



ADSTAR Distributed Storage Manager

SH26-4055-01

Using the Novell NetWare**
Backup-Archive Client**

Version 2

Note

Before using this information and the product it supports, read the general information under "Notices" on page vii.

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Second Edition (September 1996)

This edition applies to Version 2 Release 1 of the ADSTAR Distributed Storage Manager, 5648-020, 5622-112, 5697-078, 5763-SV1, 5733-197, 5686-073, 5655-119, 5765-564, 28H2250, 28H2180, 89G1342, and to any subsequent releases until otherwise indicated in new editions or technical newsletters. Make sure you are using the correct edition for the level of the product.

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Preface

ADSTAR Distributed Storage Manager (ADSM) is a client/server program product that provides storage management services to customers in a multivendor computer environment. It includes the following programs, which are available on a variety of platforms:

- A *server program* that allows systems to act as a backup and archive server and a migration server for distributed workstations and file servers. The server program provides hierarchical storage management.
- An *administrative client program* that allows an ADSM administrator to control and monitor server activities, define storage management policies for backup, archive, and space management services, and set up schedules to perform those services at regular intervals.
- A *backup-archive client program* that allows users to back up and archive files from their workstations or file servers to ADSM storage, and restore and retrieve backup versions of files and archived copies of files to their local file systems.
- A *hierarchical storage management (HSM) client program* that provides space management services. The HSM client program migrates eligible files to ADSM storage to maintain specific levels of free space on local file systems, and automatically recalls migrated files when they are accessed. It also allows users to migrate and recall specific files. This client is not available on all ADSM-supported platforms.
- An *application programming interface (API)* that allows you to enhance an existing application with storage management services. When an application is registered as a client node with an ADSM server, users can use the application to back up and archive objects, such as databases, to ADSM storage, and restore and retrieve objects from ADSM storage.

This publication provides information about the ADSM Novell NetWare backup-archive client. ADSM runs on Novell NetWare Versions 3.11, 3.12, 4.01, 4.02, and 4.1.

The Novell NetWare ADSM client is certified as a:

- Novell NLM client server (certification number N-49)
- Novell backup-restore application (certification number B-147)

What You Should Know Before Reading This Publication

This publication is intended for Novell NetWare server administrators, supervisors, and users with supervisor equivalence who need to back up and archive files stored on their NetWare servers.

We assume that you know how to use your NetWare file servers, and that you understand the general operation of the operating system.

We also assume that the ADSM backup-archive client is already installed on your system. See the *Installing the Clients* manual for information on installing your client.

Style Conventions

Throughout the book, we use these style conventions:

Figure 1. Style Conventions

Convention	Indicates
bold	A part of a window, or a file name.
UPPER CASE	An ADSM command or option.
<i>italics</i>	A new term.
monospace text	An example in the text.
plus sign (+)	Used between two keys to indicate that the two keys it separates should be pressed simultaneously.
slashes (\, /)	In a file specification, a \ is used to separate the server name from the volume, and / is used to separate directories. For example, serva\sys:/dir/file.txt. In practice, you can use either slash and ADSM will convert an incorrect slash to a correct one.

Referenced Publications

The publications referenced in this book are listed in Figure 2.

Figure 2. Referenced Publications

Short Title	Publication Title	Order Number
Installing the Clients	<i>ADSTAR Distributed Storage Manager Installing the Clients</i>	SH26-4049
ADSM Messages	<i>ADSTAR Distributed Storage Manager Mes- sages</i>	SH35-0133

All of the ADSM publications are available in online readable format on the *ADSM Online Product Library* CD-ROM, order number SK2T-1878. The ADSM library is also available in softcopy on the following CD-ROMs:

<i>AIX Base Collection Kit</i>	(order number SK2T-2066)
<i>AS/400 Base Collection Kit</i>	(order number SK2T-2171)
<i>MVS Base Collection Kit</i>	(order number SK2T-0710)
<i>OS/2 Base Collection Kit</i>	(order number SK2T-2176)
<i>VM Base Collection Kit</i>	(order number SK2T-2067)
<i>VSE Base Collection Kit</i>	(order number SK2T-0060)
<i>IBM SystemView for AIX</i>	(order number SK2T-1451)

Translations

Selected ADSM publications have been translated into languages other than American English. The *ADSTAR Distributed Storage Manager: General Information*, GH35-0114, has a complete list of the available translations and their order numbers. Contact your IBM representative for more information about the translated publications and whether these translations are available in your country.

Summary of Changes

Major technical changes in this book are indicated by a vertical bar (|) in the margin.

This book was previously released as *ADSM User's Guide and Reference for Novell NetWare*, SH35-0124.

Version 2, Release 1, July 1995

Following are changes made for ADSM Version 2 Release 1.

Functional Enhancements

- An ADSM hierarchical storage management (HSM) client, which manages storage space on local file systems, is now available on AIX 3.2.3, 3.2.4, and 3.2.5. HSM ensures that sufficient storage space is available on your workstation for new data, by migrating less frequently used files to ADSM storage.
- ADSM backup-archive clients are now available for the following workstations:
 - Siemens Nixdorf Information Systems, Inc., SINIX
 - AT&T Global Information Solutions UNIX
 - Silicon Graphics IRIX
 - NEC Corporation EWS-UX/V
 - IBM OpenEdition MVS
 - Microsoft Windows NT 3.5 workstation and Advanced Server on x86 machines
- These processing options have been added:
 - ERRORLOGRETENTION
 - POSTSCHEDULECMD
 - PRESCHEDULECMD
 - PROCESSORUTILIZATION
 - SCHEDLOGRETENTION
 - TXNBYTELIMIT
- These command-line only options have been added:
 - DELETEFILES (for ARCHIVE)
 - FROMDATE (for QUERY ARCHIVE, QUERY BACKUP, RESTORE, RETRIEVE)
 - IFNEWER (for RESTORE)
 - INCRBYDATE (for INCREMENTAL)

- TODATE (for QUERY ARCHIVE, QUERY BACKUP, RESTORE, RETRIEVE)
- A new command, MACRO, that allows you to run a macro that contains ADSM commands.
- Because the Version 2 clients store files in a different format than the Version 1 clients, ADSM updates the attributes for each active file in ADSM storage during the first incremental backup you run after installing the Version 2 client.

Changes to this Book

- We have moved installation information from this book to a common installation guide, *ADSTAR Distributed Storage Manager Installing the Clients*.
- We have moved the messages from this book to a common message guide, *ADSTAR Distributed Storage Manager Messages*.
- This book has been reorganized and rewritten to make it easier to use.

Version 2, Release 1, January 1996

Following are changes made for ADSM Version 2 Release 1.

Functional Enhancements

- These command-line-only options have been added:
 - FROMTIME (for QUERY ARCHIVE, QUERY BACKUP, RESTORE, RETRIEVE)
 - TOTIME (for QUERY ARCHIVE, QUERY BACKUP, RESTORE, RETRIEVE)

Version 2, Release 1, March 1996

These are additional changes made for ADSM Version 2 Release 1.

Functional Enhancements

- The following options have new default values:
 - TCPBUFFSIZE
 - TCPWINDOWSIZE
 - CPICBUFFERSIZE
 - TXNBYTELIMIT
 - TAPEPROMPT
 - IPXBUFFERSIZE
 - SLOWINCREMENTAL
- The following command-line only option has been added:
 - NOPROMPT (for DELETE ARCHIVE)

Version 2, Release 1, November 1996

These are additional changes made for ADSM Version 2 Release 1.

|
|

Functional Enhancements

- The COMPRESSALWAYS option has been added.

