

IBM Archive Manager for z/VM



# Archive Manager for z/VM Administration Guide

*Version 1 Release 1*



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*Version 1 Release 1*

**Note:**

Before using this information and the product it supports, read the information in "Notices" on page 61.

This edition applies to Version 1 Release 1 of IBM Archive Manager for z/VM (product number 5697-J05) and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC18-9345-00.

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## About this information

This information is designed to help system administrators Administer and operate Archive Manager.

This information is intended for those persons using Archive Manager to archive and retrieve data and assumes a working knowledge of:

- The z/VM<sup>®</sup> operating system
- CMS (including XEDIT)

Specific changes since the previous edition of this book are indicated by a vertical bar (|) to the left of a change. Editorial changes that have no technical significance are not noted.

The Archive Manager for z/VM Web page provides current product documentation that you can view, print, and download. To locate publications with the most up-to-date information, refer to the following Web page:

<http://www.ibm.com/software/stormgmt/zvm/archive/library.html>

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## Service updates and support information

To find service updates and support information, including software fix packs, PTFs, Frequently Asked Question (FAQs), technical notes, troubleshooting information, and downloads, refer to the following Web page:

<http://www.ibm.com/software/stormgmt/zvm/archive/>

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## Highlighting conventions

This information uses the following highlighting conventions:

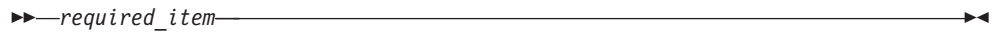
- **Boldface** type indicates commands or user interface controls such as names of fields, folders, icons, or menu choices.
- **Monospace** type indicates examples of text that you enter exactly as shown.
- *Italic* type indicates variables that you should replace with a value, to indicate the titles of other publication, and to emphasize significant terms.

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## How to read syntax diagrams

The following rules apply to the syntax diagrams that are used in this information:

- Read the syntax diagrams from left to right, from top to bottom, following the path of the line. The following conventions are used:
  - The >--- symbol indicates the beginning of a syntax diagram.
  - The ---> symbol indicates that the syntax diagram is continued on the next line.
  - The >--- symbol indicates that a syntax diagram is continued from the previous line.
  - The --->< symbol indicates the end of a syntax diagram.
- Required items appear on the horizontal line (the main path).



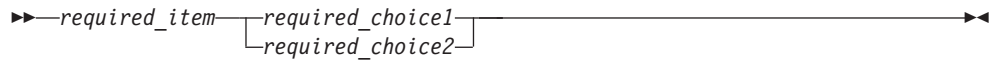
- Optional items appear below the main path.



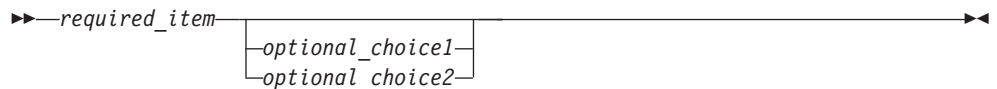
If an optional item appears above the main path, that item has no effect on the execution of the syntax element and is used only for readability.



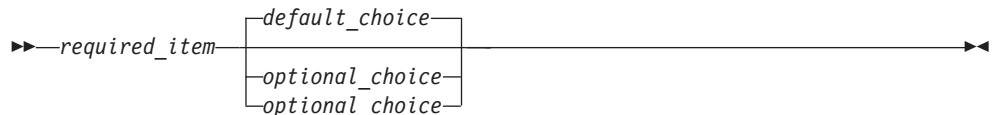
- If you can choose from two or more items, they appear vertically, in a stack. If you *must* choose one of the items, one item of the stack appears on the main path.



If choosing one of the items is optional, the entire stack appears below the main path.



If one of the items is the default, it appears above the main path, and the remaining choices are shown below.



- An arrow returning to the left, above the main line, indicates an item that can be repeated.



If the repeat arrow contains a comma, you must separate repeated items with a comma.



A repeat arrow above a stack indicates that you can repeat the items in the stack.



- Keywords, and their minimum abbreviations if applicable, appear in uppercase. They must be spelled exactly as shown. Variables appear in all lowercase italic letters (for example, *column-name*). They represent user-supplied names or values.
- Separate keywords and parameters by at least one space if no intervening punctuation is shown in the diagram.
- Enter punctuation marks, parentheses, arithmetic operators, and other symbols, exactly as shown in the diagram.
- Footnotes are shown by a number in parentheses, for example (1).



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## Summary of changes

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### Version 1.1

This section summarizes the significant improvements or enhancements for Archive Manager for z/VM V1.1 and refers you to relevant sections for more information. Minor modifications to the text are not listed.

#### SC18-9345-01

- The steps to configure Archive Manager have been updated. For more information, see Chapter 2, “Configuring Archive Manager,” on page 7.
- Archive Manager service virtual machine descriptions have been updated. See “Archive Manager components” on page 2 and “Step 1. Verify privileges for the Archive Manager servers” on page 7 for more information.
- Information for the example RECALL request has been updated. See “Example RECALL request” on page 6 for more information.
- The software requirements have been updated. See “Software requirements” on page 6 for more information.
- The descriptions for **CatalogPool** and **CatalogSpace** have been updated. See “Configuration options to specify the archive catalog SFS filespace” on page 18 for more information.
- The QUERY TAPE command has been added and existing command descriptions and examples have been updated. See Chapter 4, “Common commands,” on page 35 and Chapter 5, “Archive commands,” on page 39 for more information.
- New messages have been added. See “Messages and codes,” on page 43.



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## Chapter 1. Archive Manager overview

Archive Manager for z/VM enables users to archive CMS and non-CMS data and retrieve the data when needed.

Users can archive files, or entire minidisks, on to disk or tape as defined by the product administrator (by default, users can only archive and retrieve data that they own). For more information about Archive Manager features and benefits, including information about using Archive Manager, see the *Archive Manager for z/VM User's Guide*.

### Topics:

- “The Archive Manager environment”
- “Archive Manager components” on page 2
- “Understanding how Archive Manager manages and stores client data” on page 3
- “Archive Manager processing” on page 5
- “Prerequisites” on page 6

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## The Archive Manager environment

In the Archive Manager environment, clients (CMS users) interact with the master archive service virtual machine (AMVARKIV) which processes client requests to archive or retrieve (recall) data.

For example, during an archive request, AMVARKIV:

- Verifies and processes the request
- Packages the client data to be archived
- Archives the data on to disk or tape as requested by the client

Figure 1 on page 2 shows an overview of the Archive Manager environment.

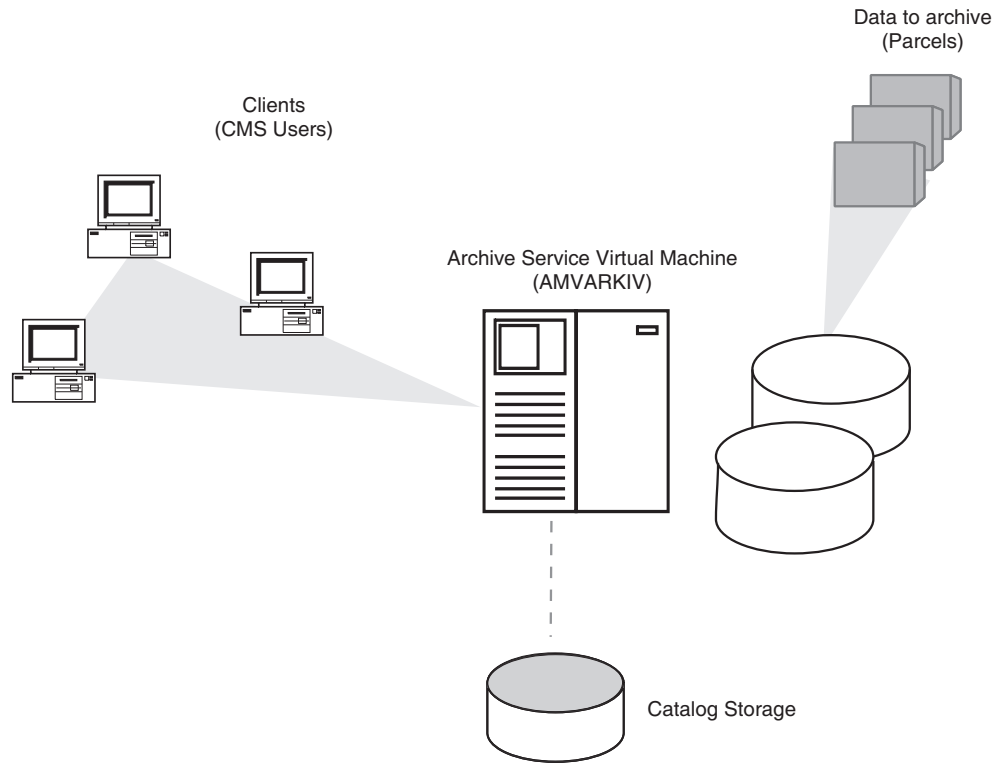


Figure 1. Archive Manager environment

Archive Manager records information for each archive operation.

## Archive Manager components

Archive Manager uses a combination of service virtual machines to process and manage archive and retrieval requests.

To perform processing, Archive Manager requires:

- A minimum of one archive service virtual machine (AMVARKIV)
- One (or more) worker service virtual machines
- One (or more) client service virtual machines

### Archive service virtual machine (AMVARKIV)

The master archive service virtual machine, AMVARKIV, verifies and processes archive requests initiated by clients and worker service virtual machines.

AMVARKIV manages client data and Archive Manager storage media called *storage classes* which are used to store packaged client data.

Archive Manager consolidates catalog management functions into the master archive server. The catalog function:

- Records information for archive operations including:
  - Transaction data (such as the date and time of the transaction and the owner)
  - Data source information
  - Media data (such as tape volser and the location on the media)

- Processes aging and expiration of catalog contents according to your installation specifications

## Worker service virtual machines

Worker service virtual machines (AMVWRKnn) are deployed to perform long-running archive transactions. Workers interface directly with tape and DASD resources, and are active only for the duration of a particular task. Workers are primarily used to handle tape-based archive and recall operations.

## Clients

A *client* is a CMS user that requests archive services from the archive server. Interaction between a client and the archive server is asynchronous and is based on transaction requests packaged in spool files. Asynchronous processing frees the client to perform other tasks and enables the archive server to handle operations at the optimal time and circumstances for the request. For example, you might want to restrict archive processing to avoid peak hours and avoid increased processing times and potential data availability issues.

## Command line interface

Commands enable authorized users to archive data, query data, or retrieve data from the archive.

## Panel interface

Archive Manager provides a panel interface, accessible through the AMVLIST command, to view the contents of the archive catalog. General users can only view the content associated with their user ID. Administrators can view all contents in the archive catalog. For more information about the AMVLIST command, see the *Archive Manager for z/VM User's Guide*.

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# Understanding how Archive Manager manages and stores client data

To understand how Archive Manager processes client requests, it is helpful to understand how Archive Manager manages and stores data.

## Archive Manager storage objects

Archive Manager uses these *storage objects* to manage client data.

- **Parcel** — A static image of archived client data and associated metadata.
- **Storage class** — Represents storage media owned by the archive server.
- **Storage group** — A collection of virtual machines associated with one or more storage classes.

When a client initiates a request to archive data, the archive server uses these storage objects to manage and store the data to be archived.

## How client data is packaged

Archive Manager uses *parcels* to package client data.

Each parcel is a static image of the archived client data and the metadata associated with the archive request (such as the date and time of the archive request) and is managed as a CMS file.

Archive Manager supports these parcel types:

- **EDF** — Files from CMS formatted minidisks
- **SFS** — Data from an SFS filesystem
- **CKD** — Raw CKD minidisk images

**Note:** Each instance of an archive server can manage a maximum of 4,294,967,295 parcels. If demand exceeds this amount, additional instances of the archive server can be implemented.

Parcels are stored on media associated with a storage class.

## How storage media is represented

A *storage class* is defined by the administrator to identify a storage media resource, such as a set of minidisks, a tape media pool, or SFS filesystems owned by the archive server.

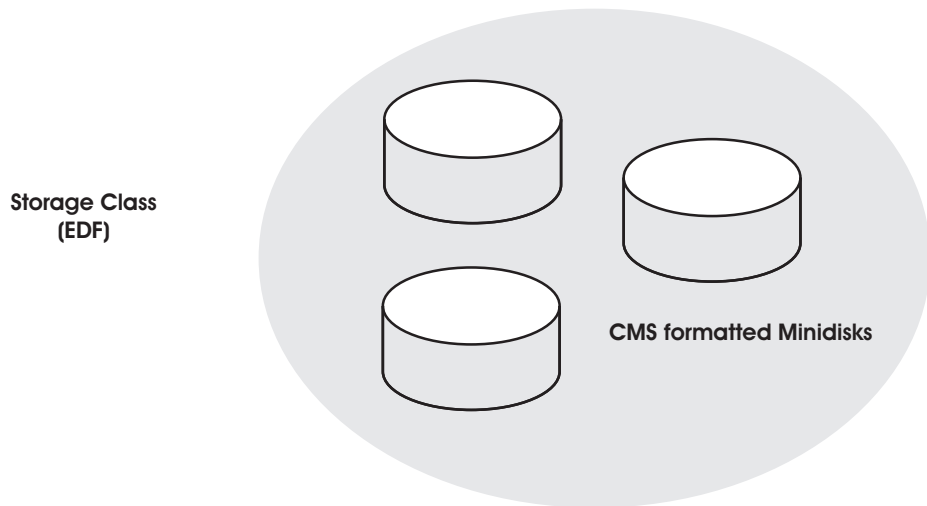


Figure 2. Storage class

**Note:** Data retention attributes, such as expiration time, are also associated with a storage class.

Archive Manager supports these types of storage classes:

- **EDF** — CMS formatted minidisks
- **SFS** — SFS filesystem
- **TAPE** — Tape media

Each storage class can be further defined as *simplex* or *duplex*.

### Simplex storage classes

When a storage class is defined as a simplex storage class, one copy of each parcel is stored.

### Duplex storage classes

When a storage class is defined as duplex, two copies of each parcel are stored.



Duplex storage classes create primary and alternate parcel locations which must be of the same media type. For example, if you define a DUPLEX TAPE storage class, the primary and alternate parcel locations must both be defined as TAPE.

## How access to archived client data is determined

A *storage group* is a collection of one or more virtual machines that group, according to access type, how archived data can be accessed.

Each storage group associates one or more users with a group name.

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## Archive Manager processing

To understand how Archive Manager performs processing, an example of an archive request is provided.

### Example archive request

This example shows how Archive Manager processes an archive request.

#### Archive request

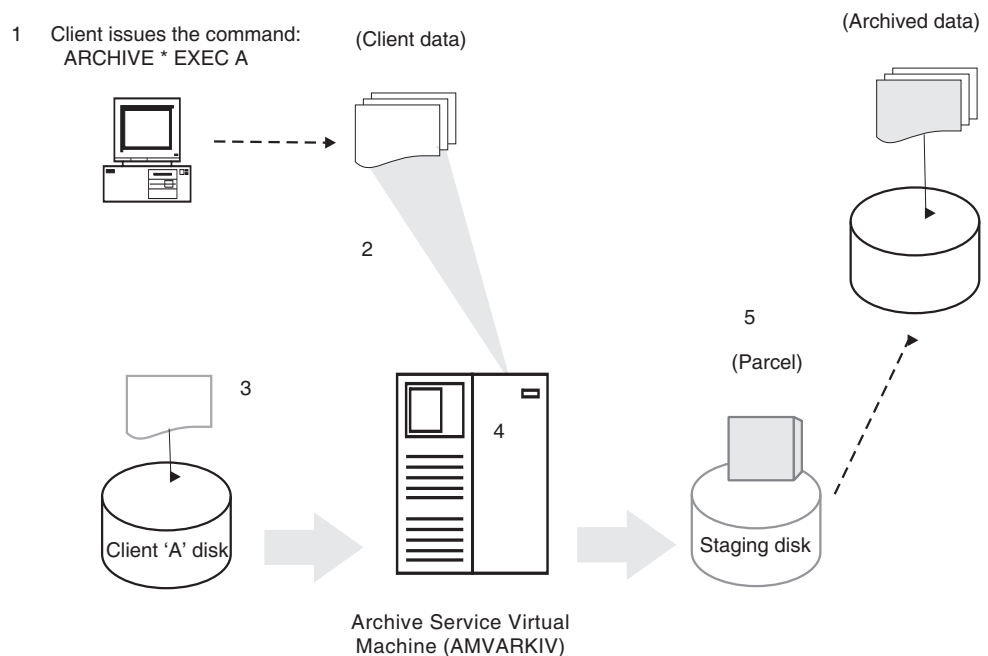


Figure 3. Example of an archive request

In the example, the client issues a request to archive all EXEC files from filemode 'A.' The following actions occur:

1. The CMS user issues the command: ARCHIVE \* EXEC A
2. Archive Manager verifies:
  - At least one file is requested to be archived.
  - The archive server determines ownership information, including the minidisk extent, or the SFS fully-qualified path —and whether or not the client is the owner of the minidisk or SFS directory at filemode 'A.'

**Note:** Clients cannot archive data they do not own unless authorized by a system administrator.

3. Archive Manager constructs a batch transaction in a temporary file on the client 'A' disk. The batch transaction is then sent to the archive server using SENDFILE.
4. The archive server parses and validates the transaction. If the transaction is declined, the archive server notifies the client and drops the archive request — otherwise, the transaction is accepted.
5. The archive server accesses the minidisk extent, or fully qualified SFS directory path and creates a parcel on a staging minidisk and archives the data as the client requested.

## Example RECALL request

AMVARKIV handles RECALL processing for DASD-based storage classes directly. Worker service virtual machines (AMVWRKnn) are dispatched to handle all tape-based transactions.

If an archive parcel is stored in an EDF or SFS storage class, then the AMVARKIV service virtual machine handles the request directly. If an archive parcel is stored in a tape-based storage class, then AMVARKIV validates the request and dispatches an AMVWRKnn service virtual machine to process the RECALL operation.

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## Prerequisites

Make sure that you have these minimum hardware and software requirements in place before you install and configure Archive Manager.

### Hardware requirements

Make sure you have these hardware requirements in place before installing Archive Manager.

Archive Manager runs on any hardware that supports z/VM and works with any VM supported DASD and tape, as well as IBM's virtual tape systems (VTS).

