issue ARC0734I for all extract list entries that are processed during volume migration.
35 (23)	1	*	Reserved.
36 (24)	20	*	Reserved.

MGCB Data Area Cross-Reference

Field	Offset
MGCBFLGS	32 (20)
MGCBID	0 (0)
MGCDMCPT	12 (C)
MGCDTCBP	28 (1C)
MGCFATRM	32 (20)
MGCFQMIG	32 (20)
MGCFSDEV	33 (21)
MGCBTSVL	34 (22)
MGCFSML1	33 (21)
MGCFSTAP	33 (21)
MGCFSTOP	32 (20)
MGCMCLSL	20 (14)
MGCMCLSP	16 (10)
MGCSMSDA	8 (8)
MGCSMSLP	8 (8)

Field	Offset
MGCVTCBP	24 (18)

MLOG – DFHSM Log or Journal Record Header

The DFHSM log or journal record header describes the fixed header portion of a DFHSM log record or journal record when it is written to the log data set or journal data set respectively. The DFHSM log or journal record header is 12 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	2	MLOGL	MLOGL contains the length of the record, including the header and variable portions of the record.
2 (2)	1	MLOGID	MLOGID contains the log identification. The following are the DFHSM log codes used in the log identification. Only codes 15 and 16 appear in journal records. Codes 15 and 16 are not written in the log unless you have specified the SETSYS TRACE command. 1 = DFHSM startup. 2 = Operator command received. 3 = Output message to the operator. 4 = Management work element received from a user address space. 5 = Recall or delete of a migrated data set started. Use the MWEFUNC field to determine which of the two processes started. 6 = Recall or delete of a migrated data set ended. Use the FSRTYPE field to determine which of the two processes ended. 7 = Migration of a data set started. 8 = Migration of a data set ended. 9 = ARCERP processing performed. 10 = Subtask abnormal end. 11 = Management work element for a volume migration received. 12 = DFHSM shutdown. 13 = Management work element from a user address space completed. 14 = Daily or volume statistics records processed. 15 = Control data set update or new entry. 16 = Control data set entry deleted. 17 = Backup of a data set started. 18 = Backup of a data set ended. 19 = Recovery of a backup version started. 20 = Recovery of a backup version ended. 21 = Deletion or retirement of a data set started. 22 = Deletion or retirement of a data set ended. 23 = Recycle of a data set started. 24 = Recycle of a data set ended. 25 = Volume dump started. 26 = Volume dump ended. 27 = Volume restore started. 28 = Volume restore ended. 29 = Data set restore started. 30 = Data set restore ended.
3 (3)	1	MLOGFLGS	MLOGFLGS contains the following flags:
	..xx xxxx	*	Reserved.
	1...	MLOGLD	When set to 1, log data was lost before.
	.1..	MLOGNJRN	When set to 1, the entry is not to be entered in the journal.
4 (4)	8	MLOGTOD	MLOGTOD contains the time stamp of the log record.
	4	MLOGDATE	MLOGDATE contains the date when the log record was created. The date is obtained from the TIME macro in format X'00*yyddds*'.
8 (8)	4	MLOGTIME	MLOGTIME contains the time when the log record was created. The time is obtained from the TIME macro in format X'*hhmmssth*'.
12 (C)	*	MLOGD	MLOGD is the starting point for variable log or journal data.

See "Printing DFHSM Log Information," *Data Facility Hierarchical Storage Manager: Version 2 Release 5.0 Diagnosis Reference Volume 3*, for a discussion of printing log information and record formats.

MLOG Data Area Cross-Reference

Field	Offset
MLOGD	12 (C)
MLOGDATE	4 (4)
MLOGFLGS	3 (3)
MLOGID	2 (2)
MLOGL	0 (0)
MLOGLD	3 (3)
MLOGNJRN	3 (3)
MLOGTIME	8 (8)
MLOGTOD	4 (4)

MTCB — Migration Task Control Block

The migration task control block passes parameters to the volume migration subtask. The control block is 136 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	MTCBBID	MTCBBID contains the block ID to identify the MTCB. 'MTCB'.
4 (4)	4	MTCBTECB	MTCBTECB contains the ARCMVOL termination ECB.
	x.xx xxxx	*	Reserved.
	.1..	MTCBTCMP	MTCBTCMP contains the complete bit.
5 (5)	3	MTCBTCDE	MTCBTCDE contains the completion code.
8 (8)	4	MTCBWECB	MTCBWECB contains the ARCMVOL work-to-do ECB.
	x.xx xxxx	*	Reserved.
	.1..	MTCBWCMP	MTCBWCMP contains the complete bit.
9 (9)	3	MTCBWCDE	MTCBWCDE contains the completion code.
12 (C)	4	MTCBFLGS	MTCBFLGS contains the following flags:
	x...	*	Reserved.
	.1..	MTCBNHMV	When set to 1, the volume being processed is not managed by DFHSM.
	..1.	MTCBL2TP	When set to 1, data set deletion or data set retirement is occurring on a tape migration level 2 volume.
	...1	MTCBRCLF	When set to 1, the recall composite flags have been created.
	.... 1...	MTCBMCVF	When set to 1, an MCV record exists for the volume being processed.
	.... .1..	MTCBSTOP	When set to 1, daily space management or interval migration should be stopped.
	.... ..1.	MTCBTERM	When set to 1, messages should be sent to the operator.
	1	MTCBFDSM	When set to 1, daily space management is requested.
	1...	MTCBFINT	When set to 1, interval migration is requested.
	.x..	*	Reserved.
	..1.	MTCBFNL1	When set to 1, an out-of-space condition occurred on a level 1 migration volume.
	...1	MTCBFCMD	When set to 1, command space management is being processed.
	.... 1...	MTCBFL1D	When set to 1, a message has been issued indicating that no migration level 1 DASD target volume was available.
	.... .1..	MTCBFL2D	When set to 1, a message has been issued indicating that no migration level 2 DASD target volume was available.
	.... ..1.	MTCBFL2T	When set to 1, a message has been issued indicating that no migration level 2 tape target volume was available.
	1	MTCBFDTT	When set to 1, at least one management class was found in the management class list returned by SMS indicating a direct-to-tape function.
14 (E)	1	MTCBPDEV	MTCBPDEV contains the following flags that indicate possible migration target levels and device types for the current task:
	 xxxx	*	Reserved.
	1...	MTCBPML1	When set to 1, a possible migration target device is a migration level 1 DASD.
	.1..	MTCBPL2D	When set to 1, a possible migration target device is a migration level 2 DASD.
	..1.	MTCBPL2T	When set to 1, a possible migration target device is a migration level 2 tape.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	...1	MTCBETRM	When set to 1, early termination of automatic migration has occurred.
15 (F)	1	*	Reserved.
16 (10)	4	MTCBMWE	MTCBMWE contains the address of the MWE being processed if this is command volume space management.
20 (14)	4	MTCBMVTP	MTCBMVTP contains the address of the MVT entry of the volume being processed.
24 (18)	4	MTCBMTSP	MTCBMTSP contains the address of the tape migration selection parameter list if migration is to tape migration level 2 volumes.
28 (1C)	4	MTCBRCBP	MTCBRCBP contains the address of the subtask (ARCMVOL) recovery control block.
32 (20)	4	MTCBDAYS	MTCBDAYS contains the number of days a data set must be unreferenced to be eligible for space management.
36 (24)	28	*	Reserved.
64 (40)	4	MTCBTCBP	MTCBTCBP contains the address of MVOL task TCB.
68 (44)	4	MTCBMCAP	MTCBMCAP contains the address of the MDQE chain anchors.
72 (48)	4	MTCBSCAP	MTCBSCAP contains the address of the SDATA chain anchors.
76 (4C)	4	MTCBMATP	MTCBMATP contains the address of the migration attach parameter list.
80 (50)	4	MTCBMAGE	MTCBMAGE contains the minimum age for a migrated data set.
84 (54)	4	MTCBNMDS	MTCBNMDS contains the number of data sets migrated.
88 (58)	4	MTCBTRKS	MTCBTRKS contains the number of tracks migrated, and scratched.
92 (5C)	4	MTCBTDS	MTCBTDS contains the total number of data sets on the volume.
96 (60)	4	MTCBBDT	MTCBBDT contains the binary date in the form X'00yyddd'.
	2	MTCBYEAR	MTCBYEAR contains the binary year in the form X'yy'.
98 (62)	2	MTCBDAY	MTCBDAY contains the binary day in the form X'ddd'.
100 (64)	4	MTCBPTRK	MTCBPTRK contains the number of tracks released by the PARTREL function.
104 (68)	1	*	Reserved.
105 (69)	3	MTCBDATE	MTCBDATE contains today's packed-decimal date in the form X'yyddd'.
108 (6C)	4	MTCBRC	MTCBRC contains the return code.
112 (70)	4	MTCBREAS	MTCBREAS contains the reason code.

The following begins at offset 116 (74) and is repeated 3 times. The first entry concerns ARCMDSUV, the second ARCMVDS, and the third ARCMDSMV.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	MTCBSTCB	MTCBSTCB contains the address of the data set level subtask TCB.
4 (4)	4	MTCBSWEC	MTCBSWEC contains the work-to-do ECB for the data set level subtask.
	x.xx xxxx	*	Reserved.
	.1..	MTCBSWCP	MTCBSWCP contains the complete bit.
5 (5)	3	MTCBSWCD	MTCBSWCD contains the completion code.
8 (8)	4	MTCBSTEC	MTCBSTEC contains the termination ECB for the data set level subtask.
	x.xx xxxx	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.1..	MTCBSTCP	MTCBSTCP contains the complete bit.
9 (9)	3	MTCBSTCD	MTCBSTCD contains the completion code.
12 (C)	4	MTCBSRCB	MTCBSRCB contains the address of the data set level subtask RCB.
16 (10)	4	MTCBPLP	MTCBPLP contains the address of MDSP or MVDSP.

MTCB Data Area Cross-Reference

Field	Offset	Begin at Offset	Field	Offset	Begin at Offset
MTCBBDT	96 (60)		MTCBWCDE	9 (9)	
MTCBBID	0 (0)		MTCBWCMP	8 (8)	
MTCBDATE	105 (69)		MTCBWECB	8 (8)	
MTCBDAY	98 (62)		MTCBYEAR	96 (60)	
MTCBDAYS	32 (20)				
MTCBETRM	14 (E)				
MTCBFCMD	12 (C)				
MTCBFDSM	12 (C)				
MTCBFDTT	12 (C)				
MTCBFINT	12 (C)				
MTCBFLGS	12 (C)				
MTCBFL1D	12 (C)				
MTCBFL2D	12 (C)				
MTCBFL2T	12 (C)				
MTCBFNL1	12 (C)				
MTCBL2TP	12 (C)				
MTCBMAGE	80 (50)				
MTCBMATP	76 (4C)				
MTCBMCAP	68 (44)				
MTCBMCVF	12 (C)				
MTCBMTSP	24 (18)				
MTCBMVTP	20 (14)				
MTCBMWE	16 (10)				
MTCBNHMV	12 (C)				
MTCBNMDS	84 (54)				
MTCBPDEV	14 (E)				
MTCBPLP	132 (84)				
MTCBPL2D	14 (E)				
MTCBPL2T	14 (E)				
MTCBPML1	14 (E)				
MTCBPTRK	100 (64)				
MTCBRC	108 (6C)				
MTCBRCBP	28 (1C)				
MTCBRCLF	12 (C)				
MTCBREAS	72 (48)				
MTCBSCAP	72 (48)				
MTCBSRCB	12 (C)	116 (74)			
MTCBSTCB	0 (0)	116 (74)			
MTCBSTCD	9 (9)	116 (74)			
MTCBSTCP	8 (8)	116 (74)			
MTCBSTEC	8 (8)	116 (74)			
MTCBSTOP	12 (C)				
MTCBSWCD	5 (5)	116 (74)			
MTCBSWCP	4 (4)	116 (74)			
MTCBSWEC	4 (4)	116 (74)			
MTCBTCBP	64 (40)				
MTCBTCDE	5 (5)				
MTCBTCMP	4 (4)				
MTCBTDS	92 (5C)				
MTCBTECB	4 (4)				
MTCBTERM	12 (C)				
MTCBTRKS	88 (58)				

MVT — Mounted Volume Table Entry

The mounted volume table entry describes all volumes mounted and used by DFHSM. This entry is 208 bytes long and resides in the DFHSM work space.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	MVTFWD	MVTFWD contains the address of the next mounted volume table entry on the queue.
4 (4)	4	MVTBWD	MVTBWD contains the address of the previous mounted volume table entry on the queue.
8 (8)	4	MVTBID	MVTBID contains the block identification, MVT*.
12 (C)	8	*	Reserved.
20 (14)	2	MVTVOLSQ	MVTVOLSQ contains the volume sequence number of the tape in the volume set.
22 (16)	1	MVTVLTYP	MVTVLTYP contains the volume type: 1 = primary 2 = migration 3 = backup 4 = dump
23 (17)	3	MVTFLGS	MVTFLGS contains the following volume table flags:
	1...	MVTFASN	When set to 1, the entry is in use.
	.1..	MVTHGENP	When set to 1, this volume is in the DFHSM general pool (JES3 systems only).
	..1.	MVTFLS	When set to 1, a space list is wanted for this volume.
	...1	MVTF1FT	When set to 1, the mounted volume is a 3480 tape written in single-file format.
	.... 1...	MVTFUSFP	When set to 1, update the MVT free space information before selecting the target migration volume.
	.... .1..	MVTFMTWT	When set to one, the mount wait timer is to be set.
	.... ..1.	MVTFMIG	When set to 1, migration is needed on the volume.
	1	MVTFHOLD	When set to 1, hold processing on the volume because an abnormal end occurred while processing this volume.
	1...	MVTFNOAM	When set to 1, the volume is not eligible for automatic space management.
	.1..	MVTFLEV2	When set to 1, this is a migration level 2 volume.
	..1.	MVTFSDP	When set to 1, a VSAM data set is defined on this volume for small data set packing.
	...1	MVTFVFUL	When set to 1, the VTOC has less than five remaining data set control blocks.
	.... 1...	MVTFPRV	When set to 1, this volume is not eligible for automatic recall unless it is in a pool.
	.... 1...	MVTFNOAR	Alias for MVTFPRV.
	.... .1..	MVTFBACK	When set to 1, this volume is to be automatically backed up.
	.... ..1.	MVTFRSV	When set to 1, this volume is to be marked reserved in the UCB.
	1	MVTFNOCM	When set to 1, this volume is not eligible for command migration.
	1...	MVTFDBA	When set to 1, see MVTFRBU.
	.1..	MVTFRBU	When set to 1 and MVTFDBA is also set to 1, the space management technique for this volume is DELETEIFBACKEDUP. When set to 0 and MVTFDBA is set to 1, the space management technique for this volume is DELETEBYAGE.
	..1.	MVTFVLTH	When set to 1, valid thresholds exist for the volume.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	...1	MVTFRVFU	When set to 1, a space check does not reset MVTFVFULL.
	.... 1...	MVTDRAIN	When set to 1, the DRAIN attribute has been specified on the ADDVOL of this volume.
	.... 1...	MVTFNOPT	When set to 1, no point is required for 3480 single file tape volume.
	.... ..1.	MVTFDSR	When set to 1, the request is for a data set.
	1	MVTFVOLR	When set to 1, the request is for a volume.
26 (1A)	6	MVTVSN	MVTVSN contains the volume serial number.
32 (20)	8	MVTUNIT	MVTUNIT contains the EBCDIC unit name, for example, 3380V.
40 (28)	4	MVTUCBP	MVTUCBP contains the address of the UCB.
44 (2C)	4	MVTTOTSP	MVTTOTSP contains the total space on the volume, in tracks.
48 (30)	4	MVTFRESP	MVTFRESP contains the total free space on the volume, in tracks.
52 (34)	2	MVTLWM	MVTLWM contains the low threshold of occupancy of a primary volume.
54 (36)	2	MVTHWM	MVTHWM contains the high threshold of occupancy.
56 (38)	24	MVTDEVTB	MVTDEVTB contains the device type information.
56 (38)	4	MVTUCBTY	MVTUCBTY contains the device type as in the UCB.
56 (38)	1	*	This field contains the following flag:
	xxxx xxx.	*	Reserved.
	1	MVTC3480	When set to 1, the volume is in 3480 compatibility mode.
57 (39)	1	*	Optional features of the device.
	x.xx .xxx	*	Reserved.
	.1..	MVTTRKOV	When set to 1, there is track overflow on the device.
	.... 1...	MVTRVDEV	When set to 1, this is a Mass Storage System device.
58 (3A)	1	*	This field contains the following flags:
	.x.x xxxx	*	Reserved.
	1...	MVTTPDEV	When set to 1, this is a tape device.
	..1.	MVTDADEV	When set to 1, this is a DASD device.
59 (3B)	1	*	Reserved.
60 (3C)	4	MVTBLK	MVTBLK contains the maximum block size for the device.
64 (40)	2	MVTNCYL	MVTNCYL contains the number of cylinders on the device.
66 (42)	2	MVTNTRK	MVTNTRK contains the number of tracks on each cylinder.
68 (44)	4	MVTTRKL	MVTTRKL contains the track length of the device.
72 (48)	2	MVT2KPT	MVT2KPT contains the number of 2K blocks on each track for this device.
74 (4A)	2	MVTOBSZ	MVTOBSZ contains the optional block size for 2K blocking in units of 1024.
76 (4C)	4	MVTGBF	Guaranteed backup frequency in days. (0 = nolimit)
80 (50)	2	MVTMINAG	MVTMINAG contains the minimum age of data sets to migrate from the volume.
82 (52)	2	MVTFRAG	MVTFRAG contains the current fragmentation index of volume entropy.
84 (54)	4	MVTACQP	MVTACQP contains the address of the acquire chain if this is a Mass Storage System volume.
88 (58)	2	MVTDFLGS	MVTDFLGS contains volume dump restore flags.
	1...	MVTFAD	When set to 1, the volume is to be automatically dumped by this host.
	.1..	MVTFDMIS	When set to 1, this volume was in use when automatic dump tried to process it.
	..1.	MVTFDHST	When set to 1, this host was using this volume when MVTFDMIS is on, if off, it was using another host.
	...1	MVTFURAC	When set to 1, the volume mounted in response to a mount scratch request was already RACF-protected.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... 1...	MVTFADVL	When set to 1, the volume mounted in response to a mount scratch request was already added to DFHSM.
	.... .1..	MVTFDTMT	When set to 1, the dump tape volume is mounted. If off, the mount is pending.
	.... ..1.	MVTFDTWT	When set to 1, the dump tape volume has been written to.
	1	MVTFDSEL	When set to 1, the dump tape was selected by DFHSM.
89 (59)	1	*	Reserved.
90 (5A)	2	MVTRSVCT	MVTRSVCT contains the reserve count for the volume.
92 (5C)	1	MVTFLGS5	This field contains the following flags:
	.xxx xxxx	*	Reserved
	1...	MVTFCDDV	When set to 1, the CDDID field on this tape volume contains a valid ID.
93 (5D)	1	MVTFLGS3	This field contains the following flags:
	1...	MVTFLSM	When set to 1, print free-space messages.
	.1..	MVTFLSF	When set to 1, the last space check failed.
	..1.	MVTFNPDE	When set to 1, volumes not in pool at startup.
	...1	MVTFTEMP	When set to 1, this MVT is a temporary MVT.
	.... 1...	MVTFCNVT	When set to 1, the MIGRATE CONVERT command was specified.
	.... .1..	MVTFCD0	When set to 1, the MIGRATE CONVERT command was specified with DAYS=0.
	.... ..1.	MVTFUFSP	When set to 1, a request was made to update the free space information in the MVT.
	1	MVTFEXPD	When set to 1, the tape expiration data has been specified.
94 (5E)	1	*	This byte contains the following flags:
	x	*	Reserved.
	1...	MVTFMMIS	When set to 1, this volume was in use when daily space management attempted to process it.
	.1..	MVTFBMIS	When set to 1, this volume was in use when automatic backup tried to process it.
	..1.	MVTFMHST	If MVTFMMIS is set to 1, indicates which host processor is using this volume. When MVTFMHST is set to 0, this host processor was using this volume. When MVTFMHST is set to 1, another host processor was using this volume.
	...1	MVTFBHST	If MVTFBMIS is set to 1, indicates which host processor is using this volume. When MVTFBHST is set to 0, this host processor was using this volume. When MVTFBHST is set to 1, another host processor was using this volume.
	.... 1...	MVTFMIGD	When set to 1, this volume is being used by data set migration.
	.... .1..	MVTFMIGV	When set to 1, this volume is being used by volume or level migration.
	.... ..1.	MVTFRCYT	When set to 1, recycle processing is using this volume as the target volume.
95 (5F)	1	MVTUHST	MVTUHST contains the DFHSM host identification of the host processor that was using this volume when DFHSM skipped the processing of this volume.
96 (60)	2	MVTDBADY	MVTDBADY contains the number of days a data set must be inactive before being eligible for data set deletion.
98 (62)	6	MVT2VSN	MVT2VSN specifies the volume serial number specified with the MIGRATE CONVERT command.
104 (68)	8	MVTDDN	MVTDDN contains the ddname used to allocate the volume.
112 (70)	1	MVTFLGS2	MVTFLGS2 contains the MVT flags:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	1...	MVTFDAY	When set to 1, this tape volume is a daily backup volume. When set to 0, this tape volume is a spill backup volume.
	.1..	MVTFJFCB	When set to 1, the JFCB has been read for this volume.
	..1.	MVTFBDCS	When set to 1, the backup volume device category is specified.
	...1	MVTFBDCT	If MVTFBDCS is set to 1, the backup volume device category is tape. When set to 0, the backup volume device category is DASD.
	.... 1...	MVTFNADV	When set to 1, an allocated scratch tape needs to be internally added.
	.... .1..	MVTFSMS	When set to 1, this is an SMS-managed volume.
	.... ..1.	MVTFSMVL	When set to 1, space management flags in MVTRECAL are valid.
	1	MVTFMC1P	When set to 1, update of the MC1 record is needed for the volume.
113 (71)	1	MVTRECAL	This field contains space management composite flags for multiple-host processor recall volume selection:
	xx	*	Reserved.
	1...	MVTRDBA	When set to 0, the volume has the space management technique of MIGRATE. When set to 1, see MVTRDBU.
	.1..	MVTRDBU	When set to 0 and MVTRDBA is set to 1, the space management technique for this volume is DELETEBYAGE. When set to 1 and MVTRDBA is also set to 1, the space management technique for this volume is DELETEIFBACKEDUP.
	..1.	MVTRBDCS	When set to 1, the backup device category is specified for this volume.
	...1	MVTRBDCT	When set to 0 and MVTRBDCS is set to 1, the backup device category is DASD. When set to 1 and MVTRBDCS is also set to 1, the backup device category is tape.
	.... 1...	MVTRAM	When set to 1, some host is requested to perform automatic space management on this volume.
	.... .1..	MVTRAB	When set to 1, some host is requested to perform automatic backup on this volume.
114 (72)	1	MVTDAY	MVTDAY contains the day of the backup cycle to which this daily backup volume is assigned.
115 (73)	1	MVTDEN	MVTDEN contains the tape density of this tape volume.
116 (74)	4	MVTLFBID	MVTLFBID contains the file sequence number of the last data set written to this tape volume.
120 (78)	4	MVTBVLST	MVTBVLST contains the address of a list of tape backup volumes allocated with this backup volume.
120 (78)	4	MVTAVLST	MVTAVLST is the alias for MVTBVLST, the address of a list of tape migration volumes allocated with this migration volume.
124 (7C)	4	MVT2DEVT	MVT2DEVT contains the device type of the MVT2VSN volume.
128 (80)	1	MVTSFLGS	MVTSFLGS contains flags indicating the security of the volume.
	...x xxxx	*	Reserved.
	1...	MVTFTSPW	When set to 1, the data sets on this tape volume have been password-protected.
	.1..	MVTFTSED	When set to 1, the data sets on this tape volume have been protected with an expiration date.
	..1.	MVTFTSRF	When set to 1, the tape volume has been RACF-protected.
129 (81)	1	MVTPTADJ	MVTPTADJ is the 3480 tape volume point sector adjustment factor.
130 (82)	2	MVTETIME	MVTETIME contains the time of the last error that occurred while this volume was being processed.
132 (84)	4	MVTJFCBP	MVTJFCBP contains the address of the JFCB work area.
136 (88)	4	MVTDCBP	MVTDCBP contains the address of the DCB.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
140 (8C)	2	*	Reserved.
142 (8E)	2	MVTDCLCT	MVTDCLCT contains the number of dump class entries.
144 (90)	40	MVTDCLSS	MVTDCLSS contains an array of dump class IDs that are the targets of the full volume dump function during automatic dump processing.
144 (90)	8	MVTDCLAS	MVTDCLAS contains the dump class identifier.
184 (B8)	8	MVTUID	MVTUID contains the userid of authorized requester of query space command.
192 (C0)	7	MVTEXPDT	MVTEXPDT contains the tape expiration date.
199 (C7)	1	*	Reserved.
200 (C8)	4	MVTL1SD	Free space delta for ML1.
204 (CC)	4	*	Reserved.

MVT Data Area Cross-Reference

Field	Offset	Field	Offset
MVTACQP	84 (54)	MVTFLGS2	112 (70)
MVTAVLST	120 (78)	MVTFLGS3	93 (5D)
MVTBID	8 (8)	MVTFLGS5	92 (5C)
MVTBLK	60 (3C)	MVTFLS	23 (17)
MVTBVLST	120 (78)	MVTFLSF	93 (5D)
MVTBWD	4 (4)	MVTFLSM	93 (5D)
MVTC3480	56 (38)	MVTFMC1P	112 (70)
MVTDADEV	58 (3A)	MVTFMHST	94 (5E)
MVTDAY	114 (72)	MVTFMIG	23 (17)
MVTDBADY	96 (60)	MVTFMIGD	94 (5E)
MVTDCBP	136 (88)	MVTFMIGV	94 (5E)
MVTDCLCT	142 (8E)	MVTFMMIS	94 (5E)
MVTDCLSS	144 (90)	MVTFMTWT	23 (17)
MVTDDN	104 (68)	MVTFNADV	112 (70)
MVTDEN	115 (73)	MVTFNOAM	24 (18)
MVTDFLGS	88 (58)	MVTFNOAR	24 (18)
MVTDHST	88 (58)	MVTFNOCM	24 (18)
MVTDLCAS	144 (90)	MVTFNOPT	25 (19)
MVTDMIS	88 (58)	MVTFNPDE	93 (5D)
MVTDRAIN	25 (19)	MVTFPRV	24 (18)
MVTDSEL	88 (58)	MVTFRAG	82 (52)
MVTETIME	130 (82)	MVTFRBU	25 (19)
MVTEXPDT	192 (C0)	MVTFRCYT	94 (5E)
MVTFAD	88 (58)	MVTFRESP	48 (30)
MVTFADVL	88 (58)	MVTFRSV	24 (18)
MVTFASN	23 (17)	MVTFRVFU	24 (18)
MVTFBACK	24 (18)	MVTFSDP	24 (18)
MVTFBDCS	112 (70)	MVTFSMS	112 (70)
MVTFBDCT	112 (70)	MVTFSMVL	112 (70)
MVTFBHST	94 (5E)	MVTFTEMP	93 (5D)
MVTFBMIS	94 (5E)	MVTFTSED	128 (80)
MVTFCDDV	92 (5C)	MVTFTSPW	128 (80)
MVTFCD0	93 (5D)	MVTFTSRF	128 (80)
MVTFCNVT	93 (5D)	MVTFUFSP	93 (5D)
MVTFDAY	112 (70)	MVTFURAC	88 (58)
MVTFDBA	25 (19)	MVTFUSFP	23 (17)
MVTFDSR	24 (18)	MVTFVFUL	24 (18)
MVTFDTMT	88 (58)	MVTFVLTH	25 (19)
MVTFDTWT	88 (58)	MVTFVOLR	24 (18)
MVTFEXPD	93 (5D)	MVTFWD	0 (0)
MVTFHOLD	23 (17)	MVTF1FT	23 (17)
MVTFJFCB	112 (70)	MVTGBF	76 (4C)
MVTFLEV2	24 (18)	MVTHGENP	23 (17)
MVTFLGS	23 (17)	MVTHWM	54 (36)

Field	Offset
MVTJFCBP	128 (80)
MVTLFBID	116 (74)
MVTLWM	52 (34)
MVTLISD	200 (C8)
MVTMINAG	80 (50)
MVTNCYL	64 (40)
MVTNTRK	66 (42)
MVTOBSZ	74 (4A)
MVTPTADJ	129 (81)
MVTRAB	113 (71)
MVTRAM	113 (71)
MVTRBDCS	113 (71)
MVTRBDCT	113 (71)
MVTRDBA	113 (71)
MVTRDBU	113 (71)
MVTRECAL	113 (71)
MVTRSVCT	90 (5A)
MVTRVDEV	57 (39)
MVTSFLGS	128 (80)
MVTTOTSP	44 (2C)
MVTTPDEV	58 (3A)
MVTTRKL	68 (44)
MVTTRKOV	57 (39)
MVTT2KPT	72 (48)
MVTUCBP	40 (2A)
MVTUCBTY	56 (38)
MVTUHST	95 (5F)
MVTUID	184 (B8)
MVTUNIT	32 (20)
MVTVLTYP	22 (16)
MVTVOLSQ	20 (14)
MVTVSN	26 (1A)
MVT2DEVT	124 (7C)
MVT2KPT	72 (48)
MVT2VSN	98 (62)

MWE — Management Work Element

The MWE describes a requested function to be performed by DFHSM. The MWEs are chained together in queues in the DFHSM work space or in the system common storage area until the proper DFHSM task processes them. The MWE is 140 bytes long, plus variable data, depending on request type.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	140	MWEHDR	MWEHDR contains the header present in all MWEs.
0 (0)	4	MWEFWD	MWEFWD contains the forward address of the next MWE in the queue.
4 (4)	4	MWEBWD	MWEBWD contains the backward address of the previous MWE in the queue.
8 (8)	4	MWESPL	MWESPL contains the GETMAIN and FREEMAIN values.
	1	MWESPN	MWESPN contains the subpool of this MWE.
9 (9)	3	MWELEN	MWELEN contains the length of this MWE.
12 (C)	4	MWEFSR	MWEFSR contains the address of the function statistics record if the MWE is in the DFHSM address space.
16 (10)	8	MWETOD	MWETOD contains the time stamp for when the MWE was queued.
	4	MWETSTIM	MWETSTIM contains the time when the MWE was queued. The time is obtained from the TIME macro in format X'*hhmmssth*'.
20 (14)	4	MWETSDAT	MWETSDAT contains the date when the MWE was queued. The date is obtained from the TIME macro in format X'00*yyddds*'.
24 (18)	1	MWEFUNC	MWEFUNC contains the MWE function code. The MWE function codes are also the DFHSM SVC function codes. Codes 0, 1, 2, and 10 are DFHSM function codes only and do not appear in an MWE. The following is a list of DFHSM SVC function codes of which 3 through 9 and 11 and 12 are MWEFUNC codes: 0 = Return the queue control table pointer. 1 = Start up DFHSM. 2 = Shut down DFHSM. 3 = Recall a data set. 4 = Unused. 5 = Recover a data set or volume. 6 = Migrate a data set or volume. 7 = Back up a data set or volume. 8 = Read a control data set record. 9 = Process command text. 10 = Post a MWE as completed. 11 = Purge the MWE. 12 = Delete a migrated data set. 13 = Perform aggregate backup. 14 = Perform aggregate recovery.
25 (19)	3	MWEFLGS	MWEFLGS contains the following option and control flags:
	1...	MWEFVSAM	When set to 1, the recalled data set is a VSAM data set.
	.1..	MWEFNOW	When set to 1, the NOWAIT parameter has been specified.
	..1.	MWEFRECV	When set to 1, DFHSM has copied the management work element into common service area storage.
	...1	MWEFTSOR	When set to 1, this is an interactive request from TSO.
	.... x...	*	Reserved.
	.... .1..	MWEMLEV2	When set to 1 and the function code equals 6, the data set is to migrate directly to level 2.
	.... .1..	MWEFDATE	When set to 1 and the function code equals 5, the MWEDATE field contains the date for a recovery request.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... ..1.	MWEFRTYW	When set to 1, the task is waiting to obtain a volume before retrying the request.
	1	MWEFUNWT	When set to 1, the user has been notified that the MWE is waiting.
26 (1A)	1...	MWE29DU	When set to 1, the request is an IGG029DU request.
	.1..	MWEGDG	When set to 1, the request is a scratch generation data group request initiated by catalog management.
	..1.	MWEFEX0A	When set to 1, the request is an IGG0EX0A request.
	...1	MWEFPODS	When set to 1, a migrate, recall, or delete operation requires the old data set to be purged.
	.... 1...	MWEFNOMT	When set to 1, there is no wait for a volume mount.
	.... .1..	MWEFBTOT	When set to 1, backup is total. When set to 0, backup is incremental.
	.... ..1.	MWEFKGT	When the function code MWEFUNC equals 8 and: • MWEFKGT is set to 1, obtain the record that has a key greater than the specified key. • MWEFKGT is set to 0, obtain the record that has a key equal to the specified key.
	1	MWEFNCAT	When set to 1, get the next control data set record based on previous positioning. When set to 0, get the specifically identified control data set record.
27 (1B)	1...	MWEFDAYS	When set to 1, the MWEFDAYS field is valid.
	.1..	MWEFAUTH	When set to 1, the sender of the management work element has space management authority.
	..1.	MWEFRSV	When set to 1 and the function code equals 3, a specific volume has been requested for a recall.
	..1.	MWEFTERM	When set to 1 and the function code equals 6, route the log output to the terminal for a migration request.
	...1	MWEFDONE	When set to 1, this MWE has been processed.
	.... 1...	MWEFABND	When set to 1, DFHSM abnormally ended processing of this MWE.
	.... .1..	MWEFOP	When set to 1, the MWE is for an operator command.
	.... ..1.	MWEFMFRC	When set to 1, the volume mount should be forced even if the MCV shows that the volume is in use.
	1	MWEFBUSY	When set to 1, DFHSM is processing the MWE.
28 (1C)	8	MWEUID	MWEUID contains the identifier of the TSO user making the request. A dummy identifier is used if it is not a TSO request.
28 (1C)	7	*	Contains the first seven characters of the user identification.
35 (23)	1	MWECONID	MWECONID contains the console identification of the operator that issued the request, if the first 7 characters are **OPER*.
36 (24)	4	MWERQN	MWERQN contains the DFHSM request number. The request number is set by the DFHSM SVC.
40 (28)	4	MWEASCB	MWEASCB contains the address of the requestor's ASCB.
44 (2C)	4	MWEECB	MWEECB contains the ECB to be posted when DFHSM completes a request.
48 (30)	4	MWERC	MWERC contains the return code from the request.
52 (34)	4	MWEREAS	MWEREAS contains the reason code for errors.
56 (38)	4	MWEID	MWEID contains the MWE identifier, 'MWE*'.
60 (3C)	4	MWEABCC	MWEABCC contains the system abnormal end completion code.
64 (40)	8	MWEGROUP	MWEGROUP contains the group name for RACF.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
72 (48)	1	MWELOCK	MWELOCK contains the lock byte used to synchronize between a cross-memory post and the user wait option if an attention occurs during cross-memory posting.
73 (49)	2	MWEFLG2	MWEFLG2 is a 2-byte field that contains the following flags:
	1...	MWEFATMP	When set to 1, processing of this MWE was attempted on this pass through the operator queue, but was not processed because another MWE for the same long-running command was being processed or the function was held.
	.1..	MWEFBDCS	When set to 1, the backup device category is specified.
	..1.	MWEFBDCT	When set to 1 and MWEFBDCS = 1, the backup device category is tape. When set to 0 and MWEFBDCS = 1, the backup device category is DASD.
	...1	MWEFSMSP	When set to 1, space management is specified on the command.
	.... 1...	MWEFDBA	When set to 0, the space management technique is MIGRATE. When set to 1, see MWEFRBU.
	.... .1..	MWEFRBU	When set to 1 and MWEFDBA is also set to 1, data set retirement can be done. When set to 0 and MWEFDBA is set to 1, data set deletion can be done.
	.... ..1.	MWEFCNVT	When set to 1, specifies that the convert function was requested if the MWE is a migration MWE, or that either a convert function or extent reduction was done for a data set if the MWE is a recall MWE.
	1	MWEFSTCK	When set to 1, a store clock timer instruction has been issued for the MWE.
74 (4A)	1...	MWEFRDRC	When set to 1, the MCD record must be read to store in this MWE the beginning and ending tape volume serial numbers of the volumes the migrated data set is on.
	.1..	MWEFINHB	When set to 1, this MWE is not selected during the recall queue scan.
	..1.	MWEFNATT	When set to 1, the DFHSM SVC should not attach the attention out module.
	...1	MWEFDNOW	When set to 1, ARCCTL should delete this MWE after ARCCTL copies it to the address space of DFHSM.
	.... 1...	MWEF26DU	When set to 1, delete request from IGG026DU.
	.... .1..	MWEFWSDP	When set to 1, this recall MWE is waiting for another recall from a SDSP data set to complete.
	.... ..1.	MWEFCONS	When set to 1, request was entered from console.
	1	MWEFLOCW	When set to 1, a DFHSM task is waiting on this MWE, and should be posted when it completes.
75 (4B)	1	MWERCLCT	MWERCLCT contains the number of attempts to recall the data set.
	1	MWEATCTR	MWEATCTR is the alternate name for the count of times the MWE has been selected to process.
76 (4C)	8	MWEJBN	MWEJBN contains the job name of the requesting job.
84 (54)	4	MWERST	MWERST contains the reader start time of the job. The time is obtained from the job management record and is in units of hundredth's of a second.
88 (58)	4	MWERSD	MWERSD contains the reader start date of the job. The date is obtained from the TIME macro in format X'00*yyddds*'.
92 (5C)	1	MWERHSCT	MWERHSCT contains the number of times DFHSM tried recalling a data set while another host processor was using the data set.
93 (5D)	2	MWEFLG3	MWEFLG3 contains additional DFHSM flags.
	1...	MWEFNPST	When set to 1, indicates to ARCPMWE that the user should not be posted when this MWE is purged.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.1..	MWEFTCM	When set to 1, contains the text completion message flag.
	..1.	MWEFMPUR	When set to 1, a delete with purge has been requested.
	...1	MWECANCL	When set to 1, this MWE has been canceled.
	.... 1...	MWEFTMPB	When set to 1, the user is a TMP background job.
	.... .1..	MWEFASNC	When set to 1, the MWEECB in user's MWE is to be posted. When set to 0, the MWEECB in DFHSM's CSA copy MWE is to be posted.
	.... ..1.	MWEFBVT	When set to 1, the backup version of the data set resides on tape.
	1	MWEFDBU	When set to 1, the data set request is a result of a DBU of the volume.
	1...	MWEFEGDG	When set to 1, roll-off processing of unexpired generation data group has been requested.
	.1..	MWEFRIWF	When set to 1, deletion of free space has been requested.
	..1.	MWEFNRD	When set to 1, ARCPRQ should not read the MCD record.
	...1	MWEFNONQ	When set to 1, processing is being done without an enqueue on the data set name.
	.... 1...	MWEFATST	When set to 1, MWE was on queue when DFHSM was started.
	xxx	*	Reserved.
95 (5F)	1	MWEFTYP	MWEFTYP contains the function code for ARCFAIL.
96 (60)	4	MWEECBP	MWEECBP contains the ECB pointer used for local wait.
100 (64)	1	MWEDFLGS	MWEDFLGS contains the dump restore flags.
	1...	MWEFDUMP	When set to 1 for a backup volume MWE, a full volume dump will be performed. When set to 1 for a recover MWE, a restore will be performed.
	.1..	MWEFDGEN	When set to 1, MWEGEN contains the dump generation number, otherwise it contains the backup version number.
	..1.	MWEFBGEN	When set to 1, a generation has been specified with the RECOVER command.
	...1	MWEF646I	When set to 1, message ARC0646I has been issued.
	.... 1...	MWEFAPIN	When set to 1, DFHSM will attempt to apply incremental volume recover after a volume restore.
	xxx	*	Reserved.
101 (65)	1	MWEFFLGS	MWEFFLGS contains subsequent migration flags.
	1...	MWEFFVL	When set to 1, the migration MWE resulted from a FREEVOL command.
	.1..	MWEFTLEV	When set to 1, the target level of the FREEVOL command is migration level 1.
	..1.	MWEFTORD	When set to 1, a target device type of tape has been specified with the FREEVOL command.
	...1	MWETSPEC	When set to 1, a target device type was specified with the FREEVOL command.
	....1....	MWEFRTNV	When set to 1, RETAINNEWESTVERSION was specified with the FREEVOL command.
	xxx	*	Reserved.
102 (66)	2	MWE89VAL	MWE89VAL contains a value that indicates the priority of the MWE on the operator queue.
104 (68)	2	MWECINDX	MWECINDX contains an index into the command and entry point tables.
106 (6A)	1	MWEFLG4	MWEFLG4 contains the following flags:
	1...	MWEFEXT	When set to 1, extent reduction is required.
	.1..	MWEFSCHG	When set to 1, the change bit in the Format 1 DSCB should be set.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	..1.	MWEFSDLR	When set to 1, the date-last-referenced field should be set to the date the data set contained when it was migrated.
	..1	MWEFCLBD	When set to 1, the last backup date should be reset to zero (0).
	 xxxx	*	Reserved.
107 (6B)	1	MWESMSFG	MWESMSFG contains the following SMS functional flags:
	1...	MWEFSMSD	When set to 1, the data set is to be recalled as SMS-managed, and SMS-related data was returned in MWESLIST area (used during JES3 converter/interpreter processing only).
	.1..	MWEFRDL0	When set to 1, reissue locate request after the data set is recalled if a change in status has occurred for the data set. (For example, SMS to non-SMS and associated construct changes.)
	..1.	MWEFGDG	When set to 1, the data set is a GDG data set.
	...1	MWEFORCE	When set to 1, the FORCE non-SMS option was specified on the RECALL or RECOVER command.
	.... 1...	MWEFNOPW	When set to 1, password checking is not required.
	.... .1..	MWEFUCAT	When set to 1, the data set is to be uncataloged.
	.... ..1.	MWEFROG	When set to 1, the data set is a rolled-off generation data set.
	x	*	Reserved.
108 (6C)	4	*	Reserved.
112 (70)	16	*	Reserved.
128 (80)	4	*	Reserved.
132 (84)	6	MWEVINUS	MWEVINUS contains volume serial number of the tape volume causing return code 82 during recall. This field is also used as an insert for message ARC0380I.
138 (8A)	2	*	Reserved.

The following fields are appended to the MWE header for operator commands from the console or by the HSENDCMD command:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
140 (8C)	2	MWECMDL	MWECMDL contains the length of the command text plus four bytes for control.
142 (8E)	2	MWECMDO	MWECMDO contains the offset that is used for the TSO scan and parse to begin processing.
144 (90)	*	MWECMDT	MWECMDT contains the command text. Its length varies, depending on the number of command parameters.

The following fields are appended to the MWE header for all MWE requests except for operator commands:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
140 (8C)	2	MWEMCNT	MWEMCNT contains the number of management work elements in the request.
142 (8E)	2	MWESEQN	MWESEQN contains the sequence number of this MWE in a multiple request.
144 (90)	2	MWECCNT	MWECCNT contains the number of MWEs processed in the current request.
146 (92)	2	MWEDARC	MWEDARC contains the dynamic allocation error return code.
148 (94)	44	MWEDSN	MWEDSN contains the data set name of the data set being processed.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
192 (C0)	8	*	Reserved.
200 (C8)	8	MWEPW	MWEPW contains the data set password.
208 (D0)	4	MWEDEVT	MWEDEVT contains the device type as in the UCB.
212 (D4)	6	MWEVSN	MWEVSN contains the volume serial number. *ALL means all volumes, *LEV0 means all level 0 volumes, and *LEV1 means all migration level 1 volumes.
218 (DA)	1	MWECETYP	MWECETYP contains the control data set entry type if MWEFUNC code equals 8.
219 (DB)	1	MWEFRACF	MWEFRACF contains the RACF flags, the same as in the ACEEFLG1 field of the ACEE.
220 (DC)	4	MWEGEN	MWEGEN contains the backup version generation number requested with a RECOVER command, when MWEFDATE is set to 0, and MWEFDGEN is 0. When MWEFDGEN is 1, MWEGEN contains the dump generation number.
	4	MWEDATE	MWEDATE contains the date for the RECOVER command in the format X'00*yyddds*', when MWEFDATE set to 1.
	4	MWE2DEVT	MWE2DEVT specifies the device type of the MWE2VSN volume.
224 (E0)	4	MWEDAYS	MWEDAYS contains the DAYS parameter value from the MIGRATE, BACKVOL, or FREEVOL command.
228 (E4)	6	MWE2VSN	MWE2VSN contains the volume serial number specified with the CONVERT parameter of the MIGRATE command.
234 (EA)	2	*	Reserved.
236 (EC)	2	MWEDBADY	MWEDBADY contains the data set deletion *days* from the MIGRATE command.
238 (EE)	6	MWECVSN	MWECVSN contains the serial number of the catalog volume.
244 (F4)	4	MWECDEVT	MWECDEVT contains the device type of the catalog volume.
248 (F8)	4	MWEPDEP	MWEPDEP contains the address of the pool descriptor element.
252 (FC)	4	MWESTAMP	MWESTAMP contains the two minute wait interval time stamp.
256 (100)	12	*	Reserved.
268 (10C)	4	MWEFBID	MWEFBID contains the file sequence number of the migrated data set on a tape migration volume.
272 (110)	6	MWESTVOL	MWESTVOL contains the volume serial number of the tape volume where the migrated data set begins.
278 (116)	6	MWELSTVL	MWELSTVL contains the volume serial number of the tape volume where the migrated data set ends.
284 (11C)	2	MWEBUFL	MWEBUFL contains the length of the buffer of a control data set read MWE.
286 (11E)	2	MWEBUFU	MWEBUFU contains the amount of buffer used for a control data set read MWE.
288 (120)	*	MWEBUFD	MWEBUFD contains the variable length buffer data area used for a control data set read and based on the value of MWEBUFL.

The following fields are appended to the MWE for RECOVER requests only:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
288 (120)	44	MWENDSN	MWENDSN contains the new data set name for the backup version.
332 (14C)	6	MWEFRVOL	MWEFRVOL contains the original volume from which the backup version was copied.
338 (152)	6	*	Reserved.
344 (158)	8	MWENDSPW	MWENDSPW contains the password for the new data set name.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
352 (160)	2	MWEDCLCT	MWEDCLCT contains the number of entries in the dump class array.
354 (162)	2	*	Reserved.
356 (164)	40	MWEDCLSS	MWEDCLSS contains the dump class array.
396 (18C)	10	MWERETPD	MWERETPD contains the retention period for dump classes the dump classes in MWEDCLSS.
406 (196)	2	*	Reserved.
408 (198)	6	MWEDVOL	MWEDVOL contains the volume serial number of the dump volume.
414 (19E)	2	*	Reserved.
416 (1A0)	4	*	Reserved.

The following fields are appended to the MWE for aggregate backup and recovery requests:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
288 (120)	344	MWEABARS	Extension for RECOVER backup copy requests.
288 (120)	30	MWEAGNM	Aggregate group name.
318 (13E)	6	*	Reserved.
324 (144)	64	MWEADSNE	Allow for expansion of data set name.
324 (144)	44	MWEADSN	Data set name of control file.
368 (170)	20	*	Allowance for expansion of data set name.
388 (184)	8	*	Reserved
396 (18C)	8	MWEAUNIT	Unit type.
404 (194)	4	*	Reserved
408 (198)	1	MWEAVSNN	Number of volsers specified.
409 (199)	3	*	Reserved
412 (19C)	120	*	15 VOLSER entries.
THE FOLLOWING TWO FIELDS ARE REPEATED 15 TIMES STARTING AT OFFSET 412 (19C).			
0 (0)	6	MWEAVSN	VOLSER entry.
6 (6)	2	*	Reserved
532 (214)	8	*	Reserved.
540 (21C)	44	MWEAMNTY	Model entity name.
584 (248)	20	*	Reserved.
604 (25C)	8	MWEATUNT	Tape data set ARECOVER unitname.
612 (264)	4	MWEAFLGS	ABARS flags.
	1...	MWEFVRFY	When set to 1, verify is requested.
	.1..	MWEFREPL	When set to 1, replace is requested.
	..1.	MWEFNCOM	When set to 1, MWE not completed.
	...1	MWEFXMIT	When set to 1, XMIT is requested.
	....x xxxx	*	Reserved.
613 (265)	3	*	Reserved.
616 (268)	16	*	Reserved.