Reading Syntax Diagrams

This section describes how to read the syntax diagrams used in this book.

To read a syntax diagram, follow the path of the line. Read from left to right and top to bottom.

- The \blacktriangleright — symbol indicates the beginning of a syntax diagram.
- The — \blacktriangleright symbol at the end of a line indicates the syntax diagram continues on the next line.
- The \blacktriangleright — symbol at the beginning of a line indicates a syntax diagram continues from the previous line.
- The — \blacktriangleleft symbol indicates the end of a syntax diagram.

Syntax items, such as a keyword or variable, can be:

- On the line (required element)
- Above the line (default element)
- Below the line (optional element).

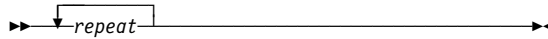
Syntax Diagram Description	Example
<p>Abbreviations:</p> <p>Uppercase letters denote the shortest acceptable truncation. If an item appears entirely in uppercase letters, it cannot be truncated.</p> <p>You can type the item in any combination of uppercase or lowercase letters.</p> <p>In this example, you can enter KEYWO, KEYWORD, or KEYWOrd.</p>	<p>\blacktriangleright—KEYWOrd—\blacktriangleleft</p>
<p>Symbols:</p> <p>Enter these symbols exactly as they appear in the syntax diagram.</p>	<ul style="list-style-type: none"> * Asterisk { } Braces : , = Equal Sign - Hyphen () Parentheses . Space
<p>Variables:</p> <p>Italicized lowercase items (<i>var_name</i>) denote variables.</p> <p>In this example, you can specify a <i>var_name</i> when you enter the KEYWORD command.</p>	<p>\blacktriangleright—KEYWOrd—<i>var_name</i>—\blacktriangleleft</p>

Syntax Diagram Description

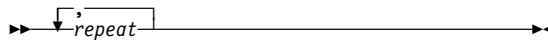
Example

Repetition:

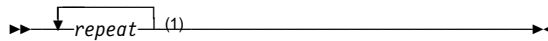
An arrow returning to the left means you can repeat the item.



A character within the arrow means you must separate repeated items with that character.



A footnote by the arrow references the number of times you can repeat the item.



Note:

1 Specify *repeat* as many as 5 times.

Required Choices:

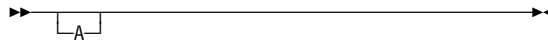
When two or more items are in a stack and one of them is on the line, you *must* specify one item.



In this example, you *must* choose A, B, or C.

Optional Choice:

When an item is below the line, that item is optional. In the first example, you can choose A or nothing at all.



When two or more items are in a stack below the line, all of them are optional. In the second example, you can choose A, B, C, or nothing at all.



Defaults:

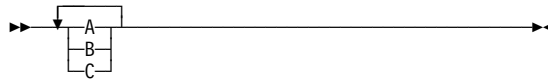
Defaults are above the line. The default is selected unless you override it. You can override the default by including an option from the stack below the line.



In this example, A is the default. You can override A by choosing B or C. You can also specify the default explicitly.

Repeatable Choices:

A stack of items followed by an arrow returning to the left means you can select more than one item or, in some cases, repeat a single item.



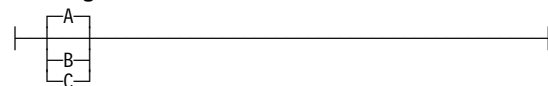
In this example, you can choose any combination of A, B, or C.

Syntax Fragments:

Some diagrams, because of their length, must fragment the syntax. The fragment name appears between vertical bars in the diagram. The expanded fragment appears between vertical bars in the diagram after a heading with the same fragment name.



The fragment name:



Chapter 1. Introducing the ADSM Backup-Archive Clients

The ADSTAR Distributed Storage Manager (ADSM) is a client/server program that helps you protect information created and stored on Novell NetWare file servers. ADSM supports Novell NetWare Versions 3.11, 3.12, 4.01, 4.02, and 4.1.

As a NetWare server administrator, supervisor, or user with administrator or supervisor equivalence, you can use ADSM to create and maintain backup versions of files that can be restored quickly and easily if the original files are damaged or lost. You can also archive files that you do not currently need on your NetWare server or that you want to preserve in their current state, and retrieve the files when necessary.

The portion of ADSM that provides these services is the *backup-archive client*, a program that allows you to request backup and archive services from an ADSM server.

Backing Up and Restoring Files

You request *backup* services when you want ADSM to save copies of files that you can restore if your original files are damaged or lost. These copies are called *backup versions* or *backups*.

You can back up local files on your NetWare servers, files on remote NetWare servers, the bindery, and the NDS. The bindery is available on Novell NetWare versions 3.11 and 3.12, and the NDS is available on versions 4.01, 4.02, and 4.1.

To back up files to an ADSM server, you can choose one of the following:

- *Incremental backup*—Backs up all files and directories on the volumes you specify that meet certain criteria.
- *Selective backup*—Backs up only those files you specify.

You can include the NDS and the bindery in an incremental or selective backup.

Running incremental backups on a regular basis can ensure that you have recent backup versions of your current files available at all times. Selective backup is useful when you want to back up only a specific subset of your files.

The file types for which ADSM provides backup and archive services are DOS, OS/2, NFS, Macintosh, and FTAM.

If a user accidentally erases a file, or if a file on the NetWare server is damaged or lost, you can *restore* a backup version of the file from ADSM storage.

You can restore a single file, a group of files, all the files in a directory, the NDS, or the bindery. You can also choose to restore files to the same directory from which you backed them up or to a different directory. You can restore any files you back up and any other files to which another user grants you access.

For more information about backing up and restoring, see Chapter 3, “Backing Up and Restoring Files” on page 9.

Archiving and Retrieving Files

You request *archive* services when you want to save files at a specific point, or when you want to place copies of files on long-term ADSM storage and erase them from your NetWare file server. These copies are called *archive copies* or *archives*.

Archives are never replaced with more current versions, but are preserved exactly as you store them.

You can archive a single file, a group of files, all the files in a directory, or the bindery. You cannot archive the NDS.

When you archive a file, you can enter a description of the file that you can use later to retrieve it. You can return a file to the same directory from which you archived it or store it in a different directory.

If you find you need a copy of an archived file back on your NetWare server, you can *retrieve* the file from ADSM storage.

You can retrieve any files you archive and any other files to which another user grants you access.

For more information about archiving and retrieving, see Chapter 4, “Archiving and Retrieving Files” on page 23.

Automating ADSM Tasks

ADSM provides *central scheduling* to automatically perform ADSM tasks. Your ADSM administrator defines schedules. For example, you might have files that you want backed up daily, weekly, or monthly. After defining appropriate schedules, your ADSM administrator associates your client node with those schedules.

You need to decide which schedule you want to use, and then run the *client scheduler*, which tells the server to include your node when it runs the schedule.

For more information about scheduling, see “Using Central Scheduling” on page 27.

Storage management policies are a set of rules that govern how and when your data is backed up and archived. Your ADSM administrator defines these policies, and you associate them with your data.

Your administrator can coordinate scheduled services with the storage management policies you use for your files. For example, if the storage management policy you use for a group of files specifies that they can be backed up only once a week, your ADSM administrator can schedule automatic backup services to occur for those files on a particular day each week.

For more information about storage management policies, see “Using Storage Management Policies” on page 33.