### Software requirements

Make sure you have these software requirements in place before installing Archive Manager.

- Archive Manager runs on all currently supported versions of z/VM.
- An SFS server and file pool are required. (Creating a file pool dedicated to Archive Manager is recommended. The default file pool name is AMVPOOL.)

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## Chapter 2. Configuring Archive Manager

These topics describe Archive Manager prerequisites and how to configure Archive Manager for your installation.

**Note:** Instructions for installing Archive Manager can be found in the *Archive Manager for z/VM Program Directory (GI10-8661)*.

**Topics:**

- “Configuration summary”
- “Configuration steps”

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### Configuration summary

After you install Archive Manager as described in the *Archive Manager for z/VM Program Directory*, perform the steps described in this section to configure Archive Manager for your site.

To configure Archive Manager, complete the steps outlined in Table 1.

*Table 1. Summary of configuration steps*

Step	Description	Sample configuration file
1	Verify privileges for the Archive Manager servers	(not applicable)
2	Allocate SFS resources for the catalog	(not applicable)
3	Copy and customize the AMVUSERS NAMES file	AMVUSERS NAMESAMP
4	Copy and customize the AMVSYSTEM CONFIG file	AMVSYSTEM CONFSAMP
5	Copy and customize the AMVSRVR CONFIG file	AMVSRVR CONFSAMP
6	Deploy and customize service virtual machine PROFILE EXEC routines	ARKPROF SAMPEXEC and WRKPROF SAMPEXEC

---

### Configuration steps

Complete these steps to configure Archive Manager.

**Note:** Before you configure Archive Manager, make sure that these VM user IDs have been created according to the instructions in *Archive Manager for z/VM Program Directory*:

- Product administrator
- Archive server
- Worker service virtual machine

#### Step 1. Verify privileges for the Archive Manager servers

Complete these steps to verify privileges for the Archive Manager servers.

Make sure that the service virtual machines have been provisioned in the CP directory and are available for use.

## Step 1a. Verify privileges for the product administrator (AMVADMIN)

The product administrator user ID (AMVADMIN) is used by the system programmer or system administrator that is responsible for installing and configuring Archive Manager.

The AMVADMIN user ID is designed to function as the default archive administrator user. This ID should have product administrator privileges.

These privileges are required for AMVADMIN:

- CP privilege class G.
- The RACF OPERATIONS attribute is required if RACF is installed, or equivalent authority for other installed external security managers (ESMs).

These privileges are recommended for AMVADMIN:

- Privilege class B. (Optional.) The class B privilege enables use of CP commands and DIAG functions and can be useful in problem determination.
- OPTION LNKNOPAS. (If an External Security Manager is installed, such as RACF, then equivalent authority, such as RACF OPERATIONS, is required instead of LNKNOPAS.)
- Administrator access to SFS file pools.

## Step 1b. Verify privileges for the master archive server (AMVARKIV)

The master archive server (AMVARKIV) is responsible for dispatching worker service virtual machines to handle archive tasks and for monitoring the status of the worker service virtual machines. The master archive server also provides catalog management functions.

This user ID is also responsible for archiving data when the target is CMS minidisk or an SFS directory. The workers are only invoked if the target of an archive is tape. Similarly, AMVARKIV handles recall requests when the data to be recalled is on CMS minidisk or in an SFS directory. The workers are invoked if the data to be recalled is on tape.

These privileges are required for AMVARKIV:

- CP privilege classes B and G.
- OPTION LNKNOPAS in the CP directory.
- OPTION DEVMAINT is required to obtain access to minidisk resources if the server is configured to use DEFINE MDISK (instead of CP LINK).
- The RACF OPERATIONS attribute is required if RACF is installed, or equivalent authority for other installed external security managers (ESMs).
- Administrator access to SFS file pools. SFS administrator authority is required for any SFS file pool that will be used with Archive Manager. This is because AMVARKIV requires authority to access data owned by clients during archive operations (and to recreate data owned by clients during recall processing).

## Step 1c. Verify privileges for the worker service virtual machines (AMVWRKxx)

Archive Manager uses worker service virtual machines to handle tasks that interact with tape resources. AMVARKIV dispatches archive and recall tasks for tape-based storage classes to AMVWRKnn service virtual machines in order to offload long-running tasks.

During archive operations, worker service virtual machines execute data functions to copy data to tape or disk and generate archive catalog content. (The product administrator can access the catalog structure to gather and display a variety of data on archive activity.)

**Note:** You must configure at least one worker service virtual machine.

It is recommended that you implement worker service virtual machines based on these considerations:

- The number of concurrently active archive processes desired.
- The number of available tape drives (each worker requires use of one tape drive to perform tape-based archive). If "twin set" tapes are used, each worker will require two tape drives.
- The available I/O bandwidth between the CPU, source data, and archive storage destination.

These privileges are required for AMVWRKnn:

- CP privilege classes B and G.
- OPTION LNKNOPAS. (If an External Security Manager is installed, such as RACF, then equivalent authority, such as RACF OPERATIONS, is required instead of LNKNOPAS.)
- Administrator access to all SFS file pools that are subject to archive operations. SFS administrator authority is required for any SFS file pool that will be used with Archive Manager. This is because the AMVWRKnn service virtual machines require authority to access data owned by clients during archive operations (and to recreate data owned by clients during recall processing).

## Step 2. Allocate SFS resources for the catalog

The Archive Manager catalog contains a record of each minidisk, or collection of files (SFS or CMS minidisk), committed to storage in the archive.

Catalog entries are generated for each archive transaction. Therefore, the catalog filespace must be able to contain all of the metadata generated for every data parcel committed to the archive. Placing the catalog in an SFS filespace provides a convenient means to organize catalog content in a hierarchical manner.

For small or medium size installations, a minimum of 3,000 cylinders of 3390 DASD (540,000 4K DASD blocks) is a reasonable starting allocation for the catalog filespace. Sites with a large number of minidisks, files, and SFS resources to manage will need correspondingly greater amounts of catalog storage.

It is strongly recommended that you store the catalog in a dedicated SFS file pool. Isolating the catalog in its own file pool simplifies post-disaster catalog recovery and allows your site to better tailor access to the catalog contents according to your requirements. See *CMS File Pool Planning, Administration, and Operation* for instructions on setting up a new SFS file pool server.

If the catalog is established in a dedicated SFS file pool as recommended, the procedures for adding additional disk space to the file pool can be implemented with minimal disruption to overall system operations.

## Determining catalog storage requirements

The amount of SFS storage required to contain the catalog varies according to the number of:

- minidisks or filespaces recorded in the catalog
- files contained on each CMS-format minidisk
- files and directories contained in each SFS file space

To estimate the amount of space you will require for the catalog file pool, use the following formula:

A minimum of one 4K block for each minidisk and file space + one 4K block per every 7.7 files and directories cataloged \* The number of unique jobs and instances maintained in the catalog

For example, the MAINT 19D minidisk will require approximately 1,700 SFS data blocks to record catalog data for the CMS-format minidisk (plus approximately 13,000 files). MAINT 190, the CMS system disk, with approximately 850 files, will require approximately 110 SFS data blocks.

**Note:** Because catalog storage requirements can vary from one installation to another, depending on number of users, number of minidisks, file spaces and files, and each installation's catalog retention policy there is no single "one size fits all" recommendation.

## Defining the backup catalog file pool and file space

If you choose to have a dedicated SFS file pool for Archive Manager, as recommended, then the name of the file pool and file space is up to your site, subject to the guidelines in the *CMS File Pool Planning, Administration, and Operation*. The recommended user ID owning the file space is AMVCATLG. Whether you use VMSYS or VMSYSU supplied by z/VM for the file pool, or create your own, you must define the file pool name, the file space name, and the user ID that owns the file space to Archive Manager in the AMVSYSTEM CONFIG file, using these parameters:

- Local\_Archive\_Catalog\_ID = *userid*
- CatalogPool = *poolname*
- CatalogSpace = *file space*

For more information, see "Step 4. Copy and customize the AMVSYSTEM CONFIG file" on page 12. For more information regarding configuration, resource allocation, and management for SFS services, see the *CMS File Pool Planning, Administration, and Operation*.

## Step 3. Copy and customize the AMVUSERS NAMES file

The AMVUSERS NAMES file identifies privileged users (archive servers, worker service virtual machines, and users with administrative privileges) to Archive Manager. The AMVUSERS NAMES file is required by the Archive Manager service virtual machines and does not require any special security considerations.

Copy the sample AMVUSERS NAMES file (AMVUSERS NAMESAMP) from the SAMPLES minidisk or directory to the production configuration minidisk (or directory) and modify it to suit your local configuration requirements. Customize this file using the installation user 5697J05A as follows:

1. ACCESS 198 Z - Access system configuration disk as filemode 'Z'
2. ACCESS 2C2 E - Access SAMPLES minidisk as filemode 'E'
3. COPY AMVUSERS NAMESAMP E = NAMES Z - Copy sample AMVUSERS NAMES
4. XEDIT AMVUSERS NAMES Z - Edit AMVUSERS NAMES

Figure 4 shows the contents of the sample AMVUSERS NAMES file (AMVUSERS NAMESAMP).

```
:nick.MASTER
      :list.AMVARKIV
      :COMMENT.Service virtual machines with "MASTER" authority

:nick.WORKERS
      :list.AMVWRK01
      :COMMENT.Worker virtual machines

:nick.ADMIN
      :list.AMVADMIN MAINT
      :COMMENT.Users with ADMIN privileges
```

Figure 4. Sample AMVUSERS NAMES file

5. Modify the sample AMVUSERS NAMES file using these settings to suit your specific site requirements:

#### **MASTER**

Specify the user ID of the archive service virtual machine (AMVARKIV). Modify this setting if you want to specify a user name other than the default name of AMVARKIV for the archive server, or if you want to specify additional archive servers. Each specification consists of a 1 to 8 character alphanumeric string that identifies a unique archive server. In the example, one master archive server (AMVARKIV) is specified.

#### **WORKERS**

Specify the names of all worker service virtual machines. Modify this setting if you want to use different service virtual machine names, or if you want to deploy additional worker service virtual machines. Each specification consists of a 1 to 8 character alphanumeric string that identifies a worker service virtual machine. In the example, one worker service virtual machine (AMVWRK01) is specified.

#### **ADMIN**

Specify the product administrator ID (AMVADMIN) and any other local users to whom administrative privileges should be granted. Modify this setting as needed when you add or remove users with ADMIN privileges. Each specification consists of a 1 to 8 character alphanumeric string that identifies a unique user that has ADMIN privileges. In the example, two users to whom administrative privileges should be granted, are specified: AMVADMIN and MAINT.

#### **Notes:**

- a. The primary copy of the AMVUSERS NAMES file should reside on 5697J05A 198 for use by AMVARKIV and AMVWRKnn. An

additional copy should be deployed to the CMS system Y-disk (MAINT 19E) in order to give all system users access to the Archive Manager end-user interface tools.

- b. Only the archive server, AMVARKIV, should be granted MASTER authority.
- c. Only worker service virtual machines should be granted WORKERS authority. Additional users can be identified as having ADMIN authority subject to local site policy and needs.
- d. The AMVUSERS NAMES file is maintained in the standard CMS NAMES file format.

## Step 4. Copy and customize the AMVSYSTEM CONFIG file

The AMVSYSTEM CONFIG file contains global settings and site configuration information for Archive Manager. To set local configuration options, modify the AMVSYSTEM CONFIG file.

The contents of AMVSYSTEM CONFIG are validated during service virtual machine startup. These checks are applied:

- For required settings, all required variables must be defined.
- Settings are checked for correct data type (numeric, logical, device address, and character string as appropriate).

If a required value is undefined, or an unacceptable value is encountered then the service virtual machine startup will be terminated. Some conditions will cause a warning message to be generated, followed by an attempt to continue processing.

Copy the sample AMVSYSTEM CONFIG file (AMVSYSTEM CONFSAMP) from the SAMPLES minidisk or directory to the production configuration minidisk (or directory) and modify it to suit your local configuration requirements. Customize this file using the installation user 5697J05A.

1. ACCESS 198 Z - Access system configuration disk as filemode 'Z'
2. ACCESS 2C2 E - Access SAMPLES minidisk as filemode 'E'
3. COPY AMVSYSTEM CONFSAMP E = CONFIG Z - Copy sample AMVSYSTEM CONFIG
4. XEDIT AMVSYSTEM CONFIG Z - Edit AMVSYSTEM CONFIG
5. Modify the sample configuration file to specify information for:
  - Localization
  - Administrator and worker service virtual machines
  - Tape Manager for z/VM (if you are using this product for tape media management functions)
  - Tape handling exits
  - Archive catalog configuration

### Notes:

- a. The primary copy of the AMVSYSTEM CONFIG file should reside on 5697J05A 198 for use by AMVARKIV and AMVWRKnn. An additional copy should be deployed to the CMS system Y-disk (MAINT 19E), or other shared disk, in order to give all system users access to the Archive Manager end-user interface tools.



- b. Comments are permitted within the AMVSYSTEM CONFIG file. To insert a comment, the record must start with an asterisk (\*). Null records are allowed.

Figure 5 on page 14 shows the contents of the sample AMVSYSTEM CONFIG file.

```

* IBM Archive Manager for z/VM: AMV*, 5697-J05
* Comments are allowed by starting a record with a "*"
*
* Global values used throughout the product. Do not touch.
*
AMV_Global_Product_Version = 1.1.0
AMV_Global_Product_Name   = IBM Archive Manager for z/VM
AMV_Global_Product_ID     = 5697-J05
*
* Localizations:
*
Local_SVM_Contact = Archive Administrator - amvadmin@some.corp.com
*
* Identify administrative user and top-level service virtual machines:
*
Local_Archive_Admin_ID   = AMVADMIN
Local_Archive_Server_ID  = AMVARKIV
Local_Archive_Catalog_ID = AMVCATLG
*
* Control archivist use of DEFINE MDISK versus LINK for minidisk access
*
* Valid settings are: "LINK"      - use CP LINK (requires OPTION LNKNOPAS)
*                      "DEFMDISK" - use CP DEFINE MDISK (requires OPTION DEVMAI)
*
* Archive_Minidisk_Via = LINK
Archive_Minidisk_Via   = DEFMDISK
*
* "Drop Dead" idle timer for worker task virtual machines
*
Worker_Idle_Timeout = +00:01:00
*
*
* Temporary staging area info for worker virtual machines
* Worker_Stage_Type = Some valid argument for DEFINE Txxxx -or- DEFINE VFB-512
*                   command
* Worker_Stage_Size = Appropriate number of units (blocks or cylinders) for
*                   worker staging area t-disk / v-disk. Workers don't
*                   actually create this unless they need it...
*
* This staging space is temporarily used to facilitate CMS file recalls when
* the recall destination minidisk is not formatted at the same EDF block size
* as the original archive source minidisk.
*
Worker_Stage_Type = VFB-512
Worker_Stage_Size = 80000
*
* Configuration for tape handling exits (AMVMOUNT, AMVUMNT, AMVEOV):
*
* Tape_Exit_Context controls whether mount/eov/dismount exits for AMV
* are driven by data packaging routines.
*
Tape_Handled_Via_EUM = No
EUM_Pool_Owner = AMVADMIN
EUM_Pool_Name = AMVPOOL
*
Tape_Exit_Context = AMV
Tape_Operator = OPERATOR
Tape_Request_Method = EXEC TELL
Tape_Delay_Interval = +00:01:00
Tape_Times_To_Poll = 15
TAP1_Virtual_Address = 181
TAP2_Virtual_Address = 182
Tape_Retain_After_EOJ = 0
*
* Archive catalog SFS file space:
*
CatalogPool = AMVPOOL
CatalogSpace = AMVCATLG

```

Figure 5. Sample AMVSYSTEM CONFIG configuration file

## Global settings

Global settings identify the product and version level and are not intended for site customization.

**Note:** Do not modify these required global variable settings.

### **AMV\_Global\_Product\_Version**

The Archive Manager version and release number

### **AMV\_Global\_Product\_Name**

The Archive Manager product name.

### **AMV\_Global\_Product\_ID**

The Archive Manager identifier.

## Specify local installation contact information

It is strongly recommended that you specify a text string (for example: the name and email address of the installation-level contact) to identify the local Archive Manager contact.

To identify the local Archive Manager contact use the **Local\_SVM\_Contact** variable to specify installation-level contact information reported by the Archive Manager service virtual machines.

## Identify the administrator user and archive service virtual machines

Modify these Archive Manager administrator and service virtual machine variables if you do not want to use the default settings provided within the file.

- **Local\_Archive\_Admin\_ID.** Specify the user ID of the main Archive Manager administrator. The default setting is AMVADMIN.
- **Local\_Archive\_Server\_ID.** Specify the user ID of the master archive service virtual machine. The default setting is AMVARKIV.
- **Local\_Archive\_Catalog\_ID.** Specify the user ID of the archive catalog. The default setting is AMVCATLG.

## Specifying archive server access to client data

This information describes the method by which the archive server obtains access to client minidisk-resident data when an archive is requested.

**Archive\_Minidisk\_Via** specifies the method by which the archive server obtains access to client minidisk-resident data. Specify one of the following options:

- **LINK**—When set to LINK, the server accesses client minidisks using the CP LINK command. This setting requires the archive server, AMVARKIV, to have appropriate authorization to be able to LINK to target minidisks. This can be done with OPTION LNKNOPAS in the CP directory entry for AMVARKIV. In addition, the RACF OPERATIONS attribute is required if RACF is installed, or equivalent authority for other installed external security managers (ESMs). Minidisks are linked in read-only mode for archive creation.
- **DEFMDISK**— (Default.) When set to DEFMDISK, the server accesses the client minidisk using the CP DEFINE MDISK command. This setting requires the archive server, AMVARKIV, to have CP privilege class A and OPTION DEVMAINT in effect in the CP directory, along with any corequisite ESM privileges. The archive server accesses client minidisks by using CP DEFINE MDISK to define an identical DASD extent overlaying the minidisk as defined at the time the ARCHIVE command was issued.

**Note:** The choice of the method to use is determined by the installation administrator. LINK mode can impose a slight risk of error if the client minidisk is deleted or redefined in the CP directory between initiation of the archive request and processing of the request. DEFMDISK mode can impose a similar risk if a minidisk extent is relocated and the old extent is cleared between initiation and processing of an archive operation.