MWE Data Area Cross-Reference

Field	Offset	Begin at Offset
MWEABARS	288 (120)	
MWEABCC	60 (3C)	
MWEADSN	324 (144)	
MWEADSNE	324 (144)	
MWEAFLGS	612 (264)	
MWEAGNM	288 (120)	
MWEAMNTY	540 (21C)	
MWEASCB	40 (28)	
MWEATCTR	75 (4B)	
MWEATUNT	604 (25C)	
MWEAUNIT	396 (18C)	
MWEAVSN	0 (0)	412 (19c)
MWEAVSNN	408 (198)	
MWEBUFD	288 (120)	
MWEBUFL	284 (11C)	
MWEBUFU	286 (11E)	
MWEBWD	4 (4)	
MWECANCL	93 (5D)	
MWECCNT	144 (90)	
MWECDEVT	244 (F4)	
MWECETYP	218 (DA)	
MWECINDX	104 (68)	
MWECMDL	140 (8C)	
MWECMDO	142 (8E)	
MWECMDT	144 (90)	
MWECONID	35 (23)	
MWECVSN	238 (EE)	
MWEDARC	146 (92)	
MWEDATE	220 (DC)	
MWEDAYS	224 (E0)	
MWEDBADY	236 (EC)	
MWEDCLCT	352 (160)	
MWEDCLSS	356 (164)	
MWEDEVT	208 (D0)	
MWEDFLGS	100 (64)	
MWEDSN	148 (94)	
MWEDVOL	408 (198)	
MWEECB	44 (2C)	
MWEECBP	96 (60)	
MWEFABND	27 (1B)	
MWEFAPIN	100 (64)	
MWEFASNC	93 (5D)	
MWEFATMP	73 (49)	
MWEFATST	94 (5E)	
MWEFAUTH	27 (1B)	
MWEFBDCS	73 (49)	
MWEFBDCT	73 (49)	
MWEFBGEN	100 (64)	
MWEFBID	268 (10C)	
MWEFBTOT	26 (1A)	
MWEFBUSY	27 (1B)	
MWEFBVT	93 (5D)	
MWEFCLBD	106 (6A)	
MWEFCNVT	73 (49)	
MWEFCONS	74 (4A)	
MWEFDATE	25 (19)	
MWEFDAYS	27 (1B)	
MWEFDBA	73 (49)	
MWEFDBU	93 (5D)	
MWEFDGEN	100 (64)	
MWEFDNOW	74 (4A)	
MWEFDONE	27 (1B)	
MWEFDUMP	100 (64)	
MWEFEGDG	94 (5E)	
MWEFEXT	106 (6A)	
MWEFEX0A	26 (1A)	
MWEFFLGS	101 (65)	
MWEFFVL	101 (65)	
MWEFGDG	107 (6B)	
MWEFINHB	74 (4A)	
MWEFKGT	26 (1A)	
MWEFLGS	25 (19)	
MWEFLG2	73 (49)	
MWEFLG3	93 (5D)	
MWEFLG4	106 (6A)	
MWEFLOCW	74 (4A)	
MWEFMFRC	27 (1B)	
MWEFMPUR	93 (5D)	
MWEFNATT	74 (4A)	
MWEFNCAT	26 (1A)	
MWEFNCOM	612 (264)	
MWEFNOMT	26 (1A)	
MWEFNONQ	94 (5E)	
MWEFNOPW	107 (6B)	
MWEFNOW	25 (19)	
MWEFNPST	93 (5D)	
MWEFNRD	94 (5E)	
MWEFOP	27 (1B)	
MWEFORCE	107 (6B)	
MWEFPODS	26 (1A)	
MWEFRACF	219 ((DB)	
MWEFRBU	73 (49)	
MWEFRDL0	107 (6B)	
MWEFRDRC	74 (4A)	
MWEFRECV	25 (19)	
MWEFREPL	612 (264)	
MWEFRIWF	94 (5E)	
MWEFROG	107 (6B)	
MWEFRSV	27 (1B)	
MWEFRTNV	101 (65)	
MWEFRTYW	25 (19)	
MWEFRVOL	332 (14C)	
MWEFSCHG	106 (6A)	
MWEFSDLR	106 (6A)	
MWEFSMSD	107 (6B)	
MWEFSMSP	73 (49)	
MWEFSR	12 (C)	
MWEFSTCK	73 (49)	
MWEFTCM	93 (5D)	
MWEFTERM	27 (1B)	
MWEFTLEV	101 (65)	
MWEFTMPB	93 (5D)	
MWEFTORD	101 (65)	
MWEFTSOR	25 (19)	
MWEFTYP	95 (5F)	
MWEFUCAT	107 (6B)	
MWEFUNC	24 (18)	
MWEFUNWT	25 (19)	
MWEFVRFY	612 (264)	
MWEFVSAM	25 (19)	
MWEFWD	0 (0)	
MWEFWSDP	74 (4A)	
MWEFXMIT	612 (264)	
MWEF26DU	74 (4A)	
MWEF646I	100 (64)	
MWEGDG	26 (1A)	
MWEGEN	220 (DC)	
MWEGROUP	64 (40)	

Field	Offset	Begin at Offset
MWEHDR	0 (0)	
MWEID	56 (38)	
MWEJBN	76 (4C)	
MWELEN	9 (9)	
MWELOCK	72 (48)	
MWELSTVL	278 (116)	
MWEMCNT	140 (8C)	
MWEMLEV2	25 (19)	
MWENDSN	288 (120)	
MWENDSPW	344 (158)	
MWEPDEP	248 (F8)	
MWEPW	200 (C8)	
MWERC	48 (30)	
MWERCLCT	75 (4B)	
MWERDEVT	208 (D0)	
MWEREAS	52 (34)	
MWERETPD	396 (18C)	
MWERHSCT	92 (5C)	
MWERQN	36 (24)	
MWERSD	88 (58)	
MWERST	84 (54)	
MWERVCT	260 (104)	
MWERVSN	212 (D4)	
MWESEQN	142 (8E)	
MWESMSFG	107 (6B)	
MWESPL	8 (8)	
MWESPN	8 (8)	
MWESTAMP	252 (FC)	
MWESTVOL	272 (110)	
MWETOD	16 (10)	
MWETSDAT	20 (14)	
MWETSPEC	101 (65)	
MWETSTIM	16 (10)	
MWEUID	28 (1C)	
MWEVINUS	132 (84)	
MWEVLIST	256 (100)	
MWEVSN	212 (D4)	
MWE2DEVT	220 (DC)	
MWE2VSN	228 (E4)	
MWE29DU	26 (1A)	
MWE89VAL	102 (66)	

PDE – Pool Descriptor Element

The pool descriptor element defines a pool of volumes eligible for recalls of data sets with the specified pool identifier. A chain of these elements resides in subpool 241. The pool descriptor element is 60 bytes long plus 10 bytes for each volume in the recall pool.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	12	PDEHDR	PDEHDR contains the header information for this particular pool descriptor element.
0 (0)	8	PDEQPTRS	PDEQPTRS contains the linkage pointers for this pool descriptor element on the queue of pool descriptor elements.
	4	PDEFWD	PDEFWD contains the address of the next pool descriptor element in the queue.
4 (4)	4	PDEBWD	PDEBWD contains the address of the previous pool descriptor element in the queue.
8 (8)	4	PDESTGE	PDESTGE contains a description of the storage used by this pool descriptor element.
	1	PDESUBP	PDESUBP contains the subpool number of this pool descriptor element.
9 (9)	3	PDESIZE	PDESIZE contains the size, in bytes, of this pool descriptor element.
12 (C)	1	PDEQLEN	PDEQLEN contains the length of the pool identifier.
13 (D)	1	PDEFLGS	PDEFLGS contains miscellaneous PDE flags.
	1...	PDESD254	When set to 1, the volume pool contains less than 254 volumes of a single device type.
	.xxx xxxx	*	Reserved.
14 (E)	2	PDENVOL	PDENVOL contains the number of volumes in the pool.
16 (10)	44	PDEQUAL	PDEQUAL contains the pool identifier.

The following field is repeated for each volume, starting at offset 60 (3C):

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	10	PDENTRY	PDENTRY contains information about each volume in this recall pool.
0 (0)	6	PDEVOL	PDEVOL contains the serial number of the volume in the pool.
6 (6)	4	PDETYPE	PDETYPE contains the device type of the volume in the pool, in JES3 systems. Without JES3, PDETYPE contains binary zeros.

PDE Data Area Cross-Reference

Field	Offset	Begin at Offset	Field	Offset	Begin at Offset
Field	Offset		Field	Offset	
PDEBWD	4 (4)		PDEQUAL	16 (10)	
PDEFLGS	13 (D)		PDESD254	13 (D)	
PDEFWD	0 (0)		PDESIZE	9 (9)	
PDEHDR	0 (0)		PDESTGE	8 (8)	
PDENTRY	0 (0)	60 (3C)	PDESUBP	8 (8)	
PDENVOL	14 (E)		PDETYPE	6 (6)	60 (3C)
PDEQLEN	12 (C)		PDEVOL	0 (0)	60 (3C)
PDEQPTRS	0 (0)				

QCT – Queue Control Table

The queue control table is the anchor element for the queue of management work elements in the system common service area. The record is 108 bytes long and resides in subpool 245.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	MQCTECBP	MQCTECBP contains the address of the DFHSM ECB.
4 (4)	4	MQCTFLGS	MQCTFLGS contains the DFHSM status flags:
	1...	MQCTFACT	When set to 1, DFHSM is active.
	.1..	MQCTJES3	When set to 0, JES2 is the current environment. When set to 1, JES3 is supported by DFHSM.
	..1.	MQCTFRCV	When set to 1, the ANYSTORAGEVOLUME recall option is in effect.
	...1	MQCTJ3WT	When set to 1, the user wants to wait for the prevent migration process. (Set only by patching MCVTJ3WT.)
	.... 1...	MQCTFRPV	When set to 1, and MQCTFRCV is also set to 1, recall to a private nonpooled volume is permitted.
	.... .1..	MQCTFHRX	When set to 1, the recall volume selection exit (ARCRDEXT) has abnormally ended. This bit is used only in JES3 systems.
	.... ..1.	MQCTNOPM	When set to 1, the DFHSM JES3 prevent-migration date is not used. The user has patched MCVTJ3D equal to 0.
	1	MQCTFNOL	When set to 1, all NOWAIT MWEs are to be removed from the common service area queue when ARCCTL copies them to the address space of DFHSM.
	1...	MQCTFAPU	When set to 1, the user entered SETSYS ACCEPTPSCBUSERID
	.1..	MQCTJ25T	When set to 1, the JES3 main device schedule (MDS) is for tapes only.
	..xx xxxx	*	Reserved.
8 (8)	4	MQCTASCB	MQCTASCB contains the address of the DFHSM ASCB.
12 (C)	4	MQCTMWEH	MQCTMWEH contains the address of the first management work element on the common service area queue.
16 (10)	4	MQCTMWET	MQCTMWET contains the address of the last management work element on the common service area queue.
20 (14)	4	MQCTRQN	MQCTRQN contains the next request number to be processed.
24 (18)	4	MQCTVOLL	MQCTVOLL contains the address of the primary volume list when there is one; otherwise, it is zero.
28 (1C)	8	MQCTPDEQ	MQCTPDEQ contains the anchor pointers for the queue of pool descriptor elements.
	4	MQCTPOOL	MQCTPOOL contains the address of the first pool descriptor element, if there is any; otherwise, it is zero.
32 (20)	4	MQCTPLT	MQCTPLT contains the address of the last pool descriptor element, if there is any; otherwise, it is zero.
36 (24)	4	MQCTMCVT	MQCTMCVT contains the address of the MCVT control block.
40 (28)	4	MQCTESD	MQCTESD contains the address of the ARCESD module that contains names and addresses of all modules in the DFHSM address space.
44 (2C)	4	MQCTID	MQCTID is the QCT block identifier QCT*.
48 (30)	4	MQCTVRM	MQCTVRM is the DFHSM version, release, and modification number.
	2	MQCTVER	MQCTVER is the DFHSM version number in the character format (MQCTVER = X'40F2' for DFHSM Version 2 Release 1).

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
50 (32)	1	MQCTREL	MQCTREL is the DFHSM release number in the character format (MQCTREL = X'F1' for DFHSM Version 2 Release 1).
51 (33)	1	MQCTMOD	MQCTMOD is the DFHSM modification number in the character format (MQCTMOD = X'F0' for DFHSM Version 2 Release 1).
52 (34)	4	MQCTCSHL	MQCTCSHL contains the maximum amount of common storage area storage (in bytes) to be allocated to all MWEs. After the limit has been reached, no MWEs are added to the common service area queue. The default is 100K bytes.
56 (38)	4	MQCTCSCU	MQCTCSCU contains the total of common service area currently used.
60 (3C)	2	MQCTCSIL	MQCTCSIL contains the DFHSM inactive limit for the common service area storage allocation. This limit is a percent of the specified maximum limit (see field MCVTCSHL). After the percent of the specified maximum limit is allocated and DFHSM is inactive, no MWEs are added to the common service area queue. The default is 30% of the maximum limit common service area usage.
62 (3E)	2	MQCTCSAL	MQCTCSAL contains the DFHSM active limit for the common service area storage allocation. This limit is a percent of the specified maximum limit (see field MCVTCSHL). The default is 90% of the specified maximum limit. After the specified percentage of common service area is allocated and DFHSM is active, only batch WAIT MWEs are added to the common service area queue.
64 (40)	2	MQCTCSNL	MQCTCSNL contains the maximum number of MWEs to allow per address space. If any NOWAIT MWEs are added to the common service area queue for this address space after the maximum number has been reached, they are flagged to indicate the common service area storage allocated to the MWE is to be freed when the ARCCTL has copied the MWE into DFHSM's address space. The default is 4 MWEs.
66 (42)	2	*	Reserved.
68 (44)	8	MQCTT57I	MQCTT57I contains the last time message ARC0057I was issued to the operator. This time is in STCK format and shifted 12 bits.
76 (4C)	8	MQCTT58I	MQCTT58I contains the last time message ARC0057I was issued to the operator. This time is in STCK format and shifted 12 bits.
84 (54)	8	MQCTVOLP	MQCTVOLP contains volume pool table pointers.
	4	MQCTVPOL	When on, indicates the volume pool is not empty.
88 (58)	4	MQCTVPLT	MQCTVPLT contains the volume pool tail address.
92 (5C)	16	*	Reserved.
108 (6C)	120	MQCTSAS	This is a two-element array containing a 4 byte pointer to the MASCB and a 4 byte field reserved for future use. The array is comprised of 15 of the two-element fields, starting at offset 108(6C). The data is used for aggregate backup/recovery.
0 (0)	4	MQCTMASP	This is a pointer to the MASCB control block.
4 (4)	4	*	Reserved.

MQCT Data Area Cross-Reference

Field	Offset	Begin at Offset
MQCTASCB	8 (8)	
MQCTCSAL	62 (3E)	
MQCTCSCU	56 (38)	
MQCTCSHL	52 (34)	
MQCTCSIL	60 (3C)	
MQCTCSNL	64 (40)	
MQCTECBP	0 (0)	
MQCTESD	40 (28)	
MQCTFACT	4 (4)	
MQCTFAPU	4 (4)	
MQCTFHRX	4 (4)	
MQCTFLGS	4 (4)	
MQCTFNOL	4 (4)	
MQCTFRCV	4 (4)	
MQCTFRPV	4 (4)	
MQCTID	44 (2C)	
MQCTJES3	4 (4)	
MQCTJ25T	4 (4)	
MQCTJ3WT	4 (4)	
MQCTMASP	0 (0)	108 (6C)
MQCTMCVT	36 (24)	
MQCTMOD	51 (33)	
MQCTMWEH	12 (C)	
MQCTMWET	16 (10)	
MQCTNOPM	4 (4)	
MQCTPDEQ	28 (1C)	
MQCTPLT	32 (20)	
MQCTPOOL	28 (1C)	
MQCTREL	50 (32)	
MQCTRQN	20 (14)	
MQCTSAS	108 (6C)	
MQCTT57I	68 (44)	
MQCTT58I	76 (4C)	
MQCTVER	48 (30)	
MQCTVOLL	24 (18)	
MQCTVOLP	84 (54)	
MQCTVPLT	88 (58)	
MQCTVPOL	84 (54)	
MQCTVRM	48 (30)	

RCB — Recovery Control Block

The recovery control block contains information used to clean up or retry after the abnormal end of a subtask. Recovery control blocks reside in DFHSM and are 216 bytes long plus 32 bytes for each data set entry.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	RCBID	RCBID contains the name of the failing subtask.
8 (8)	4	RCBBID	RCBBID contains the block identifier RCB*.
12 (C)	1	RCBSPN	RCBSPN contains the subpool number.
13 (D)	3	RCBLEN	RCBLEN contains the length of the recovery control block.
16 (10)	3	RCBFLGS	RCBFLGS contains the retry or cleanup flags.
	 xxxx	*	Reserved.
	1...	RCBFRTY	When set to 1, retry is wanted for open, close, and end-of-volume abnormal ends.
	.1..	RCBFRTYF	When set to 1, retry is wanted for all abnormal ends.
	..1.	RCBF1FT	When set to 1, the 3480 tape, written in single-file format, is in use.
	...1	RCBFUSEX	When set to 1, a user exit is being performed.
17 (11)	2	*	Reserved.
19 (13)	1	RCBNDSE	RCBNDSE contains the number of data set entries that are in this recovery control block.
20 (14)	4	RCBMWE	RCBMWE contains the address of the management work element in process, if there is any.
24 (18)	4	RCBRTYA	RCBRTYA contains the address of retry routine.
28 (1C)	64	RCBREGS	RCBREGS contains the registers for the retry routine in standard save area format.
92 (5C)	4	RCBRPLP	RCBRPLP contains the address of the RPL for the control data set record currently held.
96 (60)	4	RCBVTP	RCBVTP contains the address of mounted volume table entry, if there is any.
100 (64)	44	RCBDSN	RCBDSN contains the data set name currently being processed.
144 (90)	6	RCBVSN	RCBVSN contains the volume where the data set currently being processed resides on.
150 (96)	 xxxx	*	Reserved.
	1...	RCBFRELV	When set to 1, the data set migration task abnormally ended, and the tape volumes allocated to data set migration need deallocation.
	.1..	RCBCRELV	When set to 1, an error was detected in the data set processor task that causes the controller to release the tapes.
	..1.	RCBFOSAQ	When set to 1, the SAQ is currently enqueued by this task.
	...1	RCBRECAT	When set to 1, recatalog the data set name that is in RCBDSN.
150 (96)	1	*	Reserved.
152 (98)	4	RCBRPLP2	RCBRPLP2 contains an address of the request parameter list for the control data set entry that is held.
156 (9C)	4	RCBRPLP3	RCBRPLP3 contains an address of the request parameter list for the control data set entry that is held.
160 (A0)	16	*	Contains subtask-dependent data.
176 (B0)	4	RCBLKNXT	RCBLKNXT contains the address of the RCB for the next device category used during one invocation of volume or data set migration.
180 (B4)	4	RCBLKPRV	RCBLKPRV contains the address of the RCB for the previous device category used during one invocation of volume or data set migration.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
184 (B8)	4	RCBABCC	RCBABCC contains the abnormal end codes.
188 (BC)	4	RCBVTP2	RCBVTP2 contains an address of the second mounted volume table entry.
192 (C0)	4	RCBVLSTP	RCBVLSTP contains an address of the list of all tape volumes that contain the migration copy of the data set.
196 (C4)	4	RCBVTP3	RCBVTP3 contains the MVT entry for the target volume.
200 (C8)	4	RCBNRPLP	RCBNRPLP contains the address of the non-CDS RPL being held.
204 (CC)	4	RCBTCBIN	RCBTCBIN contains the DFHSM task control block index.
208 (D0)	4	RCBLINK	RCBLINK contains the link pointer to the next RCB area.
212 (D4)	4	RCBRBAVR	RCBRBAVR contains the RBA of NVR entry of the SMS-managed data set being recalled (this value is valid if the flag RCBFNVR in the array RCBDSE for the output data set has been set to 1).

The remaining portion of the RCB is part of a data set array. The number of elements in the array is defined in RCBNDSE.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	RCBDDN	RCBDDN contains the allocated ddname or blanks.
8 (8)	4	RCBDCBP	RCBDCBP contains the address of the DCB or ACB if the data set is open.
12 (C)	2	RCBDFLGS	RCBDFLGS is a 2-byte field that contains the data set control flags:
	..xx xxxx	*	Reserved.
	1...	RCBFSDP	When set to 1, this is a VSAM small-data-set-packing data set.
	.1..	RCBFTPO	When set to 1, the output is to tape.
	..1.	RCBFUTTC	When set to 1, the TTOC needs to be updated. When set to 0, the TTOC has been updated. This bit applies only to output tape data sets.
	...1	RCBFSCRD	When set to 1, the DASD output data set is to be scratched on an abnormal end.
	.... 1...	RCBFOTDS	When set to 1, the tape is a 3480 tape written in single-file format.
	.... .1..	RCBFEOS	When set to 1, the data set in error is assigned the ERASE attribute.
	.... ..1.	RCBFRSAQ	When set to 1, the SAQ entry is currently in the SMS-allocation queue.
	1	RCBFSMS	When set to 1, the data set is SMS-managed.
	1...	RCBFNVR	When set to 1, the NVR entry was created for a non-VSAM SMS-managed data set during recall processing.
	.1..	RCBFNVTC	When set to 1, the VTOC entry was created for a non-VSAM SMS-managed data set during recall processing.
14 (E)	18	*	Reserved.

RCB Data Area Cross-Reference

Field	Offset
RCBABCC	184 (B8)
RCBBID	8 (8)
RCBCRELV	150 (96)
RCBDCBP	8 (8)
RCBDDN	0 (0)
RCBDFLGS	12 (C)
RCBDSN	100 (64)
RCBFEOS	12 (C)
RCBFLGS	16 (10)
RCBFNVR	12 (C)
RCBFNVTC	12 (C)
RCBFOSAQ	150 (96)
RCBFOTDS	12 (C)
RCBFRELV	150 (96)
RCBFRSAQ	12 (C)
RCBFRTY	16 (10)
RCBFRTYF	16 (10)
RCBFSCRD	12 (C)
RCBFSDP	12 (C)
RCBFSMS	12 (C)
RCBFTPO	12 (C)
RCBFUSEX	16 (10)
RCBFUTTC	12 (C)
RCBF1FT	16 (10)
RCBID	0 (0)
RCBLEN	13 (D)
RCBLINK	208 (D0)
RCBLKNXT	176 (B0)
RCBLKPRV	180 (B4)
RCBMWE	20 (14)
RCBNDSE	19 (13)
RCBNRPLP	200 (C8)
RCBRBAVR	212 (D4)
RCBRECAT	150 (96)
RCBREGS	28 (1C)
RCBRPLP	92 (5C)
RCBRPLP2	152 (98)
RCBRPLP3	156 (9C)
RCBRTYA	24 (18)
RCBSPN	12 (C)
RCBTCBIN	204 (CC)
RCBVLSTP	192 (C0)
RCBVSN	144 (90)
RCBVTP	96 (60)
RCBVTP2	188 (BC)
RCBVTP3	196 (C4)

RLE — Retained Data Set Level Element

The retained data set level element defines a high-level qualifier that has restrictions on migration. The retained data set level elements are chained together in the DFHSM work space. Each retained data set level element contains a 10-byte header plus a variable length data set qualifier.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	RLEFWD	RLEFWD contains the address of the next retained data set level element on the queue.
4 (4)	4	RLEBWD	RLEBWD contains the address of the previous retained data set level element on the queue.
8 (8)	1	RLEFLGS	RLEFLGS contains the following status flags:
	...x xxxx	*	Reserved.
	1...	RLEFIXED	When set to 1, fixed core, do not free.
	.1..	RLEFMIG	When set to 1, the data sets are able to migrate. When set to 0, they are not able to migrate.
	..1.	RLEFUMIG	When set to 1, the data sets can migrate by command only.
9 (9)	1	RLELEN	RLELEN contains the length of this level qualifier.
10 (A)	*	RLELEVEL	RLELEVEL contains the level qualifier, indicating a group of data sets to be retained from migration. It is of variable length up to 44 bytes.

RLE Data Area Cross-Reference

Field	Offset
RLEBWD	4 (4)
RLEFIXED	8 (8)
RLEFLGS	8 (8)
RLEFMIG	8 (8)
RLEFUMIG	8 (8)
RLEFWD	0 (0)
RLELEN	9 (9)
RLELEVEL	10 (A)

RTCB — Recall Task Control Block

The recall task control block passes parameters to a recall subtask. A recall task control block for each recall subtask resides in the DFHSM work space. Each control block is 60 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	RTCBECB	RTCBECB contains the recall task ECB.
	x.xx xxxx	*	Reserved.
	.1..	RTCBCOMP	RTCBCOMP contains the complete bit.
1 (1)	3	*	Reserved.
4 (4)	4	RTCBFLGS	RTCBFLGS is a 4-byte field that contains the following fields:
	1...	RTCBFACT	When set to 1, the recall task is active.
	.1..	RTCBFCER	When set to 1, a DFHSM control data set record is held.
	..1.	RTCBFDBL	When set to 1, the recall task has been disabled.
	...1	RTCBFCDS	When set to 1, the control data set has a shared enqueue.
	.... 1...	RTCBFDSN	When set to 1, DFHSM has enqueued a data set.
	.... .1..	RTCBFMCD	When set to 1, DFHSM has serialized the MCD record of the data set.
	.... ..1.	RTCBFMCV	When set to 1, DFHSM has serialized the volume for recall.
	1	RTCBFOSR	When set to one, this task owns the SDSP resource and no other task can recall from SDSP until this task is done.
5 (5)	...x xxxx	*	Reserved.
	1...	RTCBFGDS	When set to one, the calling module is ARCGDS.
	.1..	RTCBFRTP	When set to one, this is a tape recall task.
	..1.	RTCBFRMQ	When set to one, the MWE queue has been locked.
6 (6)	2	*	Reserved.
8 (8)	4	RTCBTCB	RTCBTCB contains the address of the recall task TCB.
12 (C)	4	RTCBMWE	RTCBMWE contains the address of the management work element currently being processed.
16 (10)	8	RTCBID	RTCBID contains the unique recall task identifier, ARCRSTR*x*, where *x* is 1 to F.
24 (18)	4	RTCBRPLP	RTCBRPLP contains the address of the RPL if a DFHSM control data set record is held.
28 (1C)	4	RTCBRCBP	RTCBRCBP contains the address of the subtask recovery control block.
32 (20)	4	RTCBVOLP	RTCBVOLP contains an address of the volume-use array.
36 (24)	4	RTCBMMVT	RTCBMMVT is an address of the MVT for tape allocated to this task, which is in its wait to re-scan the recall queue.
40 (28)	4	RTCBECB2	RTCBECB2 contains the ARCRSTR re-scan timer ECB.
	x.xx xxxx	*	Reserved.
	.1..	RTCB2CMP	When set to 1, the recall is complete.
41 (29)	3	*	Reserved.
44 (2C)	4	RTCBECB3	RTCBECB3 indicates that more work is available for the recall task, which is waiting to rescan the queue.
	x.xx xxxx	*	Reserved.
	.1..	RTCB3CMP	RTCB3CMP contains the complete bit.

45 (2D)	3	*	Reserved.
48 (30)	4	RTCBRDMP	RTCBRDMP contains the address of the ARCRDMP parameter list for RDS and DMDS.
52 (34)	8	*	Reserved.

RTCB Data Area Cross-Reference

Field	Offset
RTCBCOMP	0 (0)
RTCBECB	0 (0)
RTCBECB2	40 (28)
RTCBBECB3	44 (2C)
RTCBFACT	4 (4)
RTCBFCDS	4 (4)
RTCBFCER	4 (4)
RTCBFDBL	4 (4)
RTCBFDSN	4 (4)
RTCBFGDS	5 (5)
RTCBFLGS	4 (4)
RTCBFMCD	4 (4)
RTCBFMCV	4 (4)
RTCBFOSR	4 (4)
RTCBFRMQ	5 (5)
RTCBFRTP	5 (5)
RTCBID	16 (10)
RTCBMMVT	36 (24)
RTCBMWE	12 (C)
RTCBRCBP	28 (1C)
RTCBRDMP	48 (30)
RTCBRPLP	24 (18)
RTCBTCB	8 (8)
RTCBVOLP	32 (20)
RTCB2CMP	40 (28)
RTCB3CMP	44 (2C)

SDATA — VSAM Sphere Backup Control Block

The SDATA control block is in a chained list of SDATA control blocks (or an individual block) that contains information used in determining whether a VSAM sphere can be migrated or backed up. When an SDATA control block is in a chained list of control blocks, the two words preceding the first block contain forward and backward pointers to subsequent chained blocks of SDATA control blocks. The control block is 384 bytes long plus 216 bytes for each AIX cluster.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	SDATAFWD	SDATAFWD contains the address of the next SDATA block.
4 (4)	4	SDATABWD	SDATABWD contains the address of the previous SDATA block.
8 (8)	8	SDATAID	SDATAID contains the control block id.
16 (10)	44	SDATADSN	SDATADSN contains the data set name of the VSAM base cluster.
60 (3C)	4	SDATADAT	SDATADAT contains the date the data set was last changed in the format of X'00*yyddds*'.
64 (40)	4	SDATCDLR	SDATCDLR contains the date the data set was last referenced.
	1	*	Reserved.
65 (41)	1	SDADLRY	SDADLRY contains the last two digits of the year in binary format.
66 (42)	2	SDADLRD	SDADLRD contains the day of the year in binary format.
68 (44)	4	SDATAFLG	SDATAFLG contains the following control flags:
	x	*	Reserved.
	1...	SDATARAC	When set to 1, the data set is RACF-protected.
	.1..	SDATAPW	When set to 1, the data set is password-protected.
	..1.	SDATAPTH	When set to 1, the VSAM cluster has a path defined on it.
	...1	SDATAOPN	When set to 1, the component is open for output.
	.... 1...	SDATICF	When set to 1, the entry is from an Integrated Catalog Facility catalog.
	.... .1..	SDATICFC	When set to 1, the entry is an Integrated Catalog Facility catalog.
	.... ..1.	SDATCMD	When set to 1, recatalog the base cluster name only.
	 xxxx	*	Reserved.
	1...	SDATF1BU	When set to 1, the base data object of an ICF VSAM has been updated.
	.1..	SDATFMV	When set to 1, the data set is a multiple-volume VSAM data set.
	..1.	SDATFKRG	When set to 1, the data set is a keyrange VSAM data set.
	...1	SDATADMV	When set to 1, DFDSS is the data mover.
69 (45)	2	*	Reserved.
72 (48)	1	SDATRCOR	SDATRCOR contains information about the VSAM record organization.
73 (49)	1	SDATAGCT	SDATAGCT contains the number of AIX(G) entries.
74 (4A)	2	SDATASP	SDATASP contains the subpool number of this control block.
76 (4C)	4	SDATANXT	SDATANXT contains the address of the next control block when processing a volume request.
	4	SDATASIZ	SDATASIZ contains the size of the control block when processing a data set request.
80 (50)	8	SDATAMPW	SDATAMPW contains the master password of the VSAM base cluster.
88 (58)	4	SDATNQHP	SDATNQHP contains the address of the first object in the enqueue list.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
92 (5C)	4	SDAT1VSZ	SDAT1VSZ contains the size (in tracks) of the data on the volume with the base cluster component.
96 (60)	4	SDATCDT4	SDATCDT4 contains the creation date of the data set.
	3	SDATCDT3	SDATCDT3 contains a 3-byte creation date.
100 (64)	8	*	Reserved.
108 (6C)	4	SDAT#REC	SDATA#REC contains the number of logical records in the data component.
112 (70)	49	SDATADCI	Data component information.
112 (70)	1	DATAOPTS	DATAOPTS contains the following flags:
	..xx xxx.	*	Reserved.
	11..	DSHROPTS	DSHROPTS contains the share options of data components.
	1	SDATADRF	When set to 1, the base data object is RACF-indicated.
113 (71)	4	SDAEXPDT	SDAEXPDT contains the expiration date of the VSAM cluster. The date is in the format X'*ccyyddds*'
	1	SDAEXPCN	SDAEXPCN contains 1 fixed byte containing the century. cc=00, century is 1900 cc=01, century is 2000.
114 (72)	1	SDAEXPYR	SDAEXPYR contains the year in the format 'yy'.
115 (73)	2	SDAEXPDY	SDAEXPDY contains the day in the format 'ddds'.
117 (75)	44	SDATDDSN	SDATDDSN contains the name of the base data component.
	3	DATACIN	DATACIN contains the control internal number of the catalog record for the data component.
161 (A1)	3	*	Reserved.
164 (A4)	4	SDATADUR	SDATADUR contains the highest relative byte address used for the data component.
168 (A8)	4	SDATADAR	SDATADAR contains the highest relative byte address allocated for the data component.
172 (AC)	4	SDATBDRB	SDATBDRB contains the base data component RBA.
176 (B0)	4	SDATATRK	Total tracks allocated.
180 (B4)	6	SDATABDV	SDATABDV contains the first base data component volume.
186 (BA)	2	*	Reserved.
188 (BC)	4	SDATDTTR	SDATDTTR contains the relative track address (TTR) of the format 1 DSCB of the base data object.
192 (C0)	8	*	Reserved.
200 (C8)	48	SDATAICI	Index component information.
	1	INDXOPTS	INDXOPTS contains the following flags:
	..xx xxx.	*	Reserved.
	11..	ISHROPTS	ISHROPTS contains the share options of the index component.
	1	SDATAIRF	When set to 1, the base index is RACF-indicated.
201 (C9)	1	SDATARFI	SDATARFI contains the base cluster RACF indicators.
	...x xxxx	*	Reserved.
	1...	SDATAPRF	When set to 1, the first base path is RACF-indicated.
	.1..	SDATARND	When set to 1, the migrated cluster is RACF-indicated. It can be recalled but not deleted.
	..1.	SDATAERA	When set to 1, activates data and index data erase option.
202 (CA)	2	*	Reserved.
204 (CC)	44	SDATIDSN	SDATIDSN contains the data set name of the base index object.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	3	INDXCIN	INDXCIN contains the control interval number of the catalog record for the index component.
248 (F8)	4	SDATAIUR	SDATAIUR contains the highest relative byte address used for the index component.
252 (FC)	4	SDATAIAR	SDATAIAR contains the highest relative byte address allocated for the index component.
256 (100)	4	SDATBIRB	SDATBIRB contains the base index component RBA.
260 (104)	4	*	Reserved.
264 (108)	6	SDATABDI	SDATABDI contains the first base index component volume.
270 (10E)	10	*	Reserved.
280 (118)	2	SDATCPCT	SDATCPCT contains the number of base cluster paths.
282 (11A)	44	SDATCPTH	SDATCPTH contains the name of the first path in the base cluster.
326 (146)	2	SDATGPCT	SDATGPCT contains the number of paths on all AIXs.
328 (148)	44	SDATGPTH	SDATGPTH contains the name of the first path on the first AIX.
372 (174)	4	SDACACBP	SDACACBP contains the address of cataloged ACB.
376 (178)	8	*	Reserved.

The AIX extension arrays begin here. The number of elements in the array is defined in SDATAGCT.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	216	SDATAEXT	SDATAEXT contains the SDATA extension array.
0 (0)	1	SDATAG	SDATAG contains the letter "G".
1 (1)	1	SDATGFLG	SDATGFLG contains alternate index cluster (AIX) RACF indicators.
	..xx xxxx	*	Reserved.
	1...	SDATGACR	When set to 1, the AIX cluster is RACF-indicated.
	.1..	SDATGAPR	When set to 1, the first AIX path is RACF-indicated.
(2) (2)	2	*	Reserved.
4 (4)	44	SDATGDSN	SDATGDSN contains the data set name of the AIX object.
	3	SDATAGCI	SDATAGCI contains the control interval number of the catalog record for the AIX cluster.
48 (30)	8	*	Reserved.
56 (38)	1	EDATOPTS	EDATOPTS contains the following flags:
	..xx xxx.	*	Reserved.
	11..	EDSHROPT	EDSHROPT contains the share options of the data component.
	1	SDATGADR	When set to 1, the AIX data component is RACF-indicated.
57 (39)	3	*	Reserved.
60 (3C)	44	SDATGDDS	SDATGDDS contains the data set name of the AIX data object.
	3	EDATACIN	EDATACIN contains the control interval number of the catalog record for the data component of the AIX cluster.
104 (68)	4	SDATAGDU	SDATAGDU contains the highest relative byte address used for the data component.
108 (6C)	4	SDATAGDA	SDATAGDA contains the highest relative byte address allocated for the data component.
112 (70)	4	SDATGDRB	SDATGDRB contains the AIX data component RBA.
116 (74)	4	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
120 (78)	6	SDATAGDV	SDATGDV contains the first AIX data component volume.
126 (7E)	10	*	Reserved.
136 (88)	48	SDATAGIC	AIX index component information.
	1	EINDOPTS	EINDOPTS contains the following flags:
	..xx xxx.	*	Reserved.
	11..	EISHROPT	EISHROPT contains share options, and index components.
	1	SDATGAIR	SDATGAIR contains the AIX index (RACF-indicated).
137 (89)	3	*	Reserved.
140 (8C)	44	SDATINDS	SDATINDS contains the AIX index object data set name.
	3	EINDXCIN	EINDXCIN contains the component index number of the AIX index object data set.
184 (B8)	4	SDATAGIU	SDATAGIU contains the high used RBA, and other index components.
188 (BC)	4	SDATAGIA	SDATAGIA contains the high allocated RBA, and other index components.
192 (C0)	4	SDATGIRB	SDATGIRB contains the AIX index component RBA.
196 (C4)	4	*	Reserved.
200 (C8)	6	SDATAGDI	SDATAGDI contains the first AIX index component volume number.
206 (CE)	10	*	Reserved.

SDATA Data Area Cross-Reference

Field	Offset	Begin at Offset
DATACIN	117 (75)	
DATAOPTS	112 (70)	
DSHROPTS	112 (70)	
EDATACIN	60 (3C)	384 (180)
EDATOPTS	56 (38)	384 (180)
EDSHROPT	56 (38)	384 (180)
EINDOPTS	136 (88)	384 (180)
EINDXCIN	140 (8C)	384 (180)
EISHROPT	136 (88)	384 (180)
INDXCIN	204 (CC)	
INDXOPTS	200 (C8)	
ISHROPTS	200 (C8)	
SDACACBP	372 (174)	
SDADLRD	66 (42)	
SDADLRY	65 (41)	
SDAEXCPN	113 (71)	
SDAEXPDT	113 (71)	
SDAEXPDY	115 (73)	
SDAEXPYR	114 (72)	
SDAT#REC	108 (6C)	
SDATABDI	264 (108)	
SDATABDV	180 (B4)	
SDATABWD	4 (4)	
SDATADAR	168 (A8)	
SDATADAT	60 (3C)	
SDATADMV	69 (45)	
SDATADCI	112 (70)	
SDATADRF	112 (70)	
SDATADSN	16 (10)	
SDATADUR	164 (A4)	
SDATAERA	201 (C9)	
SDATAEXT	0 (0)	384 (180)
SDATAFLG	68 (44)	
SDATAFWD	0 (0)	
SDATAG	0 (0)	384 (180)
SDATAGCI	4 (4)	384 (180)
SDATAGCT	73 (49)	
SDATAGDA	108 (6C)	384 (180)
SDATAGDC	440 (1B8)	
SDATAGDI	200 (C8)	384 (180)
SDATAGDU	104 (68)	384 (180)
SDATAGDV	120 (78)	384 (180)
SDATAGIA	188 (BC)	384 (180)
SDATAGIC	136 (88)	384 (180)
SDATAGIU	184 (B8)	384 (180)
SDATAIAR	252 (FC)	
SDATAICI	200 (C8)	
SDATAID	8 (8)	
SDATAIRF	200 (C8)	
SDATAIUR	248 (F8)	
SDATAMPW	80 (50)	
SDATANXT	76 (4C)	
SDATAOPN	68 (44)	
SDATAPRF	201 (C9)	
SDATAPTH	68 (44)	
SDATAPW	68 (44)	
SDATARAC	68 (44)	
SDATARFI	201 (C9)	
SDATARND	201 (C9)	
SDATASIZ	76 (4C)	
SDATASP	74 (4A)	
SDATATRK	176 (B0)	

Field	Offset	Begin at Offset
SDATBDRB	172 (AC)	
SDATBIRB	256 (100)	
SDATCDLR	64 (40)	
SDATCDT3	96 (60)	
SDATCDT4	96 (60)	
SDATCMD	68 (44)	
SDATCPCT	280 (118)	
SDATCPTH	282 (11A)	
SDATDDSN	117 (75)	
SDATDTTR	188 (BC)	
SDATFKRG	68 (44)	
SDATFMV	68 (44)	
SDATFIBU	68 (44)	
SDATGACR	1 (1)	384 (180)
SDATGADR	56 (38)	384 (180)
SDATGAIR	136 (88)	384 (180)
SDATGAPR	1 (1)	384 (180)
SDATGDDS	60 (3C)	384 (180)
SDATGDRB	112 (70)	384 (180)
SDATGDSN	4 (4)	384 (180)
SDATGFLG	1 (1)	384 (180)
SDATGIRB	192 (C0)	384 (180)
SDATGPCT	326 (146)	
SDATGPTH	328 (148)	
SDATICF	68 (44)	
SDATICFC	68 (44)	
SDATIDSN	204 (CC)	
SDATINDS	140 (8C)	384 (180)
SDATNQHP	88 (58)	
SDATRCOR	72 (48)	
SDATIVSZ	92 (5C)	

SUT — Space Usage Table

The space usage table contains space use data for the DFHSM MCDS, BCDS, OCDS, and journal data set. The space usage table resides in the DFHSM work space and is 112 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	SUTJDCB	SUTJDCB contains the address of the journal data control block.
4 (4)	4	SUTJPRI	SUTJPRI contains the size, in bytes, of the journal primary extent.
8 (8)	4	SUTJSEC	SUTJSEC contains the size, in bytes, of a journal secondary extent.
12 (C)	2	SUTJFREQ	SUTJFREQ contains the number of journal records to be written between space checks.
14 (E)	2	SUTJCNT	SUTJCNT contains the number of journal records written since the last space check.
16 (10)	2	SUTJTH	SUTJTH contains the threshold percentage of occupied space that triggers the warning that the journal is getting full.
18 (12)	2	SUTJEXT	SUTJEXT contains the number of journal extents considered in the total-space-available computation.
20 (14)	1	SUTFLAGS	SUTFLAGS contains the space monitoring control flags.
	 xxxx	*	Reserved.
	1...	SUTFJD	When set to 1, journal space monitoring is disabled.
	.1.. ...	SUTFMD	When set to 1, migration control data set space monitoring is disabled.
	..1.	SUTFBD	When set to 1, backup control data set space monitoring is disabled.
	...1	SUTFOD	When set to 1, offline control data set space monitoring is disabled.
21 (15)	7	*	Reserved.
28 (1C)	4	SUTMPRI	SUTMPRI contains the size, in bytes, of the migration control data set primary extent.
32 (20)	4	SUTMSEC	SUTMSEC contains the size, in bytes, of a migration control data set secondary extent.
36 (24)	4	SUTMAFS	SUTMAFS contains the migration control data set available free space, in bytes, at the time the multiple-host processor control record was last updated from this processor.
40 (28)	2	SUTMFREQ	SUTMFREQ contains the number of migration control data set records to be written between space checks.
42 (2A)	2	SUTMCNT	SUTMCNT contains the number of migration control data set records written since the last space check.
44 (2C)	2	SUTMTH	SUTMTH contains the threshold percentage of occupied space that triggers the warning that the migration control data set is getting full.
46 (2E)	2	SUTMEXT	SUTMEXT contains the number of migration control data set extents considered in the total-space-available computation.
48 (30)	8	*	Reserved.
56 (38)	4	SUTBPRI	SUTBPRI contains the size, in bytes, of the backup control data set primary extent.
60 (3C)	4	SUTBSEC	SUTBSEC contains the size, in bytes, of a backup control data set secondary extent.
64 (40)	4	SUTBAFS	SUTBAFS contains the backup control data set available free space, in bytes, at the time the multiple-host processor control record was last updated from this host.
68 (44)	2	SUTBFREQ	SUTBFREQ contains the number of backup control data set records to be written between space checks.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
70 (46)	2	SUTBCNT	SUTBCNT contains the number of backup control data set records written since the last space check.
72 (48)	2	SUTBTH	SUTBTH contains the threshold percentage of occupied space, which triggers the warning that the backup control data set is getting full.
74 (4A)	2	SUTBEXT	SUTBEXT contains the number of backup control data set extents considered in the total-space-available computation.
76 (4C)	8	*	Reserved.

The following is appended only for offline control data sets:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
84 (54)	4	SUTOPRI	SUTOPRI contains the size, in bytes, of the offline control data set primary extent.
88 (58)	4	SUTOSEC	SUTOSEC contains the size, in bytes, of the offline control data set secondary extent.
92 (5C)	4	SUTOAFS	SUTOAFS contains the offline control data set available free space, in bytes, at the time the multiple-host processor control record was last updated from this processor.
96 (60)	2	SUTOFREQ	SUTOFREQ contains the number of offline control data set records to be written between space checks.
98 (62)	2	SUTOCNT	SUTOCNT contains the number of offline control data set records written since the last space check.
100 (64)	2	SUTOTH	SUTOTH contains the threshold percentage of occupied space used to trigger the warning that the offline control data set is getting full.
102 (66)	2	SUTOEXT	SUTOEXT contains the number of offline control data set extents considered in the total-space-available calculation.
104 (68)	8	*	Reserved.

SUT Data Area Cross-Reference

Field	Offset
SUTBAFS	64 (40)
SUTBCNT	70 (46)
SUTBEXT	74 (4A)
SUTBFREQ	68 (44)
SUTBPRI	48 (30)
SUTBSEC	60 (3C)
SUTBTH	72 (48)
SUTFBD	20 (14)
SUTFJD	20 (14)
SUTFLAGS	20 (14)
SUTFMD	20 (14)
SUTFOD	20 (14)
SUTJCNT	14 (E)
SUTJDBC	0 (0)
SUTJEXT	18 (12)
SUTJFREQ	12 (C)
SUTJPRI	4 (4)
SUTJSEC	8 (8)
SUTJTH	16 (10)
SUTMAFS	36 (24)
SUTMCNT	42 (2A)
SUTMEXT	46 (2E)
SUTMFREQ	40 (28)
SUTMPRI	28 (1C)
SUTMSEC	32 (20)
SUTMTH	44 (2C)
SUTOAFS	92 (5C)
SUTOCNT	98 (62)
SUTOEXT	102 (66)
SUTOFREQ	96 (60)
SUTOPRI	84 (54)
SUTOSEC	88 (58)
SUTOTH	100 (64)

TAL – Tape Allocation List

The tape allocation list is the list of tape volumes allocated to a particular DFHSM task. The tape allocation list is 1546 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	TALDDN	TALDDN is the ddname for the list. It is set when the list is created.
8 (8)	4	*	Reserved.
12 (C)	2	TALNVOLS	TALNVOLS contains the number of volume serial numbers in the list.
14 (E)	2	*	Reserved.

The following field is an array made up of the allocated volumes. The array has 255 elements, each 6 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
16 (10)	1530	TALVSN	TALVSN contains the volume serial number of each allocated tape volume.

TAL Data Area Cross-Reference

Field	Offset
TALDDN	0 (0)
TALNVOLS	12 (C)
TALVSN	16 (10)

TT – Trap Table

The trap table identifies DFHSM modules and associated return codes to be trapped. When the specified module returns the specified code during error processing, the trap entry provides special dumping controls. Each trap entry is 40 bytes long. The following describes each entry in the trap table.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	2	ONAFLGS	ONAFLGS contains the following flags initialized only by the trap command:
	x	*	Reserved.
	1...	ONFSNAP	When set to 1, SNAP request by trap command.
	.1..	ONFABEND	When set to 1, abnormal end request by trap command.
	..1.	ONFACT	When set to 1, entry is a valid entry.
	...1	ONFLOG	When set to 1, log request by trap command.
	.... 1...	ONFCMND	When set to 1, a trap command was issued to build this entry. When set to 0, the entry was created by occurrence of the condition.
	.... .1..	ONFNEVER	When set to 1, never Abnormal end or SNAP for this condition was set by a trap command.
	.... ..1.	ONFALWAY	When set to 1, always abnormal end or SNAP for this condition was set by a trap command.
	1	*	Reserved.
2 (2)	2	ONBFLGS	ONBFLGS contains the following flags set by command or defaulted by occurrence:
	.xxx xxxx	*	Reserved.
	1...	ONFONCE	When set to 1, abnormal end or SNAP for this condition on the first occurrence only.
3 (3)	1	*	Reserved.
4 (4)	8	ONMODNM	ONMODNM contains the module for which the trap entry is defined.
12 (C)	4	ONCODE	ONCODE contains the trap code for which the trap entry is defined.
16 (10)	4	ONOPTION	ONOPTION contains the caller option requested the last time the condition occurred. 0 = Log 1 = Snap 2 = Abend 3 = Nodump 4 = Fatal 5 = Debug
20 (14)	4	ONECOUNT	ONECOUNT contains the number of times this condition occurred.
24 (18)	4	ONACOUNT	ONACOUNT contains the number of times an abnormal end was requested.
28 (1C)	4	ONSCOUNT	ONSCOUNT contains the number of times a snap was requested.
32 (20)	4	ONNXTPTR	ONNXTPTR contains the address of the next trap table entry.
36 (24)	4	*	Reserved.