Setting Processing Options

ADSM includes options that control processing for user sessions. For example, you can use the options to tell ADSM which communication method to use, or what format to use for dates.

ADSM uses an options file named **dsm.opt** to specify certain information related to your ADSM session. The options in that file are in effect for an entire ADSM session, but can be overridden by setting a different value for them when processing an ADSM command or starting ADSM.

For more information about ADSM options, see Chapter 6, “Setting Processing Options” on page 45.

Chapter 2. Getting Started

This chapter contains instructions for starting and ending an ADSM session.

Starting a Session

You can start an ADSM client command session from a NetWare server in either batch or interactive mode.

During installation of the Novell NetWare backup-archive client, you updated your **autoexec.ncf** file to include the ADSM directory in your path. To start ADSM from this directory, begin an ADSM command with LOAD DSMC. If you did not update **autoexec.ncf** or you want to start ADSM from a different directory, you must include the directory in the command line. For example:

```
load sys:/adsm/dsmc
```

Your ADSM administrator has the option to force you to use a password to connect to the ADSM server. ADSM prompts you for the password if one is required. Contact your administrator if you do not know your password.

Before Starting ADSM the First Time

Before you can use ADSM, your client must be registered with the ADSM server.

Your ADSM administrator decides how you register your client with the ADSM server. If your site is using open registration, ADSM prompts you for your ADSM node name, password, and contact information. If your site is using closed registration, your administrator must register your NetWare server to use ADSM, and supply you with a starting password.

Using Batch Mode

Use *batch* mode when you want to enter a single client command. You must precede each command with LOAD DSMC.

If an ADSM password is required at your NetWare server, ADSM prompts you for your password each time you enter a command. For example, to issue the INCREMENTAL command, enter the following at the NetWare colon prompt:

```
load dsmc incremental
```

If your client node name is **nwserver**, ADSM responds:

```
Please enter password for node "nwserver":
```

When you type in your password and press Enter, the password does not appear on your screen.

You can also enter your password with the command. For example, to issue the INCREMENTAL command with your password in batch mode, enter the following:

```
load dsmc incremental -password=secret
```

where secret is your password.

If ADSM is unable to authenticate your ID and password, you are returned to the NetWare colon prompt without being able to use ADSM services. If ADSM authenticates your ID and password, it then asks you for your NetWare user ID:

```
Please enter NetWare user for "nwserver":
```

Next, ADSM requests your NetWare password.

```
Please enter the password on "nwserver" for NetWare user "username":
```

After your NetWare ID and password are accepted, ADSM processes your command, displays any messages it generates, and returns to the NetWare colon prompt.

Using Interactive Mode

Use *interactive* mode when you want to issue a series of commands. Because ADSM needs to establish the connection to the ADSM server only once for interactive mode, ADSM can process a series of commands more quickly in interactive mode than it can in batch mode.

To start a client command session in interactive mode, enter the LOAD DSMC or LOAD DSMC LOOP command:

```
load dsmc
load dsmc loop
```

When you press Enter, this prompt appears on your screen:

```
dsmc>
```

When you are in interactive mode, do not precede ADSM commands with LOAD DSMC. For example, instead of typing LOAD DSMC ARCHIVE to archive a file, type ARCHIVE only.

The first time you enter a command in an interactive session, ADSM prompts you for your ADSM password, if a password is required. For example, if you enter the following as the first command in your session:

```
incremental
```

ADSM responds:

```
Please enter password for node "nwserver"
```

When you type your password and press Enter, the password does not appear on your screen.

You can also enter your password with the LOOP command:

```
load dsmc loop -password=secret
```

If ADSM is unable to authenticate your ID and password, you cannot use ADSM services. If ADSM authenticates your ID and password, it then asks you for your NetWare user ID:

Please enter NetWare user for "nwserver":

Next, ADSM requests your NetWare password.

Please enter the password on "nwserver" for NetWare user "username":

After your NetWare ID and password are accepted, ADSM processes your command, displays any messages it generates, and returns to the `dsmc>` prompt.

ADSM saves your NetWare ID and password in a file with a `.pwd` extension in the ADSM directory. When you enter additional commands within the same interactive session, ADSM gets your NetWare ID and password from this file instead of prompting you for them.

After you start an interactive session, most options you enter with additional commands *remain in effect* throughout the session unless you reenter them with a different setting. The following options, however, are exceptions. You must enter them with each command for which you want the options to take effect:

- DESCRIPTION
- DETAIL
- DIRONLY
- FROMDATE
- FROMNODE
- FROMTIME
- IFNEWER
- INACTIVE
- INCRBYDATE
- LATEST
- PICK
- TODATE
- TOTIME
- VOLINFORMATION

Accessing the NetWare Server

ADSM requires two connections to the NetWare server for normal operations. These two connections do not count against the licensed user connections. For example, if you have a five-user NetWare server, ADSM uses connection numbers 6 and 7.

Displaying Online Help

Enter the HELP command to get online help. This command brings up a menu of topics for which help is available.

For more information see “LOAD DSMC HELP—Displaying Online Information” on page 130.

Changing Your Password

If you are using passwords, you should change them regularly to protect access to your data.

Use the SET PASSWORD command to change your ADSM password.

An ADSM password can be up to 64 characters. Valid characters are:

Characters	Description
A–Z	any letter, A through Z, upper or lower case
0–9	any number, 0 through 9
+	plus
.	period
_	underscore
-	hyphen
&	ampersand

A password is not case sensitive.

Ending a Session

In batch mode, each LOAD DSMC command you enter is a complete session. ADSM ends the session when it finishes processing the command.

To end an interactive session, enter **quit** at the `dsmc>` prompt.

Chapter 3. Backing Up and Restoring Files

One of ADSM's main uses is to create and maintain a set of backup versions of the files on your NetWare server. This allows you to recover older versions of your files if those files are lost or damaged.

This chapter covers the various ways you can back up your files using ADSM, and how you can restore them when necessary. It also covers the difference between backing up and archiving files.

Do You Want to Back Up or Archive Files?

When ADSM backs up or archives a file, it sends a copy of the file and its associated attributes to the ADSM server. Backups and archives, though, have different purposes.

Backups are used to protect against file damage. A sequence of backup versions are kept for each file on your NetWare server (the number of backup versions is set by your ADSM administrator), and older versions are deleted as newer versions are made.

Archive copies, however, are permanent. They are used to maintain a file in a particular state indefinitely (although your ADSM administrator also sets a limit on how long archives are kept). They are useful if you think you might need to go back to a particular version of your files, or if you want to delete a file from your NetWare server and still be able to retrieve it if necessary. For example, you might need to save some spreadsheets for tax purposes, but because you are not using them, you do not want them left on your NetWare server. See Chapter 4, "Archiving and Retrieving Files" on page 23 for more information on archive.

Use backups to protect against unforeseen damage to your files, and archives for maintaining more permanent versions of your files.

Backing Up Files and Directories

There are two types of backup using ADSM: incremental and selective.

An *incremental backup* backs up all files that are new or that have changed since the last incremental backup.

A *selective backup* backs up the specific files you indicate.

Both kinds of backup can also be used to back up the NDS and bindery. In addition, ADSM saves trustee rights, file attributes, name spaces, and associated name space information with the backup versions of the files.

Your administrator might have set up schedules to back up files on your NetWare server automatically. See Chapter 5, "Automating ADSM Tasks" on page 27 for information on checking and running the schedules available to you. The following sections cover how to back up files without using a schedule.

Backing Up New and Changed Files

The most effective way to maintain a complete set of backup versions for your most important files is to run incremental backups regularly. An incremental backup backs up the new or changed files on your NetWare server.