### Set the timeout interval

Use the **Worker\_Idle\_Timeout** option to specify the amount of time that a worker should remain idle before logging off the system.

The format is: hh:mm:ss (hours, minutes, seconds). The default value is 00:01:00 (1 minute).

### Specify worker service virtual machine settings

Modify these worker service virtual machine settings, as needed, for your installation.

This staging space is temporarily used to facilitate CMS file recalls when the recall destination minidisk is not formatted at the same EDF block size as the original archive source minidisk.

**Note:** These settings apply to all worker service virtual machines that you define for Archive Manager.

- **Worker\_Stage\_Type.** When recalling files to a CMS minidisk, if the destination minidisk is not formatted with the same EDF block size as the source data (or, if recalling SFS archive data to a minidisk, if the destination minidisk is not formatted with an EDF block size of 4K [4096] byte blocks), a temporary staging minidisk is required to handle the recall operation. This value specifies whether the worker service virtual machine will attempt to obtain T3390 (T-disk) or VFB-512 (v-disk) temporary storage.

The size of the staging minidisk is calculated dynamically, based on parameters of the recall operation.

**Note:** For best performance, it is recommended that you set this value to VFB-512. You can specify other values that are valid for CP DEFINE T-disk however, the algorithm only supports VFB-512, T3390, and T3380.

- **Worker\_Stage\_Size.** Specify an appropriate number of units (blocks or cylinders) for the worker staging area ( T-disk or v-disk). This setting is only used in the unlikely event that Archive Manager is not able to dynamically calculate the size of the staging minidisk.

### Tape Manager for z/VM settings

Configure these tape handling exit settings if you are using Tape Manager for z/VM for all tape media management functions.

#### Parameters

**Note:** If you are not using Tape Manager for z/VM, these variables should remain commented within the file. For more information about using Tape Manager for z/VM, see the *Tape Manager for z/VM User's Guide*.

#### **Tape\_Handled\_Via\_EUM**

Indicates whether or not Tape Manager for z/VM is being used to manage tape media. Valid values are:

- 0— (Default.) Tape Manager for z/VM is *not* being used for all tape media management functions.
- 1— Tape Manager for z/VM is being used for all tape media management functions.

#### **EUM\_Pool\_Owner**

Identifies the owner of the tape pool from which all backup tapes for all jobs should be obtained. The default setting is AMVADMIN.

**Note:** You must specify a value for **EUM\_POOL\_Owner** if **Tape\_Handled\_Via\_EUM** is set to 1.

#### **EUM\_Pool\_Name**

Identifies the name of the tape pool from which all backup tapes for all jobs should be obtained. The default setting is AMVPOOL.

**Note:** You must specify a value for **EUM\_POOL\_Pool** if **Tape\_Handled\_Via\_EUM** is set to 1.

### **Tape handling exits**

Specify these options to configure tape handling exits. These settings are required regardless of whether or not you use Tape Manager for z/VM.

#### **Parameters**

##### **Tape\_Exit\_Context**

Used by low-level data handling routines during setup of runtime processing.

**Note:** The **Tape\_Exit\_Context** value must be set to AMV.

##### **Tape\_Operator**

Specifies the user ID that should receive tape mount requests and other tape interaction status messages during archive operations. (See the **Tape\_Request\_Method** description for more information.)

##### **Tape\_Request\_Method**

Specifies the means by which worker service virtual machines should communicate with the tape operator user ID specified by the **Tape\_Operator** variable. Valid values are:

- EXEC TELL (Default.) This is the recommended setting. EXEC TELL uses the CMS TELL command and enables the option of creating a NAMES file entry to send messages to multiple users.

**Note:** If you specify EXEC TELL, you can configure worker service virtual machines with an appropriately configured NAMES file. **Tape\_Operator** can then specify a nickname if you want to send tape interaction requests to more than one user.

- CP MSG — Use the CP MSG command instead of TELL. (No NAMES file support.)
- CP WARNING — Use the CP WARN command. WARN is a high-priority message that interrupts full-screen activity (for example, XEDIT).
- CP MSGNOH — Use CP MSGNOH (message, no header).

##### **Tape\_Delay\_Interval**

Specifies the amount of time a worker should pause before checking

whether or not a tape mount has occurred. The format is: hh:mm:ss (hours, minutes, and seconds). The default value is 00:00:60 (60 seconds).

#### **Tape\_Times\_To\_Poll**

Specifies the number of times a worker should check whether a tape mount has occurred before failing the request. The default value is 15.

#### **TAP1\_Virtual\_Address**

Specifies the address used by worker service virtual machines. The default value is 181.

**Note:** Do not modify the default value.

#### **TAP2\_Virtual\_Address**

Specifies the address used by worker service virtual machines when "twin set" tapes are being generated. The default value is 182.

**Note:** Do not modify the default value.

#### **Tape\_Retain\_After\_EOJ**

Controls retention of attached drives after EOJ. Valid values are:

- 0— (Default.) Do not retain drives after EOJ (any attached tapes are immediately detached at EOJ).
- 1— Retain drives after EOJ. Attached drives are retained in anticipation of another job to be processed, or until the **Worker\_Idle\_Timeout** interval expires.

**Note:** This option is effective only if **TAPE\_Handled\_Via\_EUM** is set to 0 (zero).

### **Configuration options to specify the archive catalog SFS filesystem**

Specify these configuration options to configure the archive catalog.

#### **CatalogPool**

Specifies the SFS file pool name to be used for catalog storage. The default is AMVPOOL. Modify this value to indicate the locally-configured SFS file pool.

#### **CatalogSpace**

Specifies the SFS filesystem allocated within **CatalogPool** to be used for catalog storage. The default is AMVCATLG. Modify this value to indicate the locally-configured SFS filesystem.

## **Step 5. Copy and customize the AMVSRVR CONFIG file**

The AMVSRVR CONFIG file contains storage group and storage class definitions for the archive server. This file must be accessible to the archive server (AMVARKIV). No special security measures are required to secure this file.

Copy the sample AMVSRVR CONFIG file (AMVSRVR CONFSAMP) from the SAMPLES minidisk or directory to the production configuration minidisk (or directory) and modify it to suit your local configuration requirements. Customize this file using the installation user 5697J05A.

1. ACCESS 198 Z - Access system configuration disk as filemode 'Z'
2. ACCESS 2C2 E - Access SAMPLES minidisk as filemode 'E'
3. COPY AMVSRVR CONFSAMP E = CONFIG Z - Copy sample AMVSRVR CONFIG

#### 4. XEDIT AMVSRVR CONFIG Z - Edit AMVSRVR CONFIG

##### Notes:

- a. Users do not require access to the AMVSRVR CONFIG file — therefore, you do not need to place a copy of this file on MAINT 19E.
- b. The sample configuration file references a single user group (ALLUSERS GROUPLST). A sample ALLUSERS GROUPLST file is provided on the configuration disk (5697J05A 198 minidisk or VMSYS:5697J05A.ARCHMGR.CONFIGURATION SFS directory.) The sample ALLUSERS GROUPLST references ALLUSERS ROSTER, which is also provided on the configuration disk. You do not need to place copies of these files on MAINT 19E.

Figure 6 shows the sample AMVSRVR CONFIG file:

```
* IBM Archive Manager for z/VM: AMV*, 5697-J05

* Comments begin with a '*'; blank lines are permitted.
*
* Mixed case permitted; non-comment lines are folded to all upper case for processing.
*
*****
*
* AMVSRVR CONFIG holds top-level definitions for the following
* definitions:
*
* 1) STORAGE GROUP definitions. We use the storage group entity
* as a means to associate one or more users with a group name.
*
* There are three types of storage groups:
*
* PUBLIC - Anybody on the system has access to parcels that
* reside in the PUBLIC storage group. The PUBLIC
* group is not associated with a ROSTER file.
* "PUBLIC" is a pseudo-group, and is enabled or
* disabled at installation discretion.
*
* PRIVATE - Parcels in the PRIVATE group are accessible only
* to the user who owns them, or an administrator.
* "PRIVATE" is a pseudo-group, and is enabled or
* disabled at installation discretion.
*
* ROSTER - Parcels in a ROSTER group are accessible to any
* user listed in the "groupname ROSTER" file on
* the archive server's configuration disk.
*
* 2) STORAGE CLASS definitions. A storage class identifies a
* storage media resource of some sort -- a set of minidisks,
* a tape media pool, or SFS filespaces owned by the archive
* server which are used to store PARCEL files.
*
* Storage classes are defined as EDF, SFS, or TAPE;
* additionally, a class is declared to be either SIMPLEX (only
* one copy of a parcel is maintained) or DUPLEX (two copies
* of each parcel are maintained -- a PRIMARY and an ALTERNATE
* copy.
*
*
```

Figure 6. Sample AMVSRVR CONFIG file

```

*   For DUPLEX TAPE classes, the primary and alternate parcel   *
*   copies are written to separate pieces of media.             *
*   *                                                           *
*   For DUPLEX EDF classes, a warning is issued if the primary  *
*   and alternate minidisks are on the same real volume; the   *
*   intent is to encourage physical separation of minidisks,   *
*   but it's left to the installation to actually enforce this  *
*   separation. We attempt to detect the circumstance, but will  *
*   allow duplex minidisks if the sysadmin insists.           *
*   *                                                           *
*   For DUPLEX SFS classes, a warning is issued if the primary  *
*   and alternate filespace are maintained in the same file    *
*   pool. It is recommended that the primary and alternate     *
*   copies be in different file pools, and that the SFS servers *
*   are configured such that all data are maintained on separate *
*   real DASD volumes. Again, if the sysadmin insists on       *
*   co-locating data in the same pool, we will issue a warning  *
*   but allow the condition. We do not attempt to detect the   *
*   case where different filepools have minidisks on the same  *
*   real DASD volumes, or the case where a filepool has multiple *
*   minidisks on the same real volume. Caveat sysprog...      *
*   *                                                           *
*   The STORAGE CLASS is the object to which RETENTION POLICY  *
*   values are bound.                                          *
*   *                                                           *
*****
*
*
Allow_Public = Yes      * Enable the "PUBLIC" pseudo-group
Allow_Private = YES     * Enable the "PRIVATE" pseudo-group
*
* Staging area - provision a minidisk or an SFS resource for use as a parcel staging area.
* Minidisk staging areas must be pre-formatted with an EDF block size of 4096 bytes (4K).
*
* The staging area must be large enough to contain a copy of the largest archive parcel
* expected to be handled by the archive server, plus capacity for associated metadata files
* generated during the staging process. These files will be removed from the staging area
* once an archive transaction is successfully completed.
*
* Staging_Area = 292
* Staging_Area = VMSYS:AMVARKIV.STAGINGAREA
*
BEGIN_GROUPS
ALLUSERS * Simple wild-card, one-line '*' to fit any/all users...
* BETA   * List of users in the "Beta" group
* GAMMA  * List of users in group "Gamma"
END_GROUPS
*
BEGIN_CLASSES
*
* Define_Class ClassName MediaType PlexType MinDays DefDays MaxDays PrimaryLoc GroupList SecondaryLoc Flags
*
* CLASSNAME   - The name of the storage class.
* MEDIATYPE   - One of EDF / SFS / TAPE
* PLEXTYPE    - Either SIMPLEX or DUPLEX
* Mindays     - The minimum retention time, in days (integer)
* Defdays    - The default retention time, in days (integer)
* Maxdays    - The maximum retention time, in days (integer)
* PrimaryLoc  - Minidisk address, filespace, or tape pool for primary copy
* GroupList   - The filename of "fn GROUPLST"; lists GROUPs who are allowed access to this class
* SecondaryLoc - Minidisk address, filespace, or tape pool for secondary copy
*              (use a "-" if plex type is set to SIMPLEX)
*

```

Figure 7. Sample AMVSRVR CONFIG file (continued)



```

*
* Flags - Blank-delimited 'Y' or 'N'. In order, the presently supported
* flags are:
*
* 1) RENEW Permitted? -- Controls whether or not clients can use
* the "renew" function to extend expiration
* of a parcel
*
* 2) REMOVE Permitted? -- Controls whether or not clients can use
* the "remove" function to delete a parcel
* from the archive
*
* 3) TRANSFER Permitted? - Controls whether or not clients can use
* the "transfer" function to pass ownership
* of a parcel to another user
*
* 4) MIGRATE Permitted? -- Controls whether or not clients can use
* the "migrate" function to relocate parcels
* to another storage class
*
* 5) IMAGE permitted? -- Controls whether or not clients can use
* the IMAGE keyword of the ARCHIVE command
* when creating parcels for this class.
*
* 6) COMPRESSION used? -- Controls whether or not parcels are
* compressed. Not yet implemented.
*
* 7) ENCRYPTION used? -- Controls whether or not parcels are
* encrypted. Not yet implemented.
*
* Note: Retention values are specified as a number of days; the maximum value
* is 99,999,999 (273,785.05 years; if you're still using this product
* after over a quarter of a million years have gone by, please send
* me a postcard...). The value must be at least '1'.
*
* Class DEFAULT: q.e.d... if group config permits, and no alternate class name is declared,
* parcels are stored on DEFAULT media.
*
* ALLUSERS GROUPLST: Single line, points to ALLUSERS ROSTER...
*
* name type plex min/def/max pri_media groups alt_media flags
*
Define_Class DEFAULT EDF SIMPLEX 1 365 365 E00 ALLUSERS - Y Y Y Y N N N
*
* Class CUSTOM: An example of a minidisk-based DUPLEX media resource.
*
Define_Class CUSTOM EDF DUPLEX 1 365 99999999 E10 ALLUSERS E11 Y Y Y Y N N N
*
* Class TAPE1: A simplex storage class that pulls SCRATCH tapes for new media
*
Define_Class TAPE1 TAPE SIMPLEX 1 365 365 SCRATCH ALLUSERS SCRATCH Y Y Y Y N N N
*
Define_Class TAPE2 TAPE DUPLEX 1 365 365 SCRATCH ALLUSERS SCRATCH Y Y Y Y N N N
*
* Class SFSSIMPL: A single-copy class based on SFS-provided media
*
Define_Class SFSSIMPL SFS SIMPLEX 1 365 365 ROCKSFS1:AMVARKIV.SIMPLEX ALLUSERS - y y y y n n
*
* Class SFSDUPL: A dual-copy class based on SFS-provided media
*
Define_Class SFSDUPL SFS Duplex 1 365 99999999 ROCKSFS1:AMVARKIV.DUPLEX.PRIMARY ALLUSERS ROCKSFS2:AMVARKIV.DUPLEX.SECONDARY Y Y Y Y N N N
*
END_CLASSES

```

Figure 8. Sample AMVSRVR CONFIG file (continued)

## Specify storage group definitions

Storage groups associate one or more users with a group name.

- **Allow\_Public.** Valid options are: Yes (enable the PUBLIC pseudo-group) or No (do not enable the PUBLIC pseudo-group).
- **Allow\_Private.** Valid options are: Yes (enable the PRIVATE pseudo-group) or No (do not enable the PRIVATE pseudo-group).

See “Configuring and managing storage” on page 27 for information about configuring ROSTER storage groups.

## Specify storage class definitions

Storage classes identify storage media resources.

See “Configuring and managing storage classes” on page 30 for information about defining storage classes.

## Specify staging area definitions

Specify a minidisk or an SFS resource for use as a parcel staging area. All archive transactions are initially processed by creating the archive parcel on this minidisk or SFS resource.

**Staging\_Area.** Minidisk staging areas must be pre-formatted with an EDF block size of 4096 bytes (4K). The staging area must be large enough to contain a copy of the largest archive parcel expected to be handled by the archive server, plus capacity for associated metadata files generated during the staging process. Use of an SFS directory is also supported. If you are using SFS for the staging area, specify a fully-qualified SFS path in the AMVSRVR CONFIG configuration file for the staging area (for example: AMVPOOL:AMVARKIV.STAGINGAREA). See “Configuring and managing storage” on page 27 for more information.

## Step 6. Deploy and customize service virtual machine PROFILE EXEC routines

Archive Manager provides sample PROFILE EXEC routines for the administrator and worker service virtual machines. This information describes how to deploy and customize PROFILE EXEC routines for Archive Manager service virtual machines.

Sample PROFILE EXEC routines for service virtual machines are provided as ARKPROF SAMPEXEC (PROFILE EXEC for AMVARKIV) and WRKPROF SAMPEXEC (PROFILE EXEC for AMVWRKxx users). Copy the sample PROFILE EXEC routines to the appropriate targets and then customize each EXEC as described in the comments in each EXEC.

- For minidisk-based installation, copy files from: 5697J05A 2C2 to the appropriate target minidisk.
- For SFS-based installation, copy files from: VMSYS:5697J05A.ARCHMGR.SAMPLES to the appropriate target minidisk or SFS directory.

**Note:** The following table shows the default addresses and directories. You should modify these targets if you have created a local override to the install specifications.

Table 2. Sample PROFILE EXECs and targets

Sample PROFILE EXEC	Target minidisk	Target SFS directory
ARKPROF SAMPEXEC	AMVARKIV 191	VMSYS:AMVADMIN.
WRKPROF SAMPEXEC	AMVWRKnn 191	VMSYS:AMVWRK01. - VMSYS:AMVWRK04.