TT Data Area Cross-Reference

Field	Offset
ONACOUNT	24 (18)
ONAFLGS	0 (0)
ONBFLGS	2 (2)
ONCODE	12 (C)
ONECOUNT	20 (14)
ONFABEND	0 (0)
ONFACT	0 (0)
ONFALWAY	0 (0)
ONFCMND	0 (0)
ONFLOG	0 (0)
ONFNEVER	0 (0)
ONFONCE	2 (2)
ONFSNAP	0 (0)
ONMODNM	4 (4)
ONNXTPTR	32 (20)
ONOPTION	16 (10)
ONSCOUNT	28 (1C)

TTX – Tape Timer Exit

The tape timer exit data area is 76 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	TTXFWDP	TTXFWDP contains an address of the next TTX data area for this task.
4 (4)	4	TTXBWDP	TTXBWDP contains an address of the previous TTX data area for this task.
8 (8)	4	TTXID	TTXID contains the ARCTTX record ID, 'TTX*'.
12 (C)	1	TTXSUBP	TTXSUBP contains the subpool number of the storage the TTX resides in.
13 (D)	3	TTXLEN	TTXLEN contains the length of the TTX data area.
16 (10)	4	TTXECBP	TTXECBP contains the address of the tape mount failure ECB.
20 (14)	4	TTXMVTP	TTXMVTP contains the address of the MVT representing the target tape migration, backup, or migration volume.
24 (18)	4	TTXRCBP	TTXRCBP contains the address of the RCB for the task requesting the open of the tape data set.
28 (1C)	4	TTXDECB	TTXDECB contains the dummy ECB that the daughter task does a WAIT on while waiting detachment by the mother task.
32 (20)	6	TTXVSN	TTXVSN contains the volume serial number of a volume where the data set is being opened or the volume where the data set is being extended.
38 (26)	2	*	Reserved.
40 (28)	4	TTXFLAGS	TTXFLAGS contains the timer exit control flags.
	xx	*	Reserved.
	1...	TTXFTSET	When set to 1, the tape mount timer has been set.
	.1..	TTXFEOV	When set to 1, a timer was set during EOV processing. When set to 0, the timer was set during open processing.
	..1.	TTXFOPTS	When set to 1, the tape is open for output. When set to 0, the tape is open for input.
	...1	TTXFM310	When set to 1, message ARC0310A was sent to the operator.
	.... 1...	TTXFM311	When set to 1, message ARC0311A was sent to the operator.
	.... .1..	TTXFPOST	When set to 1, the mother task should be posted.
41 (29)	3	*	Reserved.
44 (2C)	4	TTXMWT	TTXMWT contains the remaining mount wait time in hundredths of seconds.
48 (30)	4	TTXIBC	TTXIBC contains the time interval between checks for shutdown in hundredths of seconds.
52 (34)	4	TTXILSM	TTXILSM contains the time interval specified on the last STIMER macro in hundredths of seconds.
56 (38)	4	TTXRFRC	TTXRFRC contains the return code from the RACHECK issued during EOV processing.
60 (3C)	16	*	Reserved.

TTX Data Area Cross-Reference

Field	Offset
TTXBWDP	4 (4)
TTXDECB	28 (1C)
TTXECBP	16 (10)
TTXFEOV	40 (28)
TTXFLAGS	40 (28)
TTXFM310	40 (28)
TTXFM311	40 (28)
TTXFOPTS	40 (28)
TTXFPOST	40 (28)
TTXFTSET	40 (28)
TTXFWDP	0 (0)
TTXIBC	48 (30)
TTXID	8 (8)
TTXILSM	52 (34)
TTXLEN	13(D)
TTXMVTP	20 (14)
TTXMWT	44 (2C)
TTXRCBP	24 (18)
TTXRFRC	56 (38)
TTXSUBP	12 (C)
TTXVSN	20 (1C)

TVT — Tape Volume Table

The tape volume table is a list of tape migration level 2 volumes that were candidates for selection when the table was created. The table is 20 bytes long plus 12 bytes for each volume in the list.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	TVTBID	TVTBID contains the TVT block ID, 'TVT*'.
4 (4)	4	TVTMAXVL	TVTMAXVL contains the maximum number of entries in the TVV.
8 (8)	4	TVTNVOLS	TVTNVOLS contains the number of volumes in the TVT.
12 (C)	4	TVTLASTI	TVTLASTI contains the index to the last valid entry.
16 (10)	4	*	Reserved.

The following fields beginning at offset 20 (14) are repeated for each volume in the table.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	12	TVTVOLS	TVTVOLS contains tape volume information.
0 (0)	6	TVTVLSER	TVTVLSER contains the tape volume serial number.
6 (6)	2	*	Reserved.
8 (8)	1	TVTVOLFL	TVTVOLFL contains tape volume flags.
	1...	TVTFEMTY	When set to 1, the tape volume is empty.
	.xxx xxxx	*	Reserved.
9 (9)	1	TVTDEN	TVTDEN contains the tape volume density.
10 (A)	2	*	Reserved.

TVT Data Area Cross-Reference

Field	Offset
TVTBID	0 (0)
TVTDEN	9 (9)
TVTFEMTY	8 (8)
TVTLASTI	12 (C)
TVTMAXVL	4 (4)
TVTNVOLS	8 (8)
TVTVLSER	0 (0)
TVTVOLFL	8 (8)
TVTVOLS	0 (0)

UUT – User Unit Table

The user unit table contains information necessary to define esoteric unit names that can be used to mount tapes. This table is 12 bytes long plus 10 bytes for each unit type supplied.

Offset.	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	UUTSTGE	UUTSTGE contains a description of the storage used by the table.
	1	UUTSUBP	UUTSUBP contains the subpool number of the table.
	3	UUTSIZE	UUTSIZE contains the size, in bytes, of the table.
4 (4)	2	UUTNUM	UUTNUM contains the number of entries in the table.
6 (6)	6	*	Reserved.

The following field beginning at offset 12 (C) is repeated for each unit name supplied by the system programmer as a valid user unit type:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	UUTUNIT	UUTUNIT contains the user unit type.
8 (8)	2	UUTEFLGS	UUTEFLGS contains flags indicating the unit type.
	1	UUTDEN	UUTDEN contains the supported densities for this esoteric unit name.
	1...	UUT800	When set to 1, UUT800 indicates that a density of 800 BPI is supported.
	.1..	UUT1600	When set to 1, UUT1600 indicates that a density of 1600 BPI is supported.
	..1.	UUT6250	When set to 1, UUT6250 indicates that a density of 6250 BPI is supported.
	...x xxxx	*	Reserved.
9 (9)	1	UUTTYP	UUTTYP contains the user unit device types in this esoteric unit table.
	1...	UUT3400	When set to 1, UUT3400 indicates that 3420 tape drives are being used.
	.1..	UUT34009	When set to 1, UUT34009 indicates that the 3480 tape drives are contained in the esoteric unit table.
	..1.	UUT3480	When set to 1, UUT3480 indicates that all functions of the 3480 Magnetic Tape Subsystem are being used.
	...1	UUTACL	When set to 1, a minimum of one UCB of unit UUTUNIT has the flag UCBCSL set to 1 (valid only if UUT3480 is set to 1).
	.... 1...	UUTINVLD	When set to 1, UUTINVLD indicates that the unit name was not found. DFHSM sets this bit off after the error message is issued.
	xxx	*	Reserved.

UUT Data Area Cross-Reference

Field	Offset	Begin at Offset
UUTACL	9 (9)	12 (C)
UUTDEN	8 (8)	12 (C)
UUTEFLGS	8 (8)	12 (C)
UUTINVLD	9 (9)	12 (C)
UUTNUM	4 (4)	
UUTSIZE	0 (0)	
UUTSTGE	0 (0)	
UUTSUBP	0 (0)	
UUTTYP	9 (9)	12 (C)
UUTUNIT	0 (0)	12 (C)
UUT1600	8 (8)	12 (C)
UUT3400	9 (9)	12 (C)
UUT34009	9 (9)	12 (C)
UUT3480	9 (9)	12 (C)
UUT6250	8 (8)	12 (C)
UUT800	8 (8)	12 (C)

VLST – Volume List of Primary Volumes in a JES3 System

The primary volume list in a JES3 system is used to keep track of the primary volumes currently owned by DFHSM. The record is 20 bytes long, plus 12 bytes for each primary volume. If any primary volumes have been deleted, there are increments of bytes for a deleted volume list (72 times the next higher multiple of 10 than the number of deleted primary volumes) chained from the basic volume list. The volume list resides in subpool 241.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	20	VLSTHEDR	VLSTHEDR contains information about this volume list.
0 (0)	4	VLSTSTOR	VLSTSTOR describes the storage of this volume list.
	1	VLSTSUBP	VLSTSUBP contains the subpool number.
1 (1)	3	VLSTSIZE	VLSTSIZE contains the size of this volume list, in bytes.
4 (4)	2	VLSTCAPV	VLSTCAPV contains the maximum number of volumes that can be part of this list.
6 (6)	2	VLSTNVLS	VLSTNVLS contains the number of volumes that are currently described by this list.
8 (8)	4	VLSTDLVL	VLSTDLVL contains the address of the first part of the deleted volume list, if any primary volumes have been deleted. Otherwise, it is zero.
12 (C)	8	*	Reserved.

The following field is repeated for each volume, starting at offset 20 (14):

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	12	VLSTENTY	VLSTENTY contains the information about each volume.
0 (0)	6	VLSTVSER	VLSTVSER contains the volume serial number.
6 (6)	4	VLSTDVTP	VLSTDVTP contains the device type of the volume.
10 (A)	2	VLSTFLGS	VLSTFLGS contains flags describing the volume status:
	xxx	*	Reserved
	1...	VLSTONLF	When set to 1, the volume is online.
	.1..	VLSTSTGE	When set to 1, the volume is mounted with the storage attribute.
	..1.	VLSTAREC	When set to 1, the volume was added to DFHSM control with the AUTORECALL parameter.
	...1 ...	VLSTHGNP	When set to 1, the volume is in the DFHSM general pool.
	.... 1...	VLSTDELV	When set to 1, the volume has been deleted from DFHSM control since the last initialization of DFHSM.
11 (B)	1	*	Reserved.

The following deleted volume list parts are obtained as needed. The address of the first part is in the volume list field VLSTDLVL. The address of each subsequent part is in the VLSTDLNX field:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	VLSTDLST	VLSTDLST describes the storage occupied by this part of the deleted volume list.
	1	VLSTDLSP	VLSTDLSP contains the subpool number.
	3	VLSTDLSZ	VLSTDLSZ contains the size of this part.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
4 (4)	2	VLSTNDEL	VLSTNDEL contains the number of volumes in this part of the deleted volume list.
6 (6)	2	*	Reserved.
8 (8)	4	VLSTDLNX	VLSTDLNX contains the address of the next part of the deleted volume list, if there is one; otherwise it is zero.

The following is repeated ten times, starting at offset 12 (C). The number of valid contiguous iterations, beginning with the first, is in VLSTNDEL:

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	6	VLSTVSDL	VLSTVSDL contains the volume serial number of a volume that has been deleted since the latest initialization of DFHSM.

VLST Data Area Cross-Reference

Field	Offset	Begin at Offset
VLSTAREC	10 (A)	20 (14)
VLSTCAPV	4 (4)	
VLSTDELV	10 (A)	20 (14)
VLSTDLNX	8 (8)	
VLSTDLSP	0 (0)	
VLSTDLST	0 (0)	
VLSTDLSZ	0 (0)	
VLSTDLVL	8 (8)	
VLSTENTY	0 (0)	20 (14)
VLSTFLGS	10 (A)	20 (14)
VLSTHEDR	0 (0)	
VLSTHGNP	10 (A)	20 (14)
VLSTNDEL	4 (4)	
VLSTNVLS	6 (6)	
VLSTONLF	10 (A)	20 (14)
VLSTSIZE	0 (0)	
VLSTSTGE	10 (A)	20 (14)
VLSTSTOR	0 (0)	
VLSTSUBP	0 (0)	
VLSTTDVTP	6 (6)	20 (14)
VLSTVSDL	0 (0)	12 (C)
VLSTVSER	0 (0)	20 (14)

VSA — VSAM Data Set Allocation Control Block

The VSAM data set allocation control block controls allocation of a VSAM data set used for small data set packing. There is a queue of VSAM data set allocation control blocks, one for each small-data-set-packing data set. The VSAM data set allocation control blocks reside in the DFHSM work space. Each control block is 18 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	VSAFWD	VSAFWD contains the address of the next VSAM data set allocation control block in the queue.
4 (4)	4	VSABWD	VSABWD contains the address of the previous VSAM data set allocation control block in the queue.
8 (8)	6	VSAVOL	VSAVOL contains the serial number of the volume containing the small-data-set-packing data set.
14 (E)	2	VSAFLGS	VSA flags.
	..xx xxxx	*	Reserved.
	1...	VSAFSDPI	When set to 1, the SDSP is being used for input.
	.1..	VSAFSDPO	When set to 1, the SDSP is being used for output.
15 (F)	1	*	Reserved.
16 (10)	2	VSAUCNT	VSAUCNT contains the number of tasks that have this small-data-set-packing data set allocated.

VSA Data Area Cross-Reference

Field	Offset
VSABWD	4 (4)
VSAFLGS	14 (E)
VSAFSDPI	14 (E)
VSAFSDPO	14 (E)
VSAFWD	0 (0)
VSAUCNT	16 (10)
VSAVOL	8 (8)

WCNTB - Control File Map Block

The ARCWCNTB control block contains the layout of the control file as it is written to tape. Its length is based on the number of files processed by aggregate backup.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	28	WCNBODY	WCNBODY contains the body of the control block.
0 (0)	28	WCNDECSR	WCNDESCR contains the control file entry descriptor record.
0 (0)	4	WCNLEN	WCNLEN contains the length of the record including the header.
4 (4)	4	WCNSEQNO	WCNSEQNO contains the control file record sequence number.
8 (8)	4	*	Reserved.
12 (C)	4	*	Reserved.
16 (10)	4	WCNTFTYP	WCNTFTYP contains the record type flags.
16 (10)	1	WCNFLAG1	WCNFLAG1 contains the first flag byte.
	1...	WCNFCHDR	When set to 1, this is a control file header entry.
	.1..	WCNFDCON	When set to 1, this is an ARCWCONB entry for data classes.
	..1.	WCNFMCON	When set to 1, this is an ARCWCONB entry for management classes.
	...1	WCNFSCON	When set to 1, this is an ARCWCONB entry for storage classes.
	.... 1...	WCNFDSIB	When set to 1, this is an ARCWDSIB entry.
	.... .1..	WCNFDF1B	When set to 1, this is an ARCWF1B entry from DSIB.
	.... ..1.	WCNFGDBB	When set to 1, this is an ARCWGDBB entry.
	1	WCNFGF1B	When set to 1, this is an ARCWF1B entry from ARCWGDBB.
17 (11)	1	WCNFLAG2	WCNFLAG2 contains the second flag byte.
	1...	WCNFMCDB	When set to 1, this is an ARCWMCDB entry for the MCD record.
	.1..	WCNFMCOB	When set to 1, this is an ARCWMCDB entry for the MCO record.
	..1.	WCNFMCAB	When set to 1, this is an ARCWMCDB entry for the MCA record.
	...1	WCNFVOLB	When set to 1, this is an ARCWVOLB entry.
	.... 1...	WCNFDVOL	When set to 1, this is a data file volume block.
	.... .1..	WCNFAVOL	When set to 1, this is an Accompany file volume block.
	.... ..1.	WCNFCMPB	When set to 1, this is a Component Name entry volume block.
	x	*	Reserved.
20 (14)	4	*	Reserved.
24 (18)	4	*	Reserved.

The following structure, starting at offset 12 (1C), is 172 bytes long. It describes a control file header. There is a header for each entry in the control file.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	WCNHVERS	WCNHVERS contains the DFHSM aggregate control file identifier, DFHSM250.
8 (8)	8	WCNHDATE	WCNHDATE contains the aggregate backup process date.
16 (10)	8	WCNHTIME	WCNHTIME contains the aggregate backup process time.
24 (18)	8	*	Reserved.
32 (20)	30	WCNHAGNM	WCNHAGNM contains the aggregate group name.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
62 (3E)	2	*	Reserved.
64 (40)	44	WCNHCNTF	WCNHCNTF contains the control file name.
108 (6C)	44	WCNHDATF	WCNHDATF contains the data file name.
152 (98)	4	WCNHFLGS	WCNHFLGS contains the header flags.
152 (98)	1	WCNHFLG1	WCNHFLG1 is the first byte of the header flag.
	1...	WCNHFDSS	When set to 1, DFDSS was used to move the data set.
	.1..	WCNHFINT	When set to 1, internal I/O was used to move the data set.
	..1.	WCNHFD34	When set to 1, the data file is on a 3480.
	...1	WCNHFMIG	When set to 1, the data set is a backed-up migrated data set.
	.... 1...	WCNHFACC	When set to 1, the data set is a backed-up accompany data set.
	.... .1..	WCNHFALL	When set to 1, the data set is a backed-up allocate data set.
	xx	*	Reserved.
156 (9C)	6	WCNHDSSV	WCNHDSSV contains the first DSS data file volume serial number.
162 (A2)	2	*	Reserved.
164 (A4)	6	WCNHINTV	WCNHINTV contains the first internal I/O data file volume serial number.
170 (AA)	2	*	Reserved.

WCNTB Data Area Cross-Reference

Field	Offset	Begin at Offset
WCNBODY	0 (0)	
WCNDECSR	0 (0)	
WCNFAVOL	17 (11)	
WCNFCHDR	16 (10)	
WCNFCMPB	17 (11)	
WCNFDCON	16 (10)	
WCNFDF1B	16 (10)	
WCNFDSIB	16 (10)	
WCNFDVOL	17 (11)	
WCNFGDBB	16 (10)	
WCNFGF1B	16 (10)	
WCNFLAG1	16 (10)	
WCNFLAG2	17 (11)	
WCNFMCAB	17 (11)	
WCNFMCDB	17 (11)	
WCNFMCOB	17 (11)	
WCNFMCON	16 (10)	
WCNFSCON	16 (10)	
WCNFVOLB	17 (11)	
WCNHAGNM	32 (20)	28 (1C)
WCNHCNTF	64 (40)	28 (1C)
WCNHDATE	8 (8)	28 (1C)
WCNHDATF	108 (6C)	28 (1C)
WCNHDSSV	156 (9C)	28 (1C)
WCNHFACC	152 (98)	28 (1C)
WCNHFALL	152 (98)	28 (1C)
WCNHFDSS	152 (98)	28 (1C)
WCNHFD34	152 (98)	28 (1C)
WCNHFINT	152 (98)	28 (1C)
WCNHFLGS	152 (98)	28 (1C)
WCNHFLG1	152 (98)	28 (1C)
WCNHFMIG	152 (98)	28 (1C)
WCNHINTV	164 (A4)	28 (1C)
WCNHTIME	16 (10)	28 (1C)
WCNHVERS	0 (0)	28 (1C)
WCNLEN	0 (0)	
WCNSEQNO	4 (4)	
WCNTFTYP	16 (10)	

WDSIB - Data Set Information Block

The ARCWDSIB control block stores data set information for each data set processed. The control block is 4096 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WDSIHDR	WDSIHDR contains the block header information.
0 (0)	8	WDSIID	WDSIID contains the ID of the control block, WDSI250.
8 (8)	4	WDSINXT@	WDSINXT@ contains a pointer to the next block or the value 0.
12 (C)	4	WDSIAVAL	WDSIAVAL contains the available length in the control block.
16 (10)	0	WDSIBODY	WDSIBODY contains the body of the control block.

Following is a map of the WDSIBENT block which contains a data set information block entry. The control block is 416 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	WDSINXPT	WDSINXPT contains a pointer to the next entry in the control block.
4 (4)	412	WDSIBREC	WDSIBREC contains the data set information block record.
4 (4)	44	WDSINAME	WDSINAME contains the data set name.
48 (30)	60	*	Reserved.
108 (6C)	44	WDSINWNM	WDSINWNM contains the new data set name if the user exit ARCCREXT renames the original data set.
152 (98)	28	*	Reserved.
180 (B4)	4	WDSINCMP	WDSINCMP contains the number of VSAM components and associations for a base cluster.
184 (B8)	4	WDSICMP@	WDSICMP@ contains the pointer to the component list (chained ARCWDSNB entries).
188 (BC)	8	WDSIOWNR	WSDIOWNR contains the name of the data set owner for ACCOMPANY data sets.
196 (C4)	4	WDSIEXPR	WDSIEXPR contains the data set expiration date for ACCOMPANY data sets.
200 (C8)	6	WDSIMVOL	WDSIMVOL contains the volume serial of the Recovery Migration Volume.
206 (CE)	4	WDSIMDVT	WDSIMDVT contains the UCB device type of the Recovery Migration Volume.
210 (D2)	6	WDSIDVOL	WDSIDVOL contains the volume serial for the Data File Data Set (for internal I/O routines only).
216 (D8)	1	WDSIRECF	WDSIRECF contains the RECFM of the data set.
217 (D9)	3	*	Reserved.
220 (DC)	4	WDSICSEQ	WDSICSEQ contains the sequence number of the Control File Data Set.
224 (E0)	2	WDSILREC	WDSILREC contains the LRECL of the data set.
226 (E2)	2	WDSIBLSZ	WDSIBLSZ contains the BLKSIZE of the data set.
228 (E4)	4	WDSIBLK#	WDSIBLK# contains the starting relative block number (for internal I/O routines only).
232 (E8)	4	WDSIHBID	WDSIHBID contains the hardware block ID when the Data File is on 3480 tape.
236 (EC)	4	*	Reserved.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
240 (F0)	4	WDSIDIRC	WDSIDIRC contains the count of directory blocks.
244 (F4)	4	WDSIKEYL	WDSIKEYL contains the key length for a KSDS data set.
248 (F8)	4	WDSIKEYO	WDSIKEYO contains the key offset for a KSDS data set.
252 (FC)	4	WDSISEQ#	WDSISEQ# contains the file sequence number of the data set or relative block address (for a 3480 single file data set).
256 (100)	4	*	Reserved.
260 (104)	30	WDSIDCNM	WDSIDCNM contains the Data Class name.
290 (122)	2	*	Reserved.
292 (124)	30	WDSISCNM	WDSISCNM contains the Storage Class name.
322 (142)	2	*	Reserved.
324 (144)	30	WDSIMCNM	WDSIMCNM contains the Management Class name.
354 (162)	2	*	Reserved.
356 (164)	4	WDSIF1@	WDSIF1@ contains the address of the Format 1 DSCB for ALLOCATE data sets.
360 (168)	4	*	Reserved.
364 (16C)	4	WDSIGDG@	WDSIGDG@ contains the address of a generation data group block or 0 if the data set is not a generation data group.
368 (170)	4	*	Reserved.
372 (174)	4	WDSIMCD@	WDSIMCD@ contains the address of the MCD record or 0 if the data set is not migrated.
376 (178)	4	WDSIMCO@	WDSIMCO@ contains the address of the MCO record or 0 if the data set is not migrated.
380 (17C)	4	WDSIMCA@	WDSIMCA@ contains the address of the MCA record or 0 if the data set is not migrated.
384 (180)	4	WDSIACNT	WDSIACNT contains the number of MCA records.
388 (184)	4	WDSIVCNT	WDSIVCNT contains the number of volumes on which the data set resides.
392 (188)	4	WDSIVOL@	WDSIVOL@ contains the address of the volser device type list.
396 (18C)	4	*	Reserved.
400 (190)	8	WDSIFLGS	WDSIFLGS contains informational flags for the data set.
400 (190)	1	WDSIFLG1	WDSIFLG1 contains the first byte of informational flags for the data set.
	1...	WDSIFDSS	When set to 1, the data set is processed by DFDSS.
	.1..	WDSIFMIG	When set to 1, the data set is migrated.
	..1.	WDSIFDSD	When set to 1, the data set resides on DASD.
	...1	WDSIFTAP	When set to 1, the data set resides on tape.
	.... 1...	WDSIF348	When set to 1, the data set is on 3480 tape in single file format.
	.... .1..	WDSIFSDS	When set to 1, the data set is an SDSP data set.
	.... ..1.	WDSIFSMS	When set to 1, the data set is an SMS managed data set.
	1	WDSIFGDS	When set to 1, the data set is a GDS.
401 (191)	1	WDSIFLG2	WDSIFLG2 contains the second byte of informational flags for the data set.
	1...	WDSIFMUL	When set to 1, the data set is a multi-volume data set.
	.1..	WDSIFINC	When set to 1, the data set is in the INCLUDE list.
	..1.	WDSIFALL	When set to 1, the data set is in the ALLOCATE list.
	...1	WDSIFACC	When set to 1, the data set is in the ACCOMPANY list.
	.... 1...	WDSIFOWN	When set to 1, owner information exists for the ACCOMPANY data set.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	.... .1..	WDSIFEXP	When set to 1, the expiration date exists for the ACCOMPANY data set.
	.... ..1.	WDSIFENQ	When set to 1, the data set is enqueued.
	1	WDSIFGBB	When set to 1, the generation data group base entry has been located and the next Format 1 DSCB on tape will be skipped.
402 (192)	1	WDSIFLG3	WDSIFLG3 contains the third byte of informational flags for the data set.
	1...	WDSIFROK	When set to 1, the data set recovery is successful.
	.1..	WDSIFSKP	When set to 1, the user said to skip the data set or the data set is migrated VSAM and not a base cluster.
	..1.	WDSIFRNM	When set to 1, the user said to rename the data set.
	...1	WDSIFRPL	When set to 1, the user said to replace the data set.
	.... 1...	WDSIFOLM	When set to 1, the DFDSS data set rename limit has been reached.
	.... .1..	WDSIFRAC	When set to 1, the data set is RACF protected (only non-migrated data sets residing on tape).
	xx	*	Reserved.
403 (193)	1	WDSIFLG4	WDSIFLG4 contains the fourth byte of informational flags for the data set.
	1...	WDSIFNFD	When set to 1, the data set could not be located.
	.1..	WDSIFCAT	When set to 1, the data set is a catalog.
	..1.	WDSIFALE	When set to 1, the data set incurred an ALLOCATE verification error.
	...1	WDSIFACE	When set to 1, the data set incurred an ACCOMPANY verification error.
	.... 1...	WDSIFNOR	When set to 1, the data set is in the Restart Data Set and is not recovered.
	.... .1..	WDSIFINE	When set to 1, there is a verification error in the INCLUDE list.
	.... ..1.	WDSIFFUL	When set to 1, there is a fully-qualified data set name in the INCLUDE list.
	x	*	Reserved.
404 (194)	1	WDSIFLG5	WDSIFLG5 contains the fifth byte of informational flags for the data set.
	1...	WDSIFVSM	When set to 1, the data set is a VSAM data set.
	.1..	WDSIFLDS	When set to 1, the data set is a VSAM LDS.
	..1.	WDSIFRRD	When set to 1, the data set is a VSAM RRDS.
	...1	WDSIFESD	When set to 1, the data set is a VSAM ESDS.
	.... 1...	WDSIFKSD	When set to 1, the data set is a VSAM KSDS.
	.... .1..	WDSIFKRD	When set to 1, the data set is a VSAM KRDS and WDSIFKSD is also set.
	xx	*	Reserved.
408 (198)	4	*	Reserved.
412 (19C)	4	*	Reserved.
416 (1A0)	0	WDSILAST	WDSILAST represents the end of WDSIBENT.

WDSIB Data Area Cross-Reference

Field	Offset
WDSIAVAL	12 (C)
WDSIBODY	16 (10)
WDSIHDR	0 (0)
WDSIID	0 (0)
WDSINXT@	8 (8)

WDSIBENT Data Area Cross-Reference

Field	Offset
WDSIACNT	384 (180)
WDSIBLK#	228 (E4)
WDSIBLSZ	226 (E2)
WDSIBREC	4 (4)
WDSICMP@	184 (B8)
WDSICSEQ	220 (DC)
WDSIDCNM	260 (104)
WDSIDIRC	240 (F0)
WDSIDVOL	210 (D2)
WDSIEXPR	196 (C4)
WDSIFACC	401 (191)
WDSIFACE	403 (193)
WDSIFALE	403 (193)
WDSIFALL	401 (191)
WDSIFCAT	403 (193)
WDSIFDSD	400 (190)
WDSIFDSS	400 (190)
WDSIFENQ	401 (191)
WDSIFESD	404 (194)
WDSIFEXP	401 (191)
WDSIFFUL	403 (193)
WDSIFGBB	401 (191)
WDSIFGDS	400 (190)
WDSIFINC	401 (191)
WDSIFINE	403 (193)
WDSIFKRD	404 (194)
WDSIFKSD	404 (194)
WDSIFLDS	404 (194)
WDSIFLGS	400 (190)
WDSIFLG1	400 (190)
WDSIFLG2	401 (191)
WDSIFLG3	402 (192)
WDSIFLG4	403 (193)
WDSIFLG5	404 (194)
WDSIFMIG	400 (190)
WDSIFMUL	401 (191)
WDSIFNFD	403 (193)
WDSIFNOR	403 (193)
WDSIFOLM	402 (192)
WDSIFOWN	401 (191)
WDSIFRAC	402 (192)
WDSIFRNM	402 (192)
WDSIFROK	402 (192)
WDSIFRPL	402 (192)
WDSIFRRD	404 (194)
WDSIFSDS	400 (190)
WDSIFSKP	402 (192)
WDSIFSMS	400 (190)
WDSIFTAP	400 (190)
WDSIFVSM	404 (194)
WDSIF1@	356 (164)
WDSIF348	400 (190)
WDSIGDG@	364 (16C)
WDSIHBID	232 (E8)
WDSIKEYL	244 (F4)
WDSIKEYO	248 (F8)
WDSILAST	416 (1A0)
WDSILREC	224 (E0)
WDSIMCA@	380 (17C)
WDSIMCD@	372 (174)
WDSIMCNM	324 (144)
WDSIMCO@	376 (178)
WDSIMDVT	206 (CE)
WDSIMVOL	200 (C8)
WDSINAME	4 (4)
WDSINCMP	180 (B4)
WDSINWNM	108 (6C)
WDSINXPT	0 (0)
WDSIOWNR	188 (BC)
WDSIRECF	216 (D8)
WDSISCNM	292 (124)
WDSISEQ#	252 (FC)
WDSIVCNT	388 (184)
WDSIVOL@	392 (188)

WDSNB - Data Set Name Block

The ARCWDSNB control block stores partially or fully qualified 44 character data set names. The control block is 1024 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WDSNHDR	WDSNHDR contains the block header information.
0 (0)	8	WDSNID	WDSNID contains the ID of the control block, WDSNB250.
8 (8)	4	WDSNNPTR	WDSNNPTR contains a pointer to the next block or the value 0.
12 (C)	4	WDSNAVAL	WDSNAVAL contains the available length in the control block.
16 (10)	0	WDSNBODY	WDSNBODY contains the body of the control block.

Following is a map of the WDSNENT block which contains a data set name block entry. The control block is 64 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	WDSNNXPT	WDSNNXPT contains a pointer to the next entry in the control block.
4 (4)	60	WDSNREC	WDSNREC contains the data set name record.
4 (4)	4	*	Reserved.
8 (8)	1	WDSNTYPE	WDSNTYPE contains the catalog entry type for the data set.
9 (9)	3	WDSNFLGS	WDSNFLGS contains the flags for the data set name block.
	1...	WDSNFFUL	When set to 1, the data set name is fully qualified.
	.1..	WDSNFDEL	When set to 1, the data set is included in the IDCAMS Editable Data Set.
	..1.	WDSNFGDG	When set to 1, the data set is a generation data group base.
	...1	WDSNFTAP	When set to 1, the data set resides on tape.
	.... 1...	WDSNFCLS	When set to 1, the data set is a base cluster.
	.... .1..	WDSNFCAT	When set to 1, the data set is a catalog.
	.... ..1.	WDSNFMIG	When set to 1, the data set is migrated.
	x	*	Reserved.
	xxxx xxxx	*	Reserved.
	xxxx xxxx	*	Reserved.
12 (C)	4	*	Reserved.
16 (10)	44	WDSNDSN	WDSNDSN contains a 44 character data set name or a mask of a data set name.
60 (3C)	4	*	Reserved.
64 (40)	0	WDSNLAST	WDSNLAST represents the end of WDSNENT.

WDSNB Data Area Cross-Reference

Field	Offset
WDSNAVAL	12 (C)
WDSNBODY	16 (10)
WDSNHDR	0 (0)
WDSNID	0 (0)
WDSNNPTR	8 (8)

WDSNENT Data Area Cross-Reference

Field	Offset
WDSNDSN	16 (10)
WDSNFCAT	9 (9)
WDSNFCLS	9 (9)
WDSNFDEL	9 (9)
WDSNFFUL	9 (9)
WDSNFGDG	9 (9)
WDSNFLGS	9 (9)
WDSNFTAP	9 (9)
WDSNLAST	64 (40)
WDSNNXPT	0 (0)
WDSNREC	4 (4)
WDSNTYPE	8 (8)

WGDBB - Generation Data Group Base Definition Block

The ARCWGDBB control block stores definition parameters for generation data groups. The control block is 1024 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WGDBHDR	WGDBHDR contains the block header information.
0 (0)	8	WGDBID	WGDBID contains the ID of the control block, WGDBB250.
8 (8)	4	WGDBNXT@	WGDBNXT@ contains a pointer to the next block or the value 0.
12 (C)	4	WGDBAVAL	WGDBAVAL contains the available length in the control block.
16 (10)	0	WGDBBODY	WGDBBODY contains the body of the control block.

Following is a map of the WGDBENT block which contains a data set information block entry. The control block is 168 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	WGDBNXPT	WGDBNXPT contains a pointer to the next entry in the control block.
4 (4)	164	WGDBREC	WGDBREC contains the generation data group base record.
4 (4)	4	*	Reserved.
8 (8)	35	WGDBBASE	WGDBBASE contains the generation data group base name.
43 (2B)	9	*	Reserved.
52 (34)	60	*	Reserved.
112 (70)	4	WGDBMOD@	WGDBMOD@ points to the format 1 data set control block of the model for the generation data group.
116 (74)	4	*	Reserved.
120 (78)	4	WGDBCNT	WGDBCNT contains the number of data sets associated with this generation data group base.
124 (7C)	4	*	Reserved.
128 (80)	32	WGDBLOCI	WGDBLOCI contains the generation data group base catalog information. The format is identical to that of ARCWGDGP which maps a generation data group define for an SVC26 call.
128 (80)	1	WGDBLIMT	WGDBLIMT contains the maximum number of generation data groups.
129 (81)	3	*	Reserved.
132 (84)	2	WGDBATTR	WGDBATTR contains the generation data group attributes. These include either Empty or Noempty and Scratch or Noscratch.
134 (86)	2	*	Reserved.
136 (88)	8	*	Reserved.
144 (90)	8	WGDBOWNR	WGDBOWNR contains the owner ID of the generation data group base.
152 (98)	4	WGDBEXPD	WGDBEXPD contains the expiration date of the generation data group base.
156 (9C)	3	WGDBCRED	WGDBCRED contains the creation date of the generation data group base.
159 (9F)	1	*	Reserved.
160 (A0)	4	WGDBFLGS	WGDBFLGS contains the flags for this control block.
160 (A0)	1	WGDBFLG1	WGDBFLG1 contains flags to indicate which of the informational fields within this block have been assigned.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
	1...	WGDBFLMT	When set to 1, there is information in the field WGDBLIMT.
	.1..	WGDBFATT	When set to 1, there is information in the field WGDBATTR.
	..x.	*	Reserved.
	...1	WGDBFOWN	When set to 1, there is information in the field WGDBOWNR.
	.... 1...	WGDBFEXP	When set to 1, there is information in the field WGDBEXPD.
	.... .1..	WGDBFCRE	When set to 1, there is information in the field WGDBCRED.
	xx	*	Reserved.
161 (A1)	1	WGDBFLG2	WGDBFLG2 contains the second byte of informational flags for this control block.
	1...	WGDBFNOR	When set to 1, a RESTART is being performed and this generation data group base will not be defined.
	.1..	WGDBFPRE	When set to 1, the generation data group base is preallocated.
	..1.	WGDBFMSG	When set to 1, the generation data group base message is issued.
	...x xxxx	*	Reserved.
162 (A2)	2	*	Reserved.
164 (A4)	4	*	Reserved.
168 (A8)	0	WGDBLAST	WGDBLAST represents the end of WGDBENT.

WGDBB Data Area Cross-Reference

Field	Offset
WGDBAVAL	12 (C)
WGDBBODY	16 (10)
WGDBHDR	0 (0)
WGDBID	0 (0)
WGDBNXT@	8 (8)

WGDBENT Data Area Cross-Reference

Field	Offset
WGDBATTR	132 (84)
WGDBBASE	8 (8)
WGDBCNT	120 (78)
WGDBCRED	156 (9C)
WGDBENT	0 (0)
WGDBEXPD	152 (98)
WGDBFATT	160 (A0)
WGDBFCRE	160 (A0)
WGDBFEXP	160 (A0)
WGDBFLGS	160 (A0)
WGDBFLG1	160 (A0)
WGDBFLG2	161 (A1)
WGDBFLMT	160 (A0)
WGDBFMSG	161 (A1)
WGDBFNOR	161 (A1)
WGDBFOWN	160 (A0)
WGDBFPRE	161 (A1)
WGDBLAST	168 (A8)
WGDBLIMT	128 (80)
WGDBLOCI	128 (80)
WGDBMOD@	112 (70)
WGDBNXPT	0 (0)
WGDBOWNR	144 (90)
WGDBREC	4 (4)

WORK - Control Block for the Utility Work Area

The ARCWORK control block is pointed to from the control vector table. ARCWORK is used as a work area by modules that communicate with SVC 26, SVC 99, and similar system macros. The control block is 16 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WORHEADR	WORHEADR contains the block header information.
0 (0)	8	WORID	WORID contains the name of the block, WORK250.
8 (8)	4	WORNXT@	WORNXT@ contains a pointer to the next block or the value 0.
12 (C)	4	WORAVAIL	WORAVAIL contains the available length in the control block.
16 (10)	0	WORAREA	WORAREA contains the body of the control block.

WORK Data Area Cross-Reference

Field	Offset
WORAREA	16 (10)
WORAVAIL	12 (C)
WORHEADR	0 (0)
WORID	0 (0)
WORNXT@	8 (8)

WPCDD - Pseudo CDD Parameter List

The ARCWPCDD parameter list contains data set information. A pseudo CDD record is written as the first record in each migrated data set and each non-migrated tape data set processed by application backup. ARCWPCDD is used during aggregate recovery to validate the location of the data set on the data file. ARCWPCDD contains information used to recover tape data sets in the same format as existed at the backup site. The control block is 152 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	8	WPCDDID	WPCDDID contains the parameter list identifier, ARCWPCDD.
8 (8)	4	WPCDDLEN	WPCDDLEN contains the parameter list length.
12 (C)	44	WPCDDDSN	WPCDDDSN contains the data set name.
56 (38)	60	*	Reserved.
116 (74)	2	WPCDDBLK	WPCDDBLK contains the input data set blocksize.
118 (76)	2	WPCDDLRC	WPCDDLRC contains the input data set record length.
120 (78)	1	WPCDDRCF	WPCDDRCF contains the input data set record format.
121 (79)	3	*	Reserved.
124 (7C)	4	*	Reserved.
128 (80)	4	*	Reserved.
132 (84)	1	WPCDDFGS	WPCDDFGS contains the parameter list flags.
	1...	WPCDDFTP	When set to 1, the data set is on tape.
	.1..	WPCDDFRC	When set to 1, the data set is RACF-protected.
	..xx xxxx	*	Reserved.
133 (85)	3	*	Reserved.
136 (88)	4	*	Reserved.
140 (8C)	4	*	Reserved.
144 (90)	4	*	Reserved.
148 (94)	4	*	Reserved.
152 (98)	0	WPCDDLST	WPCDDLST represents the end of the parameter list.

WPCDD Data Area Cross-Reference

Field	Offset
WPCDDBLK	116 (74)
WPCDDDSN	12 (C)
WPCDDFGS	132 (84)
WPCDDFRC	132 (84)
WPCDDFTP	132 (84)
WPCDDID	0 (0)
WPCDDLEN	8 (8)
WPCDDLRC	118 (76)
WPCDDLST	152 (98)
WPCDDRFC	120 (78)

WVOLB - Volume Control Block

The ARCWVOLB control block stores volumes and device types for data sets. ARCWVOLB also stores lists of volume serials for the data file, control file, ACCOMPANY data sets, and instruction data set. The control block is 2048 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WVOLHDR	WVOLHDR contains the block header information.
0 (0)	8	WVOLID	WVOLID contains the ID of the control block, WVOLB250.
8 (8)	4	WVOLNXT@	WVOLNXT@ contains a pointer to the next block or the value 0.
12 (C)	4	WVOLAVAL	WVOLAVAL contains the available length in the control block.
16 (10)	0	WVOLBODY	WVOLBODY contains the body of the control block.

Following is a map of the WVOLENT block which is a volume block entry. The block is 16 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	WVOLNEXT	WVOLNEXT contains a pointer to the next entry in the block.
4 (4)	12	WVOLREC	WVOLREC contains the 12 character volume record.
4 (4)	6	WVOLSER	WVOLSER contains the volume serial.
10 (A)	2	WVOLSEQ#	WVOLSEQ# contains the file sequence number.
12 (C)	4	WVOLDEVT	WVOLDEVT contains the device type in UCB format.
16 (10)	0	WVOLLAST	WVOLLAST represents the end of WVOLENT.

WVOLB Data Area Cross-Reference

Field	Offset
WVOLAVAL	12 (C)
WVOLBODY	16 (10)
WVOLHDR	0 (0)
WVOLID	0 (0)
WVOLNXT@	8 (8)

WVOLENT Data Area Cross-Reference

Field	Offset
WVOLDEVT	12 (C)
WVOLENT	0 (0)
WVOLLAST	16 (10)
WVOLNEXT	0 (0)
WVOLREC	4 (4)
WVOLSEQ#	10 (A)
WVOLSER	4 (4)

WWFSR - Functional Statistics Record Control Block

The ARCWWFSR control block contains the information that is used to write an FSR record to SMF at the end of ABACKUP or ARECOVER. The control block is 240 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WFSRHEAD	WFSRHEAD contains the block header information.
0 (0)	8	WFSRID	WFSRID contains the ID of the control block, WWFSR250.
8 (8)	4	WFSRNXT@	WFSRNXT@ contains a pointer to the next block or the value 0.
12 (C)	4	WFSRAVAI	WFSRAVAI contains the available length in the control block.
16 (10)	18	WFSRBODY	WFSRBODY contains the body of the control block.
16 (10)	2	WFSRLENG	WFSRLENG contains the RDW record length.
18 (12)	2	WFSRSEG	WFSRSEG contains the RDW segment description.
20 (14)	1	WFSRFLG	WFSRFLG contains flags indicating the operating environment.
	xxxx x...	*	Reserved.
	.... .1..	WFSRFMVS	When set to 1, the MVS/XA operating system is active.
	.... ..1.	WFSRFVS2	When set to 1, the VS2 operating system is active.
	1	WFSRFVS1	When set to 1, the VS1 operating system is active.
21 (15)	1	WFSRRTY	WFSRRTY contains the record type.
22 (16)	4	WFSRTME	WFSRTME contains the time of day that the record was written.
26 (1A)	4	WFSRDTE	WFSRDTE contains the date that the record was written.
30 (1E)	4	WFSRSID	WFSRSID contains the system ID from the installation.
34 (22)	8	WFSRJBN	WFSRJBN contains the name of the job that is requesting service.
42 (2A)	4	WFSRRST	WFSRRST contains the time the reader is started to the nearest .01 second.
46 (2E)	4	WFSRRSD	WFSRRSD contains the date the reader is started.
50 (32)	8	WFSRUID	WFSRUID contains the userid that is requesting service.
58 (3A)	1	WFSRTYPE	WFSRTYPE contains the DFHSM function type. For ABACKUP the function type is 15 and for ARECOVER the function type is 16.
59 (3B)	1	*	Reserved.
60 (3C)	0	WFSRDATA	WFSRDATA is the start of the function area.
60 (3C)	72	WFSRMWE	WFSRMWE contains the data from the Management Work Element for the function request.
60 (3C)	44	WFSRDSN	WFSRDSN contains the control file data set name.
104 (68)	4	WFSRRC	WFSRRC contains the return code from the function request.
108 (6C)	4	WFSRREAS	WFSRREAS contains the reason code from the function request.
112 (70)	4	WFSRABCC	WFSRABCC contains the Secondary Address Space abend code.
116 (74)	8	WFSRGRP	WFSRGRP contains the RACF group name.
124 (7C)	1	WFSRRACF	WFSRRACF contains the RACF flags from ACEEFLG1.
124 (7D)	3	*	Reserved.
128 (80)	4	WFSRRQN	WFSRRQN contains the DFHSM request number.
132 (84)	4	WFSRDATR	WFSRDATR contains the date in packed decimal format (00YYDDDS) when the user request was made.
136 (88)	4	WFSRTIMR	WFSRTIMR contains the time of day in packed decimal format (HHMMSSTH) when the user request was made.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
140 (8C)	4	WFSRDATS	WFSRDATS contains the date that the requested processing started in packed decimal format (00YYDDDS).
144 (8C)	4	WFSRTIMS	WFSRTIMS contains the time of day that the requested processing started in packed decimal format (HHMMSSTH).
148 (94)	4	WFSRDATE	WFSRDATE contains the date the request was completed in packed decimal format (00YYDDDS).
152 (98)	4	WFSRTIME	WFSRTIME contains the time of day that the request was completed in packed decimal format (HHMMSSTH).
156 (9C)	2	WFSRFLG2	WFSRFLG2 contains the flags for the user request.
	x...	*	Reserved.
	.1..	WFSRFTSO	A 1 indicates a TSO request and a 0 indicates a batch request.
	..1.	*	Reserved.
	...1	WFSRFVSI	A 1 indicates a WAIT request and a 0 indicates a NOWAIT request.
	 xxxx	*	Reserved.
157 (9D)	xxxx xxxx	*	Reserved.
158 (9E)	2	*	Reserved.
160 (A0)	4	WFSRNENT	WFSRNENT contains the number of tape volser entries.
164 (A4)	30	WFSRAGNM	WFSRAGNM contains the aggregate group name.
194 (C2)	2	*	Reserved.
196 (C4)	4	WFSRL0CT	WFSRL0CT contains the number of level 0 data sets that were processed.
200 (C8)	4	WFSRMGCT	WFSRMGCT contains the number of migrated data sets that were processed.
204 (CC)	4	WFSRCPCT	WFSRCPCT contains the number of tape copy data sets that were processed.
208 (D0)	4	WFSRACCT	WFSRACCT contains the number of accompany data sets that were processed.
212 (D4)	4	WFSRALCT	WFSRALCT contains the number of allocate data sets that were processed.
216 (D8)	24	*	Reserved.
240 (F0)	0	WFSRLAST	WFSRLAST represents the end of the control block.