The first time you use the INCREMENTAL command to do an incremental backup, ADSM has to back up all your files, which can take a long time. Subsequent backups usually do not take as long.

There are two types of incremental backup: *full* and *partial*. A full incremental is also referred to simply as an *incremental* backup.

Do You Want a Full or Partial Incremental?

There are two main differences between full and partial incremental backups:

- A full incremental ensures that the backups kept on the ADSM server are managed according to your installation's storage management policies (see "Understanding Storage Management Policies" on page 33). It ensures that your backup storage accurately reflects the state of your workstation storage.

A partial incremental does not ensure that the ADSM server reflects the exact state of your NetWare server. For example, files that would normally be backed up during a full incremental might not be backed up during a partial incremental. Also, old files that should be deleted from the ADSM server might not be deleted. See "Understanding Partial Incrementals" on page 11 for an explanation of how ADSM determines what happens during a partial incremental.

- A partial incremental should complete more quickly than a full incremental and require less memory. Thus, if you are constrained for time or machine memory, you might want to perform a partial incremental.

Use partial incremental only if you must meet a limited backup time window, and a full incremental takes longer than the allotted time. Periodically perform full incremental backups to bring the ADSM server in line with your NetWare server's status. For example, if you have only a limited time during the week to perform backups, but extra time on the weekend, you can run partial backups on the weekdays, and then run full incremental backups on the weekends.

Understanding Full Incrementals: In a full incremental, the client queries the ADSM server so that it knows the exact state of your storage as of your last incremental. During a full incremental, ADSM uses this information to:

- Back up new files
- Back up files whose contents have changed
- Back up files whose directory contents have changed
- Rebind backup versions to management classes if you have changed management class assignments, even if the associated file is not backed up.
- Expire backup versions on the ADSM server for files that have been deleted from the NetWare server.

(Expiring a file means that old backup versions of the file are deleted from ADSM storage. ADSM does not delete files from your NetWare server.)

All of this processing is required to maintain your backups according to the policies defined in the management classes.

Understanding Partial Incrementals: In a partial incremental, however, only certain information is considered when deciding whether to back up a file. This is the available type of partial incremental:

- *Incremental by date.* The client asks the ADSM server for only the date and time of the last incremental backup. This is the only information used to determine which files get backed up, so any changes that do not change the date and time are not recognized. If a file's last changed date and time is after that of the last backup, the file is backed up. Otherwise, the file is not backed up, even if it is new to the NetWare server.

Also, in a partial incremental, files are not expired or rebound on the server, and the copy group's frequency attribute of the management classes is ignored.

Running a Full Incremental Backup

To run a full incremental backup, use the INCREMENTAL command. ADSM runs an incremental backup against the volumes specified in your client domain. The volumes you specify can include the bindery and the NDS.

You can specify the volumes you want to back up in one of the following ways:

- Allow ADSM to use the default client domain specified with the DOMAIN option in your client options file (see "DOMAIN" on page 67). If the DOMAIN option has not been set in your options file, the default is all locally mounted volumes and the bindery. For example:

```
load dsmc incremental
```

- Use the DOMAIN option with the INCREMENTAL command to add volumes to the default client domain specified in your client options file:

```
load dsmc incremental -domain=servb\sys:
```

- Use the *volume* parameter of the INCREMENTAL command to override the client domain specified in your client options file:

```
load dsmc incremental data: servc\sys:
```

Running an Incremental by Date Backup

To run an incremental by date backup, add the INCRBYDATE option to the INCREMENTAL command:

```
load dsmc incremental -incrbydate
```

Understanding the Backup Statistics

During any type of backup, ADSM displays the status of each file it attempts to back up. For each file, ADSM reports the file's size, volume, path, and file name, and whether the backup attempt was successful. (Similar statistics are produced by the SELECTIVE and ARCHIVE commands. These also show up in the schedule log for scheduled commands.) When the backup is complete, ADSM displays the following statistics:

Total number of objects inspected:	4,048
Total number of objects backed up:	710
Total number of objects updated:	0
Total number of objects rebound:	0
Total number of objects deleted:	138
Total number of objects failed:	0
Total number of bytes transferred:	59.8 MB
Data transfer time:	258.56 sec
Data transfer rate:	237.05 KB/sec
Average file size:	86.3 KB
Compression percent reduction:	46.89%
Elapsed processing time:	0:09:40

Where:

Total number of objects inspected

The number of files ADSM considered processing.

Total number of objects backed up

The number of files and directories backed up. (Directories are counted separately in this total.)

Total number of objects updated

The number of files or directories whose attributes were updated on the server, but were not backed up.

Total number of objects rebound

The number of files or directories whose management class changed (see "Binding and Rebinding Management Classes to Files" on page 41).

Total number of objects deleted

The number of files or directories that were expired on the ADSM server because they no longer exist on the NetWare server.

Total number of objects failed

The number of files or directories that could not be backed up.

Total number of bytes transferred

The number of bytes sent to the ADSM server (after any compression processing).

Data transfer time

The time it took to transfer data, from the first byte sent to the last.

Data transfer rate

The average number of kilobytes sent per second.

Average file size

The average uncompressed size of the files sent to the ADSM server.

Compression percent reduction

The percentage ADSM was able to reduce the size of your files using compression.

Elapsed processing time

The time between starting and ending the command.

Using the Include-Exclude List to Control Processing

Usually, there are files on your disk that you do not want to back up. These files might be operating system or application files that could be easily recovered by reinstalling the program, or any other file that you could easily rebuild.

You can use the INCLUDE and EXCLUDE options in the ADSM options file to tell ADSM which files to exclude from backup processing. ADSM honors the include-exclude list whether you are doing an incremental or selective backup. ADSM backs up any file that is not explicitly excluded. You do not need to use an INCLUDE option to include specific files unless those files are in a directory you are trying to exclude.

For more information on setting up an include-exclude list, see “Creating an Include-Exclude List” on page 53.

Incremental Backup: Advanced Considerations

This section discusses some advanced considerations for using incremental backup. You do not need to understand this information in order to use ADSM for basic work.

Understanding What ADSM Considers a Changed File: For full incrementals, ADSM considers a file to be changed if any of these items are different from the last backup taken:

- File size
- Date or time of last modification
- File attributes, except for the A attribute (the archive attribute). ADSM does not use the archive attribute because other programs change the attribute during file copying, even if the file has not changed. When you restore a file, ADSM restores the attributes to what they were when you backed up the file.
- Trustee rights

Understanding Which Files Are Backed Up: When you request an incremental backup, ADSM backs up a file if all of the following requirements are met:

- The file is not specified on an exclude statement in your include-exclude list. If you do not have an include-exclude list, all files are considered eligible for backup.

- The selected management class contains a backup copy group. See Chapter 5, “Automating ADSM Tasks” on page 27 for more information on management classes and backup copy groups.
- The file meets the serialization requirements defined in the backup copy group. If serialization is *static* or *shared static*, and the file is in use each time ADSM attempts to back it up, the file is not backed up. See “Copy Groups” on page 36 for more information.
- The file meets the mode requirements defined in the backup copy group. If the mode is *modified*, the file must have changed since the last backup. If the mode is *absolute*, the file can be backed up even if it has not changed. See “Copy Groups” on page 36 for more information.
- The file meets the frequency requirements defined in the backup copy group. The minimum number of days since the last backup must elapse before a file is backed up. See “Copy Groups” on page 36 for more information. (Frequency is ignored for partial incrementals.)