### ARKPROF SAMPEXEC

The following figure shows the sample ARKPROF SAMPEXEC file provided with Archive Manager.

```

/* Recommended PROFILE EXEC for Master Archive service virtual machine (AMVARKIV) */
/*****
*
* Site-specific configuration:
*
* 1) Modify SPOOL CONSOLE to direct console to local AMV
* administrator (Default is AMVADMIN)
*
* 2) Make ACCESSM0 MODULE available to master archive svm.
*
* 3) Access AMV configuration files as filemode 'B'
*
* 4) Access AMV runtime routines as filemode 'C'
*
* 5) Provide a temporary work area at filemode 'D'. The
* work area must be large enough to contain temporary
* files created during archive transaction processing.
*
* - If minidisk-based, this minidisk must be formatted
* using a 4K / 4096-byte block size.
*
* default: SFS directory ".WORKAREA".
*
*****/
Address 'COMMAND'

'CP SPOOL CONSOLE TO AMVADMIN CLASS T TERM START'

/* For MINIDISK-based installations, use these definitions: */
/*
Config_Files = '198'
SVM_RunTime = '591'
*/

/* For SFS-based installations, use these definitions: */
/*
Config_Files = 'VMSYS:5697J05A.ARCHMGR.CONFIGURATION'
SVM_RunTime = 'VMSYS:5697J05A.ARCHMGR.RUNTIME'
*/

/* Identify the destination for temporary files. */
/* Work_Area = 'VMSYS:USERID()'.WORKAREA' */ /* For SFS-based work area... */
/* Work_Area = '299' */ /* For minidisk; must be formatted and ready for use... */

/* If IBM Tape Manager for z/VM is in use, then the Tape Manager
client interface (TAPCMD MODULE) and any required configuration
files must also be available. If these are not installed on
the CMS system "Y" disk (normally MAINT 19E), then configure
this section: */

/* Substitute the minidisk address or SFS directory path for */
/* Tape Manager, and un-comment the next two lines: */
/* Tape_Manager = '410' */
/* 'ACCESS' Tape_Manager 'T/T' */
/* AMVADMIN requires use of ACCESSM0 MODULE. */
/* This file is normally installed on MAINT 193. */

'CP LINK MAINT 193 993 RR' /* Home of ACCESSM0 MODULE */
'ACCESS 993 U' /* Pick up ACCESSM0 now */

'ACCESS 19D X/S * * X2' /* CMS system HELP files */
'ACCESS 19E Y/S' /* CMS system "Y" disk */

'ACCESS 19D X/S * * X2'
'ACCESS 19E Y/S'
/*****
/****
/**** End of site configuration section - please do not modify ****
/**** the remaining sections of the master archive svm PROFILE EXEC */
/****
*****/

'ACCESS' Config_Files 'B/B'
'ACCESS' SVM_RunTime 'C/C'
'ACCESS' Work_Area 'D'
'SET LANGUAGE (ADD AMV USER' /* Load AMV message repository */

```

Figure 9. ARKPROF SAMPEXEC file

```

If rc ^= 0 then;
Do;
Say '***'
Say '*** Fatal error: Unable to load AMV message repository.'
Say '***'
Exit rc
End
'SET LANGUAGE (ADD BKR USER' /* Load BKR message repository */
If rc ^= 0 then;
Do;
Say '***'
Say '*** Fatal error: Unable to load BKR message repository.'
Say '***'
Exit rc
End

Address 'COMMAND' 'EXEC AMV$CPRT' /* Emit run-time copyright banner */
If rc ^= 0 then;
Exit rc

'CP QUERY CPLEVEL' /* Capture current CPLEVEL in console log */
Say ' '
'QUERY CMSLEVEL' /* Capture current CMSLEVEL in console log */
Apply_Patches:

'ACCESSM0 ON'
If rc ^= 0 then;
Do;
Say '*** Return code' rc 'from ACCESSM0 command.'
Say '*** Ensure that the ACCESSM0 MODULE is available and try again.'
Exit rc
End;

CP_Settings:
'EXECIO * CP (SKIP STRING SET RUN ON'
'EXECIO * CP (SKIP STRING SET CPCONIO OFF'
'EXECIO * CP (SKIP STRING SET VMCONIO OFF'
'EXECIO * CP (SKIP STRING SET WNG ON'
'EXECIO * CP (SKIP STRING SET MSG ON'
'EXECIO * CP (SKIP STRING SET SMSG ON'
'EXECIO * CP (SKIP STRING SET ACNT OFF'
'EXECIO * CP (SKIP STRING TERM LINESIZE 255 ATTN OFF'
'EXECIO * CP (SKIP STRING TERM BREAKIN GUESTCTL'
'EXECIO * CP (SKIP STRING SPOOL 00C CL * HOLD'
'EXECIO * CP (SKIP STRING SPOOL 00E TO * NOCONT NOHOLD'
'EXECIO * CP (SKIP STRING SPOOL 00D TO * NOCONT NOHOLD'Set_PF_Keys:
'EXECIO * CP (SKIP STRING SET RETRIEVE MAX'
'EXECIO * CP (SKIP STRING SET PF1 RETRIEVE'
'EXECIO * CP (SKIP STRING SET PF12 RETRIEVE'

CMS_Settings:
'SET RDYMSG LMSG'
'EXEC DEFAULTS SET NETDATA RECEIVE NOLOG'
'EXEC DEFAULTS SET NETDATA SEND NOLOG'

Final_Setup:
/* Any other commands? */

Greet_and_Launch:
Say '*** Preparing to launch Master Archive server functions...'
Address 'COMMAND' 'EXEC ARKSRVR' /* Fire up master archive server engine */
SVMrc = rc
Say '*** Master Archive kernel exited with return code' SVMrc '.'

Exit SVMrc

```

Figure 10. ARKPROF SAMPEXEC file (continued)

## WRKPROF SAMPEXEC

The following figure shows the sample WRKPROF SAMPEXEC file provided with Archive Manager.

```

/* Recommended PROFILE EXEC for worker task service virtual machines */
/*****
*
* Site-specific configuration:
*
* 1) Modify SPOOL CONSOLE to direct console to local AMV
* administrator (Default is AMVADMIN)
*
* 2) Make ACCESSM0 MODULE available to worker processes.
*
* 3) Access AMV configuration files as filemode 'B'.
*
* 4) Access AMV runtime routines as filemode 'C'.
*
* 6) Provide a temporary work area at filemode 'D'. The
* work area must be large enough to contain scratch files
* and temporary job images created during migration
* processing.
*
*****/

Address 'COMMAND'

'CP SPOOL CONSOLE TO AMVADMIN CLASS T TERM START'

/* For MINIDISK-based installations, use these definitions: */
/*
Config_Files = '198'
SVM_RunTime = '591'
*/

/* For SFS-based installations, use these definitions: */
/*
Config_Files = 'VMSYS:5697J05A.ARCHMGR.CONFIGURATION'
SVM_RunTime = 'VMSYS:5697J05A.ARCHMGR.RUNTIME'
*/

/* Identify the destination for temporary files. */
/* Work_Area = 'VMSYS:USERID()'.WORKAREA' */ /* For SFS-based work area... */
/* Work_Area = '299' */ /* For minidisk; must be formatted and ready for use... */

/* If IBM Tape Manager for z/VM is in use, then the Tape Manager
client interface (TAPCMD MODULE) and any required configuration
files must also be available. If these are not installed on
the CMS system "Y" disk (normally MAINT 19E), then configure
this section: */

/* Substitute the minidisk address or SFS directory path for */
/* Tape Manager, and un-comment the next two lines: */
/* Tape_Manager = '410' */
/* 'ACCESS' Tape_Manager 'T/T' */
'CP LINK 5697J08B 410 410 RR'
'ACCESS 410 T/T'

/* AMVWRKnn service virtual machines require use of ACCESSM0 MODULE. */
/* This file is normally installed on MAINT 193. */

'CP LINK MAINT 193 993 RR' /* Home of ACCESSM0 MODULE */
'ACCESS 993 U' /* Pick up ACCESSM0 now */
'ACCESS 19D X/S * * X2' /* CMS system HELP files */
'ACCESS 19E Y/S' /* CMS system "Y" disk */

/*****
/****
/**** End of site configuration section - please do not modify ****
/**** the remaining sections of the Worker task SVM PROFILE EXEC ****
/**** ****
*****/

'ACCESS' Config_Files 'B/B'
'ACCESS' SVM_RunTime 'C/C'
'ACCESS' Work_Area 'D'

'SET LANGUAGE (ADD AMV USER' /* Load AMV message repository */
If rc ^= 0 then;
Do;
Say '***'
Say '*** Fatal error: Unable to load AMV message repository.'
Say '***'
Exit rc
End

```

Figure 11. WRKPROF SAMPEXEC

```

'SET LANGUAGE (ADD BKR USER'      /* Load AMV message repository */
If rc ^= 0 then;
Do;
  Say '***'
  Say '*** Fatal error: Unable to load BKR message repository.'
  Say '***'
Exit rc
End

Address 'COMMAND' 'EXEC AMV$CPRT' /* Emit run-time copyright banner */
If rc ^= 0 then;
  Exit rc

'CP QUERY CPLEVEL'      /* Capture current CPLEVEL in console log */
Say ' '
'QUERY CMSLEVEL'      /* Capture current CMSLEVEL in console log */
Apply_Patches:

'ACCESSM0 ON'
If rc ^= 0 then;
Do;
  Say '*** Return code' rc 'from ACCESSM0 command.'
  Say '*** Ensure that the ACCESSM0 MODULE is available and try again.'
Exit rc
End;

CP_Settings:
'EXECIO * CP (SKIP STRING SET RUN ON'
'EXECIO * CP (SKIP STRING SET CPCONIO OFF'
'EXECIO * CP (SKIP STRING SET VMCONIO OFF'
'EXECIO * CP (SKIP STRING SET WNG ON'
'EXECIO * CP (SKIP STRING SET MSG ON'
'EXECIO * CP (SKIP STRING SET SMSG ON'
'EXECIO * CP (SKIP STRING SET ACNT OFF'
'EXECIO * CP (SKIP STRING TERM LINESIZE 255 ATTN OFF'
'EXECIO * CP (SKIP STRING TERM BREAKIN GUESTCTL'
/* Jobs for worker tasks arrive as class 'J'; pause flags as class 'P'. */
'EXECIO * CP (SKIP STRING SPOOL 00C CL * HOLD'
'EXECIO * CP (SKIP STRING SPOOL 00E TO * NOCONT NOHOLD'
'EXECIO * CP (SKIP STRING SPOOL 00D TO * NOCONT NOHOLD'
'EXECIO * CP (SKIP STRING SET 370ACCOM ON' /* Required for worker tasks */Set_PF_Keys:
'EXECIO * CP (SKIP STRING SET RETRIEVE MAX'
'EXECIO * CP (SKIP STRING SET PF1 RETRIEVE'

CMS_Settings:
'SET RDYMSG LMSG'
'EXEC DEFAULTS SET NETDATA RECEIVE NOLOG'
'EXEC DEFAULTS SET NETDATA SEND NOLOG'

Final_Setup:
/* Any other commands? */

Greet_and_Launch:
Say '*** Preparing to launch Worker Task functions...'
Address 'COMMAND' 'EXEC WRKSRVR'      /* Fire up worker svm engine */

Say '*** Worker kernel exited with return code' rc'.'

Exit rc

```

Figure 12. WRKPROF SAMPEXEC (continued)

---

## Chapter 3. Administration

These topics provide information about managing the Archive Manager service virtual machines and configuring and managing storage.

### Topics:

- “Archive server management”
- “Configuring and managing storage”
- “Configuring and managing storage classes” on page 30
- “Managing worker service virtual machines” on page 32

---

## Archive server management

The archive service virtual machine, AMVARKIV, verifies and processes archive requests initiated by clients.

The archive server manages client data and the Archive Manager storage media.

### Starting the server

After you provision AMVADMIN and after you have installed the ARKPROF EXEC on the archive server (AMVARKIV) 'A' disk (or directory) as PROFILE EXEC, start the archive server using the CP AUTOLOG command.

For example: 'CP AUTOLOG', 'CP XAUTOLOG', or by direct login followed by '#CP DISCONN'. When properly installed, the console log will be spooled to user AMVADMIN. For information about the AUTOLOG command, see the *z/VM CP Command and Utility Reference*.

### Stopping the server

To stop the server, issue the HALT command on AMVARKIV's console or through SMSG.

For example: `cp msg AMVARKIV halt`

### Displaying the status of the server

To display the status of the server, issue the STATUS command on AMVARKIV's console or through SMSG.

For example: `cp msg AMVARKIV status`

---

## Configuring and managing storage

You configure and manage Archive Manager storage by defining storage groups and classes within the AMVSRVR CONFIG configuration file.

The AMVSRVR CONFIG configuration file is divided into sections. The first section (denoted by the BEGIN\_GROUPS and END\_GROUPS parameters) enables

you to specify user-defined storage groups. The second section (denoted by the BEGIN\_CLASSES and END\_CLASSES parameters) enables you to specify storage classes.

See “Step 5. Copy and customize the AMVSRVR CONFIG file” on page 18 for an example of an AMVSRVR CONFIG file (AMVSRVR.CONFSAMP).

**Note:** Any modification to the configuration files (AMVSYSTEM CONFIG, AMVSRVR CONFIG, and AMVUSERS NAMES) requires a restart of the AMVARKIV service virtual machine to implement the changes.

## Defining storage groups

A storage group is a user-defined file that points to lists of users (ROSTERS) that should have access to a storage class.

To implement this type of storage group, perform the following steps:

1. Specify a *groupname* in the AMVSRVR CONFIG file.
2. Create a corresponding *groupname* GROUPLST file.
3. Create a *rostername* ROSTER file to be referenced by the *groupname* GROUPLST file.

**Note:** Archive Manager provides sample storage group definition files (ALLUSERS ROSTER and ALLUSERS GROUPLST). These files should be available on 5697J05A 198 or VMSYS:5697J05A.ARCHMGR.CONFIGURATION as appropriate. These files do not need to be copied to MAINT 19E.

Figure 13 shows the relationship between the ROSTER storage group *groupname*, GROUPLST file, and ROSTER file.

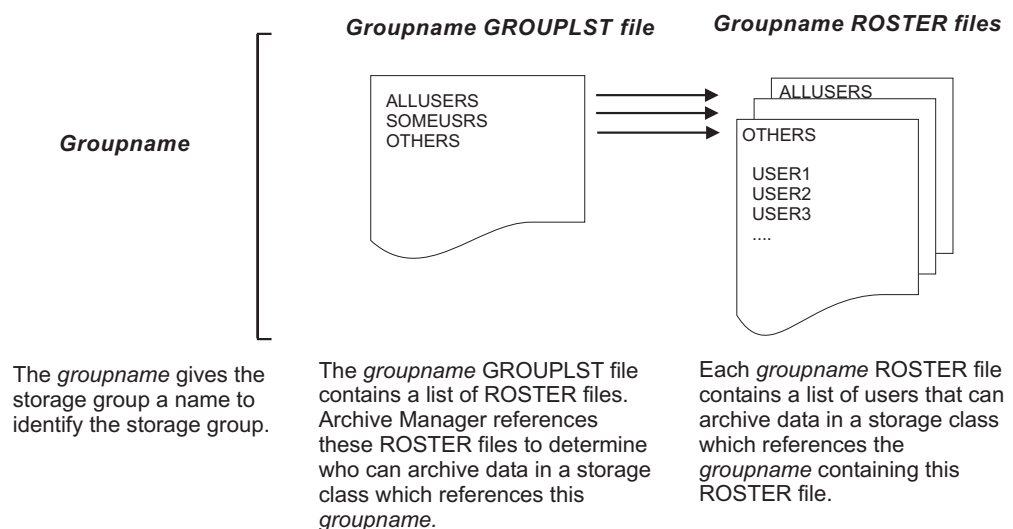


Figure 13. ROSTER (user-defined) storage group definition



## Defining groupnames

Specifying a *groupname* identifies a storage group you want to implement.

You can specify one or more group names that you want implement.

Specify group names between the BEGIN\_GROUPS keyword and the END\_GROUPS keyword. The name you specify can be any user-defined name, 1-8 characters in length, that defines a particular group of users (for example ALLUSERS or SOMEUSRS).

For example:

```
BEGIN_GROUPS  
ALLUSERS  
SOMEUSRS  
*OTHERS  
END_GROUPS
```

In the example, three groups are specified: ALLUSERS, SOMEUSRS, and OTHERS.

**Note:** Because the *groupname* OTHERS is denoted with an asterisk (\*) this storage group will not be used.

## Defining a GROUPLST file

After specifying the group names, define a corresponding GROUPLST file for each group.

Each GROUPLST file contains a list of one or more ROSTER files.

| For example, for the storage group ALLUSERS, you would define an ALLUSERS  
| GROUPLST file to contain a list of one or more ROSTER filenames that the storage  
| group should reference. In the example, ALLUSERS is listed within the ALLUSERS  
| GROUPLST file. Thus, Archive Manager will use the contents of the ALLUSERS  
| ROSTER file to determine user access to archive data in any storage class that  
| references the ALLUSERS storage group.

## Defining a ROSTER file

| After you define the GROUPLST file, define a *rostername* ROSTER file to contain  
| the user IDs that are permitted to archive data in any storage class which  
| references the *groupname* storage group.

Entries in a ROSTER file can be an explicit virtual machine name or a wildcard expression. The same wildcard conventions as those used in the CMS LISTFILE command apply.

For example:

```
AUSER  
USER123  
ABCUSER
```

In the example, only users AUSER, USER123, and ABCUSER will be permitted access to parcels that belong to the *groupname* storage group.

---

## Configuring and managing storage classes

A *storage class* identifies a storage media resource, such as a set of minidisks, a tape media pool, or SFS filespaces that are owned by the archive server which uses them to store parcel files. Each storage class can only be used by the *groupname* specified on the storage class definition. Therefore, you may have multiple storage classes with the same media type (tape, minidisk, or SFS).

### Defining simplex storage classes

When you define a storage class as simplex, one copy of each parcel is stored.

### Defining duplex storage classes

When you define a storage class as duplex, two copies of each parcel are stored.

Duplex storage classes create primary and alternate parcel locations which must be of the same media type. For example, if you define a DUPLEX TAPE storage class, the primary and alternate parcel locations must both be defined as TAPE.

You can define these types of duplex storage classes:

- DUPLEX TAPE classes—The primary and alternate parcel copies are written to separate pieces of media.
- DUPLEX EDF classes—It is recommended that the primary and alternate minidisks reside on different volumes. A warning will be issued if the primary and alternate minidisks reside on the same real volume. Duplex minidisk classes where both minidisks reside on the same real DASD volume are permitted, though not recommended.
- DUPLEX SFS classes—It is recommended that the primary and alternate copies reside in different file pools and the SFS servers are configured in such a manner that all data are maintained on separate real DASD volumes. A warning will be issued if the primary and alternate filespaces are maintained in the same file pool. Duplex SFS classes where both filespaces are maintained in the same file pool are permitted, though not recommended.

**Note:** For DUPLEX SFS classes, Archive Manager will not attempt to detect the case where different file pools have minidisks on the same real DASD volumes, or the case where a file pool has multiple minidisks on the same real volume.

### Determining your storage needs

When configuring storage class definitions, first determine how much data you want the storage class to contain.