WWFSR Data Area Cross-Reference

Field	Offset
WFSRABCC	112 (70)
WFSRACCT	208 (D0)
WFSRAGNM	164 (A4)
WFSRALCT	212 (D4)
WFSRAVAI	12 (C)
WFSRBODY	16 (10)
WFSRCPCT	204 (CC)
WFSRDATA	60 (3C)
WFSRDATE	148 (94)
WFSRDATR	132 (84)
WFSRDATS	140 (8C)
WFSRDSN	60 (3C)
WFSRDTE	26 (1A)
WFSRFLG	20 (14)
WFSRFLG2	156 (9C)
WFSRFMVS	20 (14)
WFSRFTSO	156 (9C)
WFSRFVS1	20 (14)
WFSRFVS1	156 (9C)
WFSRFVS2	20 (14)
WFSRGRP	116 (74)
WFSRHEAD	0 (0)
WFSRID	0 (0)
WFSRJBN	34 (22)
WFSRLAST	240 (F0)
WFSRLENG	16 (10)
WFSRL0CT	196 (C4)
WFSRMGCT	200 (C8)
WFSRMWE	60 (3C)
WFSRNENT	160 (A0)
WFSRNXT@	8 (8)
WFSRRACF	124 (7C)
WFSRRC	104 (68)
WFSRREAS	108 (6C)
WFSRRQN	128 (80)
WFSRRSD	46 (2E)
WFSRRST	42 (2A)
WFSRRTY	21 (15)
WFSRSEG	18 (12)
WFSRSID	30 (1E)
WFSRTIME	152 (98)
WFSRTIMR	136 (88)
WFSRTIMS	144 (8C)
WFSRTME	22 (16)
WFSRTYPE	58 (3A)
WFSRUID	50 (32)

WXITP - User Exit Processing Control Block

The ARCWXITP control block is used to pass information to the exit processing modules ARCBEINT, ARCM2INT, ARCSKINT, and ARCCRINT. The control block is 45 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	16	WXIHEADR	WXIHEADR contains the block header information.
0 (0)	8	WXIID	WXIID contains the ID of the control block, WXITP250.
8 (8)	4	WXINXPTR	WXINXPTR contains a pointer to the next block or the value 0.
12 (C)	4	WXIAVAIL	WXIAVAIL contains the available length in the control block.
16 (10)	29	WXIBODY	WXIBODY contains the body of the control block.
16 (10)	4	*	Reserved.
20 (14)	4	WXIBE@	WXIBE@ points to the module ARCBEEXT.
24 (18)	4	WXIM2@	WXIM2@ points to the module ARCM2EXT.
28 (1C)	4	WXICR@	WXICR@ points to the module ARCCREXT.
32 (20)	4	WXISK@	WXISK@ points to the module ARCSKEXT.
36 (24)	4	WXIRNCTR	WXIRNCTR contains the number of renamed data sets.
40 (28)	4	*	Reserved.
44 (2C)	4	WXIFLAGS	WXIFLAGS is used to indicate which exits were loaded.
	1...	WXIFBE	When set to 1, the module ARCBEEXT was loaded.
	.1..	WXIFM2	When set to 1, the module ARCM2EXT was loaded.
	..1.	WXIFCR	When set to 1, the module ARCCREXT was loaded.
	...1	WXIFSK	When set to 1, the module ARCSKEXT was loaded.
	 xxxx	*	Reserved.
	xxxx xxxx	*	Reserved.
	xxxx xxxx	*	Reserved.
	xxxx xxxx	*	Reserved.
45 (2D)	0	WXILAST	WXILAST represents the end of the control block.

WXITP Data Area Cross-Reference

Field	Offset
WXIAVAIL	12 (C)
WXIBE@	20 (14)
WXIBODY	16 (10)
WXICR@	28 (1C)
WXIFBE	44 (2C)
WXIFCR	44 (2C)
WXIFLAGS	44 (2C)
WXIFM2	44 (2C)
WXIFSK	44 (2C)
WXIHEADR	0 (0)
WXIID	0 (0)
WXILAST	45 (2D)
WXIM2@	24 (18)
WXINXPTR	8 (8)
WXIRNCTR	36 (24)
WXISK@	32 (20)

YTCB — Recycle Task Control Block

The recycle task control block passes parameters to a recycle subtask. A recycle task control block for each recycle subtask resides in the DFHSM work space. Each control block is 40 bytes long.

Offset	Bytes and Bit Pattern	Field Name	Description: Content, Meaning, Use
0 (0)	4	YTCBBID	YTCBBID contains the block identifier YTCB.
4 (4)	4	YTCBPLP	YTCBPLP contains the address of the data set level parameter list.
8 (8)	4	YTCBTCBP	YTCBTCBP contains the TCB for the data set level subtask.
12 (C)	4	YTCBWECB	YTCBWECB contains the work to do ECB.
16 (10)	4	YTCBTECB	YTCBTECB contains the termination ECB.
20 (14)	4	YTCBRCBP	YTCBRCBP contains the pointer to RCB.
24 (18)	1	YTCBFLGS	YTCBFLGS contains the following flags:
	 xxxx	*	Reserved.
	1...	YTCBFRBV	When set to 1, the recycle is for a migration volume. When set to 0, the recycle is for a backup volume.
	.1..	YTCBCLIP	When set to 1, only the input volume is being closed.
	..1.	YTCBCLOP	When set to 1, only the output volume is being closed.
	...1	YTCBDETH	When set to 1, the task is detached.
25 (19)	7	*	Reserved.
32 (20)	4	YTCBRC	YTCBRC contains the return code.
36 (24)	4	YTCBREAS	YTCBREAS contains the reason code.

YTCB Data Area Cross-Reference

Field	Offset
YTCBBID	0 (0)
YTCBCLIP	24 (18)
YTCBCLOP	24 (18)
YTCBDETH	24 (18)
YTCBFLGS	24 (18)
YTCBFRBV	24 (18)
YTCBPLP	4 (4)
YTCBRC	32 (20)
YTCBRCBP	20 (14)
YTCBREAS	36 (24)
YTCBTCBP	8 (8)
YTCBTECB	16 (10)
YTCBWECB	12 (C)

Appendix A. Message-to-Module Cross-Reference

An unexpected message can be a symptom of a problem. Some messages contain return codes, reason codes, or ABEND codes that further identify a problem. To help you diagnose any problems with space maintenance, internal numbers have been assigned to the short messages. These numbers all have the prefix DFQ. The space maintenance messages and their explanations are listed in alphabetical order in *Data Facility Hierarchical Storage Manager: User's Guide.*

Table 2 lists all DFHSM messages by identification number, with the module or modules that issue the message or prompt another module to issue a message.

Table 2 (Page 1 of 46). Message-to-Module Cross-Reference

Message	Module That Issued the Message
ARC0001I	ARCINIT
ARC0002I	ARCCTL
ARC0003I	ARCABMSG ARCESTAI
ARC0004I	ARCBAKDS ARCBATTC ARCCPSXT ARCCTL ARCDBAUT ARCINIT ARCMDSUX ARCRRBLK ARCRSDS ARCSAINT ARCSLVOL ARCSMINT ARCTOPEN
ARC0005I	ARCCTL ARCINIT
ARC0006I	ARCCTL
ARC0007I	ARCINIT
ARC0008I	ARCCTL
ARC0009I	ARCCTL
ARC0010I	ARCCTL
ARC0011I	ARCCP
ARC0012I	ARCINIT
ARC0013I	ARCMCTL
ARC0014I	ARCINIT
ARC0015I	ARCCTL
ARC0016I	ARCCTL ARCCPOP

Table 2 (Page 2 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0020I	ARCCPQCD ARCCPRST ARCILOG
ARC0021I	ARCILOG
ARC0022I	ARCILOG
ARC0023I	ARCILOG
ARC0024I	ARCILOG
ARC0025I	ARCCPQCD ARCCPRST ARCILOG
ARC0026A	ARCILOG
ARC0027I	ARCILOG
ARC0028I	ARCALOG ARCILOG
ARC0029E	ARCINIT
ARC0032I	ARCPDO
ARC0034I	ARCPDO
ARC0036I	ARCPDO
ARC0037I	ARCPDO
ARC0050A	IGX00024
ARC0051A	IGX00024
ARC0052A	IGX00024
ARC0055A	IGX00024
ARC0057I	IGX00024
ARC0058I	IGX00024
ARC0059I	IGX00024
ARC0060I	IFG0EX0A
ARC0090I	ARCCP ARCCPOP
ARC0091I	ARCCKEY
ARC0094I	ARCCPSET
ARC0095I	ARCCPSET
ARC0096I	ARCCPSPS
ARC0097I	ARCCPSET
ARC0098I	ARCCPSET
ARC0099I	ARCCPSET
ARC0100I	ARCCPHLD ARCCPSET ARCCPSTR

Table 2 (Page 3 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0101I	ARCCPQAR ARCCPQRY
ARC0102I	ARCCPSET
ARC0103I	ARCCPSCV ARCCPSET ARCCPSXT
ARC0104I	ARCRDIN
ARC0105I	ARCRDIN
ARC0106I	ARCSCPRM
ARC0107I	ARCRDIN
ARC0108I	ARCCPDEF ARCRDIN
ARC0109I	ARCCPSET
ARC0110I	ARCBACK ARCCPSTR ARCDCTL ARCMCTL
ARC0111I	ARCCPSTR
ARC0113I	ARCCPADV
ARC0114I	ARCCPADV
ARC0115I	ARCCPADV
ARC0116I	ARCCPADV
ARC0117I	ARCCPADV
ARC0118I	ARCCPADV
ARC0119I	ARCCPADV
ARC0120I	ARCCPADV ARCDUDVL ARCTEOV
ARC0121I	ARCCPADV ARCCPDLV
ARC0122I	ARCCPADV
ARC0123I	ARCARPOL ARCAUDIT ARCCPADV ARCCPBAK ARCCPDEF ARCCPDUP ARCCPFVL ARCCPLM2 ARCCPMIG ARCCPRBC ARCCPRES
ARC0125I	ARCCPADV
ARC0126I	ARCCPADV

Table 2 (Page 4 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0127I	ARCCPADV ARCCPDEF ARCCPSET
ARC0128I	ARCCPDEF ARCDDCR
ARC0129I	ARCCPDEF
ARC0131I	ARCCPMIG
ARC0132I	ARCCPABK ARCCPBAK ARCCPMIG
ARC0133I	ARCCOPEN
ARC0134I	ARCCOPEN ARCCPDEF
ARC0135I	ARCCPDUP ARCCPRBC ARCCPRES
ARC0136I	ARCCPDUP ARCCPRBC ARCCPRES
ARC0137I	ARCCPMIG
ARC0138I	ARCCPLM2 ARCLDS
ARC0140I	ARCCPLM2
ARC0141I	ARCAUDIT ARCCPLM2 ARCCPRCY ARCRPT ARCXBEG
ARC0142I	ARCCPQAC
ARC0143I	ARCCPQRY
ARC0144I	ARCCPQAC
ARC0145I	ARCCPQST
ARC0146I	ARCCPQST
ARC0147I	ARCCPQSS
ARC0148I	ARCCPQCD
ARC0149I	ARCCPQSS
ARC0150I	ARCCPQSS
ARC0151I	ARCCPQSS
ARC0152I	ARCCPQSS
ARC0153I	ARCCPQSS
ARC0154I	ARCCPQBS
ARC0155I	ARCCPQST

Table 2 (Page 5 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0156I	ARCCPQST
ARC0157I	ARCCPQST
ARC0158I	ARCCPQST
ARC0159I	ARCCPQST
ARC0160I	ARCCPQAC
ARC0161I	ARCCPQVT
ARC0162I	ARCCPQDT
ARC0163I	ARCCPQAC
ARC0164I	ARCCPQRY
ARC0165I	ARCCPQRY
ARC0166I	ARCCPQRY
ARC0167I	ARCCPQRY
ARC0168I	ARCCPQRY
ARC0169I	ARCCPQSS
ARC0170I	ARCCPRTN
ARC0171I	ARCCPRTN
ARC0172I	ARCCPRTN
ARC0173I	ARCCPADS
ARC0174I	ARCCPQRY
ARC0175I	ARCCPQRY
ARC0176I	ARCCPQRY
ARC0177I	ARCCPRTN
ARC0178I	ARCCPRTN
ARC0179I	ARCCPADS ARCCPDUP ARCCPRES ARCCPRTN
ARC0180I	ARCCPAUT
ARC0181I	ARCCPBD
ARC0182I	ARCCPBD
ARC0183I	ARCCPBD

Table 2 (Page 6 of 46). Message-to-Module Cross-Reference

Message	Module That Issued the Message
ARC0184I	ARCCBVR ARCCPLM2 ARCCTL ARCCVSR ARCINIT ARCITTOC ARCLDS ARCLHOST ARCLTTC ARCSCANV ARCUTTOC ARCZREAD ARCZWRIT ARCZUPDT
ARC0185I	ARCCPBD
ARC0186I	ARCCPADS
ARC0187I	ARCCBVR ARCCPLM2 ARCCPRCY ARCLDS ARCLHOST ARCSCANV ARCZPOS ARCZRNXT
ARC0188I	ARCZDEL
ARC0189I	ARCCPBD
ARC0190I	ARCCPDIS
ARC0191I	ARCCPDIS
ARC0192I	ARCCPDIS
ARC0193I	ARCCPDIS
ARC0194I	ARCCPDIS
ARC0195I	ARCCPFC
ARC0197I	ARCCPFC
ARC0198I	ARCCPFC
ARC0199I	ARCCPFC
ARC0200I	ARCCPON ARCERP
ARC0202I	ARCCPON
ARC0203I	ARCCPQCL
ARC0204I	ARCCPQRY
ARC0205I	ARCCPQRY
ARC0206I	ARCCPDIS ARCCPQRY
ARC0208I	ARCERP

Table 2 (Page 7 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0210I	ARCCPDIS
ARC0211I	ARCCPDIS
ARC0212I	ARCCPDIS
ARC0213I	ARCCPDIS
ARC0214I	ARCCPDIS
ARC0215I	ARCCPDIS
ARC0216I	ARCDDCL
ARC0217I	ARCCPDEF
ARC0219I	ARCCPDEF
ARC0220I	ARCCPDEF
ARC0221I	ARCCPDEF
ARC0222I	ARCCPDEF
ARC0223I	ARCMSL2V
ARC0224I	ARCCPDEF ARCCPQRY
ARC0225I	ARCCPDEF ARCCPQRY
ARC0226I	ARCCPQRY
ARC0227I	ARCCPQRY
ARC0228I	ARCCPDEF
ARC0229I	ARCCPDEF
ARC0230I	ARCCPQAR ARCCPQRY
ARC0232I	ARCCPQRY
ARC0233I	ARCDDCL
ARC0234I	ARCCPDEF
ARC0236I	ARCCPDEF
ARC0237I	ARCCPDEF
ARC0238I	ARCCPDEF
ARC0241I	ARCCPBAK
ARC0242I	ARCCPBAK
ARC0243I	ARCCPFVL
ARC0244I	ARCCPFVL
ARC0245I	ARCCPBAK
ARC0251I	ARCCPRBC
ARC0252I	ARCCPRBC
ARC0260I	ARCCPDDV ARCCPDLV

Table 2 (Page 8 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0261I	ARCCPDLV ARCDLVDV
ARC0262I	ARCDIDC
ARC0263I	ARCDLVDV
ARC0270I	ARCCPDEF ARCDDCR
ARC0271I	ARCCPQBS
ARC0272I	ARCCPQSS
ARC0273I	ARCCPQBS
ARC0274I	ARCCPQBS ARCCPQSS
ARC0280I	ARCRPT
ARC0281I	ARCCPDEF ARCCPRBC ARCDDCR ARCRPT
ARC0298I	ARCESTAI
ARC0299I	ARCBGEN ARCMCTL ARCMGDI ARCMGQCT
ARC0300I	ARCAUDBD ARCAUDIT ARCCATBU ARCCPDIS ARCCPFC ARCCPLM2 ARCEXVDS ARCIMVDS ARCLBUC ARCLDCLS ARCLDS ARCLDVOL ARCLTTC ARCPOQ ARCZQMSG ARCZSMSG
ARC0301I	ARCAUDIT ARCBGEN ARCDAUTO ARCDGVSZ ARCMGDI ARCMGL0
ARC0302I	ARCRRBLK ARCRSDS
ARC0303I	ARCRRBLK ARCRSDS

Table 2 (Page 9 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0304I	ARCBODS ARCCATBU ARCCP ARCCUMCI ARCDBAUT ARCEXVDS ARCGODS ARCMMDS ARCMPDS ARCMSDS ARCRPDS ARCRSDS ARCYTDS ARCZEST
ARC0305I	ARCCATBU ARCCPLMC ARCCPON ARCEXVDS ARCFVSC ARCGODS ARCRPDS ARCRSDS ARCULVOL
ARC0306I	ARCRRBLK ARCRSDS
ARC0307I	ARCACLN ARCAGEI ARCCPSET ARCGMAIN
ARC0308I	ARCCPDLV ARCDLVDV
ARC0309I	ARCDTVSV ARCTVSV
ARC0310A	ARCDRTMT ARCTMT
ARC0311A	ARCDRTMT ARCTMT
ARC0313A	ARCTPMSG
ARC0314A	ARCTPMSG
ARC0315I	ARCCPRCY ARCCTTOC
ARC0316I	ARCCP ARCSLVOL
ARC0317I	ARCCP
ARC0318I	ARCCP
ARC0319I	ARCRPDS
ARC0320A	ARCINIT

Table 2 (Page 10 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0321I	ARCINIT
ARC0322I	ARCBVR23
ARC0323I	ARCBVR23
ARC0324I	ARCBVR23
ARC0325I	ARCBVR23
ARC0326I	ARCCPDEF ARCINIT
ARC0327I	ARCBVR23
ARC0328I	ARCPEDIT ARCPRLOG
ARC0329I	ARCPEDIT ARCPRLOG
ARC0330I	ARCPRLOG
ARC0331I	ARCDGVSZ
ARC0336I	ARCCPSET
ARC0337I	ARCCPSCV ARCCPSET ARCCPSXT
ARC0339I	ARCCPQSS
ARC0340I	ARCCPQSS
ARC0341I	ARCCPQRY ARCCPQSS
ARC0342I	ARCCPQSS
ARC0345I	ARCESTAI
ARC0350I	ARCCMCP
ARC0352I	ARCBODS ARCEXVDS ARCMBBUF ARCMMDS ARCMPDS ARCMSDS ARCYTDS
ARC0353I	ARCRACF
ARC0354I	ARCTVERR
ARC0355I	ARCTFULL
ARC0356I	ARCCTTOC
ARC0357I	ARCDTVSV ARCTEOV ARCTVSC ARCTVSV
ARC0359I	ARCRACF
ARC0360I	ARCTVSC

Table 2 (Page 11 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0361I	ARCCTTOC
ARC0362I	ARCTEOV
ARC0364I	ARCITTOC
ARC0365I	ARCITTOC
ARC0366A	ARCTPMSG
ARC0367I	ARCRCTL
ARC0368I	ARCSELTV
ARC0369I	ARCUTTOC
ARC0370I	ARCATTEC ARCCMHRD ARCMDSMV ARCMDSUV ARCMVDS
ARC0371I	ARCCMHRD
ARC0372I	ARCRCLN ARCRVDS
ARC0374I	ARCCPQSS
ARC0375I	ARCCPQCV
ARC0376I	ARCCPQCV
ARC0380A	ARCRCTL
ARC0381A	ARCALVOL
ARC0382I	ARCBDEBV ARCBUDS ARCBVDS ARCCPBD ARCGDS ARCGRCLN ARCGRDPR ARCGRDS ARCGSTMP ARCGVDS ARCRDS ARCREUIM
ARC0383I	ARCGRDPR
ARC0384I	ARCGRDPR
ARC0385I	ARCGRDPR
ARC0386I	ARCGRDPR
ARC0389I	ARCRCTL
ARC0390I	ARCRSTR
ARC0400I	ARCLSPAC
ARC0401I	ARCLSPAC
ARC0402I	ARCLSPAC

Table 2 (Page 12 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0404I	ARCACREL ARCLSPAC
ARC0405I	ARCLSPAC ARCMCTL
ARC0406I	ARCCPQRY
ARC0407I	ARCCPQRY
ARC0408I	ARCCPQSS
ARC0409I	ARCLSPAC
ARC0410I	ARCCPQSS
ARC0411I	ARCCPQSS
ARC0412I	ARCCPQSS
ARC0413I	ARCCPQRY
ARC0414I	ARCCPSET
ARC0415I	ARCCPQAC
ARC0416I	ARCCPQSS
ARC0417I	ARCCPQSS
ARC0420I	ARCCPDLV
ARC0421I	ARCTFULL
ARC0422I	ARCCPCTP
ARC0423I	ARCCPCTS
ARC0424I	ARCCPCTP
ARC0425I	ARCCPCTP ARCCPCTS
ARC0426I	ARCCPCDU
ARC0427I	ARCCPCDU
ARC0428I	ARCCPCDU
ARC0429I	ARCCPCDU
ARC0430I	ARCCPCDU ARCCPCTP
ARC0431I	ARCCPCDU ARCCPCTP
ARC0432I	ARCCPCDU
ARC0433I	ARCCPCDU
ARC0434E	ARCRCYV
ARC0435I	ARCCPSET
ARC0436I	ARCCPCTP
ARC0437I	ARCCPQAC
ARC0438I	ARCCPQAC
ARC0439I	ARCCPCDU

Table 2 (Page 13 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0440I	ARCRCYV
ARC0441I	ARCUTTOC
ARC0450I	ARCYTDS
ARC0500I	ARCALVOL ARCAUDBV ARCAUDVL ARCBSPIL ARCBVBEG ARCMLCLN
ARC0501I	ARCMPVFI ARCSMPED ARCZVTOC
ARC0502I	ARCCATBU ARCCPDLV ARCDLVDV ARCMVCLN
ARC0503I	ARCALNDS ARCALOLD ARCALSDP ARCALVOL
ARC0505D	ARCBGEN ARCDCDST ARCMCTL
ARC0506I	ARCPROPN
ARC0507I	ARCRELMV
ARC0508I	ARCMSL2V
ARC0510I	ARCMGL0 ARCDGVSZ
ARC0511I	ARCMVDS
ARC0512I	ARCMVDS
ARC0513I	ARCDMDS
ARC0514I	ARCMVDS
ARC0519I	ARCMVCLN
ARC0520I	ARCMGACT
ARC0521I	ARCMGACT
ARC0522I	ARCDBAUT ARCMLEVI ARCMVBEG
ARC0523I	ARCDBAUT ARCMLEVI ARCMVCLN
ARC0524I	ARCAUDBV ARCAUDVL

Table 2 (Page 14 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0525I	ARCAUDBV ARCAUDVL
ARC0526I	ARCMLCLN
ARC0527I	ARCMLCLN
ARC0528I	ARCMSCR ARCZSCR
ARC0529I	ARCMLCLN
ARC0530I	ARCMLEV1
ARC0531I	ARCMLEV1 ARCTLEV1
ARC0532I	ARCMLEV1
ARC0534I	ARCMHOLD
ARC0535I	ARCDBAUT ARCMCVLT ARCMDSUX ARCMLEV1 ARCMMGDS ARCMVOL ARCPMDQE ARCSMBMQ ARCSMEV ARCSMPED ARCSMPGB ARCSMPMQ ARCSMVF1 ARCTLEV1
ARC0538I	ARCMVDS
ARC0539I	ARCCKRNT
ARC0540I	ARCCPMIG
ARC0541I	ARCMSDP
ARC0542I	ARCMDSMV ARCMDSUV
ARC0543I	ARCCPFVL ARCCPMIG ARCMGQCT
ARC0544I	ARCZOBT
ARC0545I	ARCMDSUV ARCZSCR
ARC0546I	ARCZESDP
ARC0547I	ARCMVDS
ARC0548I	ARCCPFVL ARCCPMIG
ARC0550I	ARCMVOL
ARC0551I	ARCMLEV1

Table 2 (Page 15 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0553I	ARCCUMC1
ARC0554I	ARCMPVF1 ARCMVOL ARCSMPED ARCZVTOC
ARC0555I	ARCZVTOC
ARC0556I	ARCMCTL
ARC0557I	ARCZVTOC
ARC0558I	ARCCPMIG
ARC0559I	ARCMCDST
ARC0560E	ARCMRSLT
ARC0561I	ARCMGEN
ARC0570I	ARCBGEN ARCBVBEG ARCCPBAK ARCCPMIG ARCDAUTO ARCDGVSZ ARCGRVOL ARCMCTL ARCMGDI ARCMGQCT ARCMVBEG ARCSMBMQ ARCSM570 ARCSVCUT
ARC0571I	ARCMGLM
ARC0612I	ARCGRFRV ARCROPIN ARCRSTR
ARC0620I	ARCDAUTO
ARC0621I	ARCDAUTO
ARC0622I	ARCDVOL ARCGRVOL
ARC0623I	ARCDVCLN ARCDVOL ARCGRVOL
ARC0624I	ARCDRDSS ARCDUUIM ARCDVOL ARCGRAIN ARCGRQE ARCGRQE2 ARCGVOL ARCREUIM
ARC0625I	ARCDAUTO

Table 2 (Page 16 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0626I	ARCDUDVL ARCDVBEG ARCGRVOL
ARC0627I	ARCDCTL
ARC0628I	ARCDADCE
ARC0629I	ARCDADCE
ARC0630I	ARCZBDST
ARC0631I	ARCZBDST
ARC0632I	ARCZBDST
ARC0633I	ARCDCTL ARCINIT
ARC0634I	ARCDCDST
ARC0635I	ARCDVOL
ARC0636I	ARCDUUIM
ARC0637I	ARCDVCLN
ARC0638I	ARCCPQBS
ARC0639I	ARCDIDC ARCDEDVC
ARC0640I	ARCDUUIM ARCREUIM
ARC0641I	ARCCPQST
ARC0642I	ARCCPQAC
ARC0643I	ARCCPADV ARCDVBEG
ARC0644I	ARCDVOL
ARC0645I	ARCGVCRT ARCPDO ARCPROPN ARCWBSAM ARCWMSGW ARCWQSAM ARCZVCRW
ARC0646I	ARCDCTL
ARC0647I	ARCZVCUT
ARC0648I	ARCDEDVC
ARC0649I	ARCDEDVC
ARC0650I	ARCDVBEG ARCDVOL
ARC0651I	ARCINIT ARCSELBV
ARC0652I	ARCDADCE
ARC0680I	ARCXBEG

Table 2 (Page 17 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0681I	ARCXCLN
ARC0682I	ARCXBEG ARCXPROC ARCXSTAI
ARC0683I	ARCXBEG
ARC0684I	ARCXPROC
ARC0685I	ARCCPEBV ARCXBEG
ARC0686I	ARCXWOUT
ARC0700I	ARCSELBV
ARC0701I	ARCBSPIL
ARC0702I	ARCBGEN ARCBKMSG ARCBVBEG ARCBVOL
ARC0703I	ARCBGEN ARCBKMSG ARCBVBEG ARCBVOL
ARC0704I	ARCGVTOC ARCZVCRW ARCZVCUT
ARC0705I	ARCZVCUT
ARC0706I	ARCBKMSG ARCBVBEG ARCBVOL
ARC0707I	ARCBVCAT ARCBVOL
ARC0708I	ARCBGEN ARCBKMSG ARCBVBEG ARCBVOL ARCDGVSZ ARCDVOL ARCGRQEI ARCGRVOL ARCGVOL ARCGVTOC
ARC0709I	ARCBKMSG
ARC0710I	ARCBKMSG
ARC0711I	ARCBKMSG
ARC0712I	ARCBGEN ARCBKMSG ARCBVBEG ARCBVOL
ARC0713I	ARCBKMSG

Table 2 (Page 18 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0714I	ARCBSPIL ARCBVBEG ARCBVOL ARCBVOL2 ARCSBVOL ARCSVCUT
ARC0715I	ARCBMBC ARCBMDS
ARC0716I	ARCBKMSG
ARC0717I	ARCBGEN
ARC0718I	ARCBMBC
ARC0719I	ARCBMBC
ARC0720I	ARCBGEN
ARC0721I	ARCBGEN
ARC0722I	ARCBVBEG
ARC0723I	ARCBGEN ARCBVEND
ARC0724I	ARCBSPIL
ARC0725I	ARCBATTC
ARC0726I	ARCBSPIL
ARC0727I	ARCBVOL
ARC0728I	ARCBVOL ARCDVOL ARCSVCUT
ARC0729I	ARCBVCAT
ARC0730I	ARCBGEN ARCBKMSG ARCBROLV ARCBVBEG ARCBVOL
ARC0731I	ARCBKMSG
ARC0732I	ARCBVOL
ARC0733I	ARCBGEN ARCBKMSG ARCBVBEG ARCBVOL

Table 2 (Page 19 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0734I	ARCAMSG ARCBAKDS ARCBATTC ARCBMBC ARCBMDS ARCBSPIL ARCBVOL2 ARCDBAUT ARCGRCAT ARCGRQE1 ARCGRQE3 ARCMDSUX ARCMLCLN ARCMLEV1 ARCMMGDS ARCMPVF1 ARCMVOL ARCPMDQE ARCRCYV ARCSBVOL ARCSMBMQ ARCSMPED ARCTLEV1 ARCXWOUT
ARC0735I	ARCBMDS
ARC0736I	ARCBMDS
ARC0737I	ARCMDSMV ARCMDSUV ARCMVDS
ARC0738I	ARCBACK ARCDCTL ARCGCTL
ARC0739I	ARCBSPIL ARCBVOL ARCGVTOC
ARC0740I	ARCCATBU
ARC0741I	ARCCATBU
ARC0742I	ARCCATBU
ARC0743I	ARCCATBU
ARC0744I	ARCCATBU
ARC0745E	ARCCATBU
ARC0746I	ARCBATTC
ARC0747I	ARCCATBU
ARC0748I	ARCCATBU
ARC0749I	ARCGRAIN ARCGRVOL ARCGVTOC
ARC0752I	ARCGRVOL ARCGVOL ARCGVTOC
ARC0753I	ARCGRVOL

Table 2 (Page 20 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0754I	ARCGVOL
ARC0756I	ARCGRGDG ARCGVCAT
ARC0758I	ARCBVOL
ARC0759I	ARCGRVOL ARCGVTOC
ARC0760I	ARCGRQE1 ARCGVTOC
ARC0761I	ARCGVTOC
ARC0762I	ARCGRGDG
ARC0763I	ARCGVCAT
ARC0764I	ARCGVCAT
ARC0765I	ARCGRTOV
ARC0766I	ARCGREN ARCGVDS
ARC0767I	ARCGVDS ARCRVDS
ARC0768I	ARCGVDS ARCRVDS
ARC0769I	ARCGCTL ARCRDS
ARC0771I	ARCGRDEC
ARC0772I	ARCGVOL
ARC0773I	ARCGVOL
ARC0774I	ARCGDSN
ARC0775I	ARCGRQE1 ARCZGCAT ARCZVCUT
ARC0776I	ARCGDS ARCGVDS
ARC0780I	ARCGSTMP
ARC0781I	ARCGRVSU
ARC0782I	ARCGRDEC
ARC0783I	ARCGSTMP
ARC0801I	ARCAUDIT
ARC0802I	ARCAUDIT
ARC0803A	ARCAUDSC
ARC0804I	ARCAUDSC
ARC0805I	ARCAUDBV ARCAUDVL

Table 2 (Page 21 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0806I	ARCAUDBV ARCAUDVL
ARC0807I	ARCAUDBV ARCAUDVL ARCZVTOC
ARC0808I	ARCAUDBV ARCAUDVL
ARC0809I	ARCAUDIT
ARC0810I	ARCAUDIT
ARC0811I	ARCCPLM2
ARC0813I	ARCAUDBC ARCAUDIT ARCAUDMC ARCAUDSC ARCAUDTC ARCAUDTV ARCAUDVL
ARC0814I	ARCCPLM2 ARCLDS ARCLTTC
ARC0815I	ARCLHOST
ARC0816I	ARCLHOST
ARC0817I	ARCLHOST
ARC0818I	ARCZVALB
ARC0819I	ARCZVALB
ARC0820I	ARCZVALB
ARC0821I	ARCZVALB
ARC0830I	ARCCPRCY
ARC0831I	ARCCPRCY
ARC0832I	ARCRCYV
ARC0833I	ARCRCYV
ARC0835I	ARCCPRCY
ARC0836I	ARCCPRCY
ARC0837I	ARCCPRCY
ARC0838I	ARCCPRCY
ARC0842I	ARCCPRCY
ARC0843I	ARCCPRCY
ARC0844I	ARCCPRCY
ARC0850I	ARCCPRST
ARC0851I	ARCCPRST
ARC0852I	ARCCPRST

Table 2 (Page 22 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0853I	ARCCPRST
ARC0854I	ARCCPRST
ARC0855I	ARCCPRST
ARC0860I	ARCCPQCD ARCCPSCV ARCCPSET ARCCTL ARCILOG ARCINIT ARCZWRIT
ARC0900I	ARCERP ARCESTAE
ARC0901I	ARCCMHRD ARCMCTL ARCMSMV ARCPROPN ARCULVRT
ARC0902I	ARCSPCNV
ARC0903I	ARCZREAD
ARC0904I	ARCZWRIT
ARC0909I	ARCILOG ARCZWRIT
ARC0910I	ARCZUPDT ARCZWRIT
ARC0920I	ARCZPONT
ARC0921I	ARCZNOTE
ARC0922I	ARCZSYNC
ARC0923I	ARCBATTC ARCBCLN ARCBSPIL ARCBVCAT ARCBVOL ARCESTAI ARCRCLN ARCYCLN ARCZCSFT
ARC0931I	ARCCPCAN
ARC0932I	ARCCPCAN
ARC0933I	ARCCPCAN
ARC0934I	ARCCPAUT
ARC0935I	ARCZSSI
ARC0936I	ARCZSFVV
ARC0937I	ARCZSCR
ARC0938I	ARCZPART

Table 2 (Page 23 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC0940I	ARCSADVL ARCSMSAD
ARC0950I	ARCZSALT ARCZSDEF ARCZSDEL ARCZSLOC
ARC1000I	ARCFAIL
ARC1001I	ARCFAIL
ARC1003I	ARCFAIL
ARC1004I	ARCFAIL
ARC1005I	ARCFAIL
ARC1006I	ARCFAIL IGG026DU
ARC1007I	ARCFAIL
ARC1008I	ARCFAIL
ARC1009I	IGG026DU
ARC1010I	ARCFAIL IGG026DU
ARC1020I	IGG026DU
ARC1051I	ARCRMDS
ARC1052I	ARCRMDS
ARC1055I	ARCRMDS
ARC1056I	ARCRMDS
ARC1059I	ARCRMDS
ARC1060I	ARCRMDS
ARC1061I	ARCRMDS
ARC1062I	ARCRMDS
ARC1063I	ARCRMDS
ARC1064I	ARCRMDS
ARC1065I	ARCADS ARCBDEL ARCRMDS
ARC1066I	ARCRMDS

Table 2 (Page 24 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1101I	ARCALSNV ARCDMDS ARCGRCAT ARCGRDCL ARCGRDGN ARCGRFRV ARCGRMCP ARCGROLD ARCGRQE3 ARCGRTOV ARCGRTVR ARCRSTR ARCRVDS
ARC1102I	ARCRSTR
ARC1103I	ARCRSTR
ARC1104I	ARCSLVOL
ARC1105I	ARCSLVOL
ARC1106I	ARCALSDP ARCALVOL ARCGRDS ARCGRVDS ARCRALOT
ARC1107I	ARCGDS ARCGSTMP ARCRNVRC
ARC1108I	ARCGDS ARCGRDS ARCRNVRC
ARC1109I	ARCGRTVR ARCRSTR
ARC1110I	ARCRSTR
ARC1111I	ARCGVDS ARCROPIN ARCRPDS ARCRSTR ARCRVDS
ARC1112I	ARCGODS ARCGVDS ARCROPIN ARCRPDS ARCRSDS ARCRSTR ARCRVDS ARCUSDS
ARC1113I	ARCGODS ARCRPDS ARCRSDS ARCUSDS

Table 2 (Page 25 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1114I	ARCCPRES ARCGDSN ARCGRCAT ARCGRNEW ARCGROLD ARCGRTOV ARCGVDSN ARCSLVOL
ARC1115I	ARCRSTR
ARC1116I	ARCALSNV ARCGDS ARCGRDS ARCGRVDS ARCGVDS ARCROPIN ARCRSTR ARCRVDS
ARC1117I	ARCGDS ARCROPIN ARCRSTR ARCRUPF1
ARC1119I	ARCGDS ARCRUPF1
ARC1120I	ARCGRCAT ARCGRQE3 ARCGRFRV ARCGRTOV ARCRALOT ARCREUIM ARCSLVOL
ARC1121I	ARCRALOT
ARC1122I	ARCGDSSC ARCGVDS ARCRSTR
ARC1123I	ARCGREN
ARC1124I	ARCGODS ARCRALOT ARCRPDS ARCRSDS
ARC1125I	ARCSLVOL
ARC1126I	ARCRCTL

Table 2 (Page 26 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1128I	ARCGDSN ARCGRCAT ARCGRDCL ARCGRDEC ARCGRFRV ARCGRMCP ARCGROLD ARCGRQE1 ARCGRQE3 ARCGRTOV
ARC1131I	ARCALSNV ARCGVDS ARCROPIN ARCRSTR ARCRVDS
ARC1133I	ARCGNVOB ARCGRNEW ARCGROLD
ARC1134I	ARCGDS ARCGRDS
ARC1135I	ARCDOPEN ARCROPIN ARCRSTR ARCTOPEN
ARC1136I	ARCDOPEN ARCGDS ARCGODS ARCRPDS ARCRSDS ARCRUPF1 ARCUSDS
ARC1137I	ARCGRTOV ARCRALOT
ARC1138I	ARCIMVDS
ARC1139I	ARCDMDS ARCGDS ARCGDSSC ARCGRDS ARCGRDPR ARCGVDS ARCRDS ARCRSTR
ARC1140I	ARCGCTL
ARC1141I	ARCRNVDS ARCRVDS
ARC1142I	ARCRVDS

Table 2 (Page 27 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1143I	ARCGDSN ARCGRCAT ARCGRNEW ARCGROLD ARCGRQE1
ARC1145I	ARCGRNEW ARCGROLD ARCGRQE1 ARCGRTOV
ARC1146I	ARCGNVOB ARCGRDS ARCGRQE1 ARCGRQE3 ARCRDS ARCRSTR
ARC1147I	ARCRPDS
ARC1149I	ARCGDS ARCGRTOV ARCSLVOL
ARC1150I	ARCALSNV ARCGVDS ARCROPIN ARCRSTR ARCRVDS
ARC1151I	ARCRSTR
ARC1152I	ARCALSNV ARCDOPEN ARCGDSN ARCGMAIN ARCGODS ARCGRLOC ARCGRMAN ARCGRNEW ARCGROLD ARCGVDS ARCIMVDS ARCRCTL ARCRDS ARCRPDS ARCRSDS ARCRSTR ARCRVDS ARCSLVOL ARCUSDS
ARC1153I	ARCROPIN ARCRSTR
ARC1154I	ARCSLVOL ARCTOPEN

Table 2 (Page 28 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1155I	ARCGVDS ARCIMVDS ARCRSTR
ARC1156I	ARCGDSSC ARCGRNEW ARCGRQE3 ARCGVDSN ARCRSTR ARCRVDS
ARC1157I	ARCGRNEW ARCGROLD ARCGRVDS ARCGVDS
ARC1158I	ARCGDSN ARCGNVOB ARCGRNEW ARCGROLD ARCGRVDS ARCGVDS
ARC1159I	ARCGREN ARCGVDS
ARC1160I	ARCDOPEN ARCGDS ARCGODS ARCOSDP ARCRDS ARCRPDS ARCRSDS ARCRSTR ARCTOPEN ARCUSDS ARCZCSFT ARCZEST
ARC1161I	ARCGROLD ARCGRQE1 ARCRSTR
ARC1162I	ARCGCTL ARCGRDEC ARCGROLD ARCGRQE1 ARCRSTR
ARC1163I	ARCULVOL
ARC1164I	ARCGRFRV ARCGRQE3
ARC1166I	ARCGRDS ARCGRVSU
ARC1167I	ARCGDS ARCGVDS

Table 2 (Page 29 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1168I	ARCGDS ARCGVDS ARCRDS ARCRVDS ARCTOPEN
ARC1169I	ARCGDS ARCRDSS ARCRSTR
ARC1170I	ARCALSNV ARCGDSN ARCGRACS ARCGRDEC ARCGRDS ARCGRNEW ARCGROLD ARCGRQE3 ARCGRVSU ARCGVDSN ARCRNVDS ARCRNVRC ARCRSTR
ARC1171I	ARCGROLD
ARC1172I	ARCGRTOV
ARC1173I	ARCGROLD
ARC1174I	ARCGCTL ARCGDSN
ARC1175I	ARCRCTL
ARC1176I	ARCRDSS
ARC1177I	ARCRDSS
ARC1178I	ARCGDSN ARCGRDEC ARCGRQE1 ARCRSTR
ARC1180I	ARCRSTR
ARC1181I	ARCRSTR
ARC1182I	ARCRSTR
ARC1186I	ARCGATTC ARCGCTL ARCGDSN ARCGRDS ARCGRVSU ARCRCTL ARCRSTR
ARC1188I	ARCGDSN ARCGRDEC ARCGRDS ARCGRDVL ARCGROLD

Table 2 (Page 30 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1190I	ARCRSTR
ARC1192I	ARCCTL ARCESTAI
ARC1195I	ARCGATTC ARCGDSN ARCGCTL ARCGRDS ARCGRFRV ARCGRQE3 ARCGRVSU ARCRCTL ARCRSTR
ARC1196I	ARCGCTL
ARC1197I	ARCALSNV ARCGVDS ARCROPIN ARCRSTR ARCRVDS
ARC1199I	ARCRSDS
ARC1202I	ARCMELIG
ARC1203I	ARCMDSN ARCMDSUV ARCMVDS ARCMVOL
ARC1205I	ARCMDSN ARCMDSUV ARCMVDS ARCMVOL
ARC1206I	ARCMDSUV ARCMVDS
ARC1207I	ARCMDSN ARCSMELG
ARC1208I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1209I	ARCMDSMV ARCMDSUV
ARC1210I	ARCMVDS
ARC1211I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1213I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1214I	ARCMDSMV ARCMDSUV ARCMVDS

Table 2 (Page 31 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1215I	ARCMPDS
ARC1216I	ARCBODS ARCMMDS ARCMPDS ARCMSDS ARCPSDS
ARC1217I	ARCMPDS
ARC1218I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS ARCPSDS
ARC1219I	ARCMDSMV ARCMDSUV ARCMVDS ARCMVOL ARCSMPED
ARC1220I	ARCMCKF1 ARCMDSN ARCMELIG
ARC1221I	ARCCPMIG ARCMDSN ARCMGQCT
ARC1222I	ARCMDSN
ARC1223I	ARCMDSMV ARCMDSUV ARCMVDS ARCMVOL ARCSMPED
ARC1224I	ARCMDSN
ARC1225I	ARCMDSMV ARCMDSN ARCMDSUV ARCMGQCT ARCMVDS
ARC1226I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1227I	ARCMCKF1
ARC1230I	ARCMDSN
ARC1232I	ARCMDSN ARCMGQCT
ARC1233I	ARCMDSN
ARC1234I	ARCMDSN ARCMGQCT

Table 2 (Page 32 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1235I	ARCBODS ARCMMDS ARCMPDS ARCMSDS
ARC1236I	ARCMMDS ARCPSDS ARCTOPEN
ARC1237I	ARCBODS ARCEXVDS ARCMDSMV ARCMDSUV ARCMMDS ARCMPDS ARCMSDS ARCMVDS ARCPSDS
ARC1238I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1239I	ARCESTAI ARCMDSN ARCMDSMV ARCMDSUV ARCMVDS
ARC1242I	ARCALTDS
ARC1244I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1245I	ARCMDSN ARCMCKFI ARCMDSUV ARCMELIG ARCMVDS ARCSMELG ARCSMEV
ARC1246I	ARCCTTOC
ARC1247I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1248I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1249I	ARCCTTOC

Table 2 (Page 33 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1250I	ARCMDSMV ARCMDSUV ARCMVDS ARCSMPED
ARC1251I	ARCMDSMV ARCMDSUV ARCMVDS
ARC1252I	ARCALTDS ARCBODS ARCEXVDS ARCGMAIN ARCMDSN ARCMMDS ARCMPDS ARCMSDS ARCMVDS ARCPSDS
ARC1254I	ARCMVDS
ARC1255I	ARCEXVDS
ARC1256I	ARCMDSUV
ARC1257I	ARCMDSUV
ARC1258I	ARCMDSN ARCMPDS ARCMVDS ARCSMEV ARCSMVF1
ARC1259I	ARCMVOL
ARC1260I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCPSDS
ARC1261I	ARCTEOV ARCTOPEN
ARC1264I	ARCBODS ARCMMDS ARCMPDS ARCMSDS
ARC1265I	ARCBODS ARCMMDS ARCMPDS ARCMSDS
ARC1266I	ARCMGL0
ARC1267I	ARCTCLOS
ARC1268I	ARCMDSS
ARC1269I	ARCTCLOS

Table 2 (Page 34 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1270I	ARCMDSN ARCMDSMV ARCMDSUV ARCMVDS ARCSMELG ARCSMEV ARCSMPED ARCSMVFI
ARC1272I	ARCMDSN
ARC1273I	ARCMDSN
ARC1274I	ARCMDSN ARCMGQCT
ARC1276I	ARCMDSS
ARC1277I	ARCMDSS
ARC1278I	ARCMDSN
ARC1280I	ARCMDSN
ARC1281I	ARCMG2TP
ARC1282I	ARCMDSN
ARC1283I	ARCMVOL
ARC1284I	ARCMDSN
ARC1285I	ARCMVDS
ARC1286I	ARCATTEC
ARC1292I	ARCCTL
ARC1294I	ARCMDSUV
ARC1295I	ARCATTEC
ARC1296I	ARCMDSUV
ARC1297I	ARCMDSMV ARCMDSUV ARCMVDS ARCSMPED
ARC1299I	ARCBODS ARCMCKFI ARCMDSN ARCMDSUV ARCMELIG ARCSMEV
ARC1302I	ARCBDSN ARCBVDS
ARC1303I	ARCBDSN ARCBMBC ARCBMDS
ARC1304I	ARCBMBC ARCBMDS
ARC1305I	ARCBDSN

Table 2 (Page 35 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1306I	ARCBMBC
ARC1307I	ARCBMBC ARCBMBV ARCBUDS
ARC1308I	ARCBMBV ARCBUDS ARCBVDS
ARC1309I	ARCBUDS ARCBVDS
ARC1311I	ARCBMBV ARCBUDS ARCBVDS ARCCTTOC
ARC1312I	ARCBDSN
ARC1315I	ARCMPDS
ARC1316I	ARCBODS ARCMMDS ARCMPDS ARCMSDS
ARC1317I	ARCMPDS
ARC1318I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1319I	ARCBMBV ARCBUDS ARCBVDS
ARC1320I	ARCBDSN ARCBVOL2
ARC1321I	ARCBDSN ARCDCMD
ARC1322I	ARCBDSN
ARC1323I	ARCBMBV ARCBUDS ARCBVDS
ARC1324I	ARCBUDS
ARC1325I	ARCBDSN ARCBMBV ARCBMDS ARCBUDS ARCBVDS ARCBVOL2 ARCCTTOC ARCDCMD ARCSBELG
ARC1328I	ARCBVDS

Table 2 (Page 36 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1330I	ARCBDSN
ARC1332I	ARCBDSN
ARC1333I	ARCBDSN
ARC1334I	ARCBDSN ARCSBELG
ARC1335I	ARCBODS ARCMMDS ARCMPDS ARCMSDS
ARC1336I	ARCBMBC ARCBMBV ARCBUDS ARCBVDS ARCMMDS ARCTOPEN
ARC1337I	ARCBMBV ARCBODS ARCBUDS ARCBVDS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1338I	ARCBMBV ARCBUDS ARCBVDS
ARC1339I	ARCBDSN ARCBMBV ARCBUDS ARCBVDS ARCESTAI
ARC1340I	ARCBACK ARCBGEN ARCDCMD
ARC1342I	ARCBMBV ARCBUDS ARCBVDS
ARC1343I	ARCBUDS ARCBVDS
ARC1344I	ARCCTTOC
ARC1345I	ARCCTTOC
ARC1346I	ARCCTTOC
ARC1347I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS

Table 2 (Page 37 of 46). Message-to-Module Cross-Reference

Message	Module That Issued the Message
ARC1348I	ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1349I	ARCCTTOC
ARC1350I	ARCBMBV ARCBUDS ARCBVDS
ARC1351I	ARCBUDS ARCBVDS
ARC1352I	ARCBDSN ARCBMBV ARCBODS ARCBUDS ARCBVDS ARCDGVSZ ARCDVOL ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1353I	ARCBVDS
ARC1354I	ARCBMBV ARCBUDS ARCBVDS ARCBAKDS
ARC1355I	ARCEXVDS
ARC1356I	ARCBDSN ARCBVDS ARCBVOL2 ARCSBELG
ARC1357I	ARCBDSN ARCBVDS
ARC1358I	ARCMPDS
ARC1360I	ARCBAKDS ARCBODS ARCEXVDS ARCMMDS ARCMPDS ARCMSDS
ARC1361I	ARCTOPEN
ARC1363I	ARCULVOL
ARC1364I	ARCBODS ARCMMDS ARCMPDS ARCMSDS