When you run an incremental backup, ADSM also backs up all directory information, except for empty directories, which are not backed up. You can exclude the files within a directory, but you cannot exclude a directory from being backed up. Directories are counted in the number of files backed up.

Understanding How Your Files Are Managed: ADSM uses *management classes* to determine how to manage your backups on the ADSM server. Every time you back up a file, the file is assigned a management class. The management class used is either a default chosen for you, or one you assigned to the file using the INCLUDE option in the include-exclude list. The chosen management class must contain a backup copy group in order for the file to be backed up. See Chapter 5, “Automating ADSM Tasks” on page 27 for more information on management classes and how to assign them to files.

Backing Up Opened Files: Some files on your system may be in use when you try backing them up (these are called *open files*, because they are opened by an application for its use). Because an open file may change, it is likely that any backup of an open file will not correctly reflect the contents of the file at a given time.

If you find that certain files are not getting backed up because they are open and get changed when you try backing them up (or when the backup schedule starts), you need to consider your options:

- If the file is unimportant, or can be easily rebuilt (for example, a temporary file), you might not care that the file is not backed up.
- If the file is important:
 - You can ensure the file is closed before ADSM tries to back it up. If backups are run according to a schedule, use the PRESCHEDULECMD option to issue a command that closes the file. For example, if the open file is a database, use the database’s quiesce command to shut down the database. You can

use the POSTSCHEDULECMD option to restart the application that uses the file after the backup completes.

If you are not using a schedule for the backup, ensure that you close the application that uses the file before you start the backup.

- You can have ADSM back up the file even if it is open and gets changed during the backup. This is only useful if the file will be usable even if it changes while being backed up. To have ADSM back up these files, assign the files a management class with the serialization **dynamic** or **shared dynamic**. See “Choosing a Management Class for Files” on page 39 for information on assigning management classes, and “Displaying Information About Management Classes” on page 35 for information on determining which management classes are available to you.

Note: If the open file has its share flag set to DENY_READ, ADSM cannot back it up.

Backing Up Specific Files or Directories

You can use the SELECTIVE command to back up specific files, a group of files with similar names, entire directories, the NDS, or the bindery. This is called a *selective backup*.

You can use more than one file specification on the SELECTIVE command. For example, to back up the **sys:/proj/test.doc** and the bindery files, use:

```
load dsmc selective sys:/proj/test.doc bindery
```

See “Understanding the Backup Statistics” on page 12 for an explanation of the statistics that ADSM provides after processing an INCREMENTAL, SELECTIVE, or ARCHIVE command.

For a scheduled selective backup, your ADSM administrator must specify which files to back up.

For more information, see “LOAD DSMC SELECTIVE—Backing up Selected Files” on page 175.

Selective Backup: Advanced Considerations

This section discusses some advanced considerations for using selective backup. You do not need to understand this information in order to use ADSM for basic work.

Backing Up Directories: If you back up a directory, you can use the SUBDIR=YES option to include all the subdirectories under that directory in the backup.

For example, to back up the **sys:/proj** directory and its subdirectories, use:

```
load dsmc selective sys:/proj -subdir=yes
```

Using Wildcard Characters: You can use the operating system's wildcard characters in file specifications with ADSM, including on ADSM commands, for most ADSM tasks. These characters allow you to select groups of files that have similar names.

In a command, wildcard characters can only be used in the file name or extension. They cannot be used to specify destination files, volume names, server names, NDS names, or the bindery.

The wildcard characters used by NetWare are:

* Asterisk. This stands for zero or more characters. For example:

***.exe** matches all files that have the extension **exe**

hm*.* matches all files that start with **hm**, regardless of extension

h*. matches all files with an **h** somewhere in the file name, regardless of extension

? Question mark. This stands for one character. For example:

?exe matches all files with the extension **exe** that have one, and only one, character in their file name

hm?.exe matches all files that have three-character names beginning with **hm** and that have an **exe** extension

You can combine the asterisk and question mark in a file specification. For example, **??hm.*** matches all four-character file names ending in **hm**, no matter what extension they have.

Understanding Which Files Are Backed Up: When you request a selective backup, ADSM backs up a file if all of the following requirements are met:

- The file is not specified on an exclude statement in your include-exclude list. If you do not have an include-exclude list, all files are considered for backup.
- The selected management class contains a backup copy group.
- The file meets the serialization requirements defined in the backup copy group. If serialization is *static* or *shared static*, and the file is in use each time ADSM attempts to back it up, the file is not backed up.

For selective backups, ADSM does not check frequency or mode, and does not check to see whether a file has changed since it was last backed up. The only criteria for selective backup are that the file is not excluded from backup services and the management class associated with it has a backup copy group.

When you run a selective backup, ADSM also backs up all directory information. You can exclude the files within a directory, but you cannot exclude a directory from being backed up. Directories are counted in the number of files backed up.

When you use the VOLINFORMATION option with the SELECTIVE command, volume information such as disk space restrictions and volume root directory trustee rights are backed up.

Requesting Backup and Archive Services for Remote Servers

You can request backup and archive services for multiple NetWare file servers.

To back up files on a remote NetWare file server, you must either:

- Know the NetWare administrator password
- Know the supervisor password for each server
- Have a user ID and password with administrator or supervisor equivalence

ADSM includes two options that relate to backing up and archiving files for remote servers:

- **NWUSER**—Allows you to specify a user ID and password for a local or remote NetWare server. You can use this option as many times as necessary in your client options file to provide password information for each remote file server for which you plan to back up and archive files.

If you do not store password information for local or remote servers in your client options file, ADSM prompts you for that information when you issue commands to back up or archive files stored on those servers.

- **NWPWFILE**—If you choose not to include password information for a local or remote NetWare server in your client options file, you can use this option to specify whether you want ADSM to save the user ID and password you provide when prompted.

If you set NWPWFILE to Yes, the first time you issue a command to back up or archive files for a local or remote NetWare server, ADSM encrypts the user ID and password you provide and stores that information in a file with an extension of **.pwd** in your installation directory. When you issue subsequent commands to back up or archive files for that server, ADSM obtains the password information from that file instead of issuing a prompt. This is the default for this option.

If you set NWPWFILE to No, ADSM prompts you for the user IDs and passwords for local or remote NetWare servers each time you issue a command to back up or archive files stored on those servers.

You can include volumes stored on remote NetWare file servers in your default client domain specified with the **DOMAIN** option in your client options file. For example, to specify the **SYS:** volume on three remote NetWare file servers as well as all local volumes and the bindery, use:

```
DOMAIN ALL-LOCAL servb\sys: servc\sys: servd\sys:
```

You can also use the **DOMAIN** option with the **INCREMENTAL** command to specify volumes stored on remote NetWare file servers. For example:

```
load dsmc incremental -domain="servb\sys: servc\sys:"
```

In addition, you can selectively back up or archive files stored on a remote server. For example:

```
load dsmc selective servb\sys:/test/*  
load dsmc archive servc\sys:/test2/proj1*
```

Restoring Files or Directories

You can use the RESTORE command to restore backup versions of specific files, a group of files with similar names, or entire directories.

You can restore a file to either its original location or to a different location. For example, to restore the **sys:/doc/h1.doc** file to its original directory, use:

```
load dsmc restore sys:/doc/h1.doc
```

To restore the file under a new name and directory, use:

```
load dsmc restore sys:/doc/h1.doc sys:/newdoc/h2.doc
```

Add the `-SUBDIR=YES` option to the command if you need to restore the files in a directory and all of its subdirectories. For example, if you are recovering an entire volume (in this example, the NW3: volume), you can restore all the files using:

```
load dsmc restore NW3:/*.* -subdir=yes
```

Note: You must use this option to restore directory attributes/permissions.