- For minidisk-based storage, the minidisk should be large enough to contain the amount of data the administrator decides to commit to the class. If the class is defined as a DUPLEX class (two minidisks, one copy of archived data to each minidisk), multiply the requirements by two (2).
- SFS-based classes are less strict since SFS does not impose the same hard limits as a minidisk. The administrator assigns a maximum quota when filespaces are created, but this can be altered dynamically if more storage is needed. If the SFS server needs more storage, you must add more DASD space to the SFS server.
- Tape classes have even more relaxed limits— simply provide the server with another tape volume (or pair of volumes if the class is a duplex class).

**Note:** Capacity of a storage class is determined according to the size of minidisks, or available storage in SFS resources. If media capacity is exceeded, minidisk sizes can be increased or SFS storage limit quotas can be raised.

## Configuring storage class definitions

Specify the following parameters for each storage class definition.

Storage class definition parameters are:

**CLASSNAME**

The 1-8 character name of the storage class.

**MEDIATYPE**

Specify the type of media, one of the following: EDF, SFS, TAPE

**PLEXTYPE**

Specify either SIMPLEX or DUPLEX.

**Mindays**

Specify the minimum retention period, in days (integer).

**Defdays**

Specify the default retention period, in days (integer).

**Maxdays**

Specify the maximum retention period, in days (integer).

**PrimaryLoc**

Specify the minidisk address, filesystem, or tape pool for primary copy.

**GroupList**

Specify the filename of the "fn GROUPLST" file (contains a list of the ROSTERS that are allowed access to this class.)

**SecondaryLoc**

Specify the minidisk address, filesystem, or tape pool for secondary copy. (Specify a dash "-" if PLEXTYPE is set to SIMPLEX.)

**Flags** Specify Y or N for each:

- RENEW — Controls whether or not clients can use the "renew" function to extend expiration of a parcel.
- REMOVE — Controls whether or not clients can use the "remove" function to delete a parcel from the archive.
- TRANSFER — Controls whether or not clients can use the "transfer" function to pass ownership of a parcel to another user.
- MIGRATE — Controls whether or not clients can use the "migrate" function to relocate parcels to another storage class.
- IMAGE — Controls whether or not clients can use the IMAGE keyword of the ARCHIVE command when creating parcels for this class.
- COMPRESSION — (Reserved.)
- ENCRYPTION — (Reserved)

Figure 14 on page 32 shows an example of storage class definitions.

```

BEGIN_CLASSES
*      name      type plex  min/def/max  pri_media      groups  alt_media  flags
*
Define_Class DEFAULT  EDF  SIMPLEX 1 365 365      E00            ALLUSERS  -        Y Y Y Y N N N
*
* Class CUSTOM: An example of a minidisk-based DUPLEX media resource.
*
Define_Class CUSTOM   EDF  DUPLEX 1 365 99999999 E10            ALLUSERS  E11      Y Y Y Y N N N
*
* Class TAPE1: A simplex storage class that pulls SCRATCH tapes for new media
*
Define_Class TAPE1    TAPE SIMPLEX 1 365 365      SCRATCH        ALLUSERS  SCRATCH  Y Y Y Y N N
*
* Class SFSSIMPL: A single-copy class based on SFS-provided media
*
Define_Class SFSSIMPL SFS  SIMPLEX 1 365 365      ROCKSFS1:AMVARKIV.SIMPLEX ALLUSERS  -        y y y y n n
*
* Class SFSDUPL: A dual-copy class based on SFS-provided media
*
Define_Class SFSDUPL  SFS  Duplex 1 365 99999999 ROCKSFS1:AMVARKIV.DUPLEX.PRIMARY ALLUSERS  ROCKSFS2:AMVARKIV.DUPLEX.SECONDARY Y Y Y Y N N
*
END_CLASSES

```

Figure 14. Example storage class definitions

## Managing worker service virtual machines

Worker service virtual machines process archive and retrieval requests that involve tape. Workers interface directly with tape and minidisk resources and are logged on to the system only for the duration of processing.

**Note:** Worker service virtual machines are started automatically by the archive server. When a worker service virtual machine starts running, it automatically registers with the archive server.

### Stopping a worker service virtual machine

To stop a worker service virtual machine, issue the HALT command on the worker's console or through SMSG, or issue the CANCEL command on AMVARKIV's console or through SMSG.

For example: CP SMSG amvwrk05 HALT or CP SMSG AMVARKIV CANCEL amvwrk05

### Displaying the status

Issue the STATUS command to display the status of an Archive Manager service virtual machine.

**Note:**

- Under most circumstances, it is recommended that you direct status requests to the archive service virtual machine, AMVARKIV.
- Worker service virtual machines respond to a status inquiry only when they are idle.

To display the status of a worker service virtual machine, issue the STATUS command. For example: cp smsg amvwrk05 status

### Adding worker service virtual machines

To add a worker service virtual machine, complete these steps:

1. Create the new AMVWRKxx user in the CP directory (you can use an existing user as a model).

2. Set up the PROFILE EXEC for the new AMVWRKxx user (to do so, copy an EXEC from another worker).
3. Add the new worker service virtual machine to the list of workers in the AMVUSERS NAMES file.
4. Restart AMVARKIV.

## Removing worker service virtual machines

To remove a worker service virtual machine, modify the AMVUSERS NAMES configuration file to remove the additional worker service virtual machines and then restart AMVARKIV.



---

## Chapter 4. Common commands

These commands are valid for the Archive Manager archive and worker service virtual machines.

The Archive Manager administrator can interact with the archive servers by logging onto them and typing commands directly on their console, or by issuing the CP SMSG command from an administrator user ID. (For example: CP SMSG AMVARKIV CMS QUERY CMSLEVEL.) Any user with administrative privileges can employ this facility to issue commands to the Archive Manager servers.

**Note:** Users with administrative privileges must be identified as such within the AMVUSERS NAMES configuration file.

---

### CMS

Use the CMS command to issue a CMS command within the archive server.

#### Authorization

System Administrator.

►►—CMS—*cms\_command*—◄◄

Figure 15. CMS command syntax

#### Operands

##### **cms\_command**

Any valid CMS command.

#### Example

Figure 16 shows an example of the CMS command QUERY CMSLEVEL.

```
cp msg amvarkiv cms query cmslevel
Ready;

  CMS Level 23, Service Level 902
Return code: 0
```

Figure 16. CMS command example

---

### CP

Use the CP command to issue a CP command within the archive server.

#### Authorization

System Administrator.

▶▶—CP—*cp\_command*—▶▶

## Operands

### *cp\_command*

Any valid CP command.

## Example

Figure 17 shows an example of the CP command QUERY CPLEVEL.

```
cp smsg amvarkiv cp query cplevel
Ready;

z/VM Version 5 Release 3.0, service level 0902 (64-bit)
Generated at 12/01/09 16:39:30 CDT
IPL at 06/03/10 08:18:22 CDT
Return code: 0
```

Figure 17. CP command example

---

## HALT

The HALT command stops the archive service virtual machine process for either AMVARKIV or AMVWRKnn. For AMVARKIV, the ARKSRVR EXEC exits and control is returned to CMS. For AMVWRKnn, the WRKSRVR EXEC exits and control is returned to CMS.

▶▶—HALT—▶▶

Figure 18. HALT command syntax

## Authorization

System Administrator.

## Operands

This command has no operands.

## Example

Figure 19 shows an example of the HALT command issued to halt the archive server.

```
cp smsg amvarkiv halt
Ready;

ARKSRVR ended by HALT command at 06/20/05 14:18:36.
```

Figure 19. HALT command example

---

## STATUS

Use the STATUS command to obtain runtime status of a server.



## Authorization

System Administrator.

►►—STATUS—server—◄◄

Figure 20. STATUS command syntax

### Operands

**server** The name of the server whose runtime status you want to obtain.

### Example

Figure 21 shows an example of the STATUS command issued to obtain runtime status for the archive server (AMVARKIV).

```
cp smsg amvarkiv status

SVM Name   : ARKSRVR - 5697-J05 IBM Archive Manager for z/VM - Master Archive SVM - Version 1.1.0
Compiled on: 20 Jun 2005 - 11:49:01
SVM Owner  : A User - a.user@abccompany.com
SVM Started: Monday, 20 Jun 2005 11:49:22
Catalog SVM: AMVCATLG
Minidisk Processing via: DEFMDISK
Worker info as of 14:13:39:
    No workers have been activated yet
```

Figure 21. STATUS command example



---

## Chapter 5. Archive commands

Administrators use these commands to manage archive parcels, determine archive quota and expiration information, and retrieve content from the archive.

**Note:** Archive commands described in this chapter can only be issued on the AMVARKIV service virtual machine. These commands can be issued directly on the console of AMVARKIV (unless otherwise noted) or from an authorized user ID by issuing the CP SMSG AMVARKIV *command*.

These commands can only be used by Archive Manager administrators, as defined in the AMVUSERS NAMES file. Commands that are available to both administrators and general users are described in the *Archive Manager for z/VM User's Guide*.

---

### EXPIRE

Use the EXPIRE command to display expiration information for all parcels and optionally delete content from the archive.

#### Authorization

System Administrator.



#### Options

##### PURGE

Display parcel expiration information and delete the expired content from the archive.

##### PREVIEW

(Default.) Display parcel expiration information but do not delete the expired content from the archive.

#### Example

Figure 22 on page 40 shows an example of the EXPIRE command. In this example, parcel expiration information will be displayed and expired content will be deleted from the archive.

```

cp smsg amvarkiv expire (purge
Ready;
AMVARK9281I Parcel 000000EC expires after 6 Mar 2011.
AMVARK9281I Parcel 000000E0 expires after 24 Feb 2011.
AMVARK9281I Parcel 000000E1 expires after 24 Feb 2011.
AMVARK9281I Parcel 000000E2 expires after 24 Feb 2011.
AMVARK9281I Parcel 000000E3 expires after 2 Mar 2011.
AMVARK9281I Parcel 000000E4 expires after 2 Mar 2011.
AMVARK9281I Parcel 000000E5 expires after 2 Mar 2011.
AMVARK9281I Parcel 000000E6 expires after 2 Mar 2011.
AMVARK9281I Parcel 000000E7 expires after 2 Mar 2011.
AMVARK9281I Parcel 000000E8 expires after 3 Mar 2011.
AMVARK9281I Parcel 000000E9 expires after 3 Mar 2011.
AMVARK9281I Parcel 000000FF expires after 7 Apr 2011.
AMVARK9281I Parcel 000000F6 expires after 6 Apr 2011.
AMVARK9281I Parcel 000000F8 expires after 6 Apr 2011.
AMVARK9281I Parcel 000000F9 expires after 6 Apr 2011.
AMVARK9281I Parcel 00000100 expires after 7 Apr 2011.
AMVARK9281I Parcel 00000101 expires after 7 Apr 2011.
AMVARK9281I Parcel 00000102 expires after 7 Apr 2011.
AMVARK9281I Parcel 00000104 expires after 7 Apr 2011.
AMVARK9281I Parcel 0000011E expires after 12 Aug 2011.
AMVARK9281I Parcel 0000011F expires after 12 Aug 2011.
AMVARK9281I Parcel 00000110 expires after 11 Aug 2011.
AMVARK9281I Parcel 00000111 expires after 11 Aug 2011.
AMVARK9281I Parcel 00000112 expires after 11 Aug 2011.
AMVARK9281I Parcel 00000113 expires after 11 Aug 2011.
AMVARK9281I Parcel 00000120 expires after 12 Aug 2011.
AMVARK9281I Parcel 00000121 expires after 13 Aug 2011.
AMVARK9281I Parcel 00000122 expires after 13 Aug 2011.
AMVARK9281I Parcel 00000123 expires after 13 Aug 2011.
AMVARK9281I Parcel 00000124 expires after 13 Aug 2011.
AMVARK9281I Parcel 00000125 expires after 13 Aug 2011.
AMVARK9281I Parcel 00000126 expires after 20 Aug 2011.
AMVARK9281I Parcel 00000127 expires after 20 Aug 2011.
AMVARK9281I Parcel 00000132 expires after 26 Aug 2011.
Return code: 0

```

Figure 22. EXPIRE example

## QUERY TAPE

Use the QUERY TAPE command to display information for any tape listed in the archive catalog.

### Syntax diagram

►►—QUERY TAPE—*tapespec*—◄◄

Figure 23. QUERY TAPE command syntax

### Authorization

Administrator.

### Operands

#### *tapespec*

*tapespec* can be null, a specific tape volume label, or a wildcard expression. Null is interpreted as a "\*" (all volumes).

**Note:** The wildcard expression is limited to the range of expressions supported by the CMS LISTFILE command.

### Example (command issued by general user)

Figure 24 shows a response to a QUERY TAPE command issued by a general user.

```
cp msg amvarkiv query tape
Ready;
Return code: 4 Insufficient privileges.
```

Figure 24. QUERY TAPE example (command issued by a general user)

### Example (active volumes)

Figure 25 shows a response with a null value for *tapespec*, with three volumes active in the archive catalog.

```
cp msg amvarkiv query tape
Ready;
3 volumes selected by spec *.
P20095 contains 8 active parcels.
P20096 contains 5 active parcels.
P20098 contains 11 active parcels.
Return code: 0 Command complete.
```

Figure 25. QUERY TAPE example (active volumes)

### Example (single volume)

Figure 26 shows a response to a QUERY TAPE command for a specific volume.

```
cp msg amvarkiv query tape p20098
Ready;
1 volumes selected by spec P20098.
P20098 contains 11 active parcels.
Return code: 0 Command complete.
```

Figure 26. QUERY TAPE example (single volume)

### Example (inquiry for a volume that is not present in the tape catalog)

Figure 27 shows a response to a QUERY TAPE command for an inquiry for a volume that is not present in the tape catalog.

```
cp msg amvarkiv query tape p20099
Ready;
Return code: 4 No tapes selected by spec P20099.
```

Figure 27. QUERY TAPE example (inquiry for a volume that is not present in the tape catalog)

---

## SET QUOTA

Use the SET QUOTA command to establish or modify quota limits.

## Syntax diagram

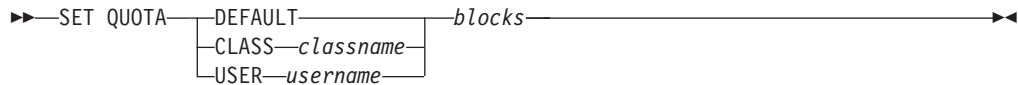


Figure 28. SET QUOTA command syntax

## Authorization

System Administrator.

**Note:** This command is not enabled for use through the service machine console.

## Options

### DEFAULT

Use the SET QUOTA DEFAULT command to set a system-wide default quota. This limits the number of 4K data blocks an individual user is allowed to consume from archive storage resources.

**Note:** The DEFAULT quota is applied only if there is no user-specific or storage class-specific quota in effect. If you do not specify a DEFAULT quota then the system-wide default quota is unlimited. (User-specific or storage class-specific quotas are still applicable.)

### CLASS *classname*

Sets the default quota for the specified storage class (*classname*). Storage class quotas override the system default and user-specific quotas. Wildcard characters are not permitted.

### USER *username*

Sets the user-specific quota established for the specified user (*username*). This quota will be applied instead of the default system-wide quota. Storage class-specific quotas will supersede this limit for the particular storage class if class-specific quotas are defined. Wildcard characters are not permitted.

## Operands

**blocks** Where *blocks* can be:

- An integer. A value of 99999999 is interpreted as "no limit".
- An integer prefixed with a + or - to indicate a delta value. *+blocks* will increase a previously defined quota by the specified number of blocks. *-blocks* will reduce a previously defined quota.

### Note:

- Quota values are calculated as a number of 4K (4096 byte) blocks.
- All quota settings are persistent across restarts and system IPLs.

## Example

Figure 29 on page 43 shows an example where the default system-wide quota limit is set (99999999 4K blocks).

```

cp smsg amvarkiv set quota default 99999999
Ready;
Return code: 0

```

Figure 29. SET QUOTA example

## Appendix. Messages and codes

All messages generated by Archive Manager have a severity code (E, I, R, S, T, or W) as the last character of the message ID.

Severity codes are described in Table 3.

Table 3. Severity codes

Code	Description
E	Error message. Some errors might be user-correctable, read the User Response text to determine the appropriate course of action.
I	Information message. No user action required.
R	Response message.
S	Severe.
T	T (terminal as in termination or ABEND).
W	Warning message. Results might not be as expected.

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IBM Corp.

**Explanation:** Product copyright notice.

**System action:** None.

**User response:** No action required.

**8001E** DMSEXIST return code *rc*, reason code  
*reason\_code* while attempting to locate  
input file.

**Explanation:** The specified input file could not be located by the DMSEXIST CSL routine.

**System action:** The operation terminates.

**User response:** Retry the operation with a valid filename, filetype, and filemode.

**8002T** Return code *rc* from subroutine  
subroutine; abend code is *abend\_code*  
return code.

**Explanation:** The specified subroutine responded with an unhandled result. An ABEND has been triggered.

**System action:** The issuing routine ABENDs.

**User response:** Record accompanying diagnostic information and contact Technical Support.

**8003S** Insufficient free storage available to  
satisfy CMSSTOR OBTAIN operation  
(DMSEXIST).

**Explanation:** Insufficient CMS free storage was available during processing of a CMSSTOR OBTAIN request.

**System action:** Processing is terminated.

**User response:** Define a larger virtual machine storage size and retry the operation.

**8004S** Insufficient free storage available to  
satisfy CMSSTOR OBTAIN operation  
(DMSREAD).

**Explanation:** Insufficient CMS free storage was

available during processing of a CMSSTOR OBTAIN request.

**System action:** Processing is terminated.

**User response:** Define a larger virtual machine storage size and retry the operation.

**8005E**      **DMSOPEN return code *rc*, reason code *reason\_code* during attempt to open target input file.**

**Explanation:** The DMSOPEN CSL routine gave a non-zero return code while attempting to access a CMS file.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the operation with a valid filename, filetype, and filemode. If a valid file was specified, and the condition persists, contact Technical Support.

**8006E**      **DMSREAD return code *rc*, reason code *reason\_code* while reading input file.**

**Explanation:** The DMSREAD CSL routine encountered an abnormal condition while processing a CMS file.

**System action:** The operation terminates with a non-zero return code.

**User response:** Review the DMSREAD return code and reason and if possible, pursue corrective action; if the condition persists, contact Technical Support.