Table 2 (Page 38 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1365I	ARCBMBV ARCBODS ARCBVDS ARCMMDS ARCMPDS ARCMSDS
ARC1366I	ARCBDSN ARCBMDS ARCBVOL2 ARCSBELG
ARC1367I	ARCMMDS
ARC1368I	ARCMDSS
ARC1369I	ARCMMDS
ARC1370I	ARCBDSN ARCBMDS ARCSBELG ARCSBVOL
ARC1371I	ARCBDSN
ARC1372I	ARCBDSN
ARC1373I	ARCBDSN
ARC1374I	ARCBACK ARCBGEN ARCDCMD
ARC1376I	ARCMDSS
ARC1377I	ARCMDSS
ARC1378I	ARCBDSN
ARC1380I	ARCBMBV
ARC1397I	ARCBMBV ARCBUDS ARCBVDS
ARC1399I	ARCBDSN ARCBODS ARCBUDS ARCBVOL2 ARCSBELG
ARC1492I	ARCCTL
ARC1601I	ARCCPOP
ARC1603I	ARCCPOP
ARC1604I	ARCCP ARCFAIL IGX00024

Table 2 (Page 39 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1605I	ARCCPADS ARCCPAUD ARCCPAUT ARCCPBAK ARCCPBD ARCCPCAN ARCCPDEF ARCCPDIS ARCCPDLV ARCCPDUP ARCCPEBV ARCCPEMD ARCCPFC ARCCPFVL ARCCPHLD ARCCPLMC ARCCPMIG ARCCPON ARCCPOP ARCCPRBC ARCCPRES ARCCPRPT ARCCPRTN ARCCPSTR ARCMCMD
ARC1606I	ARCCPAUD
ARC1607I	ARCCPRBC
ARC1609I	ARCCPOP
ARC1610I	ARCAUDBC ARCAUDBV ARCAUDIT ARCAUDMC ARCAUDSC ARCAUDTC ARCAUDTV ARCAUDVL ARCCPLM2 ARCLDS ARCRPT
ARC1611I	ARCCPAUD
ARC1612I	ARCCPDLV
ARC1613I	ARCCPDLV
ARC1614I	ARCCPDLV
ARC1615I	ARCCPFC
ARC1616I	ARCPEMD
ARC1617I	ARCCPDLV

Table 2 (Page 40 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC1652I	ARCCPBAK ARCCPDLV ARCCPDUP ARCCPEMD ARCCPOP ARCCPRBC ARCCPRES
ARC1674I	ARCCPOP
ARC1800I	ARCFAIL IGX00024
ARC1900I	ARCDSTAI ARCESTAI ARCFAIL ARCGSTAI ARCXSTAI
ARC6001E	ARCINIT
ARC6002E	ARCCPARV
ARC6003E	ARCINIT
ARC6004I	ARCWDUIM
ARC6005E	ARCCPABK ARCCPARV
ARC6006E	ARCCPADV
ARC6007E	ARCARPOL ARCCPABK ARCCPARV
ARC6008I	ARCCPQAB
ARC6009I	ARCCPQAB
ARC6010E	ARCADVSH
ARC6011I	ARCCPQAB
ARC6012I	ARCCTL
ARC6013I	ARCARPOL
ARC6014E	ARCARPOL
ARC6015I	ARCCPQAR
ARC6016E	ARCARPOL ARCCPABK ARCCPARV
ARC6018I	ARCCPQAC
ARC6019I	ARCCPQAC
ARC6020I	ARCCPQAC
ARC6021E	ARCCPABK ARCCPARV
ARC6022I	ARCAXMI ARCAXMR

Table 2 (Page 41 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC6023E	ARCWCTL
ARC6024I	ARCASSAS
ARC6025E	ARCWMSGO ARCWMSGW
ARC6026I	ARCWMSGO ARCWMSGW
ARC6027E	ARCACASS ARCASTAI ARCATIME
ARC6028E	ARCARPOL
ARC6029E	ARCARPOL
ARC6030I	ARCWCTL
ARC6031E	ARCASSAS
ARC6032E	ARCACASS ARCASTAI ARCATIME
ARC6034E	ARCWAIUM
ARC6035E	ARCWABND
ARC6051I	ARCKBACK
ARC6052E	ARCKPAG2
ARC6053E	ARCKPAGG
ARC6054I	ARCASEND ARCWCTL
ARC6055I	ARCACTL ARCASTAI ARCWCTL
ARC6056E	ARCKPAG1
ARC6057E	ARCKPAG2 ARCKSCAN
ARC6058E	ARCKBLKR ARCKMOV ARCKWRIT ARCKWRTC ARCKWRTT
ARC6059E	ARCKCDSR
ARC6060I	ARCKBACK
ARC6061I	ARCKBACK
ARC6062I	ARCKBACK
ARC6063I	ARCKBACK
ARC6064I	ARCKOTHR
ARC6066E	ARCKVRFY
ARC6067E	ARCKSDSP

Table 2 (Page 42 of 46). Message-to-Module Cross-Reference

Message	Module That Issued the Message
ARC6068I	ARCKPAGC
ARC6069E	ARCKPAGC
ARC6070E	ARCKVRFY
ARC6071I	ARCKBACK
ARC6072I	ARCKBLDC
ARC6073E	ARCWNQDQ
ARC6074E	ARCWRACF
ARC6075I	ARCWRACF
ARC6076E	ARCWDTVV ARCWTVSV
ARC6077E	ARCWDTVV ARCWTVSV
ARC6078I	ARCWRACF
ARC6079E	ARCKBACK
ARC6080E	ARCKWRTI
ARC6100E	ARCNRECV
ARC6101E	ARCNVRFY
ARC6102I	ARCASEND ARCWCTL
ARC6103I	ARCACTL ARCASTAI ARCWCTL
ARC6104E	ARCNOTHR ARCNOTR1
ARC6105E	ARCNMVR1 ARCNOTHR
ARC6106E	ARCNARV
ARC6107E	ARCNARV
ARC6108I	ARCNMOV
ARC6109I	ARCNOTHR ARCWAIUM
ARC6110E	ARCNDEFG
ARC6111I	ARCNRECV
ARC6112E	ARCNBLDC ARCNMOV ARCNRDSI ARCNRTAP ARCNWRIT
ARC6113E	ARCNCDSW
ARC6114E	ARCCPARV
ARC6115I	ARCNVOLS

Table 2 (Page 43 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC6116I	ARCNOTHR
ARC6117I	ARCNIDCW
ARC6119I	ARCNVOLS
ARC6120I	ARCCRINT
ARC6121E	ARCNVRFY
ARC6122I	ARCNDEFG
ARC6124E	ARCKWRTT
ARC6150E	ARCWCOR ARCWFREM
ARC6151E	ARCWSMS
ARC6152I	ARCKVRFY
ARC6153E	ARCWSMS
ARC6154E	ARCWVSAM
ARC6155E	ARCWVSAM
ARC6156E	ARCWOBTN
ARC6157E	ARCWESTA
ARC6158E	ARCWCGDG ARCWCLOC ARCWCNVM ARCWGLOC ARCWLOC ARCWSLOC ARCW26DL
ARC6159E	ARCKMITA ARCKWRIT ARCNMOVR
ARC6160E	ARCWBSAM ARCWQSAM
ARC6161E	ARCWCLOS ARCWOPEN
ARC6162I	ARCNARV
ARC6163E	ARCWBLDI ARCWDSSI ARCWDSYS
ARC6164E	ARCW99AL ARCW99DA ARCW99RT
ARC6165E	ARCKPAGI
ARC6166I	ARCKVRFY
ARC6167E	ARCKVRFY
ARC6168E	ARCWCMI
ARC6169E	ARCNARV

Table 2 (Page 44 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
ARC6171E	ARCNVRFY
ARC6172E	ARCKVRFY ARCKCDSR
ARC6173E	ARCNDEFG ARCNIDCW ARCNOTHR ARCNRDR ARCWDUIM
ARC6175I	ARCM2INT
ARC6176E	ARCKPARS ARCKSCAN
ARC6177E	ARCWLOAD
ARC6178I	ARCWLOAD
ARC6181I	ARCBEINT
ARC6182I	ARCSKINT
ARC6183E	ARCNVRFY
ARC6185E	ARCNVRFY
ARC6186E	ARCKCDSR ARCKFILT
ARC6187E	ARCBEINT ARCCRINT ARCM2INT ARCSKINT
ARC6188E	ARCNOTHR
ARC6189E	ARCNOTR1
ARC6191E	ARCKPAG2
ARC6192E	ARCWSMS
ARC6193E	ARCKPAG2
ARC6194E	ARCNRDSI ARCNRTAP
ARC6195E	ARCNRDSI ARCNRTAP
ARC9999I	ARCWTO
DFQ010	DFQFMD01
DFQ011	DFQATAST DFQPRFIX
DFQ012	DFQMTPRC DFQPRFIX
DFQ013	DFQVLCRT DFQDDA03
DFQ014	DFQVLDSN DFQDHV01

Table 2 (Page 45 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
DFQ016	DFQVLCRT DFQDDA02
DFQ017	DFQDDA02
DFQ018	DFQDCO01 DFQDDA02 DFQDDL01 DFQDHA01 DFQDHB01 DFQDHD01 DFQDHL01 DFQDHM01 DFQDHR01 DFQDHV01 DFQDDL02 DFQDHL02
DFQ019	DFQINMT
DFQ020	DFQMTPRC
DFQ021	DFQMTPRC
DFQ022	DFQMTPRC
DFQ023	DFQVLDSN
DFQ024	DFQINMT
DFQ025	DFQMTPRC
DFQ027	DFQATAST DFQGETMR DFQPRFIX
DFQ028	DFQMTPRC
DFQ029	DFQNVSAM
DFQ030	DFQATAST DFQCOMP DFQPRFIX
DFQ031	DFQNVSAM
DFQ032	DFQVLCRT DFQDDA02
DFQ033	DFQDDA02
DFQ034	DFQFMD01 DFQGETMR DFQPRFIX
DFQ035	DFQNVSAM
DFQ036	DFQDCL01
DFQ037	DFQMTPRC
DFQ038	DFQINMT DFQNVSAM
DFQ039	DFQNVSAM
DFQ040	DFQDHA01

Table 2 (Page 46 of 46). Message-to-Module Cross-Reference	
Message	**Module That Issued the Message**
DFQ041	DFQINMT
DFQ042	DFQDHA01 DFQDHV01
DFQ044	DFQDHA01 DFQDHV01
DFQ045	DFQDCO01 DFQDHR01 DFQDHV01
DFQ046	DFQINMT
DFQ047	DFQDCO01 DFQDHR01 DFQDHV01
DFQ048	DFQINMT
DFQ049	DFQDHV01
DFQ050	DFQINMT
DFQ051	DFQCOMN DFQVLDSN
DFQ052	DFQINMT
IEF212I	IGG026DU
IKJ56288I	IGG026DU

Message Routing and Descriptor Codes

Routing codes provide the ability to route system operator messages to selected functional areas. The routing code for the majority of DFHSM messages is 2, indicating master console information. The following messages are given a routing code of 3, indicating the tape pool:

- ARC0310A
- ARC0311A
- ARC0313A
- ARC0314A
- ARC0366A
- ARC0381A.

Message ARC0760I is given a routing code of 5, indicating the tape library.

Descriptor codes provide the means for determining how a message is to be printed or displayed and how a message is to be deleted from a graphic device. The descriptor code for the majority of DFHSM messages is 4, indicating system status. Messages ARC0313A and ARC0560E are given a descriptor codes of 2, indicating immediate or eventual action.

Appendix B. Diagnosing from Return Codes and Reason Codes

Many DFHSM error conditions cause non-zero return codes and reason codes to be generated. The return code usually identifies the error and the reason code provides additional detailed information about the problem.

When an error is reported in a DFHSM message, the return code is used to select the appropriate message. The return code is often used as part of the message identification number. For example, a return code of 5 could result in message ARC*nn*05I, where *nn* is a variable depending on the function performed. (For recall and recovery, *nn* is 11; for migration, *nn* is 12; for backup, *nn* is 13; for command processing, *nn* is 16; and for ABARS processing, *nn* is 60 or 61.) Each message explanation includes a description of any reason codes that may be associated with the message. See *Data Facility Hierarchical Storage Manager: Messages* for an explanation of each message.

Return Code Processing

Selected return codes that result from DFHSM processing are given special attention by DFHSM. These codes are passed to the ARCERP module from the detecting DFHSM module, along with a request for a particular level of automatic error processing. Table 3 on page 279 lists the modules that pass codes to ARCERP, the error codes, the error processing levels, and brief descriptions of the problem. The error processing levels are listed next in order of increasing severity:

- Debug: No action is required unless the TRAP command has been entered for the codes.
- Log: Write a message to the log and the operator, then continue.
- Snap: Write a message to the log and the operator, take a snap dump, and continue processing.
- ABEND: Write a message to the log and the operator, optionally take an abnormal end dump, and abnormally end the caller's task.
- Fatal: Write a message to the log and the operator, take an abnormal end dump, and shut down DFHSM.

Part of the error processing includes a test to check whether the return code has an associated trap. Traps are set up by the TRAP operator command, and only return codes passed to ARCERP can be trapped. When a particular return code is trapped, the trap table indicates what action to take, such as to take a snap dump or abnormally end the caller's task with or without a dump.

The level of automatic error processing requested by the ARCERP caller will be overridden by the trap table dump indicator only if the trap requests a more severe level of processing. In other words, the action taken is always the more severe of the choices requested from the trap table or ARCERP caller. The DEBUG and LOG options can be overridden by a trap table entry. The SNAP option can also be overridden in most cases by a trap table entry.

Note that in a few cases, a code returned from a module could have resulted from several conditions. For example, the ARCCOPEN module passes back OPEN macro return codes and VERIFY macro return codes. The return code itself will not identify which macro generated it. In such cases, the dump that results from the error processing must be examined to find the offset pointer into the ARCCOPEN module from which the ARCERP call was made. The ARCCOPEN source code immediately advances this offset and will indicate whether an OPEN or a VERIFY macro was being attempted.

Table 3 (Page 1 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCABMSG	400	Debug	No SDWA pointer passed.
	401	Debug	No log DCB pointer passed.
ARCACREL	1	Log	Mass Storage System acquire failed.
	OBTAIN macro return code	Log	Cannot allocate a volume.
	OBTAIN macro return code plus 100	Log	Format 5 DSCB obtain failed.
ARCADVD	401	Debug	Parameter list identification missing from ARCCPADP parameter list.
	402	Debug	RPL pointer passed, but no work area pointer.
	403	Debug	Pointer to ARCCPADV parameter descriptor list is zero.
ARCALNDS	16	Debug	Unexpected dynamic allocation error.
	400	Debug	Invalid input parameter list (VTP is zero).
ARCALOG	400	Snap	Invalid DCB pointer in ALWE.
	401	Snap	Invalid function code in ALWE.
ARCALOLD	8	Debug	Invalid parameter list or incorrect installation.
	12	Debug	Invalid dynamic allocation parameter list.
ARCALSDP	1	Debug	VSA not found.
	6	Snap	All entries in host ID array are in use.
	CDS read/update return code	Debug	CDS read/update error.
	DAIR return code	Snap	DAIR dynamic allocation failed.
ARCALSNV	400	Debug	Incorrect parameter list ID.
	401	Debug	Missing RCB address.
	402	Debug	Missing Format 1 DSCB address.
	403	Debug	An ACERO address of 0 was passed.
	404	Debug	Data set is a PDS, but the directory count is zero or negative.
	405	Debug	Invalid primary quantity (0 is valid).
	406	Debug	Invalid DDNAME supplied.
	407	Debug	Invalid unit name in ACERO.
	408	Debug	MVT address is null.
ARCALTDS	400	Debug	Invalid parameter list.
ARCALVOL	DYNALLOC macro error reason code	Debug	Dynamic allocation failed.
ARCATTEC	400	Debug	Invalid input parameter list.
ARCAUDBC	6	Debug	No buffer provided for read.

Table 3 (Page 2 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCAUDBV	6	Debug	No buffer provided for read.
	7	ABEND	JFCB read failed.
ARCAUDMC	6	Debug	No buffer provided for read.
ARCAUDSC	6	Debug	No buffer provided for read.
ARCAUDTV	6	Debug	No buffer provided for read.
ARCAUDVL	7	ABEND	JFCB read failed.
ARCBAKDS	400	Debug	Invalid macro ID.
	401	Debug	Invalid BTCB index.
	402	Debug	Missing pointer to the Format 1 DSCB for non-VSAM data set.
ARCBATTC	400	Debug	Control block ID not specified.
	401	Debug	Task ID not specified correctly.
	402	Debug	Device type not specified.
	403	Debug	More than one device type specified.
	404	Debug	Caller not specified.
	405	Debug	More than one caller specified.
	406	Debug	Subtask to be attached not specified.
	407	Debug	More than one subtask to be attached specified.
	408	Debug	BACKUPCYCLEDAY parameter not specified.
	410	Debug	Address of the DSCB is not specified.
	411	Debug	Address of the data set name is not specified.
	412	Debug	Address of the primary volume is not specified.
ARCBCEBV	400	Debug	Invalid parameter list ID.
	401	Debug	Work area passed by the caller does not contain a BCDS data set record.
	402	Debug	Invalid pointer for excess versions array.
ARCBCLN	400	Debug	Invalid task ID specified.
	401	Debug	No backup cycle day specified.
	402	Debug	No target volume pointer for tape.
ARCBELIG	400	Debug	Invalid Format 1 DSCB pointer.
	401	Debug	Invalid mount volume table pointer.
ARCBFULL	400	Debug	Invalid MVT pointer passed by caller.
ARCBKMSG	400	Debug	Invalid caller specified.
	401	Debug	No error code specified.
	402	Debug	Invalid error code specified.
	403	Debug	Address of source volume not specified.

Table 3 (Page 3 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCBMBV	*nnn*	Debug	If *nnn* is greater than or equal to 100 and less than 200, subtract 100 from *nnn* and see message ARC13*nn*I for an explanation of the failing condition. Note that the leading zero in *nnn* is not used in the message identifier. If *nnn* is greater than or equal to 9*nn*, an abnormal end occurred when the return code was set to *nn*. See message ARC0003I for more information about the abnormal end. If the return code is greater than 0, see message ARC13*nn*I for the reason for the abnormal end.
	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid MCC work area pointer.
	402	Debug	Invalid DSCB pointer.
	403	Debug	Invalid input MVT pointer.
	404	Debug	Invalid output MVT pointer.
	405	Debug	Invalid RCB pointer.
	407	Debug	Invalid FSR pointer.
	408	Debug	Invalid work-to-do ECB completion code.
ARCBROLV	400	Debug	Invalid macro ID.
	401	Debug	Invalid BTCB index.
	402	Debug	Invalid pointer to VTOC copy data set name.
	403	Debug	Invalid pointer to ML1 MVT.
ARCBUDS	*nnn*	Debug	If *nnn* is greater than or equal to 100 and less than 200, subtract 100 from *nnn*. See "Message Table for BACKUP Functions" on page 329 for information on these codes.
	400	Debug	Invalid parameter list.
	401	Debug	Invalid DSN pointer.
	402	Debug	Invalid DSCB pointer.
	403	Debug	Invalid input MVT pointer.
	404	Debug	Invalid output MVT pointer.
	405	Debug	Invalid RCB pointer.
	407	Debug	Invalid FSR pointer.
	408	Debug	Invalid work-to-do ECB completion code.
	409	Debug	Invalid SMS constructs pointer for backup of a non-migrated data set.
	410	Debug	Invalid SMS management class pointer.
ARCBVBEG	4	Debug	MCP record conversion failed in ARCCMCP.
	97	Debug	DFHSM internal error.
	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid task ID parameter.

Table 3 (Page 4 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCBVDS	*nnn*	Debug	If *nnn* is greater than or equal to 100 and less than 200, subtract 100 from *nnn* and see message ARC13*nn*I for an explanation of the failing condition. Note that the leading zero in *nnn* is not used in the message identifier. If *nnn* is greater than or equal to 9*nn*, an abnormal end occurred when the return code was set to *nn*. See message ARC0003I for more information about the abnormal end. If the return code is greater than 0, see message ARC13*nn*I for the reason for the abnormal end.
	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid data set name pointer.
	403	Debug	Invalid input MVT pointer.
	404	Debug	Invalid output MVT pointer.
	405	Debug	Invalid RCB pointer.
	407	Debug	Invalid FSR pointer.
	408	Debug	Invalid sphere data pointer.
	409	Debug	Invalid ACB pointer.
	410	Debug	Invalid work-to-do ECB completion code.
	411	Debug	Invalid SMS constructs pointer.
	412	Debug	Invalid SMS management class pointer.
ARCBVEND	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid task ID parameter.
ARCBVR23	6	Debug	No buffer provided for read.
ARCCBVR	36	Debug	No volume entry associated with this BVR.
ARCCFSR	52	ABEND	GETMAIN error.
ARCCKBUP	400	Debug	Invalid Format 1 DSCB pointer passed by the caller.
	401	Debug	Invalid MVT pointer passed by the caller.
ARCCKEOS	400	Debug	Invalid parameter list ID.
	401	Debug	Data set name pointer is not passed (EOSDSNP is less than or equal to zero), or invalid data set name passed.
	402	Debug	Invalid volume name passed.
ARCCKRNT	400	Debug	Invalid input parameter list ID passed.
	401	Debug	Caller flag is not set correctly.
	402	Debug	Invalid MTSP pointer passed.
ARCCLUSZ	400	Debug	Invalid macro identifier.
	401	Debug	Pointer to MVT is zero.
	402	Debug	VSAM specified but SDATA pointer is zero.
	403	Debug	Non-VSAM data set pointer is zero.
	404	Debug	Size results are inconsistent.
ARCCMHRD	6	Debug	No buffer supplied.

Table 3 (Page 5 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCCOPEN	OPEN macro return code	Snap	VSAM open failed on the backup control data set.
	OPEN macro return code	Fatal	VSAM open failed on the migration control data set.
	OPEN macro return code	Snap	VSAM open failed on the off-line control data set.
	VERIFY macro return code	Fatal	VSAM verify failed on the migration control data set.
	98	Fatal	GETMAIN failed.
	99	Fatal	GENCB failed.
	401	Debug	Neither open or close request on desired function.
ARCCPDEF	16	Snap	Read or write error accessing the level 2 control record or volume record for level 2 volumes.
ARCCPLMC	52	Debug	FREEMAIN failure.
ARCCPQST	*nn* > 4	Snap	Error reading parameter list.
ARCCPRCY	52	Debug	GETMAIN failure.
ARCCPRST	VERIFY macro return code	Snap	VSAM verify failed on catalog data set.
ARCCPRTN	6	Debug	No buffer passed for read request.
ARCCSDP	8	Debug	Error closing the SDSP data set.
	60	Debug	Error establishing an ESTAE environment.
ARCCTL	1	Snap	Invalid management work element.
	4	Debug	Improper authorization to issue a command.
ARCCUMC1	6	Debug	No buffer provided for reading MC1 record.
ARCCVSR	1	Snap	Broken VSR chain encountered.
	2	Abend	GETMAIN for VSR failed.
ARCDATTC	8	Debug	Attach failed.
	400	Debug	Invalid parameter list.
ARCDAUTO	16	Debug	Failure setting STIMER.
	400	Debug	ECB list was not passed by the caller.

Table 3 (Page 6 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCDCLOS	4	Debug	Non-zero return code was in register 15 after processing the FREEPOOL macro.
	8	Debug	Non-zero return code was in register 15 after processing the CLOSE macro.
	12	Debug	CLOSE abnormal end X'14' occurred during processing of the CLOSE macro.
	16	Debug	Undetermined abnormal end occurred during the processing of the CLOSE macro.
	20	Debug	Abnormal end occurred during processing of the CLOSE macro.
	42	Debug	Partial release failed.
	400	Debug	Invalid DCB pointer.
	401	Debug	Invalid RCB pointer.
ARCDCMD	400	Debug	ECB list was not passed by the caller.
ARCDGEN	nn (post code)	Debug	Post code is invalid or dump level ECB is invalid.
ARCDGVSZ	400	Debug	Macro ID does not equal VSZP.
	401	Debug	Pointer to the RCB is zero.
	403	Debug	Serialization requested and neither the VOLSER nor the MVT record is provided.
	404	Debug	Deserialization requested, but the MVT record is not provided.
	405	Debug	Message pointer provided but no message length.
	406	Debug	Message length provided but no message pointer.
	407	Debug	Invalid insert passed by user.
ARCDIDC	401	Debug	Invalid macro identification.
	402	Debug	DGN record pointer is not provided or equals zero.
	403	Debug	RCB pointer is not provided or equals zero.
	405	Debug	Invalid user ID specified.
	406	Debug	DELVOL option specified is invalid.
	407	Debug	Neither the dump generation nor a dump copy is indicated for invalidation.
	408	Debug	Both the dump generation and one or more dump copies are indicated for invalidation. Only one of these may be specified.
	409	Debug	The number of dump copies requested to be invalidated exceeds the number of dump copies in the DGN record.
	410	Debug	The dump copy to be invalidated does not exist in the DGN record.

Table 3 (Page 7 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCDLVDV	400	Debug	Invalid parameter list macro ID.
	401	Debug	Invalid disposition is specified.
	402	Debug	Neither a single dump volume VOLSER pointer nor a DGN record pointer is provided.
	403	Debug	Both the single dump volume VOLSER pointer and the DGN record pointer are provided.
	404	Debug	When a DGN record pointer is provided, the dump copy index is invalid.
	406	Debug	The flag indicates that a user ID is provided, but the pointer to the USERID is zero.
ARCDOPEN	400	Debug	Invalid parameter list.
ARCDRDSS	400	Debug	Invalid parameter list ID.
	401	Debug	Function request not specified.
	402	Debug	Full volume dump requested but the pointer to the DGN record was not specified.
	403	Debug	Pointer to caller's RCB not specified.
	404	Debug	Pointer to input volume MVT record not specified.
	405	Debug	Pointer to output volume MVT record not specified for restore request.
	406	Debug	Pointer to data set name to be restored not specified.
	407	Debug	RENAMEUNCONDITIONAL parameter requested but the pointer to the new name not specified.
	408	Debug	Full volume dump requested, but the number of dump copies to be created for this generation not specified.
	409	Debug	Number of output MVT records passed is not the same as the number of DUMP copies to be produced for this generation.
	410	Debug	Invalid completion code in ECB.
	411	Debug	More than one function was requested.
	412	Debug	Data set restore requested without SMS work area pointer.
ARCDRSTM	08	Debug	Failure in the attach macro.
	16	Debug	Abnormal end in the ARCDRTMT subtask.
	400	Debug	Invalid function specified.
	401	Debug	Pointer to the ARCDDSSP data area not specified.
ARCDRSYN	400	Debug	Pointer to EIDB not specified.
	401	Debug	Pointer to ARCDDSSP mapping macro not specified.
ARCDRTMT	400	Debug	Request code is invalid.
	999	Snap	No match between existing DDSSP control blocks and the active TCB.

Table 3 (Page 8 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCDSDP	1	Abend	Error reading from an SDSP data set.
	8	Debug	GENCB failed while attempting to create an ACB for an SDSP data set.
	GET macro condition code	Abend	Error reading from an SDSP data set.
	ERASE macro return code	Abend	Error erasing a record from an SDSP data set.
ARCDTTRM	400	Debug	Invalid parameter list.
ARCDTVSV	400	Debug	Parameter OEVSPTR is invalid.
	401	Debug	Parameter MVTP is invalid.
ARCDUDVL	>0	Debug	Error in clean-up.
	4	Debug	I/O error reading or writing DVL record or error adding the volume to RACF.
	400	Debug	Invalid parameter list.
	401	Debug	Invalid MVT index.
ARCDUUIM	400	Debug	DFDSS did not pass a pointer to the EIDB.
	401	Debug	Addressability could not be established to the ARCDDSSP data area.
	EIOPTION	Debug	(From module ARCDUIM1) Called each time that ARCDUUIM is entered when this module has been patched to request debug messages.
	EIOPTION	ABEND	(From module ARCDUIM2) ARCDUUIM returned an invalid option to DFDSS.
	EIOPTION	ABEND	(From module ARCDUIM3) The DDNAME passed to this exit does not match any of the DDNAMEs that DFHSM has recorded in the output MVT records.
	EIRETCOD	Debug	(From module ARCDUIM4) Called each time that ARCDUUIM is exited when this module has been patched to request debug messages.
ARCDVBEG	400	Debug	Invalid DTCB index.
	401	Debug	Index does not point to a valid DTCB.
ARCDVCLN	400	Debug	Invalid DTCB index.
	401	Debug	Invalid DTCB control block.
	900	Debug	The Dump Volume processing ended abnormally.
ARCDVOL	400	Debug	DTCB index passed is outside range.
	401	Debug	Invalid DTCB prefix was passed.
	Return Code from DVL read	ABEND	Error reading DVL record.
ARCFREE	4	Snap	Invalid DAIR parameter list.
	12	Snap	DAIR dynamic allocation failed.
ARCGATTC	400	Debug	Invalid parameter passed in ARCGATTP to ARCGATTC.
	401	Debug	Invalid parameters passed to ARCGATTC.

Table 3 (Page 9 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGCLN	400	Debug	Invalid parameter list.
ARCGDS	*nn*	Debug	See "Message Table for RECALL/RECOVERY Functions" on page 325 for more information.
	400	Snap	An invalid parameter address was passed, or the parameter list ID was not set properly.
	401	Debug	The MCC record pointer, the source MVT pointer, the target MVT pointer, or the functional statistics record pointer is null. All pointers are required.
	402	Debug	The data set name pointer is null or the data set name is null or blank.
	403	Debug	The parameter list indicates an MCB record is provided but the MCB record pointer is null.
	404	Debug	The parameter list indicates a VSAM data set is being recovered.
	405	Debug	The parameter list indicates the source volume is a tape but the tape DDNAME pointer is null or blank.
	406	Debug	The recover control block (RCB) indicates a single-file 3480 tape data set is open, but the source MVT has a null DCB pointer or a null JFCB pointer.
	407	Debug	The parameter list indicates the data set must be recataloged after the recovery, but the pointer to the volume serial number of where the data set is currently cataloged is null or the volume serial is null or blank.
	408	Debug	The parameter list indicates the data set must be recataloged after the recovery, but the pointer to the device type of the volume where the data set is currently cataloged is null or the device type is null.
	409	Debug	The parameter list indicates that a new name was requested and that the original data set is still cataloged, but the pointer to the volume that it is currently cataloged on is null or the volume serial number is null or blank.
	410	Snap	Invalid recovery task control block (GTCB) index was passed.
	411	Debug	Invalid work-complete ECB completion code.
	412	Debug	An ACERO address of 0 was passed.
	413	Debug	SMS work area not passed.
ARCGDSN	400	Debug	Invalid macro ID or invalid task ID.
	401	Debug	Pointer to RCB for the task was not passed.
ARCGDSSC	400	Debug	Invalid macro ID was passed in ARCGSSCP.
	401	Debug	Pointer to VOLSER was not passed or VOLSER was not passed in ARCGSSCP for a non-VSAM or ICF catalog data set.
ARCGDS1	nn	Debug	Non-zero return code from ARCTCLOS when tape data set close failed. See ARCTCLOS.
ARCGDS2	nn	Debug	Non-zero return code from ARCDCLOS when DASD data set close failed. See ARCDCLOS.

Table 3 (Page 10 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGDS3	Scratch macro return code	Debug	Non-zero return code from ARCZSCR when scratching replaced data set.
ARCGENLG	400	Debug	Log type was not one of the following: C - Command Activity Log D - Dump Activity Log M - Migration Activity Log B - Backup Activity Log.
ARCGIVER	400	Debug	Invalid request ID.
	401	Debug	Attempt made to free non-posted MWE.
	402	Debug	Locate failure or multi-volume data set.
ARCGMAIN	52	Debug	GETMAIN or FREEMAIN failure.
ARCGODS	12	Snap	I/O error reading migration or backup copy.
	13	Snap	I/O error writing primary copy.
	52	Debug	Error freeing virtual storage.
ARCGRACS	400	Debug	Invalid parameter list name.
	401	Debug	Invalid GTCB index.
	402	Debug	Invalid data set name pointer. or invalid data set name.
ARCGRAIN	400	Debug	No GDSP found.
	401	Debug	No DGN record found.
	402	Debug	No RCB pointer passed.
	403	Debug	No anchor structure for RQEs is available in the GDSP.
ARCGRCAT	400	Debug	Invalid macro ID.
	401	Debug	The index to the GTCB array is not passed or an invalid index to the GTCB is passed.
	402	Debug	The pointer to the first RQE on the RQE queue is not passed.
ARCGRCLN	400	Debug	Invalid index to GTCB array is passed.
ARCGRDCL	400	Debug	Invalid parameter list ID.
	401	Debug	Dump class or index to GTCB not passed.
	402	Debug	Pointer to the processed dump class array not passed.
	403	Debug	Invalid index to the dump copy in the DGN record is passed.
ARCGRDGN	400	Debug	Invalid parameter list name.
	401	Debug	Invalid GTCB index.
	402	Debug	Pointer to MCP record is null.
ARCGRDPR	440	Debug	Invalid GTCB index.

Table 3 (Page 11 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGRDS	*nn*	Debug	See "Message Table for RECALL/RECOVERY Functions" on page 325 for more information.
	400	Debug	The MCVT does not point to a valid GTCB.
	401	Debug	The GDSP parameter list address in the GTCB is null.
	402	Debug	An invalid ARCGDSP macro ID was passed.
	403	Debug	The data set pointer is null or the data set name is null or contains blanks.
	404	Debug	The parameter list does not indicate that a non-VSAM data set is being recovered.
	405	Debug	DUMPVOLUME is not specified and the Format 1 DSCB is not passed.
	406	Debug	The pointer to the input MVT entry is null or the MVT entry is invalid.
	407	Debug	The pointer to the output MVT entry is null or the MVT entry is invalid.
	408	Debug	The pointer to RCB is null or does not point to a valid RCB.
	409	Debug	The pointer to the FSR record is null.
	410	Debug	SMS work area not passed.
	900	Debug	DFDSS ABEND.
ARCGRDVC	4	Debug	An error occurred reading MCV/MCT record.
	8	Debug	An error occurred allocating the dump VTOC copy data set.
	14	Debug	An error occurred reading the dump VTOC copy data set.
	16	Debug	An error occurred opening the dump VTOC copy data set.
	24	Debug	An invalid or unsupported device type is found for the source backup or dump volume in its control data set.
	38	Debug	No VTOC copy data set entry is found for the requested data set.
	56	Debug	For a VSAM data set restore of a cluster, the data component name is not found in the dump VTOC copy data set.
	58	Debug	For a VSAM data set restore of a cluster, the index component name is not found in the dump.
ARCGRDVL	400	Debug	The macro ID in the input parameter list is invalid.
	401	Debug	The GTCB index in the input parameter list is invalid.

Table 3 (Page 12 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGREN	400	Debug	MCVT does not point to a valid GTCB (task is abnormally ended).
	401	Debug	GDSP parameter list address in the GTCB is null.
	402	Debug	GTCB does not point to a valid GDSP (task is abnormally ended).
	403	Debug	Base cluster name pointer is null or the base cluster name is null or blank.
	404	Debug	Base data component name is null or blank.
	405	Debug	Index component exists but the index component name is null or blank.
	406	Debug	The base cluster new name is null or blank.
	407	Debug	The base data component new name is null or blank.
	408	Debug	The base index component exists, but the base index component new name is null or blank.
ARCGRFRV	400	Debug	Invalid requesting function passed.
ARCGRGDG	4	Debug	Read JFCB for input tape volume failed or GETMAIN failed.
	35	Debug	Error opening input tape data set.
	400	Debug	Parameter list identifier is invalid.
	401	Debug	Index indicating which VCAT copy data set to process is neither 2 nor 4.
	402	Debug	MCP record for the original source volume was not passed.
ARCGRLOC	52	Debug	GETMAIN failure in ARCZQBLD.
	400	Debug	Invalid GTCB index.
	401	Debug	GDSP pointer is invalid.
	402	Debug	RCB pointer in the GTCB is invalid.
	403	Debug	RQE chain anchor is null.
	404	Debug	No target volume MVT record found.
	405	Debug	Catalog data set RQE chain anchor is null.
ARCGRMAN	400	Debug	Invalid macro ID was passed in ARCGMANP.
	402	Debug	Invalid index to GTCB array was passed in ARCGMANP.
ARCGRQE	400	Debug	The macro ID in the input parameter list is invalid.
	401	Debug	The GTCB index in the input parameter list is invalid.
	402	Debug	The pointer to the open VTOC copy data set DCB is invalid.
	403	Debug	The VTOC copy data set type is invalid.
	404	Debug	The pointer to the VTOC copy data set name is invalid.
ARCGRQEI	400	Debug	Invalid macro ID.
	401	Debug	Invalid GTCB index was passed.

Table 3 (Page 13 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGRQE2	400	Debug	Invalid input parameter list macro ID.
	401	Debug	Invalid GTCB index is passed.
ARCGRQE3	400	Debug	Invalid input parameter list macro ID.
	401	Debug	Invalid index to GTCB.
	402	Debug	Pointer to the RQE of the data set to be recovered is not passed.
ARCGRTVR	430	Debug	Invalid index to GTCB was passed as a parameter by the caller.
ARCGRVDS	*nn*	Debug	See "Message Table for RECALL/RECOVERY Functions" on page 325 for more information.
	400	Debug	The MCVT does not point to a valid GTCB.
	401	Debug	The GDSP parameter list address in the GTCB is null.
	402	Debug	An invalid ARCGDSP macro ID was passed (task is abnormally ended).
	403	Debug	The data set pointer is null, or the data set name is null or is blank.
	404	Debug	The GDSP parameter list does not indicate that a VSAM data set is being recovered.
	405	Debug	The GDSP parameter list indicates that a new name is requested, but the new name is null or blank.
	406	Debug	The pointer to the input MVT entry is null, or the MVT entry is invalid.
	407	Debug	The pointer to the output MVT entry is null, or the MVT entry is invalid.
	408	Debug	The pointer to the RCB is null or does not point to a valid RCB.
	409	Debug	The pointer to the FSR record is null.
	410	Debug	SMSWA pointer is null.
ARCGRVOL	400	Debug	Invalid control block ID or an invalid GTCB task ID.
	401	Debug	RCB for ARCGRVOL or TCB pointer of ARCGRVOL is not passed.
	402	Debug	MVT pointer of the value to be restored is not passed.
	403	Debug	Invalid MWE pointer.
ARCGRVSU	5	Debug	Failure to allocate the target SMS volume.
	19	Debug	Failure to read base data component Format 1 DSCB.
	46	Debug	Error reading Format 1 DSCB.
	400	Debug	Invalid GTCB index.
	401	Debug	Null ARCGDSP pointer in GTCB.
	402	Debug	Invalid ARCDDSSP pointer.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGSTMP	400	Debug	ARCGRTWA pointer invalid.
	401	Debug	Invalid GTCB index.
	402	Debug	Null ARCGDSP pointer in GTCB.
	403	Debug	Invalid function request in ARCGRTWA.
	404	Debug	Invalid target data set name or pointer.
	405	Debug	Invalid data set name for deletion or rename.
	406	Debug	Invalid data set name to rename back to.
ARCGVCAT	4	Snap	JFCB read failure.
	52	Debug	FREEMAIN failure.
ARCGVCRT	400	Debug	The macro ID in the input parameter list is invalid.
	401	Debug	The pointer to the caller's input buffer is invalid.
	402	Debug	The pointer to the open VTOC copy data set DCB is invalid.
	403	Debug	The pointer to the log DCB for error messages is invalid.

Table 3 (Page 15 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCGVDS	*nn*	Debug	See "Message Table for RECALL/RECOVERY Functions" on page 325 for more information.
	4	Debug	Error finding SMS target volume UCB pointer after import of base cluster.
	5	Debug	Error allocating SMS target volume after import of base cluster.
	14	Debug	LOCATE failure finding data object name for updating Format 1 DSCB.
	19	Debug	ARCZUF1 failed to update the base data component Format 1 DSCB.
	400	Snap	An invalid index to the GTCB array was passed.
	401	Debug	The MCC record pointer is null, or the MCC record passed is invalid.
	402	Debug	The data set name pointer is null, or the data set name is null or blank.
	403	Debug	The parameter list indicates an MCB record is provided, but the MCB record pointer is null.
	404	Debug	The parameter list does not indicate that a VSAM data set is being recovered.
	405	Debug	The parameter list indicates the source volume is a tape but the tape DDNAME pointer is null, or the tape DDNAME is null or blank.
	406	Debug	The recovery control block (RCB) indicates a single-file 3480 tape data set is open, but the source MVT has a null DCB pointer or a null JFCB pointer.
	407	Debug	The pointer to the catalog's owning data set name is null.
	408	Debug	The parameter list indicates that a new name was requested, but the new name is null or blank.
	409	Debug	The parameter list indicates that the password must be checked, but the pointer to the password is null.
	410	Snap	Invalid ARCGDSP address was passed.
	411	Debug	Invalid macro ID was passed in ARCGDSP.
	412	Debug	Pointer to input MVT entry is null, or the MVT entry passed is invalid.
	413	Debug	Pointer to output MVT entry is null, or the MVT entry passed is invalid.
	414	Debug	Pointer to FSR is null.
	415	Debug	Pointer to the owning catalog's master password is null.
	416	Debug	The owning catalog's data set name is null or blank.
	417	Debug	The completion code in the Work-to-Do ECB is neither zero nor X'000098'.
	418	Debug	ACERO not passed.
	419	Debug	SMSWA not passed.
	420	Debug	The pointer to MVT for the target volume is null.

Table 3 (Page 16 of 45). Modules That Pass Error Codes to ARCERP			
Entry Point or Module	**Error Code**	**Process Level**	**Description of Problem**
ARCGVDSN	400	Debug	Invalid GTCB index.
ARCGVDS1	nn	Debug	Non-zero return code from ARCTCLOS when tape data set close failed. See ARCTCLOS.
ARCGVDS2	nn	Debug	Non-zero return code from ARCDCLOS when tape data set close failed. See ARCDCLOS.
ARCGVDS3	LOCATE macro return code	Debug	Locate failure on base cluster name before Format 1 DSCB update.
ARCGVOL	400	Debug	Invalid macro identification for GTCB or invalid task name in GTCB.
	401	Debug	The pointer to the RCB for the task was not passed.
	402	Debug	Invalid target volume MVT entry pointer.
ARCGVTOC	6	Snap	JFCB read failed.
	400	Debug	Invalid input parameter list macro identification
	401	Debug	The index to the GTCB array was not passed, or an invalid index to the GTCB was passed.
	402	Debug	The number of VTOC copy data sets to be used was not passed, or an invalid number of VTOC copy data sets to be used was passed.
	403	Debug	The pointer to an area containing a DCB for opening the VTOC copy data set on a DASD volume was not passed.
	404	Debug	The pointer to a structure containing the pointer to a DCB, JFCB exit list, and JFCB work area was not passed for opening the VTOC copy data set on a tape backup volume.
	405	Debug	The pointer to an area containing a DCB for opening the VTOC copy data set on a tape volume was not passed.
	406	Debug	The pointer to an area containing a JFCB exit list was not passed for opening the VTOC copy data set on a tape volume.
	407	Debug	The pointer to an area containing the work area for JFCB was not passed for opening a VTOC copy data set on a tape volume.
ARCILOG	900	Snap	Any terminating error.
ARCINIT	HSM SVC Return Code	Snap	DFHSM SVC error initializing DFHSM.
ARCISTAT	400	Debug	Invalid volume type.
	READ macro return code	Debug	Failure when reading DSR record to storage.
	WRITE macro return code	Debug	Failure when writing DSR record to DASD.