Do You Want To Restore an Active or Inactive Backup?

Your administrator determines how many backup versions ADSM maintains for each file on your NetWare server. Frequently, the administrator has ADSM maintain more than one version of each file. Having multiple versions of a file allows you to restore older versions in case the most recent backup is damaged.

ADSM considers the most recent backup version to be the *active* version. Any other backup version is considered an *inactive* version.

Every time ADSM backs up your files, it marks the new backup version as the active backup, and it changes what used to be the active backup to an inactive backup. When the maximum number of inactive versions is reached, ADSM deletes the oldest inactive version.

Normally, you want to restore active backup versions of files. However, there might be times when you want to restore an inactive version. For example, you might want to restore a file with the contents it contained on or before a specific date. Or you might accidentally erase a file, and then run an incremental backup. The active backup version of the file is now inactive. To get your file back, you need to restore the most recent inactive backup version of the file.

The RESTORE command restores only *active* backup versions of files, unless you use the following options:

- **LATEST**—Causes ADSM to restore the latest backup version of a file regardless of whether it is active or inactive.
- **PICK** and **INACTIVE**—Causes ADSM to display a list of both active and inactive backup versions of files. From that list, you can choose the versions you want to restore.

For example, if you want to restore the latest version of the deleted file **sys:/h1.doc**, use:

```
load dsmc restore sys:/h1.doc -latest
```

If you try to restore both an active and inactive version of a file at the same time, only the active version is restored.

Restoring Files: Advanced Considerations

This section discusses some advanced considerations for restoring data. You do not need to understand this information in order to use ADSM for basic work.

Authorizing Another Client Node to Restore or Retrieve Your Files

You can authorize another client node to restore your backup versions or retrieve your archive copies.

To authorize another node to restore or retrieve your files, use the SET ACCESS command. You can also use the QUERY ACCESS command to see your current list, and DELETE ACCESS to delete nodes from the list.

For more information on the commands, see:

- “LOAD DSMC SET ACCESS—Granting Access to Files” on page 178
- “LOAD DSMC QUERY ACCESS—Displaying File Access Information” on page 139
- “LOAD DSMC DELETE ACCESS—Deleting Access to Files” on page 120

Restoring or Retrieving Files from Another Client Node

If you want to restore files backed up or retrieve files archived by another NetWare client node, then you need access to those files as described in “Authorizing Another Client Node to Restore or Retrieve Your Files.”

To find out whether you have access to files backed up by another client node, you can enter the QUERY ACCESS command and use the FROMNODE option to specify that client node. For example:

```
load dsmc query access -fromnode=nwnode2
```

If you have been granted access to files backed up by a different client node, you can restore those files by using the FROMNODE option with the RESTORE command. For example, you could enter the following:

```
load dsmc res -fromnode=nw2 servb\SYS:/home/proj/* serva\SYS:/home/proj/
```

where **nw2** is the node name for another NetWare server, **servb\SYS:/home/proj/*** indicates the name of the server and the files you want to restore, and **serva\SYS:/home/proj/** indicates where you want to place the files you are restoring. You must specify a destination, or ADSM attempts to restore the files to the server from which the files were backed up.

You can retrieve files that have been archived in the same way, using the RETRIEVE command.

For more information about using the FROMNODE option, see “LOAD DSMC RESTORE—Restoring Files from Backup” on page 157.

Restoring or Retrieving Your Files to Another Client Node

ADSM lets you restore files you backed up or retrieve files you archived from your own NetWare server when you are using a different NetWare server. You just need to tell ADSM your node name, because your backups and archives are stored according to your node, not your specific machine. Your ADSM password protects your data.

To restore or retrieve files to another NetWare server, use the NODENAME option to specify the node name of the NetWare server from which you backed up or archived the files. You can either use the NODENAME option when starting ADSM or update the client options file on the NetWare server. (If you are using someone else's machine, use the NODENAME option on the LOAD DSMC command, so you do not change their configuration.)

For example, enter the following:

```
load dsmc res -nodename=nw1 serva\SYS:/home/proj/* servb\SYS:/home/proj/
```

where **nw1** is the node name for the NetWare server from which you backed up the files, **serva\SYS:/home/proj/*** identifies the server and the files you want to restore, and **servb\SYS:/home/proj** indicates where you want to place the files you are restoring. You must specify a destination, or ADSM attempts to restore the files to the node from which the files were backed up.

You can enter the PASSWORD option with the RESTORE or RETRIEVE command, or allow ADSM to prompt you for the ADSM password for the client node you specified with the NODENAME option.

Restoring a Disk In Case of Disk Loss

ADSM can only recover your files if you can run the ADSM client. If the disk that contains the client is lost (from theft or hardware failure, for example), you must reinstall the client before you can recover your files. If you also lose the disk that contains the operating system and communication software, you must recover them before you can connect to the ADSM server.

To protect yourself against these kinds of losses, you need to put together a set of diskettes that you can use to restore your system to a state that permits you to contact the ADSM server and begin recovering data. These diskettes should contain:

1. A bootable operating system that will allow you to perform basic functions.
2. A correctly configured communication program that will allow you to establish communications with the ADSM server.
3. An ADSM client with an appropriately customized options file.

The exact files you need differ depending on the communication package you use. Consult your operating system and communication software manuals for help in setting up these diskettes.

Performing Large Restore Operations

If you need to restore a large number of files, you can get faster performance by using the RESTORE command instead of the GUI. In addition, you can improve performance by issuing multiple RESTORE commands at one time.

For example, to restore all the files in your **SYS:/user** file space, you could enter:

```
load dsmc restore SYS:/user -subdir=yes -replace=all -tapeprompt=no
```

However, if you issue multiple commands for directories in your **SYS:/user** file space, ADSM can restore the files faster.

For example, you could issue these commands:

```
load dsmc restore SYS:/user/jones -subdir=yes -replace=all -tapeprompt=no
load dsmc restore SYS:/user/smith -subdir=yes -replace=all -tapeprompt=no
load dsmc restore SYS:/user/brown -subdir=yes -replace=all -tapeprompt=no
```

Or, if you need to restore multiple volumes, you could issue a RESTORE command for each volume. For example:

```
load dsmc restore SYS:/* -subdir=yes -replace=all -tapeprompt=no
load dsmc restore APP:/* -subdir=yes -replace=all -tapeprompt=no
load dsmc restore DATA:/* -subdir=yes -replace=all -tapeprompt=no
```

Note: If you already have the appropriate values set for the SUBDIR, REPLACE, and TAPEPROMPT options in your client options file, you do not need to include those options in the commands.

When you issue multiple commands to restore your files, you must specify a unique part of the file space in each RESTORE command. Be sure that you do not use any overlapping file specifications in the commands.

To display a list of the root directories in a file space, use the QUERY BACKUP command. For example:

```
load dsmc query backup -dirsonly -subdir=no
```

As a general rule, you can issue from two to four RESTORE commands at one time. The maximum number you can run at one time without degrading performance depends on factors such as how much memory you have and network utilization.

The speed at which ADSM can restore the files also depends on how many tape drives are available, and whether your administrator is using collocation to keep file spaces assigned to as few volumes as possible.