**8007E**      **Syntax: "*command filename filetype filemode (options)*" Valid options are TYPE, STACK, and COUNT**

**Explanation:** This message is issued by several Archive Manager utility functions if the command is invoked with incorrect syntax.

*command* is the command or function name which was invoked with incorrect parameters.

*filename filetype filemode* refers to a valid CMS file ID.

*options* represents one or more supported option. For this set of functions, valid options are TYPE, STACK and COUNT.

**System action:** The operation terminates with a non-zero return code.

**User response:** Review the documentation for the issuing command and retry the operation with correct syntax and (or) operands.

**8008I**      ***routine* read *n* records from input file.**

**Explanation:** The identified routine is exiting with normal status; the summary information identifies the number of records processed from the input file.

**System action:** Normal termination.

**User response:** None.

**8009E**      **Target virtual device address must be a valid hexadecimal number.**

**Explanation:** An operand that is required to be a valid hexadecimal virtual device address contained an invalid hexadecimal character.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the operation with a valid virtual device address.

**8010E**      **Function code must be either LINK or DRCT.**

**Explanation:** AMVDIAE4 was invoked with an invalid operand.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the operation with valid syntax and operands.

**8011E**      **Unable to extract minidisk description; CP DIAG x'00E4' return code was *rc*.**

**Explanation:** AMVDIAE4 was unable to successfully obtain minidisk extent description information through DIAG E4.

**System action:** The operation terminates.

**User response:** Consult with your installation's system programmer to determine if CP DIAG E4 is unavailable to your virtual machine due to local privilege restrictions.

**8012T**      **Input stream is out of sequence; unable to continue processing.**

**Explanation:** Out -of-sequence information was encountered in an archive parcel data file. This condition indicates a data corruption issue affecting the archive parcel file. This message is typically followed by DMSABN 013.

**System action:** The operation terminates.

**User response:** Contact Technical Support.



---

**8013T**      **Record length discrepancy in &1.**

**Explanation:** This message is typically followed by DMSABN 013.

**System action:** The operation terminates.

**User response:** Contact Technical Support.

---

**8014T**      **Return code *rc* from output handler routine.**

**Explanation:** An I/O handler encountered an error. *rc* is the output handler return code. *routine* is the name of the output handler routine.

**System action:** The calling routine will exit with a non-zero return code.

**User response:** This message might be accompanied by additional supporting messages to the virtual machine console. If the problem persists, contact your system programmer or Technical Support.

---

**8015S**      **Metadata record length inconsistency; unable to continue.**

**Explanation:** This message is related to 8013, but is for non-abend scenarios.

**System action:** The operation terminates with a non-zero return code, but without ABEND.

**User response:** Contact Technical Support.

---

**8016E**      **\*\*\* Error: Command-line parsing failed.**

**Explanation:** The issuing routine was unable to parse command-line parameters correctly.

**System action:** The issuing routine exits with a non-zero return code.

**User response:** Review syntax and operands for the affected routine and contact Technical Support if necessary.

---

**8017E**      **\*\*\* Error: *filemode\_letter* is not a valid access mode letter.**

**Explanation:** An invalid CMS filemode letter was specified.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the operation with a valid CMS filemode letter.

---

**8018E**      **\*\*\* Return code *rc* from LISTFILE *filename filetype fm*.**

**Explanation:** The CMS LISTFILE command terminated with an unexpected return code.

---

**System action:** The operation terminates with a non-zero return code.

**User response:** Review configuration and (or) command syntax. If no corrective action is available, contact Technical Support.

---

**8019E**      **\*\*\* You are not the owner of *filesystem*; archive is not permitted.**

**Explanation:** The ARCHIVE command restricts archive operations to media owned by the invoking virtual machine. In this case, it was not possible to determine that the issuing user was the owner of the minidisk or SFS directory that was targeted for ARCHIVE operations.

**System action:** The command exits with a non-zero return code.

**User response:** Retry the operation from a user who owns the targeted minidisk or SFS directory.

---

**8020E**      **\*\*\* You are not the owner of *minidisk*; archive is not permitted.**

**Explanation:** The ARCHIVE command restricts archive operations to media owned by the invoking virtual machine. In this case, it was not possible to determine that the issuing user was the owner of the minidisk or SFS directory that was targeted for ARCHIVE operations.

**System action:** The command exits with a non-zero return code.

**User response:** Retry the operation from a user who owns the targeted minidisk or SFS directory.

---

**8021E**      **\*\*\* Return code *rc* from AMVDIAE4 (CP Diag E4 interface); processing can not continue.**

**Explanation:** AMVDIAE4 encountered an error condition while attempting to extract detailed minidisk extent information.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the operation; if the problem persists, contact Technical Support.

---

**8022E**      **\*\*\* Error - *operand* contains invalid hexadecimal data.**

**Explanation:** Invalid hexadecimal digits were encountered in an operand that should represent a valid virtual device address.

**System action:** The routine exits with a non-zero return code.

**User response:** Retry the operation specifying a valid virtual device address.

---

---

8023E      **\*\*\* Error - Null value for AccessVDEV.**

**Explanation:** A null value was found where a valid virtual device address was expected.

**System action:** the routine exits with a non-zero return code.

**User response:** Retry with a valid virtual device address.

---

8024E      **\*\*\* Error - ARCHIVE operations are not supported for VFB-512 virtual devices.**

**Explanation:** An ARCHIVE operation was requested for a temporary VFB-512 virtual device.

**System action:** The routine exits with a non-zero return code.

**User response:** Copy files to an SFS directory, a permanent minidisk, or a T3380 / T3390 temporary disk and retry the operation.

---

8025E      **\*\*\* Error - LISTFILE *filename filetype fm* returned 0 files.**

**Explanation:** The CMS LISTFILE command could not identify any files meeting the criteria specified on the ARCHIVE command.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the operation with a valid filename or filetype wildcard expression. If you are attempting to perform an IMAGE archive, use the "VDEV *ccuu* syntax of the ARCHIVE command.

---

8026E      **\*\*\* Error: CLASS requires an alternate storage class name.**

**Explanation:** The ARCHIVE command was invoked with an invalid storage class identified on the CLASS parameter.

**System action:** The operation terminates with a non-zero return code.

**User response:** Retry the command specifying a valid storage class.

---

8027E      **\*\*\* Invalid option *option*.**

**Explanation:** The issuing routine encountered an invalid parameter.

**System action:** The operation terminates with a non-zero return code.

**User response:** Review the syntax for the affected command and retry the operation with valid operands.

---



---

8028E      **Local\_Archive\_Server\_ID is not defined in AMVSYSTEM CONFIG.**

**Explanation:** No value was specified for **Local\_Archive\_Server\_ID** in AMVSYSTEM CONFIG.

**System action:** The operation terminates with a non-zero return code.

**User response:** Contact your local support staff for the correct product configuration.

---

8029E      **\*\*\* Error - Return code *rc* trying to write ARCHIVE CMSUT1 A.**

**Explanation:** The ARCHIVE command requires access to a read-write "A" disk for creation of an archive transaction. Either non R/W "A" disk was accessed, or insufficient free space is available on the current A disk.

**System action:** The operation terminates with a non-zero return code. No archive transaction has been submitted.

**User response:** Retry the operation with a R/W A-disk if none was available, or with additional free space at filemode "A."

---

8030E      **\*\*\* Error - SENDFILE return code *rc* while attempting to transmit request to archive server.**

**Explanation:** The ARCHIVE command delivers archive transaction requests to the archive server through SENDFILE. The SENDFILE command responded with a non-zero return code.

**System action:** The operation terminates with a non-zero return code.

**User response:** Consult your local system administrator; check the product configuration and contact Technical Support if necessary.

---

8031I      **\*\*\* Archive transaction has been submitted for processing. \*\*\*  
IMPORTANT: Do not alter or delete objects selected for archive until you receive confirmation that the archive transaction has been successfully processed.**

**Explanation:** An ARCHIVE operation created a transaction request and delivered it to the archive server for processing. Do not alter or delete content from the archive source until confirmation has been received that the transaction was successfully processed.

**System action:** A transaction has been passed to the archive server for processing.

**User response:** None.

---

---

8032E      **AMV\_Global\_Product\_Version is not defined in AMVSYSTEM CONFIG.**

**Explanation:** A valid value has not been specified for **AMV\_Global\_Product\_Version** in the AMVSYSTEM CONFIG file.

**System action:** None.

**User response:** **AMV\_Global\_Product\_Version** should be set to 1.1.0 and should not be modified.

---

8033E      **AMV\_Global\_Product\_ID is not defined in AMVSYSTEM CONFIG.**

**Explanation:** A valid value has not been specified for **AMV\_Global\_Product\_ID** in the AMVSYSTEM CONFIG file.

**System action:** None.

**User response:** **AMV\_Global\_Product\_ID** should be set to 5697-J05 and should not be modified.

---

8034E      **AMV\_Global\_Product\_ID is not defined in AMVSYSTEM CONFIG.**

**Explanation:** A valid value has not been specified for **AMV\_Global\_Product\_ID** in the AMVSYSTEM CONFIG file.

**System action:** None.

**User response:** **AMV\_Global\_Product\_ID** should be set to 5697-J05 and should not be modified.

---

8035E      **Local\_SVM\_Contact is not defined in AMVSYSTEM CONFIG.**

**Explanation:** A valid value has not been specified for **Local\_SVM\_Contact** in the AMVSYSTEM CONFIG file.

**System action:** None.

**User response:** Please specify a valid value for **Local\_SVM\_Contact**.

---

8036E      **Local\_Archive\_Admin\_ID is not defined in AMVSYSTEM CONFIG.**

**Explanation:** A valid value has not been specified for **Local\_Archive\_Admin\_ID** in the AMVSYSTEM CONFIG file.

**System action:** None.

**User response:** Please specify a valid value for **Local\_Archive\_Admin\_ID**.

---

| 8037E      **Local\_Archive\_Catalog\_ID is not defined in AMVSYSTEM CONFIG**

| **Explanation:** A valid value has not been specified for **Local\_Archive\_Catalog\_ID** in the AMVSYSTEM CONFIG file.

---

| **System action:** None.

| **User response:** Please specify a valid value for **Local\_Archive\_Catalog\_ID**.

---

8038E      **This routine should only be executed on the master archive server SVM. The configuration in AMVSYSTEM CONFIG identifies user *user\_id* as the archive server.**

**Explanation:** A service virtual machine process has been invoked by a user other than the one for which the SVM process is appropriate.

**System action:** The routine exits with a non-zero return code.

**User response:** If this message is received on a valid Archive Manager service virtual machine, check the content of AMVSYSTEM CONFIG and AMVUSERS NAMES for proper identification of service virtual machines.

---

8039I      **Minidisk archive processing will use CP LINK.**

**Explanation:** This informational message indicates that minidisk archive processing will use CP LINK.

**System action:** Archive transactions for minidisk sources will be processed using CP LINK.

**User response:** None required.

---

8040I      **Minidisk archive processing will use CP DEFINE MDISK.**

**Explanation:** This informational message indicates that minidisk archive processing will use CP DEFINE MDISK.

**System action:** Archive transactions for minidisk sources will be processed using CP DEFINE MDISK.

**User response:** None required.

---

8041E      **Invalid value *value* for AMVSYSTEM CONFIG setting of Archive\_Minidisk\_Via.**

**Explanation:** An invalid value was specified for the **Archive\_Minidisk\_Via** variable within the AMVSYSTEM CONFIG file.

**System action:** Configuration fails; the archive server will not be started.

**User response:** Specify a valid value for the **Archive\_Minidisk\_Via** variable within the AMVSYSTEM CONFIG file.

---

---

**8042E**      **Server configuration failed with *n* errors and *n* warnings.**

**Explanation:** Processing of AMVSRVR CONFIG resulted in one or more significant errors. Review the output of server startup for error messages, and correct the underlying problem as indicated.

**System action:** The server start-up is aborted.

**User response:** Correct resource definitions for the archive server or revise AMVSRVR CONFIG.

---

**8043E**      **ERROR: No storage groups defined in AMVSRVR CONFIG. At least one storage group must be defined.**

**Explanation:** No storage groups have been defined within the AMVSRVR CONFIG file. You must define at least one storage group.

**System action:** Server start-up is aborted.

**User response:** Define at least one storage group.

---

**8044E**      **ERROR: No storage classes defined in AMVSRVR CONFIG. At least one storage group must be defined.**

**Explanation:** No storage classes have been defined within the AMVSRVR CONFIG file. You must define at least one storage class.

**System action:** Server start-up is aborted.

**User response:** Define at least one storage class.

---

**8045E**      **ERROR: AMVSRVR CONFIG parameter "Staging\_Area" is undefined. A valid minidisk or SFS directory must be supplied for use as an archive parcel staging area.**

**Explanation:** You must provide a valid minidisk or SFS directory for use as an archive parcel staging area.

**System action:** Server start-up is aborted.

**User response:** Provide a valid minidisk or SFS directory for use as an archive parcel staging area.

---

**8202E**      **DMSQFMOD return code, reason code**  
*reason\_code.*

**Explanation:** The issuing application encountered a non-zero return code from an invocation of the CMS CSL routine DMSQFMOD. Archive Manager might use this routine to extract information associated with a CMS minidisk or SFS directory.

**System action:** This message could be issued in conjunction with Archive Manager service virtual machine initialization, if DMSQFMOD issues an error response during inspection of the archive staging area. It can also be issued during other archive operations.

Archive Manager will attempt to continue processing around this situation. This message might be issued in conjunction with other diagnostic information.

**User response:** The return codes and reason codes associated with CSL (CMS Callable Services Library) routines are documented in *z/VM: CMS Callable Services Reference*. If the issue cannot be resolved based on guidance specific to the return and reason codes displayed, contact your system programmer or Technical Support for additional assistance.

---

**9172W**      **Unsupported value *value* specified for variable *variable* in file *file\_id*.**

**Explanation:** This message is issued during service virtual machine initialization when an unsupported value is specified for a configuration setting in one of the Archive Manager configuration files.

**System action:** Service virtual machine initialization will continue. Once configuration files have been processed, the affected service virtual machine might attempt to continue if it is possible to assume a reasonable default for the affected setting. In some cases, it might not be possible to assume a default value. When this occurs, the affected service virtual machine will terminate once the configuration files have been processed.

**User response:** Review the product documentation for the configuration option displayed in this message and modify the setting to specify a supported value.

---

**9173E**      **Variable *variable* in file *file\_id* must be defined as *datatype*. The specified value, *value*, cannot be used.**

**Explanation:** This message is issued during service virtual machine initialization when a value of incorrect data type (for example, a character string where a numeric value is required) is specified for a configuration setting in one of the Archive Manager configuration files.

**System action:** Service virtual machine initialization will continue. Once configuration files have been processed, the affected service virtual machine might attempt to continue if it is possible to assume a reasonable default for the affected setting.

In some cases, it might not be possible to assume a default value. When this occurs, the affected service virtual machine will terminate once configuration files have been processed.

**User response:** Review the product documentation for the configuration option displayed in this message and modify the setting to specify a supported value.

---

---

| **9174E**      **No value has been specified for variable**  
|                    *variable* in file *file\_id*.

| **Explanation:** This message is issued during service  
| virtual machine initialization when a value of incorrect  
| data type (for example, a character string where a  
| numeric value is required) is specified for a  
| configuration setting in one of the Archive Manager  
| configuration files.

| **System action:** Service virtual machine initialization  
| will continue. Once configuration files have been  
| processed, the affected service virtual machine might  
| attempt to continue if it is possible to assume a  
| reasonable default for the affected setting.

| In some cases, it might not be possible to assume a  
| default value. When this occurs, the affected service  
| virtual machine will terminate once configuration files  
| have been processed.

| **User response:** Review the product documentation for  
| the configuration option displayed in this message and  
| modify the setting to specify a supported value.

---

| **9218E**      **Unable to continue service virtual**  
|                    **machine start-up.**

| **Explanation:** This message is issued during service  
| virtual machine initialization when an unrecoverable  
| error is encountered during configuration file  
| processing.

| **System action:** Service virtual machine initialization  
| terminates.

| **User response:** This message is issued in conjunction  
| with other diagnostic information. Review the console  
| log for the affected service virtual machine and modify  
| parameters specified in AMVSYSTEM CONFIG,  
| AMVUSERS NAMES, or AMVSRVR CONFIG as  
| indicated.

---

| **9219E**      **Unable to locate AMVSYSTEM CONFIG;**  
|                    **LISTFILE return code *rc*.**

| **Explanation:** This message is issued during service  
| virtual machine initialization if the required  
| configuration file AMVSYSTEM CONFIG cannot be  
| located on any active CMS file mode.

| **System action:** Service virtual machine initialization  
| terminates.

| **User response:** Inspect the affected service virtual  
| machine configuration and product installation to  
| verify whether or not the service virtual machine has  
| access to Archive Manager configuration files.

---

| **9220W**      **Attempting to continue service virtual**  
|                    **machine start-up.**

| **Explanation:** This message is issued during service  
| virtual machine initialization when a recoverable error  
| has been detected during processing of Archive  
| Manager configuration files. The severity of the  
| associated errors or warnings is low enough to allow  
| the affected service virtual machine to proceed with  
| initialization.

| **System action:** Service virtual machine operations will  
| continue past the initialization stage and the affected  
| SVM will attempt to enter normal operating mode.

| **User response:** Review the service virtual machine  
| console log for other diagnostic messages associated  
| with initialization processing. If possible, resolve any  
| issues with settings defined in the Archive Manager  
| configuration files to eliminate this message. The  
| affected service virtual machine will attempt to  
| continue operations — but this message indicates a  
| possible exposure to later issues.

---

| **9221W**      **Multiple copies (*count total*) of**  
|                    **AMVSYSTEM CONFIG were found.**

| **Explanation:** This message is issued when multiple  
| copies of AMVSYSTEM CONFIG are encountered in the  
| service virtual machine environment.

| **System action:** Service virtual machine initialization  
| will continue. The copy of AMVSYSTEM CONFIG used  
| to establish runtime configuration will be determined  
| according to normal CMS file system search order. The  
| effective copy of AMVSYSTEM CONFIG will be  
| identified in message 9222I.

| **User response:** In some cases, it might be appropriate  
| to have multiple copies of AMVSYSTEM CONFIG  
| present — for example, one copy on the product  
| installation virtual machine “config files” minidisk and  
| an addition copy on the CMS system Y-disk (MAINT  
| 19E). If multiple copies are deployed, it is important to  
| ensure they contain identical or compatible settings.