Table 3 (Page 17 of 45). Modules That Pass Error Codes to ARCERP			
Entry Point or Module	**Error Code**	**Process Level**	**Description of Problem**
ARCLDCLS	1	Debug	ARCZREAD failure.
	2	Debug	List held, or DFHSM is shut down.
	4	Debug	No record found.
	400	Debug	Macro ID does not equal LDCV.
	401	Debug	Pointer to LIST command equals zero.
	402	Debug	Pointer to RCB equals zero.
	403	Debug	Data set flag equals ON, but the DCB pointer equals zero.
	404	Debug	USERID is blank, and the DCB pointer equals zero.
ARCLDVOL	1	Debug	Read DVL failed.
	2	Debug	List held or DFHSM is shut down.
	7	Debug	Read DGN failed.
	10	Debug	No DVL record qualified.
	400	Debug	Macro ID missing or invalid.
	401	Debug	List PDL pointer missing.
	402	Debug	RCB pointer missing.
	403	Debug	DCB Indicator mismatch.
ARCLSPAC	4	Debug	Volume not found.
	8	Debug	I/O error on VTOC record.
	20	Debug	Volume type not supported.
	24	Debug	OBTAIN Macro error.
	28	Debug	Volume allocation error.
	32	Debug	Volume De-allocation error.
	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid MVT pointer.
ARCMBFSR	400	Debug	Invalid parameter list.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCMBUIM	400	Debug	DFDSS did not pass a pointer to the EIDB.
	401	Debug	Addressability to the ARCMDSSP data area could not be established.
	402	Debug	MDSS_ID not set to MDSS_NAME.
	403	Debug	MDSS_RCBP is not valid or passed.
	404	Debug	MDSS_CDDP is not valid or passed.
	405	Debug	MDSS_TOVTP is not valid or passed.
	406	Debug	MDSS_OUTDCBP is not valid or passed.
	407	Debug	MDSS_LOFTYP not 2 or 3.
	408	Debug	MDSS_DSN is not valid or passed.
	409	Debug	MDSS_SYSINNUM is not valid or passed.
	410	Debug	Any message anchor pointer is not valid or passed.
	411	Debug	Message buffer blocksize or subpool is not valid or passed.
	412	Debug	Any data set processing buffer address is not valid or passed.
ARCMCDST	400	Debug	Invalid function requested.
	401	Debug	Invalid MTCB index.
	402	Debug	MTCB index does not reference a valid MTCB.
	403	Debug	Invalid MDQE pointer.
ARCMCKF1	400	Debug	Invalid DSCB pointer.
	401	Debug	Invalid MVT entry pointer.
	402	Debug	Invalid SDATA pointer.
ARCMCLN	400	Debug	Input parameter is invalid.
ARCMCLUS	400	Debug	Invalid macro ID for ARCMDSSP.
	401	Debug	Incorrect function or combination of functions.
	402	Debug	Invalid MVT pointer for source volume.
	403	Debug	Invalid RCB pointer.
	404	Debug	Invalid SDATA pointer.
	405	Debug	Invalid format 1 DSCB pointer.
ARCMCPSV	400	Debug	Invalid MWE pointer
ARCMCVLT	400	Debug	Invalid function requested.
	401	Debug	Invalid MTCB index.
	402	Debug	MTCB index does not reference a valid MTCB.
ARCMDSMV	*nn*	Debug	See "Message Table for MIGRATION Functions" on page 327 for more information.
	400	Debug	Invalid parameter list.
	401	Debug	Invalid work-to-do ECB completion code.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCMDSS	400	Debug	Invalid macro ID for ARCMDSSP.
	401	Debug	Invalid pointer to the CDD.
	402	Debug	Invalid pointer to MVT of target volume.
	403	Debug	Invalid pointer to output DCB.
	404	Debug	Message log type is not 2 or 3.
	405	Debug	Invalid data set name.
	406	Debug	Invalid pointer to RCB.
ARCMDSUV	*nn*	Debug	See "Message Table for MIGRATION Functions" on page 327 for more information.
	400	Debug	Invalid parameter list.
	401	Debug	Invalid work-to-do ECB completion code.
ARCMDSUX	400	Debug	Wrong parameter list ID.
	401	Debug	Task ID for MVOL not set.
	402	Debug	Pointer to MDQE is invalid.
ARCMELIG	400	Debug	Invalid parameter list ID.
ARCMETRG	400	Debug	Invalid index to the MTCB passed.
	401	Debug	MTCB index references an invalid MTCB.
ARCMEXP	400	Debug	Invalid input parameter list ID.
	401	Debug	Current date not passed.
	402	Debug	Expiration date of data set not supplied.
	403	Debug	Creation date of data set not supplied.
	404	Debug	Date last referenced of data set not supplied.
	405	Debug	Management class definition for an SMS-managed data set not supplied.
	406	Debug	Caller requested to check the ROLLED_OFF_GDS_ACTION = EXPIRE management class attributes, but did not indicate this was an SMS-managed data set.
ARCMG2TP	400	Debug	Invalid input parameter passed to ARCMG2TP.
ARCMIGDS	400	Debug	Incorrect parameter list ID.
	401	Debug	Incorrect MTCB index.
	400	Debug	Missing MDQE pointer.
ARCMLCLN	FREEMAIN return code	Debug	Error returned from FREEMAIN macro when freeing storage for mounted volume tables for Migration Level 2 volumes.
ARCMMDS	4	Debug	Error from ARCRSDP. Read failed for first record of data set in SDSP. No record found.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCMMGDS	400	Debug	Wrong parameter list ID passed.
	401	Debug	Task ID not set.
	402	Debug	MDQE pointer invalid.
	403	Debug	No pointer to target MVT.
ARCMMVF1	400	Debug	Wrong parameter list ID passed.
	401	Debug	Task ID for MVOL not set.
	402	Debug	Pointer to MDQE BLK chain anchor is invalid.
	403	Debug	Pointer to MDQE chain anchor is invalid.
	404	Debug	Pointer to Format 1 DSCB invalid.
ARCMPVF1	400	Debug	Wrong parameter list passed.
	401	Debug	Task ID for MVOL not set.
	402	Debug	Pointer to block chain anchor is invalid.
	403	Debug	Pointer to MDQE chain anchor is invalid.
	404	Debug	Pointer to SDATA chain anchor is invalid.
	405	Debug	Pointer to Format 1 DSCB invalid.
	407	Debug	Current day is invalid.
	408	Debug	Current year is invalid.
ARCMSDP	1	Debug	VSAM RPL active on another host.
	8	Debug	Failed to build an RPL for reading SDSP or VSAM logical error on reading SDSP.
	12	Debug	VSAM physical error on reading SDSP.
	400	Debug	Invalid input parameter list ID.
	401	Debug	Pointer to MDQE block chain anchor is invalid.
	402	Debug	Pointer to MDQE chain anchor is invalid.
	403	Debug	Invalid MVOL task ID.
ARCMSDS	16	Snap	A record with an invalid length was read from the input (user's) data set.
	400	Debug	Invalid macro ID for ARCMSDPP.
	401	Debug	Invalid MDQE pointer.
	402	Debug	Invalid MVT pointer for source volume.
	403	Debug	Invalid RCB pointer.
ARCMSDSP	400	Debug	Invalid macro ID for ARCMSDPP.
	401	Debug	Invalid MDQE pointer.
	402	Debug	Invalid MVT pointer for source volume.
	403	Debug	Invalid RCB pointer.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCMSL2V	4	Debug	No Level 2 volumes available.
	5	Debug	Level 2 association error.
	52	Debug	GETMAIN error.
	400	Dump	Invalid parameter list.
ARCMSMV	400	Debug	Parameter list is invalid.
ARCMVBEG	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid task ID.
ARCMVCDS	20	Debug	Error closing or deallocating the new VTOC copy data set after another error encountered.
	22	Debug	Error closing or deallocating the old VTOC copy data set after another error was encountered.
	400	Debug	Invalid macro identifier.
	401	Debug	Data set name pointer not specified.
	402	Debug	Invalid settings of flags that specify whether the data set is a backup or dump VTOC copy.
	404	Debug	Pointer to the callers' RCB is not specified.
	405	Debug	Pointer to the input volume MVT record is not specified.
	406	Debug	The passed data set name is invalid.
ARCMVCLN	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid task ID parameter.
	402	Debug	Invalid allocation start time parameter.
ARCMVDS	*nnn*	Debug	If *nnn* is greater than or equal to 100 and less than 200, subtract 100 from *nnn* and see message ARC12*nn*I for an explanation of the failing condition. Note that the leading zero in *nnn* is not used in the message identifier. If *nnn* is greater than or equal to 9*nn*, an abnormal end occurred when the return code was set to *nn*. See message ARC0003I for more information about the abnormal end. If the return code is greater than 0, see message ARC12*nn*I for the reason for the abnormal end.
	400	Debug	Invalid parameter list.
	401	Debug	Invalid work-to-do ECB completion code.
ARCMVOL	400	Debug	MTCB block ID not set.
	401	Debug	No pointer to the MVT entry for the volume to be managed by space maintenance.
	402	Debug	No pointer to the recovery control block of the ARCMVOL task.
	403	Debug	DFHSM is in a direct-to-tape migration environment, and no pointer to the migration tape selection parameter list exists.
	404	Debug	Bad ECB completion code.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCMVTOC	400	Debug	Wrong parameter list passed.
	401	Debug	Task ID for MVOL not set.
	402	Debug	Pointer to block chain anchor is invalid.
	403	Debug	Pointer to MDQE chain anchor is invalid.
	404	Debug	Pointer to SDATA chain anchor is invalid.
ARCOSDP	4	Debug	GENCB failed while attempting to create an ACB for open.
	8	Debug	OPEN macro failed for an SDSP data set.
	12	Debug	GENCB failed while attempting to create an RPL to verify an SDSP data set.
	16	Debug	Verify failed.
	60	Debug	ESTAE set up failed.
ARCPBQ	400	Debug	Input MWE pointer is not valid.
ARCPMDQE	400	Debug	Invalid MTCB index.
	401	Debug	MTCB index does not reference a valid MTCB.
	402	Debug	Invalid MDQE pointer.
	403	Debug	Inconsistent MDQE size fields.
ARCPROPN	3	Debug	Data set open failed.
	7	Snap	The DCB is closed and is not the DCB for either the migration, backup, or dump activity logs.
	DYNALLOC macro return code	Debug	Dynamic allocation failed.
	ARCZEST return code	Debug	Either ESTAI or ESTAE is not established.
ARCQSORT	401	Debug	Invalid array pointer was passed.
	402	Debug	Invalid lower boundary was passed.
	403	Debug	Invalid upper boundary was passed.
	404	Debug	Invalid element length was passed.
	405	Debug	Invalid starting key was passed.
	406	Debug	Invalid key length was passed.
	407	Debug	Lower boundary passed was greater than the upper boundary passed.

Table 3 (Page 23 of 45). Modules That Pass Error Codes to ARCERP			
Entry Point or Module	**Error Code**	**Process Level**	**Description of Problem**
ARCRACF	440	Debug	Invalid parameter list or parameter list is missing.
	441	Debug	Function request in field is invalid.
	442	Debug	Authorization level is invalid for a RACF check request.
	443	Debug	Pointer to a volume serial is null, or the field where it points is null or blank when a valid value is required.
	444	Debug	Pointer to a data set name is null, or the field where it points is null or blank when a valid value is required.
	445	Debug	New device type pointer is null, or the device type field was null or blank.
	446	Debug	A null USERID pointer was found, or the USERID field was null or blank.
ARCRALOT	6	Debug	Error allocating the data set.
	420	Debug	Invalid parameter list passed, or the parameter list ID was not set properly.
	421	Debug	The input data set name pointer, the MVT pointer, the RCB pointer, the DDNAME pointer, or the CDD pointer is null, all are required.
ARCRCTL	*nn*	Fatal	ARCGMAIN was called to get storage for the recall task control blocks. ARCGMAIN returned a non-zero return code (*nn*).
ARCRCYDS	401	Snap	Invalid pointer was passed.
	402	Snap	Required parameter was not passed.
ARCRCYV	7	Snap	JFCB read failed.
ARCRDIN	1	ABEND	IKJSCAN error.
ARCRDS	4	Debug	A UCB for the target SMS volume could not be found.
ARCRDSS	69	Debug	Abnormal end in DFDSS.
	76	Snap	Failure attempting to link the DFDSS load module.
	400	Debug	Invalid macro identifier.
	401	Debug	The function recall or recover was not specified.
	402	Debug	The pointer to the input DCB was zero.
	403	Debug	The pointer to DFHSM recall/recover TCB was zero.
	404	Debug	Invalid activity log type was specified.
	405	Debug	The data set name was not passed.
	406	Debug	The data set name for rename was not passed.
	407	Debug	A target volume was not passed or a DDNAME for the volume allocated during volume recovery was not passed.
	408	Debug	The data set is SMS-managed but a storage class was not passed.
	409	Debug	The data set is a VSAM data set but the name of catalog was not passed.
	410	Debug	The pointer to the CDD was not passed.
ARCRELMV	400	Debug	Invalid parameter list ID passed in ARCMTSP.

Table 3 (Page 24 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCREUIM	4	Abend	Error finding the UCB for the target volume.
	400	Debug	DFDSS did not pass a pointer to the EIDB.
	401	Debug	Addressability could not be established to the ARCDDSSP data area.
	EIOPTION	Debug	(From module ARCRUIM1) Called each time that ARCREUIM is entered when this module has been patched to request debug messages.
	EIOPTION	ABEND	(From module ARCRUIM2) ARCREUIM returned an invalid option to DFDSS.
	EIRETCOD	Debug	(From module ARCRUIM4) Called each time that ARCREUIM is exited when this module has been patched to request debug messages.
ARCRGUIM	400	Debug	DFDSS did not pass a pointer to the EIDB.
	401	Debug	Addressability could not be established to the ARCRDSSP data area.
	402	Debug	RDSS_ID not set to RDSS_NAME.
	403	Debug	RDSS_RTBP is zero.
	404	Debug	RDSS_CDDP is zero.
	405	Debug	RDSS_CRDP is zero.
	406	Debug	RDSS_DCBP is zero.
	407	Debug	RDSS_LOGTYP not 2 or 3.
	408	Debug	RDSS_DSN is a blank.
	409	Debug	RDSS_SYSINNUM is zero.
	410	Debug	RDSS_FTAPE and RDSS_DECBPTR is zero.
	411	Debug	RDSS_FTAPE and VOLLISTP is zero.
	412	Debug	RDSS_FCOMPACT and RDSS_CTTINDEX is zero.
	413	Debug	Any message anchor pointer not is zero.
	414	Debug	Message buffer blocksize or subpool is zero.
	415	Debug	Any data set processing buffer address is zero.
	416	Debug	Output volume array address is not valid or passed.
ARCRMGDS	400	Debug	Invalid MDQE pointer.
	401	Debug	Invalid MVT pointer.

Table 3 (Page 25 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCRNVDS	400	Debug	The RDMP indicates an SMS data set is being processed, but the ACERO or SMSWA pointer is missing.
	401	Debug	The RDMP indicates a non-SMS data set is being processed, but there are no target MVT pointers.
	402	Debug	RTCB address missing.
	403	Debug	MCD address missing.
	405	Debug	MWE address missing.
	406	Debug	DECB address missing.
	407	Debug	The CDD address or the address of the first block of data is missing in the RDMP.
ARCRNVRC	401	Debug	Missing SMSWA address.
	402	Debug	The RDMP indicates a non-SMS data set is being processed, but there are no target MVT pointers.
	403	Debug	The address of the RTCB is missing from the RDMP.
	404	Debug	Missing MWE address.
	405	Debug	Missing MCD address.
ARCROPIN	nn	Debug	See "Message Table for BACKUP Functions" on page 329 for more information.
	410	Debug	Invalid parameter list address or ID.
	411	Debug	Invalid pointer to data set name, or MVT, or RCB, or DDNAME.
	412	Debug	USERID pointer or original data set name pointer is null when message ARC0612I will be issued.
	413	Debug	Input buffer pointer is null when input is from an SDSP data set or for tape volume.
	414	Debug	DECB pointer, termination ECB pointer, or tape data set volume list pointer in the RCB is null when input is from a tape.
	415	Debug	DCB or if input is from tape, the JFCB pointer in the MVT is null.
ARCRPDS	11	Snap	Unexpected end-of-file reached on migration or backup copy.
	12	Snap	I/O error reading migration or backup copy.
	13	Snap	I/O error writing recall or recovery copy.
	52	Snap	FREEMAIN failure.
ARCRRBLK	400	Debug	Invalid macro identifier.
	401	Debug	The function recall or recover was not specified.
	402	Debug	The pointer to the CDD was zero.
	403	Debug	The volume serial number that the data set migrated from was not passed.
	404	Debug	Invalid activity log type was specified.
	405	Debug	The data set name was not passed.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCRSDP	1	Abend	Error reading from an SDSP data set.
	8	Debug	GENCB failed while attempting to create an ACB for an SDSP data set.
	GET macro condition code	Abend	Error reading from an SDSP data set.
ARCRSDS	12	Snap	I/O error reading migration or backup copy.
	13	Snap	I/O error writing recall or recovery copy.
	52	Debug	FREEMAIN error.
ARCRSTR	*nnn*	Debug	If *nnn* is greater than or equal to 9*nn*, an abnormal end occurred when the return code was set to *nn*. See message ARC0003I for more information about the abnormal end. If the return code is greater than 0, see message ARC11*nn*I for the reason for the error.
ARCRUPFI	401	Debug	The target volume MVT address is missing.
	402	Debug	The RTCB address, or the MCD or MWE address in the RDMP is missing.
ARCRVDS	4	Debug	Parameter list error.
	12	Debug	Unable to get UCB address for volume.
	16	Debug	DFDSS restored data set but allocation of the data set failed.
	400	Debug	DFDSS restored data set but delete of the data set failed.
	nnnn	Debug	An error occurred attempting to scratch a VSAM data set from a primary volume after the recall for that data set failed because of an error updating the Format 1 DSCB. *nnnn* is the return code from the catalog delete request.
ARCSACLN	400	Debug	Invalid parameter list ID.
ARCSADVL	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid function code.
	402	Debug	Invalid volume definition pointer.
	403	Debug	Invalid storage group definition pointer.
	404	Debug	Invalid RCB pointer.
ARCSAINT	16	Debug	Installation exit ABEND.
	60	Debug	Error establishing ESTAE environment.
	400	Debug	Invalid parameter list.
ARCSALSZ	400	Debug	Incorrect parameter list ID.
	401	Debug	Missing Format 1 DSCB pointer.
	402	Debug	Missing size allocation of data set on source volume.
	403	Debug	Missing used size of data set on source volume.
	404	Debug	Invalid device type. No DVT entry could be found.

Table 3 (Page 27 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCSBELG	400	Debug	Invalid macro ID.
	401	Debug	Invalid BTCB index.
	402	Debug	Missing extract list entry pointer.
	403	Debug	Missing Format 1 DSCB pointer.
ARCSBVOL	400	Debug	Invalid BTCB index.
ARCSELDV	4	Debug	Error when allocating MVT record.
	6	Debug	Update of DVL record failed.
	8	Debug	Two allocation failures on dump volume.
	10	Debug	Device name is not supported.
	52	Debug	GETMAIN for MVT record failed.
	401	Debug	Invalid macro identification.
	403	Debug	A secondary request is indicated, but the IECOENTE data area is not provided.
	404	Debug	An RCB pointer is not provided.
	405	Debug	A secondary request is indicated, but a MVT pointer is not provided.
	406	Debug	A secondary request is indicated, but the IECOENTE data area pointer is not provided.
	407	Debug	An initial request is indicated, but a unit name is not provided.
	408	Debug	An initial request is indicated, but a dump class is not provided.
	409	Debug	An initial request is indicated, but the dump time stamp is not provided.
ARCSELMV	400	Debug	Invalid macro ID in ARCMTSP.
	401	Debug	MVT pointer not passed by EOV request.
	402	Debug	RCB pointer not passed.
	403	Debug	More than one caller was specified.
ARCSELTV	2	Debug	No TTX was found.
ARCSKINT	187	Log	A user exit abnormal end occurred.
ARCSMBMQ	400	Debug	Invalid MTCB index.
	401	Debug	MTCB index does not reference a valid MTCB.
ARCSMELG	400	Debug	Incorrect parameter list ID.
	401	Debug	Invalid MTCB index.
	402	Debug	Missing MDQE pointer.
	403	Debug	Missing extract list entry pointer.
	404	Debug	Missing management class pointer.

Table 3 (Page 28 of 45). Modules That Pass Error Codes to ARCERP			
Entry Point or Module	**Error Code**	**Process Level**	**Description of Problem**
ARCSMEV	400	Debug	Incorrect parameter list ID.
	401	Debug	Incorrect task ID.
	402	Debug	Missing MDQE pointer.
	403	Debug	Missing extract list entry pointer.
ARCSMINT	400	Debug	Invalid parameter list.
ARCSMPED	400	Debug	Incorrect parameter list ID.
	401	Debug	Incorrect task ID.
	402	Debug	Missing MDQE pointer.
	403	Debug	Missing extract list entry pointer.
ARCSMPMQ	400	Debug	Invalid MTCB index.
	400	Debug	MTCB index does not reference a valid MTCB.
ARCSMSAD	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid function code.
	402	Debug	Invalid RCB pointer.
ARCSMSVM	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid function code.
	402	Debug	Invalid RCB pointer.
ARCSMVFI	400	Debug	Incorrect parameter list ID.
	401	Debug	Invalid MTCB index.
	402	Debug	Missing MDQE pointer.
	403	Debug	Missing extract list entry pointer.
ARCSMVOL	400	Debug	Invalid MTCB index.
	401	Debug	MTCB index does not reference a valid MTCB.
ARCSM570	400	Debug	Invalid macro ID for ARCS570P.
	401	Debug	Return code to be put in ARC0570I is not greater than zero.
	402	Debug	None of the functions were set in S570_FUNC.
	403	Debug	Pointer to the activity log was not passed.
ARCSVCUT	400	Debug	Invalid macro ID.
	401	Debug	Missing pointer to the MVT of the source volume.
	402	Debug	Missing RCB pointer.
	403	Debug	Missing pointer to VTOC/VVDS parameter list.
	404	Debug	Missing pointer to area for VTOC copy data set name.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCTCLOS	4	Debug	Non-zero return code in register 15 after processing of the FREEPOOL macro.
	8	Debug	Non-zero return code in register 15 after processing of the CLOSE macro.
	12	Debug	Close abnormal end (X'14') occurred during the processing of the CLOSE macro.
	16	Debug	Indeterminate abnormal end occurred during the processing of the CLOSE macro.
	20	Debug	Abnormal end occurred during the processing of the CLOSE macro.
	24	Debug	An error occurred while reading or updating a MCV record for a migration volume or a backup volume.
	67	Debug	Non-zero return code was returned from ARCZNOTE to obtain a block id of the next block to be written.
	69	Debug	Non-zero return code returned from ARCZSYNC to flush the tape buffer and write data to tape.
	400	Debug	Invalid parameter list.
	401	Debug	Invalid DCB pointer.
	402	Debug	Invalid RCB pointer.
	403	Debug	Invalid MVT pointer.
	404	Debug	Invalid SYNCDEV request.
ARCTECDM	400	Debug	Invalid parameter list.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCTEOV	4	Debug	Error creating MCDS MCV record.
	8	Debug	Error deleting MCDS MCV record.
	12	Debug	Error reading MCDS MCV record.
	16	Debug	Error writing MCDS MCV record.
	20	Debug	Error creating BCDS MCT record.
	24	Debug	Error deleting BCDS MCT record.
	28	Debug	Error reading BCDS MCT record.
	32	Debug	Error writing BCDS MCT record.
	36	Debug	Error creating OCDS TTOC record.
	40	Debug	Error reading OCDS TTOC record.
	44	Debug	Error writing OCDS TTOC record.
	48	Debug	Error changing key of OCDS TTOC record.
	52	Debug	Error deleting BCDS BVR volume entry.
	56	Debug	Error creating BCDS BVR volume entry.
	60	Debug	Error updating BCDS BVR volume entry.
	64	Debug	The tape volume contains valid DFHSM data, but the file sequence number in the MCV or MVT record is non-zero.
	68	Debug	The tape volume is RACF protected, but does not appear in DFHSM's RACF tape volume set. Also, the tape volume is not in DFHSM's inventory of backup or migration volumes.
	72	Debug	The tape volume is RACF protected, but does not appear in DFHSM's RACF tape volume set. Also, the tape volume is in DFHSM's inventory of backup or migration volumes. The MCT or MCV records indicate that the tape volume is empty (the file sequence number is zero). The tape volume is being removed from DFHSM's inventory of backup or migration volumes.
	80	Debug	An error occurred when DFHSM attempted to add the tape volume to DFHSM's RACF tape volume set.
	84	Debug	An error occurred when DFHSM attempted to delete the tape volume from DFHSM's RACF tape volume set.
ARCTLEVI	400	Debug	The pointer to ARCMTSP in MTCB is invalid.
ARCTOPEN	35	Debug	Error opening input data set.
	36	Debug	Error opening output data set.
	54	Debug	User exit ABEND.
	60	Debug	Failure to establish ESTAE environment.
	61	Debug	Internal ADDVOL failed.
	67	Debug	Error in NOTE macro.
	68	Debug	Error in POINT macro.
	111	Debug	Error writing MCT or MVT record.
	125	Debug	Error reading MCT or MVT record.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCTPMSG	401	Debug	Invalid parameter list ID.
	402	Debug	Parameter list volume list pointer equals zero.
	403	Debug	Parameter list request flag is invalid.
	404	Debug	Parameter list requested more than 40 volume serials.
	405	Debug	Parameter list message flag is invalid.
ARCTVSC	4	Debug	The selected tape volume is unacceptable because it contains password-protected data sets and the PASSWORD tape security option is not in effect.
	8	Debug	The selected tape volume is unacceptable because it contains a non-password-protected data sets and the PASSWORD tape security option is in effect.
	12	Debug	The selected tape volume is unacceptable because it contains expiration-date-protected data sets and neither the EXPIRATION nor the EXPIRATIONINCLUDE tape security option is in effect.
	16	Debug	The selected tape volume is unacceptable because it contains data sets that are not expiration-date protected and either the EXPIRATION or the EXPIRATIONINCLUDE tape security option is in effect.
	20	Debug	The selected tape volume is unacceptable because it was RACF-protected when it was previously selected and neither the RACF nor the RACFINCLUDE tape security option is currently in effect.
	24	Debug	The selected tape volume is unacceptable because it is RACF-protected but does not appear in the RACF tape volume set. The DFHSM control data set volume record (MCV, MCT, or DVL) indicates the tape volume contains valid DFHSM data. The tape volume is being marked full to prevent DFHSM from using it.
	28	Debug	The selected tape volume is unacceptable because ARCTVSC encountered an error updating the BVR volume entry for the selected volume.
	32	Debug	The selected tape volume is unacceptable because ARCTVSC encountered an error reading or writing the volume record (MCT, MCV or DVL) for the selected volume.
	36	Debug	The selected tape volume is unacceptable because ARCTVSC encountered an error reading or writing the TTOC record for the selected volume.
	40	Debug	The work area pointed to by the first parameter to this module does not contain an MCT, MCV, or a DVL record describing the selected volume.
	44	Debug	The selected tape volume is unacceptable because an error occurred when DFHSM attempted to add the tape volume to its RACF tape volume set.

Table 3 (Page 32 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCTVSC Con't	48	Debug	The selected tape volume is unacceptable because it is RACF-protected but does not appear in the RACF tape volume set. The DFHSM control data set volume record (MCV, MCT, or DVL) indicates the tape volume is empty. The tape volume is being deleted to prevent DFHSM from using it.
	56	Debug	The partially full tape volume selected is unacceptable because it is not RACF-protected and the tape security RACF or RACFINCLUDE is in effect.
ARCULOCK	VERIFY macro return code	Fatal	VSAM verify failed on the migration control data set.
	VERIFY macro return code	Snap	VSAM verify failed on the backup control data set.
	VERIFY macro return code	Snap	VSAM verify failed on the off-line control data set.
	OBTAIN macro return code	Log	Format 4 DSCB obtain failed.
	999	Debug	First reserve of the MCDS or BCDS already reserved, or the OCDS is already reserved. Or, the first reserve of the BCDS or OCDS already reserved.
ARCUSDS	12	Snap	I/O error reading migration copy.
	13	Snap	I/O error writing primary copy.
ARCVCUPD	6	Debug	No work area supplied for read request.
ARCVSCHK	440	Debug	ARCRACFP parameter list does not contain RCFP in the parameter list identifier field, or the parameter list pointer is null.
	441	Debug	Data set name pointer is invalid, or the data set name is null or blank.
	442	Debug	Pointer to catalog master password is invalid.
	443	Debug	Pointer to catalog name is invalid.
	444	Debug	Pointer to a cataloged VOLSER name is invalid.
	445	Debug	Model name pointer or model name is invalid.
ARCVVSC	400	Debug	Bad parameter list ID in ARCVVSCP.
	401	Debug	Data set pointer not passed, or data set name is null or blank.
	402	Debug	Anchor block pointer not passed or is null when SDATA control blocks will be linked.
	403	Debug	Queue element chain pointer not passed or is null when SDATA control blocks will be linked.
	404	Debug	SMS work area not passed when SMS information is requested.
	405	Debug	Size fields calculated are inconsistent.
ARCWAIUM	34	Log	DFDSS DUMP or RESTORE error.

Table 3 (Page 33 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCWTO	15	Snap	Invalid length of log record.
	16	Snap	TPUT parameter list error.
	184	Debug	I/O error.
ARCXPIRE	400	Debug	Invalid (non-positive) pointer to RPL.
	401	Debug	Invalid (non-positive) pointer to array of BUI entries.
	402	Debug	Invalid (negative) count of BUI entries in the array.
ARCXSBV	400	Debug	Invalid pointer to construct-name area.
	401	Debug	Invalid pointer to the management class area.
ARCXWOUT	400	Debug	Invalid pointer to array of XBUI entries.
	401	Debug	Non-positive count of XBUI entries.
ARCYTDS	400	Debug	Block count of 0 for a single file data set.
ARCZACER	400	Debug	Invalid parameter list pointer.
	401	Debug	No data set name pointer provided, or the data set name points to an invalid data set.
	402	Debug	ACE_UNAUTH is on, but no user ID provided or an invalid user ID is pointed to.
	403	Debug	ACE_ENVIRON_SET is on, but no environment is provided.
	404	Debug	At least one of the volumes in the array is invalid, the array index of the invalid volume is provided in ACE_REAS.
	405	Debug	A pointer to the ARCSMSWA data area was not provided, this area is needed to return construct names.
ARCZAL2V	400	Debug	Invalid macro ID passed in the input parameter list.
	401	Debug	Volume serial to be added to the table was not passed.
	402	Debug	Invalid tape density passed.
	403	Debug	Invalid drain attribute.
ARCZBDST	8	Debug	Greater than 5 I/O errors or no successful read.
	10	Debug	DVL record positioning failed.
	52	Debug	GETMAIN error.
	400	Debug	Invalid function type.
	401	Debug	Invalid RCB pointer.
	402	Debug	Parameter inconsistent with the function requested.
	403	Debug	Invalid DVL pointer.
ARCZCAT	8	Debug	Catalog request failed.
	400	Debug	Invalid parameter list.

Table 3 (Page 34 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZCDQR	4	Debug	A reserve was not outstanding for the QNAME/RNAME/VOLSER combination.
	8	Debug	ARCCKVOL could not get a UCB address for the specified input volume.
	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid QNAME supplied.
	402	Debug	Invalid RNAME supplied.
	403	Debug	Neither a UCB address nor a volume serial number was supplied, or both fields are invalid.
ARCZCLNI	10	Debug	Error closing output tape.
	400	Debug	Invalid input parameter list ID.
	401	Debug	Invalid RCB pointer passed.
ARCZCOMP	400	Debug	Invalid parameter list.
ARCZCP31	400	Debug	Incorrect parameter list ID.
	401	Debug	Missing source address.
	402	Debug	Missing target address.
	403	Debug	Missing source length.
ARCZCSFT	400	Debug	Invalid macro ID was passed in ARCCSFTP.
	401	Debug	The task index to the task control block was not passed, or an invalid task index was passed.
	402	Debug	The number of subtasks was not passed, or an invalid number was passed.
	403	Debug	An invalid DFHSM function value was passed.
	404	Debug	An invalid index to the data set entries in the RCB was passed.
	405	Debug	The completion code (which is to be put in the work-to-do ECB of the subtask) was not passed, or an invalid completion code was passed.
ARCZDDSC	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid Format 1 pointer.
	402	Debug	Invalid primary quantity.
	404	Debug	Invalid pointer to IGDACERO.
	405	Debug	Invalid pointer to MVT entry.
	406	Debug	Request for non-SMS-managed data set.
ARCZDEL	*nn*	Debug	Error code in RPL returned by VSAM. If the error code indicates DELRC, then it is either a physical or logical error.
	1	ABEND	'Bad RPL' code returned by VSAM.
	4	Debug	'Record not found' code returned by VSAM.
	400	Debug	Invalid parameter list.

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Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZEND	400	Debug	Invalid function specified.
	401	Debug	EOD or EOV (or both) not specified.
ARCZESDP	400	Debug	Invalid parameter list.
	401	Debug	Invalid pointer to MVT entry.
	402	Debug	Invalid pointer to data set name.
	403	Debug	Invalid pointer to the RCB block.
	404	Debug	Invalid pointer to the SDSP DDNAME.
ARCZEST	60	Debug	ESTAE set up failed.
	400	Debug	Incorrect macro ID.
	401	Debug	Invalid retry routine address passed by caller.
	402	Debug	Invalid RCB pointer passed by caller.
	403	Debug	Invalid caller's save area pointer.
	404	Debug	Both SETUP and CANCEL ESTAE requests are specified.
	405	Debug	Neither SETUP nor CANCEL ESTAE requests are specified.
	406	Debug	Invalid address pointer of calling module.
ARCZGCAT	400	Debug	Invalid input parameter list ID.
	401	Debug	An invalid requesting function was passed.
	402	Debug	The pointer to the data set name was not passed, or the data set name was not passed.
	403	Debug	The pointer to the VOLSER was not passed or the VOLSER was not passed.
	404	Debug	Entry type not passed for a VSAM dataset.
	405	Debug	The pointer to a new name was not passed, or the new name was not passed.
	406	Debug	The pointer to a catalog was not passed, or the name of the catalog was not passed.
	407	Debug	The pointer to an alias name was not passed, or the name of the alias was not passed.
	409	Debug	The pointer to the area containing the VSAM cluster name was not passed.
	411	Debug	The pointer to the DDNAME of the volume was not passed, or the DDNAME of the volume was not passed.
ARCZGENM	400	Debug	Invalid invocation.
ARCZLOC	400	Debug	Invalid parameter list.

Table 3 (Page 36 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZLSRT	52	Debug	GETMAIN failure.
	66	Debug	A zero forward pointer was encountered.
	400	Debug	The parameter list must start with the characters LSRT.
	401	Debug	The pointers to the queue anchor, head element, and tail element must be non-zero.
	402	Debug	The list element length must be greater than 8.
	403	Debug	The first SORT key length must be greater than zero. **Note:** The following return codes can only be found for a SORT key greater than zero in length.
	404	Debug	SORT key offset must be equal to or greater than 8.
	405	Debug	The SORT key data type must be either 'S' for signed-fixed-binary or C for character.
	406	Debug	The SORT key order must be either A for ascending or D for descending.
	407	Debug	The SORT key length for the signed-fixed-binary data type must be 0, 2, or 4.
	408	Debug	The SORT key length for the character data type must be in the range of 1-256 inclusive.
	409	Debug	The SORT key offset and SORT key length must have a sum that is no greater than the list element length.
ARCZMDST	400	Debug	Invalid function type.
	401	Debug	Parameter entered is inconsistent with the function requested.
	402	Debug	Invalid DVL pointer.
	403	Debug	Invalid parameter list ID.
ARCZMVT	400	Debug	Invalid macro ID for ARCMVTP.
	401	Debug	Pointer to VOLSER not passed or invalid VOLSER.
	402	Debug	Pointer not passed for area to build MVT entry.
	403	Debug	Device type not passed for a direct build request.
	404	Debug	Device type not passed, but the caller indicated it was.
	405	Debug	More than one volume type (Primary, ML1, ML2, or Backup) was indicated.
	406	Debug	Invalid pointer to the RCB.
ARCZNOTE	400	Debug	Invalid macro ID in passed parameter list.
	401	Debug	Invalid data set DCB pointer in passed parameter list.
ARCZOBT	8	Debug	DSCB read failed.
	400	Debug	Invalid parameter list.

Table 3 (Page 37 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZPART	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid data set name.
	402	Debug	Invalid Format 1 DSCB pointer.
	403	Debug	Invalid MVT pointer.
ARCZPONT	400	Debug	Invalid macro ID in parameter list.
	401	Debug	Invalid data set DCB pointer in parameter list.
	403	Debug	Invalid block ID for point macro specified.
ARCZPORD	4	Debug	Error from ARCZPOS. Reason codes are return codes from ARCZPOS.
	8	Debug	Error from ARCZRNXT. Reason codes are return codes from ARCZRNXT.
	400	Debug	Invalid name.
	401	Debug	Work area pointer equals zero.
	402	Debug	Invalid record type or record type is blank.
	404	Debug	RPL pointer equals zero.
	405	Debug	RCB pointer equals zero.
ARCZPOS	16	Debug	Physical I/O error.
	22	Debug	No OCDS is defined.
	24	Debug	No BCDS is defined.
	400	Debug	Parameter list not initialized properly.
ARCZQBLD	400	Debug	Wrong parameter list passed.
	401	Debug	Pointer to the block chain anchor is invalid.
	402	Debug	Pointer to the queue element chain anchor is invalid.
	403	Debug	Pointer to the queue element to be put on the chain is invalid.
	404	Debug	Length of the queue element is invalid.
	406	Debug	Subpool value is invalid.
	407	Debug	Storage size is invalid.
ARCZQMSG	8	Debug	Error building message chain, end process, no error message necessary.
	400	Debug	Invalid macro ID for ARCZQMSP.
	401	Debug	None of the functions were specified.
	402	Debug	Any combination but write/purge was specified.
	403	Debug	On a write function the message pointer or the message length is zero.
	404	Debug	The message queue anchor pointer is zero.
	405	Debug	The log message pointer is zero.

Table 3 (Page 38 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZQUE	66	Snap	A possible broken queue is encountered, see Reason Codes.
	400	Debug	Parameter list must start with the characters 'QUEP'.
	401	Debug	Pointer to the queue anchor pointer must not be zero.
	403	Debug	Pointer to the new element must not be zero.
	404	Debug	The QUE_OLDPTR for an empty queue must not be specified.
	405	Debug	There are too many indicators for placing new elements.
	406	Debug	If QNAME or RNAME is specified, both must be specified.
	407	Debug	QNAME or RNAME can only be specified when the request is to add the element to the tail or head of the queue.
	408	Debug	SCOPE was specified as other than the valid values of 'L' for step, 'S' for system, or 'C' for systems.
ARCZQVOL	400	Debug	Invalid data set name passed.
	401	Debug	Invalid volume serial passed.
ARCZREAD	VSAM Return Code	Debug	VSAM read failure.
	1	Abend	Invalid VSAM request parameter list.
	22	Debug	OCDS referenced but not defined.
	24	Debug	BCDS referenced but not defined.
	400	Debug	Invalid parameter list.
	410	Debug	Invalid CDS key.
ARCZRLSE	4	Debug	VSAM error.
	24	Snap	ACB address in the RPL did not match any CDS ACB in the MCVT.
	400	Debug	Parameter list is not initialized correctly.
ARCZRNXT	1	Abend	Invalid VSAM request parameter list.
	20	Debug	No VSAM RPL passed.
	22	Debug	No OCDS defined.
	24	Debug	No BCDS defined.
	44	Debug	Work area not large enough from VSAM.
	400	Debug	Invalid parameter list.
ARCZRPLS	400	Debug	Invalid parameter list.
	401	Debug	Invalid function type.
	402	Debug	Invalid RCB pointer.
	403	Debug	Invalid RPL pointer.

Table 3 (Page 39 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZSACS	400	Debug	Invalid parameter list ID.
	401	Debug	An ACERO address of 0 was passed.
	402	Debug	Invalid pointer to SMSWA.
ARCZSALT	400	Debug	Error in parameter list value of SALT_ID, must be SALT.
	401	Debug	Error in parameter list value of SALT_FUNCTION, invalid function code.
	402	Debug	Error in parameter list value of SALT_DSN_PTR, data set name must be provided.
	403	Debug	Error in parameter list value of SALT_VOLLIST_PTR, address of volume serial must be provided for an ALTER BCS request.
	404	Debug	Error in parameter list value of SALT_DEVTYP_PTR, address of volume device type must be provided for an ALTER BCS request.
	405	Debug	Error in parameter list value of SALT_NEW_DSN_PTR, data set name must be provided for an ALTER NEWNAME request.
ARCZSAQM	04	Debug	Remove requested, but a corresponding entry was not found.
	08	Debug	The SAQ is full, and this task does not already have an entry in the SAQ.
	400	Debug	Incorrect parameter list ID.
	401	Debug	Missing RCB address.
	402	Debug	Missing data set name address.
	403	Debug	Missing device type.
	404	Debug	Missing or invalid volume serial number.
	405	Debug	Invalid function request.
	406	Debug	Invalid RCB index.
	407	Debug	Invalid storage class pointer, name, or length.
ARCZSCAN	1	Debug	SCAN error.
	3	Debug	Command syntax error.
	400	Debug	Invalid parameter list.
	401	Debug	Zero pointer for the command text buffer.
	402	Debug	The request came from a user address space, but the pointer to the CPPL was not passed.
ARCZSCLN	400	Debug	Invalid invocation.
ARCZSCMC	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid management class definition pointer.

Table 3 (Page 40 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZSCON	400	Debug	Invalid parameter list pointer.
	401	Debug	No data set name pointer is provided, or the data set name points to an invalid data set name.
	402	Debug	CON_UNAUTH is on, but no user ID pointer is provided or an invalid user ID is pointed to.
	403	Debug	CON_ENVIRON_SET is on, but no environment is provided.
	404	Debug	At least one of the volumes in the array is invalid. The array index of the invalid volume is provided in CON_REAS.
	405	Debug	A pointer to the ARCSMSWA data area was not provided. This area is needed to return construct names.
	406	Debug	CON_UPDATE is set, but there is no pointer to the CDS record.
	407	Debug	CON_RECTYPE is set to an invalid type for a CDS record, CON_MCC and CON_MCD are valid values.
ARCZSCR	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid data set name pointer.
	402	Debug	Invalid volume pointer.
	403	Debug	Invalid MVT pointer.
	404	Debug	Invalid RCB pointer for update of Migration Level 1 volume free space.
	405	Debug	No erase status specified for a backup version or migration copy.
	406	Debug	Invalid last reference date.
	407	Debug	Invalid combination of VTOC, VVDS, BCS.
	409	Debug	No data RBA pointer specified for case of VTOC, VVDS, BCS, VSAM.
	410	Debug	Index RBA pointer specified without a data RBA pointer.

Table 3 (Page 41 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZSDEF	400	Debug	Error in parameter list value of SDEF_ID, must be DEFP.
	401	Debug	Error in parameter list value of SDEF_FUNCTION, invalid function code.
	402	Debug	Error in parameter list value of SDEF_DSN_PTR, data set name must be provided.
	403	Debug	Error in parameter list value of SDEF_VOLLIST_PTR, address of volume serial must be provided.
	404	Debug	Error in parameter list value of SDEF_DEVTYP_PTR, address of volume device type must be provided.
	405	Debug	Error in parameter list value of SDEF_SMSWA_PTR, address of SMS work area where construct names are located.
	406	Debug	Error in parameter list value of SDEF_UCBADDR_PTR, address of UCB address of volume where data set resides.
	407	Debug	Error in parameter list value of SDEF_LASTBKUP_, address of last backup date of data set.
ARCZSDEL	400	Debug	Error in parameter list value of SDEL_ID, must be SDEL.
	401	Debug	Error in parameter list value of SDEL_FUNCTION, invalid function code.
	402	Debug	Error in parameter list value of SDEL_DSN_PTR, data set name must be provided.
	403	Debug	Error in parameter list value of SDEL_DATA_RBA_PTR. Address of data component RBA must be provided.
	404	Debug	Error in parameter list value of SDEL_INDEX_RBA_PTR. Address of index component RBA must be provided if the parameter list indicates an index was provided.
	405	Debug	Error in parameter list value of SDEL_DDNAME_PTR. Address of DD NAME must be provided.
	406	Debug	Error in parameter list value of SDEL_DATASET_TYPE. Data set type must be a valid type.
ARCZSDMC	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid default MC definition pointer.
ARCZSFVV	400	Debug	Invalid parameter list ID.
ARCZSLKT	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid function.
	402	Debug	Invalid lock token pointer.
ARCZSLOC	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid data set name pointer.
	402	Debug	Invalid SMS work area pointer.
	403	Debug	Invalid volume list pointer.
ARCZSMCD	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid management class pointer.
	402	Debug	Invalid default definition pointer.

Table 3 (Page 42 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZSMSG	400	Debug	Invalid parameter list ID.
ARCZSMVT	400	Debug	The macro ID is invalid in ARCMVTP.
	401	Debug	The volume type specified in ARCMVTP is neither primary nor unknown.
ARCZSSCD	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid storage class length.
	402	Debug	Invalid storage class name.
ARCZSSGD	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid storage group pointer.
ARCZSSI	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid SSOB extension pointer.
	402	Debug	Invalid function code.
ARCZSVCC	400	Debug	Incorrect parameter list ID.
	401	Debug	Invalid function requested.
	402	Debug	Invalid base cluster name pointer or base cluster name.
	403	Debug	Invalid MCO record pointer, or MCO record.
	404	Debug	No device type or SMS work area defined.
	405	Debug	Both MCO and cluster name provided.
ARCZSVLD	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid VOLSER or SSSA pointer.
ARCZSYNC	400	Debug	Invalid macro ID in passed parameter list.
	401	Debug	Invalid data set DCB pointer in passed parameter list.
ARCZS1EL	400	Debug	Incorrect parameter list ID.
	401	Debug	Missing source volume UCB pointer or missing pointer to the FAST VTOC/VVDS parameter list.
	402	Debug	Missing address to the storage area in which to return the extract list entry.
	403	Debug	Missing address to the storage area in which the associated Format 1 DSCB is returned.
	404	Debug	Subsequent entry indicated, but missing the extract list pointer to the next entry to return.

Table 3 (Page 43 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZTMVT	400	Debug	Invalid macro ID for ARCTMVTP.
	401	Debug	The caller did not request a read CDS function, and the device type was not passed.
	402	Debug	The caller requested a read CDS function, but the VOLSER was not passed.
	403	Debug	The caller requested an MVT entry built, but the pointer to the MVT was not passed. Or the pointer to the CDS work area, which is needed if the read CDS function is not requested, was not passed.
	404	Debug	The caller requested tape volumes to be allocated, but the pointer to the MVT or the pointer to the tape volume list was not passed.
	405	Debug	The caller requested tape volumes to be allocated, but the pointer to the RCB or the index to the RCB was not passed.
	406	Debug	The caller requested messages ARC0313A and ARC0314A, or messages ARC0313A and ARC0366A to be issued, but the pointer to the tape volume list was not passed, or the caller type was not specified.
	407	Debug	The caller requested a read CDS function or allocate tape function, but the log type was not passed.
	408	Debug	The caller requested a read CDS function or build an MVT entry function or build an MVT entry function, but the volume type was not passed.
	409	Debug	The device type passed by the caller or obtained by the read CDS record indicates that the device type is not tape.
	410	Debug	Invalid DDNAME passed, name must be blanks or an 8-character name.
	411	Debug	The caller requested a direct build of the MVT entry, but the unit name or the volume serial was not passed.
	412	Debug	The caller requested a direct build of the MVT entry and the volume type was dump, but the dump class was not passed.
	413	Debug	The tape data set name to be associated with the dump tape allocation was not passed.
ARCZTODC	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid time of day (TOD) clock value.
ARCZUPDCR	2	Debug	DCR read error.
	4	Debug	DCR write error.
	400	Debug	Invalid parameter list.
ARCZUPDT	VSAM Return Code	Debug	VSAM update failure.
	1	ABEND	Invalid VSAM request parameter list.
	400	Debug	Invalid parameter list.
	410	Debug	Invalid CDS key.

Table 3 (Page 44 of 45). Modules That Pass Error Codes to ARCERP			
Entry Point or Module	**Error Code**	**Process Level**	**Description of Problem**
ARCZVALB	16	Fatal	I/O error in CDS.
	400	Debug	Invalid parameter list.
ARCZVCNM	400	Debug	The pointer to the 44 byte generated name is not provided.
	401	Debug	Invalid request.
	402	Debug	Invalid time.
	403	Debug	Invalid date.
	404	Debug	Invalid backup prefix.
	405	Debug	Invalid volume serial number.
	406	Debug	Invalid parameter list macro ID.
	407	Debug	Invalid dump class.
ARCZVCRW	400	Debug	Invalid function type.
	401	Debug	Invalid caller specified.
	402	Debug	Invalid DCB pointer.
	404	Debug	Invalid DSCB.
ARCZVCUT	8	Debug	Module processing may have completed successfully, see Reason Codes.
	12	Debug	Module processing did not complete, see Reason Codes.
	400	Debug	Invalid function type.
	401	Debug	Invalid caller.
	402	Debug	Invalid RCB pointer.
	403	Debug	Invalid DCB pointer.
	405	Debug	Invalid data set name pointer.
	406	Debug	Invalid MVT pointer.
	407	Debug	Invalid RCB index for the VTOC copy data set.
	408	Debug	Invalid RCB index for the VTOC.
	408	Debug	Invalid NOMSG bit setting or no MVT pointer.
ARCZVDSC	400	Debug	Invalid parameter list ID.
	401	Debug	Invalid pointer to DADSM parameter list.
	402	Debug	An ACERO address of 0 was passed.
ARCZVDSD	400	Debug	Invalid pointer to DADSM parameter list.
ARCZVLAT	400	Debug	Invalid parameter list ID, MVT pointer, MCV pointer, or MCV read area pointer.

Table 3 (Page 45 of 45). Modules That Pass Error Codes to ARCERP

Entry Point or Module	Error Code	Process Level	Description of Problem
ARCZVTOC	60	Debug	Unable to establish ESTAE environment.
	400	Debug	Invalid parameter list.
	401	Debug	TRKLOC error.
	402	Debug	No RCB pointer passed.
	404	Debug	No MVT pointer passed.
	405	Debug	No RCB index passed.
	501	Debug	I/O error reading VTOC.
	554	Debug	Open of VTOC failed.
	555	Debug	Close of VTOC failed.
	557	Debug	Unable to read JFCB.
	807	Debug	GETBUF or TRKCALC macro failure.
	999	Debug	Error reported to ARCGMAIN or other service module.
ARCZWRIT	1	ABEND	Invalid VSAM request parameter list.
	VSAM Return Code	Debug	VSAM write failure.
	400	Debug	Invalid parameter list.
	410	Debug	Invalid CDS key.

ABEND Codes

DFHSM generates user abnormal ends in two cases:

- 999 (X'3E7'): Caused when the DFHSM STOP command is issued with the DUMP parameter.
- 1000 (X'3E8') + return code: Caused when the DFHSM internal return code was flagged for special processing that included taking an abnormal end dump. See "Return Code Processing" on page 277 for further explanation.

System abnormal ends can also occur, but all modules in the DFHSM address space are ESTAI-protected. Control can be given to the task-related ESTAI module from any DFHSM module in the event of a system abnormal end. The task-related ESTAI module performs cleanup functions and then allows a subtask abnormal end process to continue. The main DFHSM task reestablishes subtasks that have abnormally ended.

Message Table for RECALL/RECOVERY Functions

The following lists the 11*nn* error messages and their meaning:

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 date 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, or migration copy name.
16	Data set in use.
17	Error in reading the JFCB.
19	Error in updating the Format 1 DSCB.
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 user exit.
26	Undirected recall after prior recall user 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.
39	Authorization failure.
40	RECOVERY function is disabled.
41	Error during cleanup of VSAM during recall.
42	'A' entries for the VSAM sphere were not uncataloged.
43	Error retrieving catalog information during RECOVER.
45	The data set is migrated or the target volume is a migrated volume.
46	OBTAIN failed for Format 1 DSCB.
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 DFHSM process is using this data set.
52	There is a GETMAIN or FREEMAIN error.
53	MSS is inactive.
54	Error in installation exit.
55	Error during AMS 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 DFDSS 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 recovery with Apply Incremental option.
68 Error in positioning to input data set.
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 requested function was held.
75 RECALL of a data set has been 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.
92 DFHSM 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.

Message Table for MIGRATION Functions

The following lists the 12*nn* error messages and their meaning:

Retcode	Meaning
2	Catalog locate error during migration.
3	Obtain error in reading Format 1 DSCB.
5	No migration volume available.
6	The data set is already migrated, or duplicate dataset name in MCDS.
7	OBTAIN error on Format 3 DSCB.
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 recataloging 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 the 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.
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 DFHSM function, migration rejected.
52	GETMAIN or FREEMAIN error, migration terminated.
54	An abnormal ending in the tape data set user exist.
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 host.
64 Failure in closing the input data set.
65 Error closing output data set.
66 Specified L0 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 DFHSM shutdown occurred while waiting for a tape mount.
92 Termination of DFHSM Migration wait request.
94 Unable to open VTOC.
95 Tape volume could not be mounted.
96 Error in reading JFCB to update VTOC.
97 An internal DFHSM error during allocation of a source data set.
99 Unsupported data set organization.