For example, if **SYS:/user/jones** and **SYS:/user/smith** are on the same tape, the restore for **SYS:/user/smith** must wait until the restore for **SYS:/user/jones** is complete. However, if **SYS:/user/brown** is on a different tape, and there are at least two

tape drives available, the restore for **SYS:/user/brown** can begin at the same time as the restore for **SYS:/user/jones**.

If your administrator is using collocation, the number of sequential access media mounts required for restore operations is also reduced.

Other options you can choose to use in multiple RESTORE commands are:

QUIET

The advantage of using this option is that messages are not printed to your screen, and processing is faster. The disadvantage is that you do not receive information about individual files that are processed. ADSM records only summary information.

ERRORLOGNAME

You can use this option to specify a different error log file for each RESTORE command. Be sure to keep track of which command goes with each log file.

Deleting File Spaces

If your ADSM administrator gives you backdelete authority, you can delete entire file spaces from the server. When you delete a file space, you delete all the files, both backup versions and archive copies, that are contained within the file space.

Carefully consider what you are doing before you attempt to delete a file space.

You cannot delete individual backup versions kept on the ADSM server.

If you decide you do not need the file space, use the DELETE FILESPACE command. See "LOAD DSMC DELETE FILESPACE—Deleting File Spaces" on page 127 for more information.

Chapter 4. Archiving and Retrieving Files

Archiving and retrieving files is similar to backing up and restoring files. Many of the concepts are similar. In this chapter, we cover the main archive and retrieve tasks, but where the concepts are the same as for backup and restore, we direct you to sections within Chapter 3, "Backing Up and Restoring Files" on page 9.

See "Do You Want to Back Up or Archive Files?" on page 9 for a discussion of the difference between backups and archives.

Archiving Files

You request archive services when you want to preserve copies of files in their current state, either for later use or for historical or legal purposes. You can archive a single file, a group of files, or all the files in a directory or subdirectory. After you archive a file, you can choose to erase the original file.

In addition, ADSM stores trustee file assignments, file attributes, name spaces, and associated name space information with the archive copies of the files.

Note: Trustee directory rights are not archived.

Use the ARCHIVE command to archive files. Use wildcards to archive more than one file at a time. If you archive a directory of files, you can use the SUBDIR=YES option to include all the subdirectories under that directory in the archive.

For example, to archive the files in the **sys:/proj** directory and its subdirectories, use:

```
load dsmc archive sys:/proj -subdir=yes
```

You can use more than one file specification with the ARCHIVE command. For example, to archive the **sys:/proj/h1.doc** file and the bindery, use:

```
load dsmc archive sys:/proj/h1.doc bindery
```

Use the description option to assign a description to the archive:

```
load dsmc archive sys:/h1.doc -description="Chapter 1, first version"
```

See "Understanding the Backup Statistics" on page 12 for an explanation of the statistics that ADSM provides after processing an INCREMENTAL, SELECTIVE, or ARCHIVE command.

Use the ARCHMC option to specify a different management class than the one normally associated with the file.

If ADSM refuses to archive a file, check to see if it is marked for execute only or if it is opened and locked by another user.

Your administrator might have set up schedules to automatically archive certain files on your NetWare server. See Chapter 5, “Automating ADSM Tasks” on page 27 for information on checking and running the schedules available to you.

See “LOAD DSMC ARCHIVE—Archiving Files” on page 117 for more information.

Archiving Files: Advanced Considerations

This section discusses some advanced considerations for archiving files. You do not need to understand this information in order to use ADSM for basic work.

Deleting Archived Files

You can delete archives if you decide you no longer need them. Unlike backup versions, you can delete individual archives without deleting the entire file space.

Use the DELETE ARCHIVE command to delete archive copies.

Understanding How Your Archives Are Managed

As with backing up files, ADSM checks the INCLUDE options in your include-exclude list to determine which management class to assign to your archived files. If you do not specifically assign a management class to a file with an INCLUDE option, ADSM assigns the file the default management class.

ADSM can only archive a file if the selected management class contains an archive copy group.

For information on the various management class attributes used to manage your archives, see “Displaying Information About Management Classes” on page 35. For information on assigning management classes, see “Using Management Classes with INCLUDE” on page 57.

Requesting Archive Services for Remote Servers

You can request archive services for multiple NetWare file servers. See “Requesting Backup and Archive Services for Remote Servers” on page 17 for more information.

Retrieving Archived Files

You *retrieve* a file when you want to return an archive copy from the ADSM server to your NetWare server.

You can retrieve a single file, a group of files, or all the files in a directory or subdirectory. When you retrieve a file, ADSM sends you a copy of what is stored. The archived file remains intact in ADSM storage.

You can also specify that you want to retrieve files you archived within a particular range of dates or that are due to expire within a particular range of dates.

Use the RETRIEVE command to retrieve files. Indicate the file you want retrieved and a destination. If you do not indicate a destination, the files are retrieved to their original location.

For example, to retrieve the **sys:/doc/h1.doc** file to its original directory, use:

```
load dsmc retrieve sys:/doc/h1.doc
```

To retrieve it under a new name, use:

```
load dsmc retrieve sys:/doc/h1.doc sys:/doc/h2.doc
```

You can use the PICK option to get a list of archives from which you can pick files.

See “LOAD DSMC RETRIEVE—Retrieving Files from Archive” on page 166 for more information.

Retrieving Files: Advanced Considerations

This section discusses some advanced considerations for retrieving files. You do not need to understand this information in order to use ADSM for basic work.

Understanding the Similarities between Retrieve and Restore

Many of the advanced considerations for retrieving files are the same as they are for restoring files. See these sections for more information:

- “Authorizing Another Client Node to Restore or Retrieve Your Files” on page 19
- “Restoring or Retrieving Files from Another Client Node” on page 19
- “Restoring or Retrieving Your Files to Another Client Node” on page 20

Chapter 5. Automating ADSM Tasks

One of the best ways to use ADSM is to automate the tasks you want done on a regular basis. Your ADSM administrator has probably set up some ADSM processes that you can use to do this. For example, ADSM can back up files at the end of each day automatically. Or, it can archive some of your files every Friday.

Central scheduling is a procedure your administrator defines to process ADSM tasks automatically. You start the *client scheduler* on your NetWare server, which connects you to the ADSM server's schedule.

Whereas you can use central scheduling to actually perform your tasks automatically, you can use *storage management policies* to tell ADSM how to manage your backups and archives on the ADSM server. Your ADSM administrator defines these policies, and you associate your data with them. Then, when your data is backed up or archived, it is managed according to the criteria set by the policy.

Using Central Scheduling

An ADSM administrator can set up schedules to perform ADSM tasks automatically. Central scheduling is a cooperative effort between the ADSM server and your client node. An ADSM administrator sets up central scheduling on the ADSM server, and you are responsible for starting the client scheduler on your node. After you start the client scheduler, no further intervention is necessary.

You can also:

- Display information about available schedules
- Display information about work that the schedule has completed
- Modify scheduling options in the client options file, if necessary

Starting the Client Scheduler

You must start the client scheduler on your client node to use the ADSM server's schedule. To start the client scheduler, issue the SCHEDULE command as follows:

```
load dsmc schedule
```

You can also include the SCHEDULE command in your **autoexec.ncf** file so that every time you start NetWare the client scheduler starts.

After you start the client scheduler, it runs continuously until you shut down your system or enter the following command at the NetWare console prompt:

```
unload dsmc
```

Displaying Information About Scheduled Work

To see what schedules are defined for your client node, use the QUERY SCHEDULE command:

```
load dsmc query schedule
```

ADSM displays detailed information about all scheduled work for your client node.