---

| **9222I**      **Service virtual machine configuration**  
|                    **derived from AMVSYSTEM CONFIG**  
|                    **located *locationspec* accessed as file mode**  
|                    ***fm*.**

| **Explanation:** This message is issued during service  
| virtual machine initialization. *locationspec* identifies the  
| SFS directory or CMS minidisk which contains the  
| effective copy of AMVSYSTEM CONFIG used to  
| configure the Archive Manager service virtual machine.  
| This value will be reported as:

- | • on minidisk userid *vdev* or
- | • in SFS directory *filepool:filesystem.directory*

| *fm* identifies the CMS file mode at which the minidisk  
| or directory is accessed.

---

| **System action:** Initialization processing continues.

| **User response:** None required.

---

| **9223E**      **Tape Manager interface TAPCMD  
MODULE is not available.**

| **Explanation:** This message is issued by the master  
| archive service virtual machine (AMVARKIV) when  
| Tape\_Handled\_Via\_EUM = 1 has been specified in  
| AMVSYSTEM CONFIG—but the client interface  
| TAPCMD MODULE is not present on any currently  
| accessed minidisk or SFS directory.

| **System action:** Service virtual machine initialization  
| terminates. If the TAPCMD MODULE interface to IBM  
| Tape Manager for z/VM is not available, Archive  
| Manager will be unable to request tape management  
| services.

| **User response:** Correct the Archive Manager service  
| virtual machine configuration to make Tape Manager  
| runtime components available to the affected service  
| virtual machine.

---

| **9224W**      **Return code *rc* from operation.**

| **Explanation:** A CMS command or function *operation*  
| invoked by Archive Manager resulted in a non-zero  
| return code.

| **System action:** If possible, Archive Manager will  
| attempt to recover from the situation and continue  
| processing.

| **User response:** This message can be issued in  
| conjunction with additional diagnostic information  
| provided by either Archive Manager or the affected  
| CMS command. If the issue cannot be resolved, contact  
| your system programmer or Technical Support.

---

| **9232E**      **Tape manager interface TAPCMD  
MODULE was not found on any  
accessed minidisk or directory.**

| **Explanation:** This message is issued by Archive  
| Manager worker (AMVWRKnn) service virtual  
| machines when Tape\_Handled\_Via\_EUM = 1 has been  
| specified in AMVSYSTEM CONFIG—but the client  
| interface TAPCMD MODULE is not present on any  
| currently accessed minidisk or SFS directory.

| **System action:** Service virtual machine initialization  
| terminates. If the TAPCMD MODULE interface to IBM  
| Tape Manager for z/VM is not available, Archive  
| Manager will be unable to request tape management  
| services.

| **User response:** Correct the Archive Manager service  
| virtual machine configuration to make Tape Manager  
| runtime components available to the affected service  
| virtual machine.

---

| **9233E**      **Required file *filename filetype* was not  
found on any accessed minidisk or  
directory.**

| **Explanation:** This message is issued during service  
| virtual machine initialization if a required component  
| or configuration file is not found in the current CMS  
| environment. This message can be issued for either  
| executable files installed with the product or for  
| essential configuration files (AMVSYSTEM CONFIG,  
| AMVSRVR CONFIG and AMVUSERS NAMES) which  
| must be customized and deployed by the installation.

| **System action:** Service virtual machine processing will  
| terminate once any remaining initialization processing  
| has completed.

| **User response:** Review the installation and  
| configuration procedures and requirements for Archive  
| Manager and ensure the indicated file is correctly  
| installed.

---

| **9234I**      **A new required components state  
tracking file, *filename filetype*, is being  
created.**

| **Explanation:** Archive Manager service virtual  
| machines record filename, filetype, time stamp and  
| checksum data for essential program components and  
| configuration files. Program component version  
| information is recorded in "\$AMV\$ SVMFILES A" on  
| each service virtual machine; information for  
| configuration files is recorded in "\$AMV\$ CFGFILES  
| A". This message is issued during service virtual  
| machine initialization when no pre-existing tracking  
| information is found, and a new tracking file is created.

| **System action:** Service virtual machine initialization  
| continues.

| **User response:** None required.

---

| **9235E**      **EXECIO return code *rc* during update to  
required components state tracking file.**

| **Explanation:** The CMS EXECIO function terminated  
| with a non-zero return code when initialization  
| processing attempted to modify one of the required  
| components state tracking files on the affected service  
| virtual machine's A-disk.

| **System action:** Service virtual machine initialization  
| terminates.

| **User response:** Ensure that the affected service virtual  
| machine is provisioned with a read-write minidisk or  
| SFS directory accessed as file mode 'A'.

---

| **9236E**      **Required component *component* not  
found; LISTFILE *rc*.**

| **Explanation:** Archive Manager service virtual  
| machines employ the CMS LISTFILE command to  
| search for required component files during

initialization. This message is issued if LISTFILE responds with a non-zero return code, and usually indicates that the required file is missing.

**System action:** Service virtual machine initialization terminates.

**User response:** Review the installation and configuration procedures and requirements for Archive Manager and ensure the indicated file is correctly installed.

---

**9237E**      **AMVMD5 rc rc for component *filename* filetype; unable to continue. AMVMD5 output: *text\_string***

**Explanation:** Archive Manager service virtual machines employ the AMVMD5 utility to generate checksum values for each required component or configuration file. This message is issued if AMVMD5 terminates with a non-zero return code.

**System action:** Initialization processing terminates.

**User response:** Examine the service virtual machine console log for any additional messages which could help identify the cause of this problem. If the issue cannot be resolved, contact your system programmer or Technical Support.

---

**9238W**      **Required component *filename filetype* was found on file mode *fm*. The expected filemode for this component is *fm*.**

**Explanation:** During service virtual machine initialization, a required component or configuration file was detected on an unexpected CMS file mode letter.

**System action:** Initialization processing continues.

**User response:** This message could indicate a product installation which varies from documented requirements. Review the recommended installation and configuration processes for Archive Manager and ensure that the indicated file is installed correctly.

This message can also be issued in cases where files related to the end-user client interface have been installed to the CMS system Y-disk (MAINT 19E) in addition to the service virtual machine runtime components minidisk; in this case, the message can safely be ignored.

---

**9239W**      **Server startup will continue, but this installation is inconsistent with documented configuration requirements.**

**Explanation:** During service virtual machine initialization, a warning-severity condition was detected. This message will be displayed in conjunction with other diagnostic information.

**System action:** Service virtual machine execution continues.

**User response:** This message could indicate a product installation which varies from documented requirements. The service virtual machine will be allowed to complete initialization and attempt to run, but with possible exposure to later problems.

---

**9240W**      ***n* copies of required component *filename filetype* were found. The expected filemode for this component is *fm*.**

**Explanation:** During service virtual machine initialization, multiple copies of a required component or configuration file were detected on multiple CMS minidisks or SFS directories.

**System action:** Initialization processing continues.

**User response:** This message could indicate a product installation which varies from documented requirements. Review the recommended installation and configuration processes for Archive Manager and ensure that the indicated file is installed correctly.

This message can also be issued in cases where files related to the end-user client interface have been installed to the CMS system Y-disk (MAINT 19E) in addition to the service virtual machine runtime components minidisk; in this case, the message can safely be ignored.

---

**9241E**      **PIPE rc rc during state tracking file search.**

**Explanation:** Archive Manager uses the CMS PIPE function to maintain information stored in files used for component and configuration file version tracking. This message is issued when the PIPE function exits with an unexpected return code.

**System action:** Service virtual machine initialization terminates.

**User response:** Archive Manager relies on the CMS PIPE facility for a variety of internal operations. If the PIPE command fails during initialization, the affected service virtual machine will terminate. Examine the service virtual machine console log for any additional messages which might have been issued by the PIPE facility. If the problem cannot be resolved contact your system programmer or Technical Support for assistance.

---

**9242I**      **A new required component file has been found. New component: *filename filetype fm mm/dd/yy hh:mm:ss checksum*.**

**Explanation:** Archive Manager issues this message during service virtual machine initialization when a new required component or configuration file is added to the version tracking information recorded in \$AMV\$ SVMFILES A or \$AMV\$ CFGFILES A.

**System action:** A new record is added to the appropriate version tracking information file.

**User response:** None required.

---

**9243I**      **An update to a required component file has been detected. Changed component:**  
*filename filetype fm mm/dd/yy hh:mn:ss checksum.*

**Explanation:** Archive Manager issues this message during service virtual machine initialization when a change to timestamp information or contents of a required component or configuration file is detected.

**System action:** The metadata for the indicated file is updated in the appropriate version tracking information file.

**User response:** None required. Expect this message to appear when Archive Manager components are updated during the service process, or when configuration files are modified. If files are modified while Archive Manager is running, the condition will not be detected and reported until Archive Manager service virtual machines are restarted.

---

**9244I**      **Privileged virtual machine settings are based on *filename filetype* located *location\_description* accessed as file mode *fm*.**

**Explanation:** This message is issued during Archive Manager service virtual machine initialization. It confirms the source of information used to identify virtual machines which have been granted additional privileges for Archive Manager functions.

*filename filetype* will be AMVUSERS NAMES.

*location\_description* will be one of:

on minidisk *userid vdev*

or

in SFS directory *filepool:filespace.directory*

*fm* will be the CMS file mode letter at which the minidisk or SFS directory is accessed.

**System action:** Initialization processing continues.

**User response:** None required. This message verifies which users are granted additional privileges for Archive Manager services. As with any other form of privileged access, additional privileges should be granted only with due regard for product configuration requirements and site policies regarding privileged access to system functions.

---

**9245E**      **NAMEFIND return code *rc* during attempt to enumerate *privilege\_type*. Service virtual machine start-up can not continue.**

**Explanation:** Archive Manager relies on the CMS NAMEFIND function to extract information from the AMVUSERS NAMES configuration file. This message is issued when NAMEFIND terminates with an unexpected return code.

*rc* is the NAMEFIND return code.

*privilege\_type* will be one of worker, administrators, or master archive servers.

**System action:** Service virtual machine initialization is terminated.

**User response:** Examine the affected service virtual machine's configuration to verify that required configuration file AMVUSERS NAMES is available and correctly formatted. The NAMEFIND return code may also provide additional guidance toward resolution of the problem. This information is available in *CMS Commands and Utilities Reference*. If the problem cannot be resolved, contact your system programmer or Technical Support for assistance.

---

**9246I**      ***count* virtual machine(s) are granted *privilege\_type* authority.**

**Explanation:** This message is issued during Archive Manager service virtual machine initialization. It documents the number of users which have been granted additional *privilege\_type* privileges in AMVUSERS NAMES. *count* is the number of users granted additional privileges. *privilege\_type* is one of worker, archive administrator, or master archive server.

**System action:** Initialization processing continues.

**User response:** None required. This message documents the number of users which are granted additional privileges for Archive Manager services. As with any other form of privileged access, additional privileges should be granted only with regard for product configuration requirements and site policies regarding privileged access to system functions.

---

**9247I**      **Temporary work area at file mode D is a *devtype* minidisk with *count* cylinders/blocks formatted at block size of *nmmnK*. Work area contains *count* files. *count* blocks in use; *nn%* utilized.**

**Explanation:** This message is issued during Archive Manager service virtual machine initialization when a CMS minidisk has been provisioned as the required temporary data work area. It documents the device type, capacity, format and utilization of the minidisk.

*devtype* is the virtual device type (for example 3390).

*count* is an integer value (it documents the number of



| cylinders or FB-512 blocks allocated for the minidisk,  
| the number of files present on the minidisk at  
| initialization, or the number of EDF data blocks in use  
| on the minidisk).

| *mmnnK* is the EDF block size at which the minidisk has  
| been formatted. *nn%* is the percentage of space in use  
| on the minidisk.

| **System action:** Initialization continues.

| **User response:** None required. Archive Manager  
| service virtual machines rely on this space during  
| normal operation. Requirements for both the master  
| archive service virtual machine (AMVARKIV) and  
| archive worker service virtual machines (AMVWRKnn)  
| are described in the *Archive Manager for z/VM Program*  
| *Directory* and in Chapter 2, "Configuring Archive  
| Manager," on page 7.

---

| **9248I**      **Temporary work area at file mode D is**  
|                    **an SFS directory: *filepool:filespace.directory***  
|                    **This file space is limited to *count* 4K**  
|                    **blocks. *count* blocks are in use; *nn.nn%***  
|                    **of capacity is utilized.**

| **Explanation:** This message is issued during Archive  
| Manager service virtual machine initialization when a  
| CMS SFS directory has been provisioned as the  
| required temporary data work area. It documents SFS  
| filepool, filespace and directory being used, the  
| capacity limit of the file space, the number of blocks  
| currently in use by the filespace, and the percentage of  
| total filespace capacity currently in use.

| *filepool:filespace.directory* is the fully-qualified SFS  
| directory path being used for temporary files.

| *count* is maximum number of 4K SFS data blocks  
| allowed to be committed to use in the filespace, or the  
| number of SFS data blocks currently committed.

| *nn.nn%* is the percentage utilization of the filespace.

| **System action:** Initialization continues.

| **User response:** None required. Archive Manager  
| service virtual machines rely on this space during  
| normal operation. Requirements for both the master  
| archive service virtual machine (AMVARKIV) and  
| archive worker service virtual machines (AMVWRKnn)  
| are documented in the *Archive Manager for z/VM*  
| *Program Directory* and in Chapter 2, "Configuring  
| Archive Manager," on page 7.

---

| **9249E**      **File mode *fm* is read-only, but is**  
|                    **required to be read-write.**

| **Explanation:** This message is issued when a read-only  
| minidisk or SFS directory has been provisioned for use  
| by an Archive Manager service virtual machine, but  
| read-write access is required for proper operation. *fm* is  
| the CMS file mode letter involved; this may represent a  
| CMS minidisk or SFS resource.

| **System action:** Processing is terminated.

| **User response:** Correct the service virtual machine  
| configuration in order to provide read-write access to  
| the affected minidisk or SFS directory.

---

| **9279E**      **Validation of AMVSYSTEM CONFIG \***  
|                    **completed with result code *rc*. The**  
|                    **service virtual machine can not start**  
|                    **until these errors are corrected.**

| **Explanation:** Errors were encountered during service  
| virtual machine initialization. The severity of the  
| condition prevents further operation until the issue is  
| corrected. *rc* is the result code generated during service  
| virtual machine initialization processing.

| **System action:** Service virtual machine operation is  
| terminated.

| **User response:** Evaluate any messages generated prior  
| to appearance of this message, and address the issues  
| cited by those messages. The necessary changes will  
| typically be confined to one of the Archive Manager  
| configuration files (AMVSYSTEM CONFIG, AMVSRVR  
| CONFIG, or AMVUSERS NAMES).

---

| **9280E**      **Environment configuration checks**  
|                    **completed with result code *rc*. The**  
|                    **service virtual machine can not start**  
|                    **until these issues are resolved.**

| **Explanation:** Errors were encountered during service  
| virtual machine initialization. The severity of the  
| condition prevents further operation until the issue is  
| corrected. *rc* is the result code generated during service  
| virtual machine initialization processing.

| **System action:** Service virtual machine operation is  
| terminated.

| **User response:** Evaluate any messages generated prior  
| to appearance of this message, and address the issues  
| cited by those messages. The necessary changes will  
| typically involve modification of the service virtual  
| machine runtime configuration.

---

| **9281I**      **Parcel *parcel\_id* expires after *dd mmm***  
|                    ***yyyy*.**

| **Explanation:** This message is issued in response to  
| any operation which causes the expiration date of an  
| unexpired archive parcel to be displayed. *parcel\_id* is an  
| archive parcel ID *dd mmm yyyy* is the day, month and  
| year after which the parcel will expire from Archive  
| Manager storage.

| **System action:** Processing continues.

| **User response:** None required.

---

**9282W** Parcel *parcel\_id* has expired, and will be deleted at the next EXPIRE (PURGE operation).

**Explanation:** This message is issued in response to any operation which causes the expiration date of an expired archive parcel to be displayed. *parcel\_id* is an archive parcel ID *dd mmm yyyy* is the day, month and year after which the parcel became expired.

**System action:** Processing continues.

**User response:** None required. If this message appears in response to an EXPIRE command which has been issued with no other operands, it indicates that the associated parcel is expired and eligible for deletion from the archive catalog and associated storage class media. If this message appears in response to an EXPIRE (PURGE) command, the associated parcel will be removed from the archive catalog and storage class media.

---

**9283I** Purging all elements of expired parcel *parcel\_id*.

**Explanation:** This message is issued for each expired parcel in conjunction with message 9282W when the EXPIRE command is invoked with the PURGE option. It indicates that the process for removing an expired archive parcel from the archive catalog and associated storage class media has been initiated. *parcel\_id* is the archive parcel ID of an expired archive parcel.

**System action:** Archive Manager proceeds with deletion of parcel information from the archive catalog, and removal of parcel contents from minidisk or SFS media associated with the related storage class.

**User response:** None required. Catalog information for the affected parcel is removed from the archive catalog, and archive parcel data is deleted from minidisk or SFS-based storage class media at the time this message is displayed. Parcel data stored on tape media is not deleted from associated tape volumes, but all information is expunged from the archive catalog effectively rendering data from expired tape-resident parcels inaccessible.

---

**9284E** Invalid mode *mode* specified for EXPIRE processing.

**Explanation:** The EXPIRE command was invoked with an invalid operating mode. Valid modes are PREVIEW, PURGE, and a null string. The null string is equivalent to PREVIEW.

**System action:** The EXPIRE command is rejected.

**User response:** Re-issue the EXPIRE command with a valid expiration mode.

---

**9285E** Invalid / non-numeric number of days: *ndays*

**Explanation:** This message is issued when an attempt is made to set or modify the expiration date of an archive parcel, but the supplied number of days (*ndays*) contains invalid data.

**System action:** The operation is rejected.

**User response:** Retry the operation with valid syntax.

---

**9286E** Command rejected; requestor is not parcel owner.

**Explanation:** A non-privileged user attempted to perform an operation which involves an archive parcel which they do not own.