Message Table for BACKUP Functions

The following lists the 13*nn* error messages and their meaning:

Retcode	Meaning
2	A catalog locate error.
3	OBTAIN error reading Format 1 DSCB.
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 Format 3.
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	The tape backup volume is not available.
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 during backup.
28	No alias name in the master catalog for a data set high level qualifier, and the data set is not cataloged in the master catalog.
30	Data set not cataloged, and the volume was not specified.
32	Request for an uncataloged data set failed. Only a cataloged data set was found on the specified volume.
33	Cannot backup an ML2 data set.
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 or RACF-INCLUDE.
39	Attempt to create BACKUP profile for a RACF indicated data set failed, or RACF check failed to obtain an erase status of a backup version.
40	Backup or DUMP function is disabled.
41	Wrong DSCB found when module attempted to turn off the data-set-update bit and reset the date last referenced.
42	Error in reading the job file control block.
43	Error in updating Format 1 DSCB.
44	Tape volume cannot be added for BACKUP ... Volume already contains valid DFHSM data.
45	Error deleting a DFHSM 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 DFHSM 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 output 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.

92 DFHSM is shutting down.

97 An internal DFHSM allocation error.

99 Unsupported data set organization.

Message Table for Return Code in ARC0570I Error Messages

The following lists the Return Codes set in ARC570I error message:

Retcode	Meaning
1	SMS is not installed.
2	SMS lock token not retrieved.
3	VTOC/VVDS load module (IGDCSP00) was not loaded into DFHSM address space.
4	SMS is not active in the configuration that DFHSM is running in.
5	Error reading the Format 4 DSCB 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 Format 4 DSCB.
11	SMS volume definition and Format 4 DSCB 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 DFHSM.
14	Error retrieving data set list from VTOC/VVDS 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 non-zero 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 DFDSS 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.

Message Table for ABARS Functions

The following lists the *6nnn* error messages and their meaning:

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	DFDSS not at proper level to allow ABARS processing to continue.

Appendix C. DFHSM Maintenance Commands

The four DFHSM maintenance commands presented in this section are for the purpose of maintenance and diagnosis only. See *Data Facility Hierarchical Storage Manager: System Programmer's Command Reference* for other DFHSM commands.

DFHSM maintenance commands are submitted primarily by a DFHSM-authorized system programmer who uses the HSENDCMD command to issue these commands from a TSO terminal. They can also be submitted by a DFHSM-authorized user from a TSO terminal or by a system operator from the system console.

Using DFHSM Commands

Before using DFHSM maintenance commands, their parameters, and comments, you should read and understand the following use and notational conventions for DFHSM commands.

A command consists of a command name usually followed by one or more operands. The maximum size of a DFHSM command and its operands is 1024 bytes. All operands described in this section are called parameters. Parameters provide the specific information required by the command to perform the requested function.

All TSO conventions apply to the syntax of DFHSM commands.

DFHSM commands use positional and keyword parameters.

Positional Parameters: Positional parameters follow the command name in a prescribed sequence. In the command explanations used in this section, the positional parameters are shown in *lowercase italic* characters. There are two types of positional parameters: required and optional. You must specify required positional parameters immediately after the command name. If you use optional positional parameters, you must specify them immediately after any required positional parameters. If the command does not have any required positional parameters. you must specify any optional positional parameters immediately after the command name. If you specify a list of items to replace a positional parameter, you must put parentheses around the list. Otherwise, you do not have to use the parentheses.

Keyword Parameters: Keyword parameters are specific words or symbols that have a meaning to DFHSM. They follow positional parameters and can occur in any order. In the command explanations used in this book, the keyword parameters are shown in **UPPERCASE BOLDFACE** characters.

You can specify values or variables with some keyword parameters by putting them in parentheses after the keyword parameter. An example of a keyword with a variable follows:

ASSIGNEDBIT(OFF)

Some keyword parameters are separated by a vertical bar, for example, ALWAYS | NEVER | ONCE. This bar shows keywords that conflict with one another.

Notes:

1. If you enter conflicting parameters in a single command, the last parameter entered in the command overrides all previously entered conflicting parameters and is the only parameter of those in conflict that is processed. All the previous conflicting parameters within the command are ignored.
2. If you enter the same parameter more than once in a single command, only the last of the repeated parameters entered in the command is processed.

If you issue commands from the system console, you must enter the DFHSM commands in the following manner:

F DFHSM,*command*

You should replace the **DFHSM** abbreviation with the procedure name in the startup procedure in SYS1.PROCLIB.

Abbreviating Commands and Parameters

The TSO abbreviation convention applies to all DFHSM maintenance command names and parameters. The TSO abbreviation convention requires that you specify as much of the command name or parameter as necessary to distinguish it from the other command names or parameters.

Some DFHSM keyword parameters allow unique abbreviations. All unique abbreviations are listed in a table following the command syntax and in the explanation of each keyword parameter.

Delimiters

When you issue a DFHSM command, you must separate the command name from the first parameter by using one or more blanks. You must separate succeeding parameters by using one or more blanks or a comma. Do not use a semicolon as a delimiter because any characters that follow a semicolon are ignored.

Line Continuations

During batch processing, when you continue a command to more than one line, use a plus or minus sign as the last character of all but the last line of the command. If a comment is included on the same line, the plus or minus sign follows the comment. Refer to "Comments" on page 335 for information about comments. When you use a plus sign, leading delimiters are removed from the continued line.

For commands entered from a TSO terminal, do not use a line continuation character. All command examples in this book are commands entered for batch processing.

Data Set Naming Conventions

When you specify a data set name with a DFHSM command, the data set name must conform to TSO data set naming conventions. With DFHSM, you can use the characters $, @, and # as the first character in the data set name. You cannot use the characters hyphen (-) or ampersand-zero (12-0 punch) anywhere in the data set name.

Comments

You can add comments to DFHSM commands anywhere that a blank might appear. To set off your comments, enter them between the symbols /* and */. You can continue a comment to the next line by using a line continuation character (+ or -) at the end of the line following the */ of the comment.

The following is an example of using comments:

```
COMMAND1 PARAMETER1   /* comment */ -
         PARAMETER2   /* comment */ -
                      /* more comments */ -
         PARAMETER3   /* comment */
COMMAND2 PARAMETER1   -
         PARAMETER2   /* comment */
```

Notational Conventions

The following symbols define the format of DFHSM commands.

- Brackets ([ ]) specify an optional field or parameter.
- A vertical bar (|) separates alternative choices. Unless otherwise stated, you can select only one alternative. Do not use the vertical bar when you submit the command.
- An ellipsis (...) specifies that multiple entries of the type immediately preceding the ellipsis are allowed. For example, *volser* ... means that you can specify one or more volume serial numbers. Do not use the ellipsis when you submit the command.
- You must enter parentheses, commas, and slashes as they are shown in the book unless the parameter is a positional parameter. If you specify a positional parameter, you do not have to use parentheses if you specify only one item when DFHSM allows you to specify a list of items.
- COURIER type specifies job control language statements and DFHSM statements in examples, messages, and reports.
- **BOLDFACE** type specifies characters that must be entered exactly as shown.
- *Italic* type specifies fields you are to supply to DFHSM.
- You can code numeric parameters three different ways, unless you are specifically restricted in the parameter explanation. The three ways you can code numeric parameters are:
  - Decimal (EBCDIC)
  - Hexadecimal (X'n')
  - Binary (B'n').

Submitting DFHSM Commands

A DFHSM user with access to the system can submit maintenance commands from the system console. If you want to submit DFHSM maintenance commands from a TSO terminal, you must be a DFHSM-authorized user. To issue these commands from a TSO terminal, the DFHSM-authorized user must preface each command with the HSENDCMD command. For example, if you want to submit the TRAP ALL command from a TSO terminal, you specify the following:

```
HSENDCMD TRAP ALL
```

In systems with the Resource Access Control Facility (RACF), you can submit the maintenance commands for processing in batch mode if you are a DFHSM-authorized user. To do this, your TSO identification must be specified on the JOB statement of the MVS/SP JCL (USER=*userid*). RACF scans the *userid* field and builds the control blocks DFHSM uses to confirm the authorization of the person who submitted the command.

If the batch submittal fails because the user ID is missing or invalid, DFHSM cannot issue a message to your terminal but notes the exception in the DFHSM log.

In a system without RACF, you can submit maintenance commands for batch processing by defining the HSENDCMD (HSEND) to the Terminal Monitor Program (TMP) as authorized commands and by providing a STEPLIB or JOBLIB card to an Authorized Program Facility (APF) authorized version of module ARCMCMD.

Instead of specifying USER=*userid* on the JOB card, add the HSENDCMD command (HSEND) to the authorized commands table in TMP so that this command can be invoked and submitted to DFHSM as an acceptable authorized command.

CSECT IKJEFTE2 within the IKJEFT02 load module must be modified to indicate that HSENDCMD alias HSEND is an authorized command and should be attached with APF authorization. This modification should be done to the first entry in IKJEFTE2 that contains eight blanks. One blank entry must remain in the authorized command table to indicate the end of the table.

Note: In the latest version of TSO/E, the authorized command table has been moved to a CSECT in a separate load module named IKJTABLS.

The DFHSM module ARCMCMD, the HSENDCMD command processor, must be link edited into an APF authorized library as an authorized program. The job submitting the HSENDCMD (HSEND) command must use a STEPLIB or JOBLIB card to this library. Access to this APF library must be restricted to prevent unauthorized use of the HSEND command. It is the responsibility of the system programmer to ensure that any DFHSM maintenance to module ARCMCMD is also applied to the authorized copy of ARCMCMD. All concatenated STEPLIBs must be authorized. The APF library name must appear either in the system LINKLIST or in the appropriate APF*xx* of the SYS1.PARMLIB. Refer to *MVS/ESA System Programming Library: Initialization and Tuning* for additional information about the APF*xx*. The following is a sample of job steps to link edit the ARCMCMD module to create an authorized copy of ARCMCMD.

```
//LINKED  EXEC PGM=IEWL,PARM='LIST,LET,NCAL,XREF,RENT,REUS'
//SYSPRINT DD  SYSOUT=A
//SYSUT1   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSLMOD  DD  DISP=SHR,DSN=DFHSM.AUTHLIB
//IN       DD  DISP=SHR,DSN=SYS1.CMDLIB
//SYSLIN   DD  *
 INCLUDE IN(HSENDCMD)
 ALIAS HSEND
 SETCODE AC(1)
 ENTRY ARCMCMD
 NAME HSENDCMD(R)
/*
```

The successful execution of this link edit results in message IEW0461 for ARCWTU2 and ARCCVT.

There is another method that can be used to allow DFHSM-authorized commands to be processed from a batch TMP on a system without RACF installed. To use this option the user must ensure that the TSO user ID is stored in the protected step control block (PSCB). The user must use the following command:

```
SETSYS ACCEPTPSCBUSERID
```

DFHSM retrieves the user ID for the TSO batch requests from the PSCB and associates it with the user ID with the request. The user ID must have been defined previously as a DFHSM-authorized user using the following command:

```
AUTH userid DATABASEAUTHORITY(USER)
```

This command identifies a DFHSM-authorized user who can issue DFHSM-authorized commands. The AUTH command is submitted as part of the PARMLIB member being processed during DFHSM startup.

Refer to *TSO/E Version 2 Customization*, SC28-1872 for additional information about adding authorized commands to the TSO/E environment.

DISPLAY: Displaying DFHSM Storage Locations

The DISPLAY command displays locations within the DFHSM address space.

When you issue the DISPLAY command, you can display a storage location by specifying an absolute address, a relative address, or a qualified address. You can also specify the number of bytes you want displayed.

DFHSM lists all DISPLAY commands and their output at the terminal where you issue the command. You can optionally send the results to an output data set.

Syntax of the DISPLAY Command

Command	Required Parameters	Optional Parameters
DISPLAY	(*address* [*:address*] ...)	**LENGTHS(***bytes* ...**)** **LOGONLY** **OUTDATASET(***dsname***)**

Note: If you specify a list of addresses, you must enclose it in parentheses.

Required Parameters of the DISPLAY Command

Address: Specifying the Location to Display

Explanation: *address* [*:address*] is a required positional parameter specifying which locations in the DFHSM address space should be displayed. You can specify one address, an address range, a list of separate addresses, or a list of address ranges.

For *address*, substitute the absolute address, qualified address, or relative address of the location you want to display. You specify these addresses in the following manner:

- An absolute address is one to six hexadecimal digits followed by a period (*hhhhhh.*).
- A qualified address is a DFHSM load module name, followed sequentially by a period, a CSECT name, a period, a plus sign and one to six hexadecimal digits (*loadmodulename.csectname.+hhhhhh*). Because ARCCTL is the only load module that can be displayed, the load name of ARCCTL is always the load module name if you supply only the CSECT name and offset (*.csectname.+hhhhhh*). Note that the leading period is still required.
- A relative address is entered as a plus sign followed by one to six hexadecimal digits (*+hhhhhh*). You must specify a qualified address identifying the CSECT in a DISPLAY or PATCH command before you specify a relative address because DFHSM considers the relative address to be the offset in the CSECT you or any other user last specified.

You can specify a range of addresses by specifying the optional second address [*:address*]. You must specify the colon (:) preceding the second *address* to show that

you want to display a range of addresses. If you want to specify a list of separate addresses, do not use colons.

Abbreviations: None.

Defaults: None.

Notes:

1. Because *address* is a required positional parameter, you must specify it immediately after the command name.
2. You cannot substitute indirect addressing, registers, expressions, and variable names for *address*.
3. You cannot display addresses in DFHSM secondary address space.

Optional Parameters of the DISPLAY Command

LENGTHS: Specifying How Much Data to Display

Explanation: **LENGTHS(***bytes* ...**)** is an optional parameter specifying the number of bytes to be displayed. For *bytes*, substitute a decimal number from 1 to 999999 for the length of the data you want to display.

You can specify a list of bytes that match the specified addresses. For example, the first length you specify applies to the first address, the second length applies to the second address, and so forth. If you specify fewer lengths than addresses, the last length you specify applies to the remaining addresses. The LENGTH parameter does not specify how much data to display for an address range. If you specify a length with an address range, DFHSM pairs the length and address range, but it only uses the address range to determine how much to display.

For example, if you specify the addresses as:

```
8EC.,.ARCZWRIT.+4,+8:+12,.ARCBACK.+0
```

where:

8EC. is a separate absolute address

.ARCZWRIT.+4 is a separate qualified address

+8:+12 is the range of relative addresses in CSECT ARCZWRIT

.ARCBACK.+0 is another separate qualified address

and you specify the lengths as:

```
LEN(2,4,5,3)
```

then:

- 2 bytes of data, starting at absolute address 8EC, are displayed.
- 4 bytes of data, starting at qualified address .ARCZWRIT.+4, are displayed.

- 5, which corresponds to the address range +8:+12 of the relative addresses in CSECT ARCZWRIT, could be any number. This number just aligns the remaining length values with the address you specified.
- 3 bytes of data, starting at qualified address .ARCBACK.+0, are displayed.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to LENGTHS. There are no additional abbreviations.

Defaults: If you do not specify LENGTHS, the default is four bytes.

LOGONLY: Specifying That Data Not Go to the Terminal

Explanation: **LOGONLY** is an optional parameter specifying that the output from the DISPLAY command not go to the terminal of the issuer of the DISPLAY command.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to LOGONLY. There are no additional abbreviations.

Defaults: If you do not specify LOGONLY, the output from the DISPLAY command goes to the terminal where you issued the command.

OUTDATASET: Specifying the Output Location for the DISPLAY Results

Explanation: **OUTDATASET(*dsname*)** is an optional parameter specifying the name of the data set where DFHSM is to write the output data.

For *dsname*, substitute the fully qualified name of the data set that is to receive the DISPLAY results. If the data set does not exist, DFHSM dynamically allocates and catalogs an output data set with the following characteristics:

- Uses the data set name specified (dsname).
- Record format of fixed-block-architecture (FBA).
- Logical record length of 121.
- The data set is system reblockable if DFHSM is executing with DFP 3.1.0 or a subsequent release; otherwise, block size is 1210.
- Primary allocation of 20 tracks.
- Secondary allocation of 50 tracks.
- Unit type of SYSALLDA.

If the data set already exists:

- It must be cataloged and on DASD.
- The record format must be FBA.
- The logical record length must be 121.
- The data set is system reblockable if DFHSM is executing with DFP 3.1.0 or a subsequent release and the block size is 0; otherwise, the block size must be a multiple of 121 up to a limit of 32K.
- The user can choose the primary space allocation.
- If DFHSM needs additional extents after the primary space allocation, DFHSM uses a secondary space allocation of 50 tracks.

- If the data set does not contain data, DFHSM starts writing output data at the beginning of the data set.
- If the data set contains data, DFHSM writes the output data after the existing data.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to OUTDATASET. In addition, you can use the abbreviation ODS for OUTDATASET.

Defaults: None.

Examples of How to Code the DISPLAY Command

The following examples show different ways to code the DISPLAY command:

Note: Any values specified here are examples only and should not be interpreted as the values to be used for your system.

Displaying the Contents of a Range of Absolute Addresses

In this example, the contents of a range of DFHSM absolute addresses is displayed.

```
DISPLAY 82C1FF.:8C45FF.
```

Displaying the Contents at a Relative Address

In this example, 80 bytes of DFHSM address space are displayed starting at a relative address (offset 6D into the last CSECT specified with either the DISPLAY or PATCH command). The output goes to the terminal that issued the command.

```
DISPLAY +6D LENGTHS(80)
```

Displaying the Contents at a Qualified Address

In this example, 120 bytes at each of two places in the DFHSM address space are displayed. The output goes to the terminal that issued the command.

```
DISPLAY (.ARCALVOL.+3D2,+7A) LENGTHS(120)
```

Displaying the Last Date Daily Space Management Ran

In this example, the last date daily space management ran to completion is displayed.

```
DISPLAY .MCR.+98 LENGTHS(4)
```

Displaying the Last Date Migration Cleanup Ran

In this example, the last date migration cleanup ran is displayed.

```
DISPLAY .MCR.+48 LENGTHS(4)
```

Displaying the Last Date Automatic Backup Ran

In this example, the last date automatic backup ran is displayed.

```
DISPLAY .BCR.+50 LENGTHS(4)
```

Displaying the Last Date Level 1 Functions Ran

In this example, the last date the level 1 functions of moving backup versions and backing up migrated data sets ran is displayed.

```
DISPLAY .BCR.+5C LENGTHS(4)
```

Displaying the Last Date Automatic Dump Functions Ran

In this example, the last date the automatic dump functions ran is displayed.

```
DISPLAY .DCR.+5A LENGTHS(4)
```

Displaying Data and Sending the Results to an Output Data Set

This example will display the module ARCCTL at hex offset 0. The data being displayed will be added to the data set **USERID.DISPLAY.DATA**, and will also be shown at the terminal of the issuer of the DISPLAY command.

```
DISPLAY .ARCCTL.+0 ODS(USERID.DISPLAY.DATA)
```

This example will display the module ARCCTL at hex offset 0. The data being displayed will be added to the data set **USERID.DISPLAY.DATA**, but will NOT be shown at the terminal of the issuer of the DISPLAY command.

```
DISPLAY .ARCCTL.+0 ODS(USERID.DISPLAY.DATA) LOGONLY
```

This example will display the module ARCCTL at hex offset 0. The data being displayed will NOT be added to any output data set, but will be shown at the terminal of the issuer of the DISPLAY command.

```
DISPLAY .ARCCTL.+0
```

This example will display the module ARCCTL at hex offset 0. The data being displayed will NOT be added to any output data set, and will NOT be shown at the terminal of the issuer of the DISPLAY command.

```
DISPLAY .ARCCTL.+0 LOGONLY
```

FIXCDS: Displaying, Creating, or Modifying a Record in the MCDS, BCDS, or OCDS

The FIXCDS command displays or modifies records in the migration control data set (MCDS), backup control data set (BCDS), or offline control data set (OCDS). You can display a record in one of the control data sets with FIXCDS, and then issue FIXCDS again to make changes to that record. A record consists of a key field (44 bytes), followed by a header field (20 bytes), followed by variable data. The formats of the records are shown in "Data Areas and Data Area Cross-Reference" on page 37.

You use the FIXCDS command to fix minor problems that occur in the control data sets. For example, you can use the FIXCDS command when the audit process finds a discrepancy between the computing system catalog and the MCDS.

You can use the DISPLAY parameter of the FIXCDS command to display the data before you change it. Then, after you change a control data set record, verify that the change was successful by specifying the DISPLAY parameter of the FIXCDS command.

Although DFHSM keeps copies of the following records in working storage, the changes you specify with the FIXCDS command for these types of records are made only to the DASD copy of these records:

- Backup control record (BCR)
- Daily statistics record (DSR)
- Migration level 2 control record (L2CR)
- Management control record (MCR)
- JES3 volume activity count record (VAC)
- Volume statistics record (VSR).

If you want the virtual storage copy of the above records to keep the changes you make to the records, use the PATCH command. Otherwise, when you stop DFHSM, the changes you made to the control data set records with the FIXCDS command are replaced with the unchanged records from the virtual storage copy.

Use the FIXCDS command to make the following changes to the MCDS, BCDS, and OCDS:

- Delete a control data set record (DELETE).
- Expand a control data set record by a specified number of bytes (EXPAND).
- Rename a control data set record by specifying a new key (NEWKEY).
- Change existing data at the specified offset in a control data set record (PATCH).
- Create a new record in one of the control data sets (CREATE).

Use the FIXCDS command to make the following changes only to the MCDS:

- Add a new MCDS data set record for a migrated data set residing on the volume that you specify (ADDMIGRATEDDATASET).
- Turn the assigned bit on or off in the MCDS for a migrated data set record to show the migration status of a data set (ASSIGNEDBIT).

DFHSM lists all FIXCDS commands and their output in the SYSOUT data set. You can request a printout of this SYSOUT data set.

Note: For information on DFHSM supported patches, see the *Data Facility Hierarchical Storage Manager: Version 3 Release 5.0 Installation and Customization Guide.*

Syntax of the FIXCDS Command

Command	Required Parameters	Optional Parameters
FIXCDS	*type* *key*	**ADDMIGRATEDDATASET(***volser***)** | **ASSIGNEDBIT[(ON | OFF)]** | **CREATE(***offset* [*data*]**)** | **DELETE** | **DISPLAY(***offset***)** | **ENTRY(***volser* | *dsname***)** | **EXPAND(***bytes***)** | **NEWKEY(***keyname***)** | **VERIFY(***offset*[*data* | **BITS(***bits***)**]**)** | **PATCH(***offset*[*data* | **BITS(***bits***)**]**)** **LOGONLY** **OUTDATASET(***dsname***)** **LENGTH(***bytes***)**

Note: You can specify one of ADDMIGRATEDDATASET, ASSIGNEDBIT, CREATE, DELETE, DISPLAY, ENTRY, EXPAND, NEWKEY, VERIFY, or PATCH with each FIXCDS command.

Required Parameters of the FIXCDS Command

Type: Specifying the Type of Control Data Set Record

Explanation: *type* is a required positional parameter for which you substitute the alphameric 1-character record type identification for the control data set record you want to fix or display. The following table shows the record types in the MCDS, BCDS, and OCDS:

Table 4 (Page 1 of 2). Records of the Control Data Sets

1-Character Record Type	3 or 4 Character Record Type	Record Type Name
A	MCA	MCDS alias entry record
B	MCB	BCDS data set record
C	MCC	BCDS backup version record
D	MCD	MCDS data set record
G	DGN	BCDS dump generation record
L	MCL	BCDS backup migrated data set record

Table 4 (Page 2 of 2). Records of the Control Data Sets		
1-Character Record Type	**3 or 4 Character Record Type**	**Record Type Name**
M	MCM	BCDS move backup version record
N	VAC	MCDS JES3 volume activity count record
O	MCO	MCDS VSAM association record
P	MCP	BCDS eligible volume record
R	BCR BVR DCR	BCDS backup control record BCDS backup cycle volume record subdivided into spill, unassigned, day of backup cycle (daily) BCDS dump control record
S	DSR L2CR MCR MHCR VSR	MCDS daily statistics record MCDS migration level 2 control record MCDS management control record MCDS multiple-processing-unit control record MCDS volume statistics record
T	TTC	OCDS tape table of contents record subdivided into spill, unassigned, day of backup cycle (daily), and migration level 2
U	MCU	MCDS user record
V	MCV	MCDS volume record
W	DCL	BCDS dump class record
X	MCT	BCDS backup volume record
Y	DVL	BCDS dump volume record
1	MC1	MCDS migration level 1 free space record

Abbreviations: None.

Defaults: None.

Note: Because *type* is a required positional parameter, you must specify it immediately after the command name.

Key: Specifying the Control Record Key

Explanation: *key* is the required positional parameter specifying the control record key for the control data set record you want to fix or display. The key can be specified in EBCDIC or hexadecimal characters.

Notes:

1. Record types G, L, M, N, O, P, R, S, T, U, V, W, X, Y, and 1 have a 1-byte hexadecimal identification as an internal first byte. Do not include the 1-byte hexadecimal identification in the *key* field.
2. For deletion of an L record, specify the users' data set name instead of the key.

The key for types A, B, C, and D records are:

Record Type	Key
A	Migrated data set name (non-VSAM) created when DFHSM migrates the data set or the name of a VSAM component of a migrated data set eligible for automatic recall.
B	Data set name of a user data set.
C	Backup version data set name created when DFHSM backs up the data set.
D	Data set name of a user data set.

A, B, C, and D data set records: The following are examples of the key used with A, B, C, and D data set records:

```
FIXCDS A DFHSM.HMIG.T231510.USER.DATA.H4060
FIXCDS A VSAM.PATHNAME
FIXCDS B USER.DATA.NAME
FIXCDS C DFHSM.BACK.T352016.DATA.NAME.H4323
FIXCDS D USER.DATA.NAME
```

G dump generation record: The key for the type G dump generation record is the volume serial number followed by the time of the day (*hhmmssth*) in packed decimal format. The time of day is followed by the year and day (*00yydddF*) in packed decimal format. Because the time and date are in packed decimal format, you must specify the key in hexadecimal. An example of the key used for a dump generation record on volume DUMP01 created at 12:55 p.m. on day 135 of the year 1986 is:

```
FIXCDS G X'C4E4D4D7F0F1125519490086135F'
```

L backup migrated data set record: The key for a type L backup migrated data set record is the first 43 characters of the data set name. Under certain circumstances, DFHSM changes the 44th byte of the key, which corresponds to the 43rd character of the data set name, so the key to the record might not correspond exactly with the first 43 characters of the data set name. The true 43rd character and the 44th character of the data set name are stored in the data portion of the record. An example of the key used with a type L backup migrated data set record is:

```
FIXCDS L USER.DATA.NAME
```

M move backup version record: The key for a type M move backup version record is 43 characters of the backup version name. DFHSM uses all characters except the fourth character of the second qualifier. The fourth character of the second qualifier is always a K. An example of the key used with an M move backup version record is:

```
FIXCDS M USER.BAC.T280112.JCL.CNTL.H4104
```

N volume activity count record: The key for a type N volume activity count record is the constant VOLCNT followed by a dash (-) and *n*, where *n* is a decimal number that indicates the sequence number of the record. The N record is an internal record used to maintain activity counts on primary volumes in a JES3 environment. An example of the key used with an N data set record is:

```
FIXCDS N VOLCNT-4
```

O VSAM data set record: The key for a type O VSAM data set record is the migrated data set name created by DFHSM when it migrates a VSAM data set. An example of the key used with an O data set record is:

```
FIXCDS O DFHSM.HMIG.T231510.USER.DATA.H4079
```

P, V, X, and Y volume records: The key for types P, V, X, and Y volume records is the volume serial number. Examples of the key used with P, V, X, and Y volume records are:

```
FIXCDS P TS0456
FIXCDS V TS0123
FIXCDS X TS0789
FIXCDS Y TS0444
```

R backup control record: The key for a type R backup control record is the constant BCR and the processing unit identification in a multiple-processing-unit environment. The processing unit identification is a 1-digit alphameric character. If you omit the processing unit identification, DFHSM defaults to the ID of the issuing processing unit. An example of the key used with an R backup control record is:

```
FIXCDS R BCR3
```

R backup cycle volume record: The key for a type R backup cycle volume record is the constant BVR followed by two characters representing the type of record (01-31 for daily, SP for spill, and UN for unassigned), a dash (-), and a four-character sequence number. An example of the key used with an R backup cycle volume record for day 1 of the backup cycle is:

```
FIXCDS R BVR01-0000
```

R dump control record: The key for the type R dump control record is the constant DCR and the processing unit identification in a multiple-processing-unit environment. The processing unit identification is a 1-digit alphameric character. If you omit the processing unit identification, DFHSM defaults to the identification of the issuing processing unit. An example of the key used with an R dump control record is:

```
FIXCDS R DCR2
```

S level 2 control record: The key for a type S level 2 control record is the constant L2CR. An example of the key used with an S level 2 control record is:

```
FIXCDS S L2CR
```

S management control record: The key for a type S management control record is the constant MCR and the processing unit identification in a multiple-processing-unit environment. The processing unit identification is a 1-digit alphameric character. If you omit the processing unit identification, DFHSM defaults to the ID of the issuing processing unit. An example of the key used with an S management control record is:

```
FIXCDS S MCR2
```

S daily statistics record: The key for a type S daily statistics record is the constant X'C4E2D9' (DSR) followed by the year and day in packed decimal format. The sign code is F. Because the date is in packed decimal format, you must specify the key in hexadecimal. An example of the key used with an S daily statistics record for day 76 of 1984 is:

```
FIXCDS S X'C4E2D984076F'
```

S volume statistics record: The key for a type S volume statistics record is the constant X'E5E2D9' (VSR) followed by the volume serial number, which is followed by the year and day in packed decimal format. The sign code is F. Because the date is in packed decimal format, you must specify the key in hexadecimal. An example of the key used for volume 123400 for its use on day 121 of 1984 with an S volume statistics record is:

```
FIXCDS S X'E5E2D9F1F2F3F4F0F084121F'
```

T tape table of contents record (migration level 2 volume): The key for a type T tape table of contents record for a tape migration level 2 volume is the constant L2 followed by a dash (-), the volume serial number, a dash (-), and a four-character sequence number. An example of the key used with a T tape table of contents record for the migration level 2 volume TML205 is:

```
FIXCDS T L2-TML205-0000
```

T tape table of contents record (backup volume): The key for a type T tape table of contents record for a tape backup volume is a two-character representation of the volume assignment (01-31 for daily, SP for spill, and UN for unassigned), followed by a dash (-), the volume serial number, a dash (-), and a four-character sequence number. An example of the key used with a T tape table of contents record for spill volume TAPE01 is:

```
FIXCDS T SP-TAPE01-0000
```

U user record: The key for a type U user record is the user identification. An example of the key used with a U user record is:

```
FIXCDS U SLJ2345
```

W dump class record: The key for the type W dump class record is the one to eight alphameric character dump class name. An example of the key used with a W dump class record is:

```
FIXCDS W DCLASS01
```

Type 1 record: The key for a type 1 record is the constant L1VOL a dash (-), and a two-character sequence number representing the record sequence. The record sequence number for the first record is 00, the number for the second record is 01, and so forth. The type 1 records are always created sequentially. An example of the key used with a type 1 migration level 1 free space record is:

```
FIXCDS 1 L1VOL-00
```

Abbreviations: None.

Defaults: None.

Notes:

1. Because *key* is a required positional parameter, you must specify it immediately after the *type* parameter.
2. When you specify the key as hexadecimal, use an even number of hexadecimal digits. If you specify an odd number of hexadecimal digits, DFHSM inserts a 0 to the left of the value to make it an even number of hexadecimal digits. Hexadecimal characters must be in the form X'*n*'.

Optional Parameters of the FIXCDS Command

ADDMIGRATEDDATASET: Adding an MCDS Record for a Migrated Data Set

Explanation: **ADDMIGRATEDDATASET(*volser*)** is an optional parameter specifying that a new type D MCDS record is to be added for a migrated data set residing on the specified volume. The record contains only the minimum information about the data set. To make the data set eligible for recall, you must issue the PATCH parameter of the FIXCDS command to patch the data set's fully-qualified migration name (MCDMCANM) padded to the right with blanks.

In release 3, HHM2302, and release 4, HHM2402, it is necessary to patch the following additional fields:

Field Name	Offset	Explanation
MCDFRVSN	64 or X'40'	The volume serial number of the primary volume from which the data set was migrated.
MCDUCBTY	76 or X'4C'	The device type of the primary volume from which the data set was migrated.

If the data set is migrated to tape and the data set spans more than one tape, the following fields must be filled in:

Field Name	Explanation
MCDNVSN The FIXCDS offset is 212 (X'D4').	A 2-byte binary number of tape volumes after the tape volume where the data set started.
MCDNVSNO The FIXCDS offset is 214 (X'D6').	A binary number representing the offset from the MCDVSN field to the MCDAVSN field. This value can be calculated by issuing the DISPLAY parameter of the FIXCDS command and using the offsets displayed on the screen.

To add the extra volumes to the record, you must first use the EXPAND parameter of the FIXCDS command to increase the length of the D record. The D record must increase 6 bytes for each additional volume serial number that needs to be included. Enter the volume serial numbers of the other tape volumes in the expanded area. The first volume serial number starts at offset +0 in the expanded area, the second at offset +6, and so on. Pad the volume serial number with blanks to the right.

For *volser*, substitute the volume serial number of the migration level 1 or DASD migration level 2 volume where the migrated data set resides. For tape migration level 2 volumes, substitute the volume serial number of the volume where the migrated data set starts.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to ADDMIGRATEDDATASET. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Notes:

1. You can specify the ADDMIGRATEDDATASET parameter only for a type D record. The command fails if you issue it for another record type.
2. To recall the migrated data set after you add the new type D MCDS record, add MCDMCANM, padded by blanks, to the D record.

ASSIGNEDBIT: Turning the Assigned Bit On or Off

Explanation: **ASSIGNEDBIT(ON | OFF)** is an optional parameter specifying whether to turn the assigned bit on or off in an MCDS type D record. The assigned bit indicates whether the data set has migrated.

ON specifies that you want to turn the assigned bit on in the type D record. This indicates that the data set has migrated.

OFF specifies that you want to turn the assigned bit off in the type D record. This specifies that DFHSM has recalled the data set.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to ASSIGNEDBIT, ON, and OFF. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

If you do not specify ON or OFF with the ASSIGNEDBIT parameter, the default is OFF.

Notes:

1. You can specify the ASSIGNEDBIT parameter only for a type D record. The command fails if you issue it for another record type.
2. You can specify either ON or OFF, but not both.

CREATE: Creating a New Control Data Set Record

Explanation: **CREATE(***offset*[*data*]) is an optional parameter specifying that a new control data set record is to be created. The LENGTH parameter controls the size of the record to be created.

For *offset*, substitute a decimal number from 0 to 1975 for the offset where you want the data to be inserted into the variable portion of the record. You specify the data for the variable portion of the record. The FIXCDS command automatically creates the key and header portions of the record.

For *data*, substitute hexadecimal characters, or alphameric characters and $, #, or @ to be inserted into the new record. You cannot specify more than 256 bytes (512 hexadecimal digits), and you should specify an even number of hexadecimal digits. If you specify an odd number of hexadecimal digits, DFHSM inserts a 0 to the left of the value to make it an even number. Hexadecimal characters must be in the form X'*n*'. The new record contains all zeros after the header field unless you supply data.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to CREATE. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Notes:

1. The offset of the first byte of the variable data of the record is zero. The offset of the last byte of the variable data of the record is one less than the length of the variable data.
2. If you are creating a Tape Table of Contents (TTOC) extension record, be sure to update the TTCNUM field for the TTOC base record for the volume. This halfword field is the total count of the base and the extension records for the volume.

   If you are creating a Migration Level 1 Free Space (MC1) or JES3 Volume Activity Count (VAC) continuation record, be sure to patch the continuation flag in the appropriate lower-level record to binary '1'.

DELETE: Deleting a Control Data Set Record

Explanation: **DELETE** is an optional parameter specifying that a control data set record is to be deleted.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to DELETE. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Notes:

1. When a type X backup volume record is deleted from the BCDS, the BVR entry for the volume and the TTOC record for a tape backup volume are also deleted.
2. The four-character sequence number specified on a delete of a TTOC record will be ignored and will have the effect of deleting the entire record including all the extensions and the base of the TTOC. See "T tape table of contents record (migration level 2 volume)" on page 348, for further explanation.
3. If you are deleting a Tape Table of Contents (TTOC) record for a volume, all the TTOC records (base and extension) for that volume will be deleted.

If you are deleting a Migration Level 1 Free Space (MC1) or JES3 Volume Activity Count (VAC) continuation record, be sure to patch the continuation flag in the appropriate lower-level record to binary '0'.

If you delete a lower-level MC1 or VAC record, any upper-level continuation records will remain in the MCDS but will not be usable by DFHSM.

4. For deletion of an L record, the user's data set name is specified (not the key). If there is only one L record that corresponds to the requested data set name, the L record is deleted. If there is more than one L record for the data set name, only those L records not associated with a D record will be deleted. If there is more than one L record for the data set name and all L records need to be deleted, issue the same command twice.

DISPLAY: Requesting a Display of the Data from the Control Data Sets

Explanation: **DISPLAY**(*offset*) is an optional parameter you specify to display the data from the specified record. A record consists of a key field (44 bytes), followed by a header field (20 bytes), followed by variable data depending on the record type. For each request, you always see the header field but never see the key field.

For *offset*, substitute a decimal value from 0 to 1975 for the offset into the variable data portion of the record that you want to display or specify a hexadecimal value for the offset. The LENGTH parameter controls how much record data you want to display. Hexadecimal characters must be in the form X'*n*'.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to DISPLAY. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

If you specify DISPLAY without specifying *offset*, the display starts from offset 0 of the variable data portion of the record.

Notes:

1. If you specify an offset that goes beyond the end of the record you are referring to, the FIXCDS command fails.
2. When you display the D record for a migrated VSAM data set, the password field is blanked out.
3. The offset of the first byte of the variable data of the record is zero. The offset of the last byte of the variable data of the record is one less than the length of the variable data.

ENTRY: Specifying a Particular Entry in the BVR or TTOC Record

Explanation: **ENTRY**(*volser* | *dsname*) is an optional parameter used to specify a particular entry in the BVR or TTOC record. Offset will then be the offset in the specified entry. ENTRY may be used with the CREATE, DELETE, DISPLAY, VERIFY, and PATCH parameters. The domain of CREATE ENTRY is the first unused entry in the existing record.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to ENTRY. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

EXPAND: Expanding a Control Data Set Record

Explanation: **EXPAND**(*bytes*) is an optional parameter specifying that a control data set record is to be expanded by the specified number of bytes. The new portion of the record is set to binary zeros. For *bytes*, substitute a decimal number for the number of bytes by which you want the record to be expanded.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to EXPAND. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Notes:

1. If the expanded record length is more than 2040 bytes, the FIXCDS command fails.
2. If a Backup Cycle Volume Record (BVR) is being expanded, the specified length must be an even multiple of 12 bytes, the length of the volume entry in the BVR.
3. If a BVR is being expanded, the resultant record length must not be able to contain more than the maximum number of volume entries. If the maximum record length is 1016 bytes in length, 78 entries can be put in each BVR. If the maximum record length is 2040 bytes in length, 164 entries can be put in each BVR.
4. When a BVR is expanded, the number of volume entries is incremented to reflect the new number of volume entries. If you subsequently update these new volume entries with volume serial numbers, you must ensure that the volume full flag is turned off in the BVR by using the appropriate FIXCDS PATCH command.

NEWKEY: Renaming a Control Data Set Record

Explanation: **NEWKEY**(*keyname*) is an optional parameter specifying that a control data set record is to be renamed. For *keyname*, substitute 1 to 44 EBCDIC characters or specify the new key as hexadecimal. Do not include the 1-byte hexadecimal identification in the *keyname*. The 1-byte hexadecimal ID is the first byte of the internal format of keys for types G, L, M, N, O, P, R, S, T, U, V, W, X, Y, and 1 records.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to NEWKEY. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Notes:

1. You must specify the same record type as the one you specified with the *type* parameter. The record with the new key is the same as the record with the old key.
2. When you specify the key as hexadecimal, specify an even number of hexadecimal digits. If you specify an odd number of hexadecimal digits, DFHSM inserts a 0 to the left of the value to make it an even number. Hexadecimal characters must be in the form X'*n*'.
3. If the FIXCDS NEWKEY parameter is performed on a DFHSM record and the new data set name (DSN) that is specified by the NEWKEY parameter differs from the original data set name, then any subsequent function which references this key will fail.

VERIFY: Verify That a Field in a CDS Record Matches the Given Data

Explanation: **VERIFY** (*offset*[*data* | **BITS**(*bits*)]) | is an optional parameter used to confirm that the data in the control data set record matches the specified data. If VERIFY is specified, the requested function will only be performed if the VERIFY is successful. VERIFY should always be used with the PATCH parameter: If the verify fails, the patch will not be performed.

For *offset*, substitute a decimal number from 0 to 1975 (hexadecimal '0' to '7B7') for the offset into the variable portion of the record you want to check. If the ENTRY parameter is used, offset applies to the particular entry in the record and not to the record itself. Hexadecimal characters must be in the form X'*n*'.

For *data*, substitute the data you want checked. You can enter the data as hexadecimal characters or alphameric characters and $, #, or @. You can verify up to 256 bytes of data.

For *bits*, substitute an eight-character string specifying which bit or bits are to be tested for on/off. A period (.) means do not test, a **1** means verify if bit is on, and a **0** means verify if bit is off. For example,

```
1.0.....
```

means verify if bit 0 is on and bit 2 is off.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to VERIFY and BITS. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Notes:

1. VERIFY is not required when using PATCH, but recommended.
2. VERIFY can be used alone, without the PATCH parameter.

PATCH: Changing a Control Data Set Record

Explanation: **PATCH** (*offset*[*data* | **BITS**(*bits*)]) | is an optional parameter you specify to change a control data set record.

For *offset*, substitute a decimal number from 0 to 1975 for the offset into the variable data portion of the record you want to change, or specify a hexadecimal value for the offset. Hexadecimal characters must be in the form X'*n*'.

For *data*, substitute the changes you want made to the data. You can enter the data as hexadecimal characters or alphameric characters and $, #, or @. You can change up to 256 bytes of data.

For *bits*, substitute an eight-character string specifying which bit or bits are to be turned on or off. A period (.) means do not change bit, a **1** means set bit on, and a **0** means set bit off. For example,

```
0.1.....
```

means set bit 0 off and set bit 2 on, do not change bits 1, 3, 4, 5, 6, and 7.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to PATCH and BITS. There are no additional abbreviations.

Defaults: If you do not specify one of the optional parameters of FIXCDS, the default is DISPLAY.

Note: The offset of the first byte of the variable data of the record is zero. The offset of the last byte of the variable data of the record is one less than the length of the variable data.

LOGONLY: Sending the Output to the Output Data Set

Explanation: **LOGONLY** is an optional parameter specifying that you want the output to go only to the output data set.

If LOGONLY is specified when it is not applicable, it will be ignored.

If LOGONLY is specified and OUTDATASET(dsname) is *not* specified, it implies that printed output for FIXCDS processing is not desired and will *not* be sent to the user and/or console.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to LOGONLY. There are no additional abbreviations.

Defaults: None.

OUTDATASET: Specifying the Output Location for the FIXCDS Results

Explanation: **OUTDATASET(*dsname*)** is an optional parameter specifying the name of the data set where DFHSM is to write the output data. For *dsname*, substitute the fully qualified name of the data set that will receive the FIXCDS results. If the data set does not exist, DFHSM dynamically allocates and catalogs an output data set with the following characteristics:

- Data set name = the name you specify (*dsname*)
- Record format = fixed-block-architecture (FBA)
- Logical record length = 121
- Block size = 1210 (if DFHSM is running with release 3.1.0 or a subsequent release of DFP, the data set is system reblockable).
- Primary allocation = 20 tracks
- Secondary allocation = 50 tracks
- Unit = SYSALLDA

If the data set already exists, it must be configured as follows:

- It must be cataloged and on DASD.
- Its record format must be FBA.
- Its logical record length must be 121.
- Its block size must be a multiple of 121 (up to a limit of 32K) unless DFHSM is running with release 3.1.0 or a subsequent release of DFP. Then the data set is system reblockable.
- The user can choose the primary space allocation. If DFHSM needs additional extents after the primary space allocation, DFHSM uses a secondary space allocation of 50 tracks.
- If the data set does not contain data, DFHSM starts writing output data at the beginning of the data set.
- If the data set contains data, DFHSM writes the output data after the existing data.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to OUTDATASET. In addition, you can use the abbreviation ODS for OUTDATASET.

Defaults: None.

LENGTH: Specifying the Length of the Data or of a New Control Data Set Record

Explanation: **LENGTH(*bytes*)** is an optional parameter specifying the length of the data to be displayed or the length of a new control data set record. LENGTH applies to only the variable portion of a record. For a display, the record header is always displayed with the number of bytes you specified with this parameter. For a new record, FIXCDS always creates the first 64 bytes that are the key and header fields.

For *bytes*, substitute a decimal number from 1 through 1976 for the number of bytes you want to display or create for the variable portion of the record.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to LENGTH. There are no additional abbreviations.

Defaults: If you do not specify LENGTH or you specify LENGTH without *bytes*, the default length to be displayed is the remaining length of the current record, or the default length to be created is the minimum valid length for the variable data portion of the type of record being created.

Notes:

1. The LENGTH parameter applies only with the DISPLAY and CREATE parameters. If you specify LENGTH when it does not apply, DFHSM ignores it.
2. If you specify LENGTH with CREATE, the number of bytes you specify must be at least the minimum length allowed for the variable data portion of the record you are creating.

Examples of How to Code the FIXCDS Command

The following examples show different ways to code the FIXCDS command:

Note: Any values specified here are examples only and should not be interpreted as the values to be used for your system.