**System action:** The command is rejected.

**User response:** If the affected user is supposed to have archive administrator privileges, modify AMVUSERS NAMES to grant this privilege. For general users who are not granted archive administrator privileges, retry the operation specifying an archive parcel ID which is owned by the user ID issuing the command.

---

**9287E** AMV\_Get\_Class *rc rc*, response *response* for parcel *parcel\_id*.

**Explanation:** The internal Archive Manager service AMV\_Get\_Class exited with an unexpected response during an attempt to extract information associated with archive parcel *parcel\_id*.

*rc* is the AMV\_Get\_Class return code *response* can be a numeric reason code or a text string which provides additional details regarding the failed operations.

**System action:** The affected operation is terminated.

**User response:** Contact your system programmer or Technical Support.

---

**9288E** AMV\_Get\_Class\_Dates *rc rc*, response *response* for parcel *parcel\_id*.

**Explanation:** The internal Archive Manager service AMV\_Get\_Class\_Dates exited with an unexpected response during an attempt to extract information associated with archive parcel *parcel\_id*. *rc* is the AMV\_Get\_Class\_Dates return code *response* can be a numeric reason code or a text string which provides additional details regarding the failed operations.

**System action:** The affected operation is terminated.

**User response:** Contact your system programmer or Technical Support.

---

---

**9289E**      **Expiration date *ndays* (*dd mmm yyyy*) exceeds class *class\_id* limits.**

**Explanation:** The expiration date or retention period specified on an ARCHIVE operation or on a SET EXPIRE command falls outside the minimum and maximum expiration periods allowed by the given storage class.

*ndays* is the number of days specified for a retention period. *dd mmm yyyy* is the effective date for the specified retention period. *class\_id* is the name of the storage class which contains the associated archive parcel.

**System action:** The affected operation is terminated.

**User response:** Contact your system programmer or Technical Support.

---

**9290I**      **Parcel *parcel\_id* is set to expire after *dd mmm yyyy*.**

**Explanation:** This message is issued when the expiration date for an archive parcel is updated. *parcel\_id* is the affected archive parcel. *dd mmm yyyy* is the day, month and year after which the parcel will expire.

**System action:** Processing continues.

**User response:** None required.

---

**9291E**      **Return code *rc* updating expiration date; abending.**

**Explanation:** Archive Manager encountered an unexpected return code while updating the archive catalog with a new expiration date stamp. This situation reflects the potential for loss of data integrity in the archive catalog, so further processing is terminated through ABEND.

**System action:** The operation is interrupted. Diagnostic information related to the active REXX environment and virtual machine configuration is displayed at the console, followed by an ABEND termination.

**User response:** This error scenario is triggered when a file system I/O error occurs during an attempt to create or modify information in the archive catalog SFS filespace. Additional information could be recorded in the Archive Manager service virtual machine console log, or in the associated SFS filepool server virtual machine console log. If the archive catalog SFS filespace is at, or near its capacity threshold, then it might be possible to correct the problem by increasing the SFS filespace limits for the catalog filespace.

---

**9292E**      **SET EXPIRE denied due to storage class configuration.**

**Explanation:** This message is issued in response to a SET EXPIRE command when the storage class configuration for the associated parcel does not post-archive modification of parcel expiration dates.

**System action:** The SET EXPIRE command is rejected.

**User response:** None required. If it is necessary to modify the expiration date for the associated archive parcel, the archive administrator can modify the configuration settings of the storage class to enable use of SET EXPIRE.

---

**9293I**      **Modifying expiration date for parcel *parcel\_id*.**

**Explanation:** This message appears in the Archive Manager console log as part of SET EXPIRE processing, at the beginning of internal processing for a SET EXPIRE command. *parcel\_id* is the archive parcel ID of the parcel being modified.

**System action:** SET EXPIRE processing is initiated.

**User response:** None required.

---

**9294I**      **Original expiration date is *dd mmm yyyy*.**

**Explanation:** This message appears in the Archive Manager console log as part of SET EXPIRE processing. It documents the current expiration date for the archive parcel whose retention is being modified. *dd mmm yyyy* is the day, month and year of the original archive parcel expiration date.

**System action:** SET EXPIRE processing continues.

**User response:** None required.

---

**9295E**      **No archive catalog entry for parcel *parcel\_id*.**

**Explanation:** This message is issued when a command affecting archive parcel status specifies an archive parcel id which is not present in the archive catalog. *parcel\_id* is the archive parcel ID of the parcel being modified.

**System action:** The command is rejected.

**User response:** Retry the operation, specifying a valid archive parcel ID.

---

**9296W**      **No expiration date is set for parcel *parcel\_id*.**

**Explanation:** This message is issued during EXPIRE processing for any parcel in the archive catalog which does not have an expiration date established. This condition could arise as a side-effect of an incomplete archive operation, or of deliberate removal of the

| expiration data for the parcel by a privileged user.  
| *parcel\_id* is the archive parcel ID of the affected parcel.

| **System action:** Processing continues.

| **User response:** None required. However, be aware  
| that in this scenario the associated archive parcel will  
| never expire from the archive catalog. Archive  
| administrators can use the SET EXPIRE command to  
| assign an expiration date.

---

| **9297E**            **Return code *rc* reading expiration date;**  
|                    **abending.**

| **Explanation:** This message is issued when an  
| unexpected file system error is encountered during an  
| attempt to read the expiration time stamp for an  
| archive parcel. Because this situation indicates a  
| possible exposure to loss of archive catalog integrity,  
| further processing is terminated through ABEND.

| **System action:** The affected Archive Manager service  
| virtual machine will display diagnostic information  
| about the active REXX environment and virtual  
| machine configuration, and then terminate processing  
| through ABEND.

| **User response:** Review the console log for the affected  
| Archive Manager service virtual machine, and for the  
| associated SFS file pool server. If the problem persists,  
| contact your system programmer or Technical Support  
| for assistance.

---

| **9298E**            **Return code *rc* from *system* command**  
|                    ***command\_string*.**

| **Explanation:** Archive Manager functions can issue this  
| message when a CP or CMS command function  
| terminates with an unexpected return code. *rc* is a CP  
| or CMS command return code *system* will be one of CP  
| or CMS *command\_string* will be the CP or CMS  
| command which produced the unexpected return code.

| **System action:** Actions taken in this case will vary,  
| depending on the nature and severity of the error. If  
| the error can be tolerated or is susceptible to recovery,  
| processing will continue. More severe or unrecoverable  
| errors will result in termination of the associated  
| process. This message might be accompanied by  
| additional messages from CMS or Archive Manager.

| **User response:** User response to this message will  
| vary depending on the context in which it is issued. If  
| the problem cannot be resolved, contact your system  
| programmer or Technical Support for assistance.

---

| **9299W**            **Storage class media content is**  
|                    **inconsistent with catalog info. Catalog**  
|                    **deletion for parcel will continue.**

| **Explanation:** This message is issued during EXPIRE  
| (PURGE processing when an expired archive parcel  
| associated with a CMS minidisk or SFS-based storage  
| class is being removed from the archive catalog, and

| the files containing the actual parcel data are not  
| present on storage class media. The message  
| documents an inconsistency between archive catalog  
| information versus the actual contents of storage class  
| media.

| **System action:** Since the archive parcel is expired, and  
| is in the process of being removed from the system,  
| processing continues.

| **User response:** None required. This situation could  
| arise if archive parcel files are deleted from DASD  
| resources managed by Archive Manager by processes  
| external to Archive Manager.

---

| **9300E**            **EXECIO *rc* *rc* writing file *fileid*; unable**  
|                    **to continue.**

| **Explanation:** Archive Manager issues this message if a  
| CMS file system I/O error occurs during an attempt to  
| update the contents of a user quota management file in  
| the archive catalog. *rc* is the EXECIO return code and  
| *fileid* identifies the CMS file associated with the error.  
| This will be one of:

| *filename filetype fm* (for minidisk-based files)

| or

| *filepool:filespace.directory filename filetype* (for SFS files)

| **System action:** The operation is aborted.

| **User response:** If this message is associated with an  
| update to a CMS minidisk-based file, ensure that the  
| minidisk has sufficient free space to operation to  
| succeed. If this message is associated with updates to  
| an SFS-based file, verify that the SFS filepool server is  
| available, that the Archive Manager service virtual  
| machine has sufficient privileges to modify the file, and  
| that the SFS filespace has not exceeded its storage  
| threshold. If the problem cannot be resolved, contact  
| your system programmer or Technical Support.

---

| **9301I**            **Removing parcel *parcel\_id* data from**  
|                    ***structure*.**

| **Explanation:** This message is issued during EXPIRE  
| (PURGE processing, during deletion of archive catalog  
| information for an expired archive parcel. *parcel\_id* is  
| the archive parcel ID being processed. *structure* is the  
| portion of the archive catalog hierarchy which is being  
| updated. This value will be one of:

| primary mediakat

| secondary mediakat

| Classcat structures

| Ownercat structures

| Groupcat structures

| Parcelcat structures

| **System action:** Processing continues.

| **User response:** None required.

---

| **9302I**      **Job parsing completed. Owner:** *ownerid*;  
| **archive from** *datasource* **Destination class:**  
| *storageclass*; *ndays* **days retention.**  
| **Verbosity:** *level* **Notifications to**  
| *destination* **via** *method*.

| **Explanation:** This message is issued by the master  
| archive service virtual machine (AMVARKIV) when an  
| archive transaction is accepted for processing.

| *ownerid* is the user ID which owns the data being  
| archived.

| *datasource* is the source media from which information  
| is being archived. This variable is a text string which  
| describes the source minidisk or SFS directory, and –  
| for CMS file-level archive transactions - the CMS file  
| selection mask being used.

| *storageclass* is the Archive Manager storage class  
| selected as a destination for the resulting archive  
| parcel.

| *ndays* is the number of days specified for a retention  
| period.

| *level* is the verbosity level in effect for the current  
| operation. This value is normally VERBOSE.

| *destination* is the user ID to which messages about the  
| archive transaction will be sent.

| *method* is the means by which status messages about  
| the archive transaction will be sent to destination. This  
| value is normally MSG, indicating that information will  
| be transferred using the CP MSG command.

| **System action:** Processing continues.

| **User response:** None required.

---

| **9303I**      **Class** *storageclass*, **attribute:** *state*.

| **Explanation:** This message is issued during Archive  
| Manager service virtual machine initialization. It  
| documents configuration settings in effect for each  
| storage class. *storageclass* is the name of the storage  
| class being processed. *attribute* is a storage class  
| attribute name. *state* indicates whether or not *attribute*  
| has been enabled.

| **System action:** Processing continues.

| **User response:** None required.

---

| **9304I**      **The** *sourcetype* **media type for class**  
| *storageclass* **is defined as TAPE. Please**  
| **ensure archive has access to tape pool**  
| *poolname* **within the tape management**  
| **system.**

| **Explanation:** This message is issued during Archive  
| Manager service virtual machine initialization. It is  
| displayed for any tape-based storage class, and serves

| as a reminder that both the master archive service  
| virtual machine (AMVARKIV) and any archive worker  
| virtual machines (AMVWRKnn) must have been  
| granted sufficient access to tape resources.

| **System action:** Processing continues.

| **User response:** Verify that Archive Manager service  
| virtual machines have been granted access to tape  
| media controlled by local procedures, or – if  
| Tape\_Handled\_Via\_EUM = 1 is specified in AMVSYSTEM  
| CONFIG – within the associated IBM Tape Manager for  
| z/VM configuration.

---

| **9305I**      *mm/dd/yy hh:mm:ss* **processing archive**  
| **configuration file** *filename filetype*.

| **Explanation:** This message is issued during archive  
| manager service virtual machine initialization, at the  
| start of processing for a configuration file. *mm/dd/yy*  
| *hh:mm:ss* is the date and time at which processing  
| occurs *filename filetype* identifies the CMS *filename* and  
| *filetype* of the configuration file being processed.

| **System action:** Processing continues.

| **User response:** None required.

---

| **9306I**      **Archive server configuration summary:**  
| **Configuration derived from file:** *filename*  
| *filetype* **Errors encountered:** *errorcount*  
| **Warnings generated:** *warningcount* **Parcel**  
| **staging area:** *stagingarea* **Allow\_Public:**  
| *state*; **Allow\_Private:** *state* **Defined**  
| *groupcount* **storage groups,** *classcount*  
| **storage classes.**

| **Explanation:** This message is issued upon completion  
| of Archive Manager service virtual machine  
| initialization. It summarizes portions of service virtual  
| machine configuration as derived from AMVSYSTEM  
| CONFIG and AMVSRVR CONFIG.

| *filename filetype* identifies the CMS file from which  
| archive storage class and group information has been  
| derived. This value will ordinarily be AMVSRVR  
| CONFIG.

| *errorcount* is the number of errors detected in the  
| configuration file.

| *warningcount* is the number of warning conditions  
| detected in the configuration file.

| *stagingarea* identifies the master archive service virtual  
| machine (AMVARKIV) temporary staging area. This  
| value will identify either a fully-qualified SFS directory  
| path (*filepool:filespace.directory*) or a CMS minidisk  
| (*userid vdev*).

| *state* is a binary value, declaring whether or not a  
| configuration attribute is enabled. "1" indicates  
| enabled; "0" indicates disabled.

| *groupcount* and *classcount* are the number of storage groups and classes defined.

| **System action:** Processing continues.

| **User response:** None required.

| **9307I Storage group list:**

| **Explanation:** This message is issued upon completion of Archive Manager service virtual machine initialization, in conjunction with message 9306I. It will be followed by a list of one or more storage groups.

| **System action:** Processing continues.

| **User response:** None required.

| **9308I Storage class list:**

| **Explanation:** This message is issued upon completion of Archive Manager service virtual machine initialization, in conjunction with message 9306I. It will be followed by a list of one or more storage classes.

| **System action:** Processing continues.

| **User response:** None required.

| **9309I Archiving parcel *parcel\_id* in class *storageclass* for owner *ownerid*.**

| **Explanation:** This message is issued during archive processing, as an archive parcel is relocated from temporary staging storage to media associated with the destination storage class. *parcel\_id* is an archive parcel ID. *storageclass* is the name of the destination storage class *ownerid* is the user ID which owns the parcel being processed.

| **System action:** Processing continues.

| **User response:** None required.

| **9310I Associated storage group is *storagegroup*.**

| **Explanation:** This message is issued in conjunction with message 9309I during archive processing, as an archive parcel is relocated from temporary staging storage to media associated with the destination storage class. *storagegroup* is the name of the associated storage group.

| **System action:** Processing continues.

| **User response:** None required.

| **9311I Destination media type is *mediatype*; migration will be processed by *servertype*.**

| **Explanation:** This message is issued during archive processing, as an archive parcel is relocated from temporary staging storage to media associated with the destination storage class.

| *mediatype* is the destination media type; this value will be one of Tape, SFS or EDF Minidisk.

| *servertype* indicates whether the migration from staging storage will be performed by the master archive service virtual machine, or by a worker service virtual machine. SFS and EDF Minidisk migrations are handled by the master archive service virtual machine (AMVARKIV). Migrations to tape-based storage are processed by archive worker service virtual machines (AMVWRKnn).

| **System action:** Processing continues. For worker-processed migrations, AMVARKIV will deploy an AMVWRKnn worker to process the migration asynchronously.

| **User response:** None required.

| **9312I *loctype* copy of parcel will be stored in *mediatype media\_id*.**

| **Explanation:** This message is issued during archive processing for each newly-created archive parcel. It documents the disposition of each copy of an archive parcel.

| *loctype* indicates which copy of an the archive parcel is currently being handled by migration from staging to long-term retention storage. This value will be either primary or secondary.

| *mediatype* indicates whether the parcel is being stored on a minidisk or in an SFS Directory.

| *media\_id* identifies the SFS directory (*filepool:filespace.directory*) or minidisk (*vdev*) used to store the archive parcel.

| **System action:** Processing continues.

| **User response:** None required.

| **9313I Archive parcel committed to catalog; archive complete.**

| **Explanation:** Archive Manager issues this message when archive parcel migration processing has completed, and updates are committed to the archive catalog.

| **System action:** Processing continues.

| **User response:** None required. If the archive parcel is being migrated to a tape-based storage class, this message might be issued upon completion of the initial staging operation. Catalog information for archive parcels involved in migration to tape will be further updated by the archive worker virtual machine (AMVWRKnn) responsible for handling the migration once the migration operation is completed.

---

| **9314W**      **Tag text not set; rc *rc*, reason *reason*.**

| **Explanation:** An attempt to create or modify archive  
| parcel tag information using SET TAG or the TAG  
| option of the ARCHIVE command exited with an  
| unexpected return code. *rc* is the return code associated  
| with the failed tag update *reason* is the supplemental  
| reason code or string associated with the failed tag  
| update.

| **System action:** Processing continues. The tag  
| information for the associated archive parcel has not  
| been modified.

| **User response:** Retry the operation. If the problem  
| persists, contact your system programmer or Technical  
| Support.

---

| **9315I**      **Tag text set to *tagtext*.**

| **Explanation:** This message is issued in response to a  
| SET TAG command, or the TAG option of the  
| ARCHIVE command. It is displayed with tag  
| information for the updated archive parcel is  
| successfully modified. *tagtext* is the archive tag text  
| string established for the parcel.

| **System action:** Processing continues.

| **User response:** None required.





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## Bibliography

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This section lists the documentation that supports Archive Manager. Use the appropriate library for the version of z/VM that you are using.

**Tip:** To quickly locate a specific book, use the IBM Publications Center, which is located at [www.elink.ibm.link.ibm.com/public/applications/publications/cgibin/pbi.cgi](http://www.elink.ibm.link.ibm.com/public/applications/publications/cgibin/pbi.cgi). After you enter your country information, click **Search for publications**, and enter the publication number (xxxx-xxxx) of the book that you want.

### **z/VM titles cited in this book**

- *z/VM REXX/VM Reference*, SC24-6221
- *z/VM REXX/VM User's Guide*, SC24-6222
- *z/VM CMS User's Guide*, SC24-6173
- *z/VM CMS Commands and Utilities Reference*, SC24-6166
- *z/VM CP Commands and Utilities Reference*, SC24-6175
- *CMS File Pool Planning, Administration, and Operation*, SC24-6167
- *Archive Manager for z/VM User's Guide*, SC18-9348
- *Tape Manager for z/VM User's Guide*, SC18-9349



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