Displaying a Backup Control Record from the BCDS

In this example, the type R backup control record from the issuing processing unit is displayed from variable data offset 15 to the end of the record. The output goes only to the SYSOUT data set.

```
FIXCDS R BCR DISPLAY(15 LOGONLY)
```

Adding a Migrated Data Set Record to the MCDS

In this example, a type D data set record for a data set that has migrated is added to the MCDS.

```
FIXCDS D PAC1234.DUMMY.ASM ADDMIGRATEDDATASET(VOL006)
```

Deleting a Backup Volume Record from the BCDS

In this example, a type X backup volume record is deleted from the BCDS.

```
FIXCDS X BAK123 DELETE
```

Expanding a Backup Data Set Record in the BCDS

In this example, a type B backup data set record in the BCDS is expanded by 256 bytes.

```
FIXCDS B JLT7652.REPORT.DATA EXPAND(256)
```

Creating a Management Control Record in the MCDS

In this example, the type S management control record for processing unit 1, having variable data 512 bytes in length, is created with data supplied for offset locations 64 and 65 in the variable data portion of the new record.

```
FIXCDS S MCR1 CREATE(64 X'8010') LENGTH(512)
```

Turning On the Assigned Bit in the MCD Record

In this example, you turn on the assigned bit in the MCD record to indicate that the data set has migrated.

```
FIXCDS D VLS325.REPORT.ASM ASSIGNEDBIT(ON)
```

Renaming a Migration Volume Record in the MCDS

In this example, a type V migration volume record is renamed to a new key.

```
FIXCDS V MIG011 NEWKEY(SCR002)
```

Modifying a Volume Statistics Record in the MCDS

In this example, a type S volume statistics record is modified at offset locations 64 and 65 of the variable data. The SYSOUT data set is printed.

```
FIXCDS S X'E5E2D9C2C1D2E5D6D377133F' PATCH(64 X'0700') -
       CLOSE
```

Deleting a Tape Volume Record from the OCDS

In this example, all type T tape volume records (backup and migration level 2) are deleted from the OCDS.

```
FIXCDS T 01-0FF456-0000 DELETE
```

Changing the Version Number of the Multiple Backup Data Set

In this example, you back up the control data sets to multiple backup data sets and have reached the limit of V9999999. You change the last final qualifier to V0000001:

```
FIXCDS S MHCR PATCH(X'B0' X'E5F0F0F0F0F0F0F1')
```

Displaying Part of the Type R Dump Control Record

In this example, part of the type R dump control record for a processing unit is displayed. The dump cycle (bit string) is at offset 12. The length of the dump cycle is at offset 16. The cycle start date (Julian date in packed decimal format) is at offset 18.

```
FIXCDS R DCR DISPLAY(12) LENGTH(12)
```

Displaying the Array of Dump Generation Keys in the Type P BCDS Volume Record

In this example, the array of dump generation keys in the type P BCDS volume record for volume PRIM01 is displayed. The array begins at offset X'138'. Each key is 14 bytes long. There are a maximum of 100 dump generations.

```
FIXCDS P PRIM01 DISPLAY(X'138') LENGTH(1400)
```

Displaying a Type G Dump Generation Record

In this example, the dump generation record for a dump that was done of user volume PRIM01 (EBCDIC 'D7D9C9D4F0F1') at midnight on Julian date 86209 is displayed.

```
FIXCDS G X'D7D9C9D4F0F1000000000086209F' DISPLAY
```

Displaying a Type Y Dump Volume Record

In this example, the type Y dump volume record for volume D00001 is displayed.

```
FIXCDS Y D00001 DISPLAY
```

Displaying a Type W Dump Class Record

In this example, the type W dump class record for class WEEKLY is displayed.

```
FIXCDS W WEEKLY DISPLAY
```

Verifying and Patching a Migrated Data Set Record

In this example, a type D data set record 'RECORD_KEY' at offset X'10' will be PATCHed. The byte (8 bits) of data will be changed *only* if initially bit 7 is off, bits 5 and 4 are on, and bit 0 is off. The data before and after the PATCH will be added to the dataset 'USERID.FIXCDS.DATA'. The PATCH data output will also be sent to the terminal that issued the command.

```
FIXCDS D RECORD_KEY PATCH(X'10' BITS(1.00...1))
       VERIFY(X'10' BITS(0.11...0)) ODS(USERID.FIXCDS.DATA)
```

This example is the same as the preceding example, except that the PATCH data output will *not* be sent to the terminal that issued the command.

```
FIXCDS D RECORD_KEY PATCH(X'10' BITS(1.00...1))
       VERIFY(X'10' BITS(0.11...0)) ODS(USERID.FIXCDS.DATA)
       LOGONLY
```

This example is the same as the preceding example, except that the data before and after the PATCH will *not* be sent to any output data set.

```
FIXCDS D RECORD_KEY PATCH(X'10' BITS(1.00...1))
       VERIFY(X'10' BITS(0.11...0)) LOGONLY
```

Creating an Entry for a Backup Volume Record

In this example, an ENTRY for volume BACK01 is created in the type R backup volume record BVR01-0000 if the entry does not already exist.

```
FIXCDS R BVR01-0000 CREATE ENTRY(BACK01)
```

This example is like the previous example. Additionally, the ENTRY area beginning at X'6' will be PATCHed with the data specified by 'xxxxxxxx'.

```
FIXCDS R BVR01-0000 CREATE(X'06' X'xxxxxxxx') ENTRY(BACK01)
```

PATCH: Changing Storage in the Address Space of DFHSM

The PATCH command changes storage within the DFHSM address space under the protect key of the DFHSM problem program. You can identify the storage location to be changed with an absolute address, a relative address, or a qualified address.

The PATCH command has a VERIFY parameter that you can specify to be sure that you have correctly identified the location where you want to make a change.

Note: For information on DFHSM supported patches, see the *Data Facility Hierarchical Storage Manager: Version 3 Release 5.0 Installation and Customization Guide*.

Syntax of the PATCH Command

Command	Required Parameters	Optional Parameters
PATCH	*address* *data* | **BITS**(*bits*)	**OUTDATASET**(*dsname*) **VERIFY**(*offset* [*data* | **BITS**(*bits*)])

Required Parameters of the PATCH Command

Address: Specifying the Location to Change

Explanation: *address* is a required positional parameter specifying where the DFHSM address space is to be changed.

For *address*, substitute the absolute address, the qualified address, or the relative address of the location you want to change. Although the addresses contain hexadecimal digits, you do not represent them in the form X'*nn*'. Instead, you enter them in the following manner:

- Enter an absolute address as one to six hexadecimal digits followed by a period (*hhhhhh.*).
- Enter a qualified address as a DFHSM load module name, followed by a period, a CSECT name, a period, a plus sign, and one to six hexadecimal digits (*loadmodulename.csectname.+hhhhhh*). Because ARCCTL is the only load module that can be displayed, the load name of ARCCTL is always used as the load module name if you supply only the CSECT name and offset (*.csectname.+hhhhhh*). The leading period is still required.
- Enter a relative address as a plus sign followed by one to six hexadecimal digits (*+hhhhhh*). You must have specified a qualified address identifying the CSECT in a previous PATCH or DISPLAY command before you specify the relative address. The relative address is the offset into the last CSECT you or any other user specified.

Abbreviations: None.

Defaults: None.

Notes:

1. Because *address* is a required positional parameter, you must specify it immediately after the command name.
2. You cannot use indirect addressing, registers, expressions, and variable names with the PATCH command.
3. You cannot patch addresses in a DFHSM secondary address space.

Data: Specifying the Data

Explanation: *data* is a required positional parameter specifying the data to be entered at the specified address.

For *data*, substitute hexadecimal data in the form X'*data*' or substitute character data. If the data contains special characters, put single quotation marks around it. You cannot specify more than 256 bytes (512 hexadecimal digits), and you should specify an even number of hexadecimal digits. If you specify an odd number of hexadecimal digits, DFHSM inserts a 0 to the left of the value to make it an even number of hexadecimal digits.

Abbreviations: None.

Defaults: None.

Note: Because *data* is a required positional parameter, you must specify it immediately after *address*.

BITS: Specifying the Bits to Change

For *bits*, substitute an eight-character string specifying which bit or bits are to be turned on or off. A period (.) means no change, a **1** means set the bit on, and a **0** means set the bit off. For example,

```
0.1.....
```

means set bit 0 off, set bit 2 on, and leave all other bits unchanged.

Abbreviations: None.

Defaults: None.

Optional Parameters of the PATCH Command

optional parameters

OUTDATASET: Specifying the Output Location for the PATCH Results

Explanation: **OUTDATASET**(*dsname*) is an optional parameter specifying the name of the data set where DFHSM is to write the output data.

For *dsname*, substitute the fully qualified name of the data set that is to receive the PATCH results. If the data set does not exist, DFHSM dynamically allocates and catalogs an output data set with the following characteristics:

- Uses the data set name specified (dsname)
- Record format of fixed-block-architecture (FBA)
- Logical record length of 121
- The data set is system reblockable if DFHSM is executing with DFP 3.1.0 or a subsequent release; otherwise, block size is 1210
- Primary allocation of 20 tracks
- Secondary allocation of 50 tracks
- Unit type of SYSALLDA.

If the data set already exists:

- It must be cataloged and on DASD.
- The record format must be FBA.
- The logical record length must be 121.
- The data set is system reblockable if DFHSM is executing with DFP 3.1.0 or a subsequent release and the block size is 0; otherwise, the block size must be a multiple of 121 up to a limit of 32K.
- The user can choose the primary space allocation
- If DFHSM needs additional extents after the primary space allocation, DFHSM uses a secondary space allocation of 50 tracks.
- If the data set does not contain data, DFHSM starts writing output data at the beginning of the data set.
- If the data set contains data, DFHSM writes the output data after the existing data.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to OUTDATASET. In addition, you can use the abbreviation ODS for OUTDATASET.

Defaults: None.

VERIFY: Verifying Data before Changing It

Explanation: **VERIFY**(*offset* [*data* | **BITS**(*bits*)]) is an optional parameter requesting that DFHSM verify the current data before it makes the change. If the data does not match, DFHSM rejects the change.

For *offset*, specify a decimal number from 0 to 1975 (hexadecimal x'0' to x'7B7') for the offset into the area that is to be verified.

For *data*, specify the data that you want DFHSM to verify. You can verify up to 256 bytes of data.

For *bits*, substitute an eight-character string specifying which bit or bits are to be turned on or off. A period (.) means do not test, a **1** means test bit for on, and a **0** means test bit for off. For example,

```
1.0.....
```

means test bit 0 for on, test bit 2 for off, and do not test the remaining bits.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to VERIFY. There are no additional abbreviations.

Defaults: None.

Note: You cannot use indirect addressing, registers, and variable names with the PATCH command.

Examples of How to Code the PATCH Command

The following examples show different ways to code the PATCH command:

Note: Any values specified here are examples only and should not be interpreted as the values to be used for your system.

Changing the Data at an Absolute Address and Verifying the Change

In this example, the data is modified at an absolute address and verified before processing.

```
PATCH B7A341. X'ABCD' VERIFY(B7A341. X'0000')
```

Changing the Data at a Qualified Address

In this example, the data is modified at a qualified address without verification.

```
PATCH .ARCCPFC.+4FA X'0700'
```

Changing the Date Fields

In this example, you want to change the last date the following functions ran. This permits the functions to be run again on the current day.

- Automatic backup
- Moving backup versions and backing up migrated data sets (level 1 functions).

To cause the functions to be run again, you can zero the appropriate date field and issue the SETSYS command with the AUTOBACKUPSTART parameters, specifying the appropriate times.

```
PATCH .BCR.+50 X'00000000' /* automatic backup */
PATCH .BCR.+5C X'00000000' /* move backup versions and */
                           /* back up migrated data/sets */
```

Allowing Migration of Password-Protected Generation Data Sets

In this example, the bit MCVTFPW in the MCVT is set to 1 to select a design alternative which allows password-protected generation data sets to be migrated and allows DFHSM to ignore the password at the time a generation is rolled off.

```
PATCH .MCVT.+53 X'40' /* allow migrate of password-protected data set */
```

Scratching Generation Data Sets Regardless of Expiration Date at Roll-Off Time

In this example, the bit MCVTFGDG in the MCVT is set to 1 to select a design alternative which allows DFHSM to scratch a generation data set regardless of its expiration date when it is rolled off.

```
PATCH .MCVT.+53 X'80' /* allow scratch of date-protected data set */
                      /* at time of roll-off */
```

Varying Dump Invocation

In this example, the bit MCVTALLX in the MCVT is set to 1 to suppress the ALLEXCP option specified in the full-volume dump invocation of DFDSS by DFHSM.

```
PATCH .MCVT.+3C3 x'80' /* suppress ALLEXCP option */
```

In this example, the bit MCVTALLD in the MCVT is set to 1 to suppress the ALLDATA(*) option specified in the full-volume dump invocation of DFDSS by DFHSM.

```
PATCH .MCVT.+3C3 x'40' /* suppress ALLDATA(*) option */
```

In this example, the bits MCVTALLX and MCVTALLD in the MCVT are set to 1 to suppress both the ALLEXCP and ALLDATA(*) options.

```
PATCH .MCVT.+3C3 x'C0' /* suppress ALLEXCP and ALLDATA(*) option */
```

Verifying and Patching Data and Sending the Results to an Output Data Set

In this example, the command will PATCH the named module at hex offset 10. The data will ONLY be changed if the byte of data at offset x'10' currently has a value of x'87654321'. The data before and after the PATCH will be added to the data set **USERID.PATCH.DATA** and will also be shown at the terminal of the issuer of the PATCH command.

```
PATCH .MODULE_NAME.+10 X'12345678'
      VERIFY(X'10' X'87654321') ODS(USERID.PATCH.DATA)
```

In this example, the command will PATCH the named module at hex offset 10. The data will ONLY be changed if the byte of data at offset x'10' currently has the following value:

bit 0 = 0
bits 2,3 = 1
bit 7 = 0
bits 1,4,5,6 = not tested.

The data before and after the PATCH will be added to the data set **USERID.PATCH.DATA** and will also be shown at the terminal of the issuer of the PATCH command.

```
PATCH .MODULE_NAME.+10 BITS(1.00...1)
      VERIFY(X'10' BITS(0.11...0) ODS(USERID.PATCH.DATA)
```

TRAP: Requesting a Dump When a Specified Error Occurs

The TRAP command specifies what DFHSM should do if an error occurs. DFHSM can do one of the following:

- Abnormally end the task when the error occurs. After the abnormal end, DFHSM produces an abnormal end dump (ABEND).
- Write the error in a SYSOUT data set (LOG).
- Remove a previous trap (OFF).
- Take a snap dump (SNAP).

Note: DFHSM automatically shuts down because of recurring trap conditions. DFHSM automatically shuts down after 200 occurrences of the same error code in the same module under one of the following conditions:

- Automatic traps - when 200 occurrences of the same error code with an option of ABEND or SNAP.
- TRAP command issued with the SNAP option - when 200 occurrences of the same error code with an option of ABEND or SNAP.
- TRAP command issued with the ABEND option - when 200 occurrences of the same error code with any option except FATAL.

Refer to Appendix B, "Diagnosing from Return Codes and Reason Codes" on page 277 for additional information about errors and error codes.

Automatic shutdown can be avoided by issuing a TRAP command for the selected error code with the LOG optional parameter.

Syntax of the TRAP Command

Command	Required Parameters	Optional Parameters
TRAP	ALL | *module*	*error code* ABEND[(ALWAYS | NEVER | ONCE)] | LOG | OFF | SNAP[(ALWAYS | NEVER | ONCE)]

Required Parameters of the TRAP Command

ALL | Module: Specifying the Location of the Trap

Explanation: ALL | *module* are mutually exclusive, required positional parameters that specify the location of the trap.

ALL specifies that all DFHSM modules are to be tested for errors.

For *module*, substitute the name of the DFHSM module that you want to test for errors. A list of modules and codes that DFHSM can trap are described in Appendix B, "Diagnosing from Return Codes and Reason Codes" on page 277

Abbreviations: None.

Defaults: None.

Note: Because *module* is a required positional parameter, you must specify it immediately after the command name.

Optional Parameters of the TRAP Command

Error Code: Specifying the Error Code to Test For

Explanation: *error code* is an optional positional parameter specifying the error return code to be tested when it is returned by the module you specified. For example, if you specify TRAP ARCGODS 13, DFHSM checks for return code 13 from module ARCGODS. For *error code*, substitute a code number. If you substitute a 0 for the error code, DFHSM tests for any error in the specified module.

Abbreviations: None.

Defaults: When you do not substitute an error code, *error code* defaults to 0. This means that DFHSM tests for any error in the module you specified.

Note: Because *error code* is an optional positional parameter, you must specify it immediately after *module*.

ABEND | LOG | OFF | SNAP: Specifying What DFHSM Should Do if an Error Occurs

Explanation: **ABEND[(ALWAYS | NEVER | ONCE)] | LOG | OFF | SNAP[(ALWAYS | NEVER | ONCE)]** are mutually exclusive, optional parameters specifying what DFHSM should do and how many times it should do it when the specified error occurs in the specified module.

ABEND specifies that DFHSM abnormally ends the task when the specified error condition occurs in the specified module. DFHSM abnormally ends the task by issuing an ABEND macro. DFHSM almost always tries to restart the task that abnormally ended. During the abnormal end, DFHSM produces an abnormal end dump.

ALWAYS | NEVER | ONCE are mutually exclusive, optional subparameters of the ABEND parameter specifying how many times DFHSM should abnormally end the task when the specified error condition occurs in the specified module.

ALWAYS specifies that DFHSM abnormally end the task every time the specified error condition occurs in the specified module.

NEVER specifies that DFHSM should never abnormally end the task when the specified error condition occurs in the specified module.

ONCE specifies that DFHSM should abnormally end the task the first time the specified error condition occurs in the specified module.

LOG specifies that DFHSM is to write an entry in the DFHSM log when the specified error condition occurs in the specified module.

OFF specifies that DFHSM remove a trap you specified with a previous TRAP command. For example, you specified TRAP ARCGODS 13 SNAP(ONCE) to cause DFHSM to produce a snap dump the first time error condition 13 occurs in module ARCGODS. To prevent DFHSM from further checking for that error condition, you specify TRAP ARCGODS 13 OFF.

SNAP specifies that DFHSM is to produce a snap dump when the specified error condition occurs in the specified module. DFHSM produces a snap dump by issuing a SNAP macro. If you specified the SYS1DUMP parameter of the SETSYS command, the dump is written to a system dump data set. If you specified the NOSYS1DUMP parameter on the SETSYS command, the dump is written to the data set identified with the SYSABEND, SYSUDUMP, or SYSMDUMP statement in the procedure used to start DFHSM. DFHSM continues processing after producing a snap dump.

ALWAYS | NEVER | ONCE are mutually exclusive, optional subparameters of the SNAP parameter specifying how many times DFHSM should produce a snap dump when the specified error condition occurs in the specified module.

ALWAYS specifies that DFHSM produce a snap dump every time the specified error condition occurs in the specified module.

NEVER specifies that DFHSM never produce a snap dump when the specified error condition occurs in the specified module.

ONCE specifies that DFHSM produce a snap dump the first time the specified error condition occurs in the specified module.

Abbreviations: The TSO abbreviation convention described in "Abbreviating Commands and Parameters" on page 334 applies to ABEND, ALWAYS, LOG, NEVER, OFF, ONCE, and SNAP. There are no additional abbreviations.

Defaults: If you do not specify ABEND, LOG, OFF, or SNAP, the default is SNAP. If you do not specify ALWAYS, NEVER, or ONCE, the default is ONCE.

Examples of How to Code the TRAP Command

The following examples show different ways to code the TRAP command:

Note: Any values specified here are examples only and should not be interpreted as the values to be used for your system.

Trapping an Error Condition with a Snap Dump

In this example, all the error conditions in module ARCACREL are trapped, and a snap dump is taken any first time the error occurs.

```
TRAP ARCACREL 0 SNAP
```

Trapping an Error Condition with an Abnormal End Dump

In this example, a trap is set for error condition 1 in module ARCCPOP, and an abnormal end dump is printed the first time the error occurs.

```
TRAP ARCCPOP 1 ABEND
```

Trapping an Error Condition with a Log Entry

In this example, all the error conditions in module ARCBELIG are entered in the DFHSM log.

```
TRAP ARCBELIG 0 LOG
```

Removing a Previous Trap

In this example, a trap is removed that was previously specified for error condition 3 in module ARCPROPN.

```
TRAP ARCPROPN 3 OFF
```

Glossary of Terms and Abbreviations

This glossary includes definitions of some terms found in this document. Some of the terms defined below are from:

- The *American National Dictionary for Information Processing Systems*, copyright 1982 by the Computer and Business Equipment Manufacturers Association. Copies may be purchased from the American National Standards Institute at 1430 Broadway, New York, New York 10018. These definitions are identified by an asterisk.
- The *ISO Vocabulary - Information Processing*, and the *ISO Vocabulary - Office Machines*, developed by the International Standards Organization, Technical Committee 97, Subcommittee 1. Definitions from published sections of this vocabulary are identified by the symbol "(ISO)" preceding the definition. Definitions from draft proposals and working papers under development by the ISO/TC97 vocabulary subcommittee are identified by the symbol "(TC97)," indicating that final agreement has not yet been reached among its participating members.

A

ABARS. Aggregate backup and recovery support.

accompany data set. In aggregate backup and recovery processing, a data set that is physically transported from the backup site to the recovery site instead of being copied to the aggregate data tape. It is cataloged during recovery.

ACCOMPANY keyword. The keyword used in the selection data set to create an accompany list.

accompany list. An optional list in the selection data set that identifies the accompany data sets.

ACEE. Access control environment element.

ACS. Automatic class selection.

active data. Data that is frequently accessed by users and that resides on level 0 volumes.

activity log. In DFHSM, a SYSOUT or DASD-type data set used to record activity and errors that occurred during DFHSM processing.

AG. Aggregate group.

aggregate backup. The process of copying the data sets and control information of a user-defined group of data sets so that they can be recovered later as an entity by an aggregate recovery process.

aggregate group. A Storage Management Subsystem class that defines control information and identifies the data sets to be backed up by a specific aggregate backup.

aggregate recovery. The process of recovering a user-defined group of data sets that were backed up by aggregate backup.

aggregated data sets. In aggregate backup and recovery processing, data sets that have been defined in an aggregate group as being related.

AIX. See alternate index.

allocate data set. In aggregate backup and recovery processing, a data set name that is listed in the selection data set. The space for this data set is allocated and the data set is cataloged at the recovery location, but the actual data is not restored.

ALLOCATE keyword. The keyword used in the selection data set to create an allocate list.

allocate list. An optional list in the selection data set that identifies the allocate data sets.

alternate index. In systems with VSAM, a collection of index entries related to a given base cluster and organized by an alternate key, that is, a key other than the prime key of the associated base cluster data records. Its function is to provide an alternate directory for locating records in the data component of a base cluster. See also path.

alternate index cluster. In VSAM, the data and index components of an alternate index.

alternate tape volumes. In DFHSM, copies of original tape volumes created during tape copy processing. The volumes can either be stored on-site or off-site for use later in the event of a disaster. During the tape replace processing, these volumes can replace the original volumes that may be lost.

alternate tape volume reference. In DFHSM, additional fields in the TTOC record that record information about the alternate tape volume. These fields provide DFHSM with the necessary information to refer to the alternate tape volume.

audit. A DFHSM process that detects discrepancies between data set information in the VTOCs, the computing system catalog, the MCDS, the BCDS, and the OCDS.

AUTH. The DFHSM command used to identify an authorized user who can issue DFHSM system programmer and storage administrator commands.

authorized user. In DFHSM, the person or persons who are authorized through the DFHSM AUTH command to issue DFHSM system programmer, storage administrator, and operator commands.

automatic backup. In DFHSM, the process of automatically copying eligible data sets from DFHSM-managed volumes or migration volumes to backup volumes during a specified backup cycle.

Automatic Cartridge Loader Feature. A feature of the 3480 Magnetic Tape Subsystem providing the operator with the capability of preloading multiple tapes to be used as migration, backup, or dump tapes.

automatic class selection (ACS). A mechanism for assigning SMS classes and storage groups.

automatic dump. In DFHSM, the process of using DFDSS to automatically do a full volume dump of all allocated space on DFHSM-managed volumes to designated tape dump volumes.

automatic migration. In DFHSM, the process of automatically moving eligible data sets from user volumes to migration level 1 or level 2 volumes, or from migration level 1 volumes to migration level 2 volumes, without a specific request for each data set moved. See interval migration.

availability management. In DFHSM, the process of ensuring that a current version (backup copy) of the installation's data sets resides on tape or DASD.

B

backup. In DFHSM, the process of copying a data set residing on a level 0 volume, level 1 volume, or a volume not managed by DFHSM to a backup volume. See automatic backup, incremental backup.

backup control data set (BCDS). A VSAM, key-sequenced data set that contains information about backup versions of data sets, backup volumes, dump volumes, and volumes under control of the backup and dump functions of DFHSM.

backup copy. In DFHSM, a copy of a data set that is kept for reference in case the original data set is destroyed.

backup cycle. In DFHSM, a period of days for which a pattern is used to specify the days in the cycle on which automatic backup is scheduled to take place.

backup frequency. In DFHSM, the number of days that must elapse since the last backup version of a data set was made until a changed data set is again eligible for backup.

backup profile. In DFHSM, a RACF discrete data set profile associated with the backup version of a cataloged data set that is protected by a RACF discrete data set profile.

backup version. See backup copy.

backup volume. A volume managed by DFHSM to which backup versions of data sets are written.

backup volume cleanup process. A DFHSM process that scratches data set backup versions on DASD that are no longer needed.

backup VTOC copy data set. In DFHSM, a copy of the VTOC of a volume that was backed up by DFHSM. This VTOC data set contains only part of the Format 1 DSCB for each data set from the original data set. This data set is written on a migration level 1 volume.

base cluster. In systems with VSAM, a key-sequenced or entry-sequenced file over which one or more alternate indexes are built. See also cluster.

BCDS. See backup control data set.

base data component. In VSAM, a component of the base cluster containing data of a data set.

BDAM. Basic direct access method.

BVR. Backup cycle volume record.

C

catalog. (1) * (ISO) A directory of files and libraries, with reference to their locations. A catalog may contain other information such as the types of devices in which the files are stored, passwords, blocking factors. (2) * (ISO) To enter information about a file or a library into a catalog. (3) The collection of all data set indexes that are used by the control program to locate a volume containing a specific data set. (4) To include the volume identification of a data set in the catalog. (5) See VSAM master catalog, VSAM user catalog.

CDD. See common data set descriptor record.

CDT. Class descriptor table.

changed data set. In DFHSM, a data set that has been opened for other than read-only access.

CLIST. See command list.

cluster. In systems with VSAM, a named structure consisting of a group of related components, for

example, a data component with its index component. See also base cluster.

command list. A command procedure containing executable sequences of TSO commands, subcommands, and command procedure statements.

command procedure. In TSO, a data set or a member of a partitioned data set containing TSO commands to be performed sequentially by the EXEC command. See also CLIST.

common data set descriptor record. A record that precedes a user's data set on a DFHSM-owned volume and that is used to return the data set to the user's format.

common filter services. A subcomponent of DFP common services. Common filter services compares data items with filter keys and indicates which data items match the keys and how many matches have been found.

common service area (CSA). In OS/VS2, a part of the common area that contains data areas addressable by all address spaces, but protected during its use by the key of the requester.

compaction. In DFHSM, a method of compressing and encoding data that is migrated or backed up.

compress. In DFHSM, to release unused space in a partitioned data set during the migrate/recall and backup/recovery processes.

computing system catalog. In DFHSM, the master catalog and any associated user catalogs used as sources during the audit process.

contiguous space. An unbroken consecutive series of storage locations.

control data set. In DFHSM, one of three data sets (BCDS, MCDS, and OCDS) that contain records used in DFHSM processing.

control file. In aggregate backup and recovery processing, one of three aggregate files generated by the aggregate backup process. It contains the catalog, allocation, volume, and related information necessary to perform aggregate recovery.

converter/interpreter processing. The job segment that converts and interprets JCL for MVS.

CSA. See common service area.

current backup version. In DFHSM, a backup copy of the data set that was created on a date after the data set was last updated.

cycle start date. In DFHSM, the date a backup cycle, dump cycle, or migration cleanup cycle is started.

D

daily backup volume. In DFHSM, a volume associated with a given day in the backup cycle and assigned to contain backup versions created on that cycle day.

daily space management. In DFHSM, the automatic space management of data sets that occurs once every 24 hours.

DASD. See direct access storage device.

DASD calculation services (DCS). A subcomponent of DFP common services. DCS retrieves and calculates data set information for both VSAM and non-VSAM data sets based on the user's input request.

data class. A list of allocation attributes that the system uses for the creation of data sets.

data control block (DCB). A control block used by access method routines in storing and retrieving data.

Data Facility Data Set Services (DFDSS). An IBM licensed program used to copy, move, dump, and restore data sets and volumes.

Data Facility Hierarchical Storage Manager (DFHSM). An IBM licensed program used to manage volumes and data sets in an MVS operating environment.

data file. In aggregate backup and recovery processing, one of three aggregate files generated by the aggregate backup process. It contains the backup copies of the data sets to be recovered.

data migration. See migration.

data set change indicator. A bit in the DSCB that indicates whether the data set was opened for output. This is bit 6 of the DS1DSIND field in the Format 1 DSCB. This indicator is supported on MVS systems that have data-set-changed flag support installed.

data set deletion. In DFHSM, the space management technique of deleting non-SMS-managed data sets that have not been used for a specified number of days and that do not have expiration date protection.

data set group. Data sets that have the same set of initial characters in their names.

data set organization. The type of arrangement of data in a data set. Examples are sequential organization or partitioned organization.

data set pool. One or more volumes managed by DFHSM to which data sets that have migrated can be

recalled, depending on the set of initial characters of the data set name.

data set retirement. In DFHSM, the space management technique of deleting non-SMS-managed data sets that have not been referred to for a specified number of days and that have a backup version.

date last referred to. In DFHSM, the last date when a data set was opened.

DBA. See delete-by-age.

DBU. See delete-if-backed-up.

DCB. See data control block.

DCS. See DASD calculation services.

debug mode. In DFHSM, the method of operation that projects the changes that would occur in normal operation but in which no user data moves.

decompaction. In DFHSM, the process of decoding and expanding data that was compacted during daily space management or backup.

delete-by-age (DBA). In DFHSM, the space management technique of deleting non-SMS-managed data sets that have not been opened for a specified number of days.

delete-if-backed-up (DBU). In DFHSM, the space management technique of deleting non-SMS-managed data sets that have not been opened for a specified number of days and that have a current backup version.

DFDSS. See Data Facility Data Set Services.

DFHSM. See Data Facility Hierarchical Storage Manager.

DFHSM-authorized user. In DFHSM, the person or persons who are authorized through the DFHSM AUTH command to issue system programmer and storage administrator commands.

DFHSM log. In DFHSM, a pair of sequential data sets, X and Y, containing a chronological list of transactions and statistics occurring in DFHSM.

DFHSM-managed volume. A volume managed by DFHSM containing data sets that are directly accessible to the user.

DFHSM secondary address space. A separate address space started and controlled by DFHSM to perform aggregate backup or aggregate recovery processing.

DFP common services. A component of DFP that contains three subcomponents: common filter services (CFS), DASD calculation services (DCS), and device information services (DIS).

direct access storage device (DASD). A device in which the access time is effectively independent of the location of data.

directed recall. Moving a migrated data set from a level 1 or a level 2 volume to a level 0 volume and specifying the target volume and unit name where the data set can be allocated.

disaster. An unplanned occurrence that keeps a company or organization from conducting its normal business for some time period.

disaster backup. A means to protect a computing system complex against data loss in the event of a disaster. In DFHSM, the copying of all data on 3480 single-file tape volumes, or the equivalent, for storage at another location. The copied tape volumes can be used at another location to replace tape volumes that may be lost in a disaster.

disaster recovery. A means to replace lost data at another location with sufficient resources in order to resume operation. In DFHSM, the replacement of lost data that was contained on 3480 single-file tape volumes, or the equivalent, in the event of a disaster.

discrete backup profile. A RACF profile created when DFHSM backs up a cataloged, RACF-indicated data set.

discrete profile. A RACF profile that contains security information about a specific data set on a particular volume.

disposition processing. In OS/VS, a function performed by the initiator at the end of a job step to keep, delete, catalog, or uncatalog data sets, or pass them to a subsequent job step, depending on the data set status of the disposition specified in the DISP parameter of the DD statement.

DSCB. Data set control block. See also Format 1 DSCB.

DSLO. Distributed Systems License Option.

dump. See full volume dump.

dump class. A DFHSM-named set of characteristics that describe how volume dumps are managed.

dump copy. In DFHSM, a copy of the volume image produced by the DFDSS full volume dump function.

dump cycle. In DFHSM, a period of days for which a pattern is used to specify the days in the cycle on which automatic full volume dump is scheduled to take place.

dump generation. A successful full volume dump of a volume that may contain one to five identical dump copies.

dump VTOC copy data set. In DFHSM, a copy of the VTOC of a volume dumped by DFHSM. This VTOC data set contains only part of the Format 1 DSCB for each data set from the original data set. This data set is written on a migration level 1 volume.

E

eligibility age. The number of days since a data set met its criteria to be migrated.

emergency mode. In DFHSM, the method of operation that prevents data set movement and deletion in space management, backup, and recovery processes.

encode. (TC97) To convert data by the use of a code in such a manner that reconversion to the original form is possible.

erase-on-scratch. A RACF and DFP/XA function that overwrites the space occupied by a data set when the data set is scratched from a DASD device supported by MVS/XA.

ESDS. Entry-sequenced data set.

esoteric unit names. The names a user assigns to I/O devices that have the same device type. When the user specifies the assigned unit name to DFHSM, DFHSM associates the unit name to its device type.

exclude data set. In aggregate backup and recovery processing, a data set in the selection data set exclude list. This data set is to be excluded from being processed by aggregate backup.

EXCLUDE keyword. The keyword used in the selection data set to create an exclude list.

exclude list. An optional list in the selection data set that identifies those data sets that are to be excluded from being processed by aggregate backup.

expiration. The removal of a user data set from either a user (non-DFHSM-owned) volume, or from a DFHSM-owned volume when the user data set has been migrated. If there is an explicit expiration date, it is found in the Format 1 DSCB for a non-migrated data set, or in the MCD record for a migrated data set. If there is no explicit expiration date, the management class attributes are checked to determine an implicit expiration date.

extents. A continuous space on a direct access storage volume, occupied by or reserved for a particular data set, data space, or file.

extent reduction. In DFHSM, the releasing of unused space, reducing the number of extents, and compressing partitioned data sets.

F

FBA. See fixed-block architecture.

fixed-block architecture. Data stored in blocks of fixed size; these blocks are addressed by block number relative to the beginning of the particular file.

FMID. Function modification identifier.

Format 1 DSCB. An identifier DSCB that describes a data set or VSAM data space and its first three extents. Refer to the appropriate system data areas manual.

fragmentation index. The qualitative measure of the scattered free space on a volume.

FSR. Functional statistics record

full volume dump. In DFHSM, the process of using a DFDSS function that backs up the entire allocated space on a volume.

full volume restore. In DFHSM, the process of using a DFDSS function that restores the entire volume image.

functional statistics record. A record that is created each time a DFHSM function is processed. It contains a log of system activity and is written to SYS1.LOGREC.

functional verification procedure. A procedure distributed with DFHSM that tests to verify that all basic DFHSM functions are working properly.

G

general pool. In a DFHSM environment with JES3, the collection of all DFHSM primary volumes added to that processor that have a mount status of permanently-resident or reserved, that have the automatic recall attribute, specified, and that have a mount attribute of storage or private.

generic profile. A RACF profile that contains security information about multiple data sets, users, or resources that may have similar characteristics and require a similar level of protection.

H

high threshold of occupancy. In DFHSM, the upper limit of space to be occupied on a volume managed by DFHSM. Contrast with low threshold of occupancy.

I

IDCAMS data set. In aggregate backup and recovery processing, a file created during the aggregate recovery verification process. It can be used to resolve data set conflicts that were detected.

inactive age. In DFHSM, the number of days since the data set was last referred to.

inactive data. Copies of active or low-activity data that reside on DFHSM-owned dump and incremental backup volumes. See also low-activity data.

include data set. In aggregate backup and recovery processing, a data set in the selection data set include list. This data set is processed by aggregate backup.

INCLUDE keyword. The keyword used in the selection data set to create an include list.

include list. A required list in the selection data set that identifies the include data sets that are to be processed by aggregate backup.

incremental backup. In DFHSM, the process of copying a data set that has been opened for other than read-only access since the last backup version was created and that has met the backup frequency criteria.

incremental recovery. Recovery of the latest backup copy of a data set or data sets made by incremental backup.

inline backup. The process of copying a specific data set to a migration level 1 volume from a batch environment. This process allows you to back up data sets in the middle of a job.

installation verification procedure (IVP). A procedure distributed with DFHSM that tests to verify that the basic facilities of DFHSM are functioning correctly.

instruction data set. In aggregate backup and recovery processing, a data set that contains instructions, commands, or any data the aggregate backup site defines as needed for aggregate recovery at the recovery site.

instruction file. In aggregate backup and recovery processing, one of three aggregate files generated by the aggregate backup process. It contains the instruction data set.

interactive storage management facility (ISMF). The interactive panels of MVS/DFP that allows users and storage administrators access to the storage management functions of DFDSS and DFHSM.

Interactive System Productivity Facility (ISPF). An IBM licensed program used to develop, test, and run application programs interactively. ISPF is the interactive access method for all storage management functions.

interval migration. In DFHSM, automatic migration that occurs when the high threshold of occupancy is reached or exceeded on a DFHSM-managed volume during a specified time interval. Data sets are moved from the volume, largest eligible data set first, until the low threshold of occupancy is reached.

ISMF. See interactive storage management facility.

ISPF. See Interactive System Productivity Facility.

ISPF/PDF. Interactive System Productivity Facility/Program Development Facility.

IVP. See installation verification procedure.

J

JCL. Job control language.

JES2. Job entry subsystem 2.

JES3. Job entry subsystem 3.

JFCB. Job file control block.

journal data set. In DFHSM, a sequential data set used by DFHSM for recovery of the MCDS, BCDS, and OCDS. The journal contains a duplicate of each record in the control data sets that has changed since the MCDS, BCDS, and OCDS were last backed up.

K

KSDS. Key-sequenced data set.

L

level 0 volume. A volume that contains data sets directly accessible by the user. The volume may be either DFHSM managed or not DFHSM managed.

level 1 volume. A volume owned by DFHSM containing data sets that migrated from a level 0 volume.

level 2 volume. A volume under control of DFHSM containing data sets that migrated from a level 0 volume, from a level 1 volume, or from a volume not managed by DFHSM.

like device. Pertaining to (DASD) devices with identical geometry: that is, the same number of bytes per track, the same number of tracks per cylinder, and the same number of cylinders per actuator.

linear data set. In VSAM, a named linear string of data, stored in such a way that it can be retrieved or updated in 4096-byte units.

low-activity data. Data that is infrequently accessed by users and is eligible to be moved or has been moved to DFHSM-owned migration volumes.

low threshold of occupancy. The lower limit of space to be occupied on a volume managed by DFHSM. Contrast with high threshold of occupancy.

M

management class. A list of data set migration, backup, and retention attributes that DFHSM uses to manage storage at the data set level.

management work element (MWE). A control block containing the necessary information to direct DFHSM functions.

managed volume. See DFHSM-managed volume and primary volume.

MCB. BCDS data set record.

MCC. Backup version record.

MCD. MCDS data set record.

MCDS. See migration control data set.

MCP. Eligible volume record.

MCT. Backup volume record.

MCV. Primary and migration volume record.

MCVT. Management communication vector table.

migration. In DFHSM, the process of moving a cataloged data set from a DFHSM-managed volume to a migration level 1 or migration level 2 volume, from a migration level 1 volume to a migration level 2 volume, or from a volume not managed by DFHSM to a migration level 1 or migration level 2 volume.

migration cleanup. In DFHSM, the first phase of daily space management. This process deletes unnecessary records or migration copies.

migration control data set (MCDS). A VSAM, key-sequenced data set that contains statistics records, control records, user records, records for data sets that have migrated, and records for volumes under migration control of DFHSM.

migration level 1 volume. See level 1 volume.

migration level 2 volume. See level 2 volume.

migration volume. A volume under control of DFHSM that contains migrated data sets.

minimal discrete profile. A profile with no access list or model profile. The minimal discrete profile is used when recovering a RACF-indicated data set whose original profile or backup profile no longer exists.

minimum migration age. In DFHSM, the number of days a data set must remain unopened before DFHSM can select it to migrate from a volume.

ML1. Migration level 1. See level 1 volume.

ML2. Migration level 2. See level 2 volume.

model entity. A model data set name that defines a discrete data set profile for RACF protection.

multiple-file format. In DFHSM, a 3480 tape format, or the equivalent, that requires a unique standard label data set for each user data set written. When DFHSM writes in multiple-file format it writes one tape data set for every user data set to all 3480 migration and backup volumes.

mutually exclusive parameters. A set of parameters of which only one can be used. If more than one parameter is specified, only the last parameter specified is used.

MVS/DFP. An IBM licensed program used to manage programs, devices, and data in an MVS operating environment.

MVS/Enterprise Systems Architecture (MVS/ESA). An MVS operating system environment that supports accessing of virtual storage in multiple address spaces and data spaces.

MVS/Extended Architecture (MVS/XA). An MVS operating system environment that supports 31-bit real and virtual storage addressing, increasing the size of addressable real and virtual storage from 16 megabytes to 2 gigabytes.

MVS/SP. An IBM licensed program used to control the MVS operating system and establish a base for a MVS/XA or MVS/370 environment.

MVT. Mounted volume table.

MWE. See management work element.

N

non-DFHSM-managed volume. A volume not defined to DFHSM containing data sets that are directly accessible to users.

O

OCDS. See offline control data set.

offline control data set (OCDS). In DFHSM, a VSAM, key-sequenced data set that contains information about tape backup volumes and tape migration level 2 volumes.

online. (1) * (ISO) Pertaining to the operation of a functional unit when under the direct control of a computer. (2) * Pertaining to a user's ability to interact with a computer. (3) * Pertaining to a user's access to a computer via a terminal. (4) Controlled by, or communicating with, a computer.

original tape volume. In DFHSM, a 3480 single-file tape volume, or the equivalent, used to store data during migration or backup processing, and from which a copy (called the alternate volume) is made for disaster recovery.

OS/VS2. A virtual storage operating system that is an extension of OS/MVT.

owned space. The storage space on a set of volumes to which DFHSM allocates migrated data sets and backup versions, but to which user jobs should not allocate. Included in this set are migration level 1, migration level 2, and backup volumes.

owned volume. A volume on which DFHSM writes dump, migration, or backup data sets.

P

partitioned data set (PDS). A data set in DASD that is divided into partitions, called members, each of which can contain a program, part of a program, or data.

partitioned data set extended (PDSE). A DFP library structure that is an enhanced replacement for a partitioned data set.

path. (1) (TC97) In a network, any route between any two nodes. (2) In a data base, a sequence of segment occurrences from the root segment to an individual segment. (3) In VSAM, a named, logical entity providing access to the records of a base cluster either directly or through an alternate index. (4) In an online IMS/VS system, the route a message takes from the time it is originated through processing; in a multisystem environment, the route can include more than one IMS/VS system.

PCDD. Pseudo common data set descriptor (CDD) record

PDF. Program Development Facility.

PDS. Partitioned data set.

PDSE. Partitioned data set extended.

physical data set restore. In DFHSM, the process of using a DFDSS function to restore one data set from a dump copy created by using the DFHSM full-volume dump function.

pool of volumes. See data set pool, general pool, and volume pool.

primary processing unit. In a multiple-processing-unit environment, the processing unit assigned to do level functions (such as backing up migrated data sets).

primary volume. A non-SMS volume managed by DFHSM containing data sets that are directly accessible to the user.

PSCB. Protected step control block.

PSP. Preventive services planning.

PTF. Program temporary fix.

Q

quiesce time. A time of day after which an automatic function does not start processing any more volumes.

R

RACF. See Resource Access Control Facility.

recall. The process of moving a migrated data set from a level 1 or level 2 volume to a DFHSM-managed volume or to a volume not managed by DFHSM.

recovery. In DFHSM, the process of copying a backup version of a data set from a backup volume to a specified volume or to the volume from which the backup version was created.

recycle process. A DFHSM process that, based on the percentage of valid data on a tape backup or migration level 2 volume, copies all valid data on the tape to a tape spill backup or migration level 2 volume.

Resource Access Control Facility (RACF). An IBM licensed program that provides access control by identifying and verifying users to the system. RACF authorizes access to resources, logs unauthorized access attempts, and logs accesses to protected data sets.

restart data set. A data set created by DFHSM if aggregate recovery fails. It contains a list of all the data sets successfully restored during the aggregate recovery and allows the user to restart the aggregate recovery once the cause of the failure has been resolved.

restore. In DFHSM, the process of invoking DFDSS to perform the program's recover function. In general, it is to return to an original value or image, for example, to restore data in main storage from auxiliary storage.

retired version. In DFHSM, a specially marked backup version that DFHSM created before it deleted the non-SMS-managed original data set during data set retirement.

retirement. See data set retirement.

RRDS. Relative record data set.

S

SAF. System authorization facility.

SCP. System control programming.

SDSP. See small data set packing.

secondary address space. See DFHSM secondary address space.

selection data set. In aggregate backup and recovery processing, a sequential data set or a member of a partitioned data set used to define the data sets that comprise the input to the aggregate backup function. It contains any include, exclude, accompany, or allocate lists.

sequential data set. A data set whose records are organized on the basis of their successive physical positions, such as on magnetic tape.

similar device. A (DASD) device with the same number of bytes per track and tracks per cylinder.

single-file format. In DFHSM, a 3480 format, or the equivalent, consisting of one standard-label data set that spans up to 255 tape volumes.

small data set packing (SDSP). In DFHSM, the process used to migrate data sets that contain equal to or less than a specified amount of actual data. The data sets are written as one or more records into a VSAM data set on a migration level 1 volume.

small-data-set-packing data set. In DFHSM, a VSAM key-sequenced data set allocated on a migration level 1 volume and containing small data sets that have migrated.

SMF. System Management Facilities

SMP. System Modification Program.

SMP/E. System Modification Program Extended.

SMS. See Storage Management Subsystem.

SMS class. A list of attributes that SMS applies to data sets having similar allocation (data class), performance (storage class), or availability (management class) needs.

SMS-managed data set. A data set that has been assigned a storage class.

space manager. See storage administrator.

space management. In DFHSM, the process of managing aged data sets on DFHSM-managed and migration volumes. The three types of space management are: migration, deletion, and retirement.

spill backup volume. A volume owned by DFHSM to which all but the latest backup version of a data set are moved when more space is needed on a DASD daily backup volume or all valid versions are moved when a tape backup volume is recycled.

spill process. A DFHSM process that moves all but the latest backup version of a data set from a DASD daily backup volume to a spill backup volume.

SSI. See subsystem interface.

SSSA. Subsystem option block extension for SMS.

storage administrator. In DFHSM, the person or persons who are authorized through the DFHSM AUTH command to issue DFHSM system programmer and storage administrator commands, who can affect the authority of other DFHSM users, and who control the ways DFHSM manages DASD space.

storage class. A list of storage performance and availability service requests.

storage group. A list of real DASD volumes, or a list of serial numbers of volumes that no longer reside on a system but that end users continue to refer to in their JCL.

storage hierarchy. An arrangement in which data may be stored in several types of storage devices that have different characteristics such as capacity and speed of access.

Storage Management Subsystem (SMS). An operating environment that helps automate and centralize the management of storage. To manage storage, SMS provides the storage administrator with control over data class, storage class, management class, storage group, and ACS routine definitions.

suballocated file. A VSAM file that occupies a portion of an already defined data space. The data space may contain other files. Contrast with unique file.

subsystem interface (SSI). The means by which system routines request services of the master subsystem, a job entry subsystem, or other subsystems defined to the subsystem interface.

system-managed storage. An approach to storage management in which the system determines data placement and an automatic data manager handles data backup, movement, space, and security.

T

threshold of occupancy. A limit of occupied space on a volume managed by DFHSM.

time sharing option (TSO). An option on the operating system for a System/370 that provides interactive time sharing from remote terminals.

TIOT. Task input/output table.

trace. (1) A record of the execution of a computer program that exhibits the sequence in which the instructions were executed. (2) To record a series of events as they occur. (3) In MSS, a monitor in the mass storage control that records data about the system's activity, staging, and destaging. The data describes completed 3850 Mass Storage System functions from the activity schedule queues plus time stamps.

TSO. See time sharing option.

TSO/E. Time sharing option/extended.

TTOC. Tape table of contents record.

U

undirected recall. In DFHSM, moving a migrated data set from a level 1 or level 2 volume to a level 0 volume without specifying the target volume or unit where the volume can be allocated. Undirected recall can be automatic or by command.

unique file. A VSAM file that occupies a data space of its own. The data space is defined at the same time as the file and cannot contain any other file. Contrast with suballocated file.

unlike device. A DASD device with a different number of bytes per track and tracks per cylinder, or both.

V

virtual DASD. In DFHSM, this refers to the 3850 Mass Storage System (MSS).

virtual storage access method (VSAM). An access method for indexed or sequential processing of fixed and variable-length records on direct access devices. The records in a VSAM data set or file can be organized in logical sequence by a key field (key sequence), in the physical sequence in which they are written on the data set or file (entry-sequence), or by relative-record number.

virtual storage constraint relief (VSCR). A function that increases the amount of storage available for the user's application program.

volume. (1) (ISO) A certain portion of data, together with its data carrier, that can be handled conveniently as a unit. (2) (ISO) A data carrier that is mounted and demounted as a unit, for example, a reel of magnetic tape, a disk pack. (3) That portion of a single unit of storage that is accessible to a single read/write mechanism, for example, a drum, a disk pack, or part of a disk storage module. (4) A storage medium that is mounted and demounted as a unit; for example, magnetic tape or diskette.

volume pool. In DFHSM, a set of related primary volumes. When a data set is recalled, if the original volume that it was on is in a defined volume pool, the data set can be recalled to one of the volumes in the pool.

volume serial number. An identification number in a volume label that is assigned when a volume is prepared for use in the system.

volume table of contents (VTOC). (1) A table on a direct access volume that describes each data set on the volume. (2) An area on a disk or diskette that describes the location, size, and other characteristics of each file and library on the disk or diskette.

VSAM. See virtual storage access method.

VSAM master catalog. A key-sequenced data set or file with an index containing extensive data set and volume information that VSAM requires to locate data sets or files, to allocate and deallocate storage space, to verify the authorization of a program or operator to gain access to a data set or file, and to accumulate usage statistics for data sets or files.

VSAM sphere. A VSAM sphere contains the following eight components: base cluster, base data object, base index object, base path, alternate index, alternate index data object, alternate index index object, and alternate index path.

VSAM user catalog. An optional VSAM catalog used in the same way as the master catalog and pointed to by the master catalog. Use of user catalogs lessens the contention for the master catalog and facilitates volume portability.

VSCR. See virtual storage constraint relief.

VTOC. See volume table of contents.

VVDS. VSAM volume data set.

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