Figure 3 shows sample QUERY SCHEDULE output.

```
Schedule Name: DAILY_INC
Description: Daily System-wide backup
Action: Incremental
Options: QUIET
Objects:
Priority: 1
Next Execution: 30 minutes
Duration: 4 Hours
Period: 1 Day
Day of Week: Any
Expire: Never

Schedule Name: WEEKLY_INC
Description: Weekly backup for project files
Action: Incremental
Options: QUIET
Objects: BINDERY SYS:
Priority: 1
Next Execution: 60 minutes
Duration: 8 Hours
Period: 7 Days
Day of Week: Friday
Expire: Never
```

Figure 3. Sample QUERY SCHEDULE output

The schedule named DAILY_INC starts an incremental backup every day. The next incremental backup is due to start in 30 minutes. Because no objects are listed, ADSM runs the incremental backup on your default domain. The schedule has no expiration date.

The schedule named WEEKLY_INC starts an incremental backup on the bindery and SYS: volumes every Friday.

The QUERY SCHEDULE output shows the following details about schedules:

Schedule Name

The name the administrator has given to the schedule.

Description

A description of the schedule.

Action

The type of task to perform:

- **Incremental**—The schedule performs an incremental backup of the volumes listed in the **Objects** field.
- **Selective**—The schedule backs up the files listed in the **Objects** field.

- Archive—The schedule archives the files listed in the **Objects** field.
- Restore—The schedule restores the files listed in the **Objects** field.
- Retrieve—The schedule retrieves the files listed in the **Objects** field.
- Command—The schedule runs the command shown in the **Objects** field.
- Macro—The schedule runs the macro listed in the **Objects** field.

Options

Override options that you have set in the client options file for scheduling. See “Specifying Scheduling Options” on page 30 for more information about scheduling options.

Objects

The volumes or files to be processed, or the command to be executed. If volumes are not listed for an incremental backup, then ADSM uses the default domain.

Priority

The priority of the schedule if there is more than one schedule for the same client node starting at the same period of time. The ADSM server runs the schedule with the highest priority first. For example, a schedule with a priority of 1 is started before a priority 3 schedule.

Next Execution

When the schedule runs next.

Duration

The maximum amount of time after the ADSM server has started the schedule that you can begin your client scheduler. For example, if the duration is 4 hours, then you can start your client scheduler up to 4 hours after the ADSM server starts the schedule.

Period

How often the schedule runs. A period of 12 hours indicates that the schedule runs every 12 hours.

Day of Week

The day of the week on which the schedule begins. *Any* means that the schedule can start on any day.

Expire

The date on which the schedule is no longer used. *Never* means that the schedule never expires.

Displaying Information About Completed Work

When you run the SCHEDULE command in the foreground, output from scheduled commands appears on your screen. It is also directed to a file called **dsmsched.log** in the installation directory unless you change the directory and file name using the SCHEDLOGNAME option.

After scheduled work is performed, you can check the schedule log to find out whether all work completed successfully. Figure 4 on page 31 shows sample output directed to

the schedule log. The output shows the successful completion of a scheduled, selective backup.

See “Understanding the Backup Statistics” on page 12 for an explanation of the statistics that ADSM provides after processing an INCREMENTAL, SELECTIVE, or ARCHIVE command.

The schedule log continues to grow unless you prune it using the SCHEDLOGRETENTION option. See “Specifying Scheduling Options” for more information.

Specifying Scheduling Options

You can modify scheduling options in the client options file if you do not like the current values.

For more detailed information about each scheduling option, see Chapter 6, “Setting Processing Options” on page 45.

Changing How the Scheduler Runs

The following options determine how the scheduler runs on your workstation.

If your ADSM administrator specifies a value for these options, it overrides what you have in the client options file.

QUERYSCHEDPERIOD: If you are using the client-polling mode, you can set the maximum number of hours the client scheduler waits between attempts to contact the ADSM server for scheduled work.

In the following example, the client scheduler waits for 5 hours:

```
querschedperiod=5
```

MAXCMDRETRIES: Use this option to indicate the maximum number of times the client scheduler can retry a scheduled command that fails.

In the following example, the client scheduler tries 3 times:

```
maxcmdretries=3
```

RETRYPERIOD: Use this option to set the number of minutes the client scheduler must wait between retry attempts for a scheduled command that fails or between unsuccessful attempts to contact the ADSM server.

In the following example, the client scheduler waits for 15 minutes:

```
retryperiod=15
```

SCHEDLOGNAME: Use this option to specify where you want ADSM to store the schedule log. The default is the installation directory with a file name of **dsmsched.log**.

```

06/18/1995 12:50:18 Session established with server GANDALF: NW_V3_for_RS/6000
06/18/1995 12:50:18 Server Version 2, Release 1, Level 0
06/18/1995 12:50:18 Server date/time: 06/18/1995 12:50:33 Last access: 06/18/1995 12:35:56

06/18/1995 12:50:18 Querying server for next scheduled event.
06/18/1995 12:50:18 Next operation scheduled:
06/18/1995 12:50:18 -----
06/18/1995 12:50:18 ScheduleName: BONZTEST
06/18/1995 12:50:18 Action: Selective
06/18/1995 12:50:19 Objects: ADSM\SYS:/home/ramke/*.tst
06/18/1995 12:50:19 Options:
06/18/1995 12:50:19 Server Window Start: 13:00:00 on 06/18/1995
06/18/1995 12:50:19 -----
06/18/1995 12:50:19 Command will be executed in 13 minutes.
06/18/1995 13:03:19 Executing scheduled command now.
06/18/1995 13:03:19 Session established with server GANDALF: NTW_V3_for_RS/6000
06/18/1995 13:03:19 Server Version 2, Release 1, Level 0
06/18/1995 13:03:19 Server date/time: 06/18/1995 13:03:34 Last access: 06/18/1995 12:50:33

06/18/1995 13:03:19 Selective Backup function invoked.

06/18/1995 13:03:33 Normal File--> 1,327 ADSM\SYS:/home/ramke/bonz1.tst Sent
06/18/1995 13:03:33 Normal File--> 1,379 ADSM\SYS:/home/ramke/bonz2.tst Sent
06/18/1995 13:03:33 Normal File--> 2,656 ADSM\SYS:/home/ramke/bonz3.tst Sent
06/18/1995 13:03:33 Normal File--> 2,705 ADSM\SYS:/home/ramke/bonz4.tst Sent
06/18/1995 13:03:34 Normal File--> 1,327 ADSM\SYS:/home/ramke/bonz5.tst Sent
06/18/1995 13:03:34 Normal File--> 1,327 ADSM\SYS:/home/ramke/bonz6.tst Sent
06/18/1995 13:03:34 Normal File--> 1,327 ADSM\SYS:/home/ramke/bonz7.tst Sent
06/18/1995 13:03:35 Normal File--> 1,327 ADSM\SYS:/home/ramke/bonz8.tst Sent
06/18/1995 13:03:35 Normal File--> 1,327 ADSM\SYS:/home/ramke/bonz9.tst Sent
06/18/1995 13:03:37 Selective Backup of ADSM\SYS:/HOME/L64/*.TST complete.

06/18/1995 13:03:37 Scheduled event 'BONZTEST' completed successfully.
06/18/1995 13:03:37 Sending results for scheduled event 'BONZTEST'.
06/18/1995 13:03:38 Results sent to server for scheduled event 'BONZTEST'.

```

Figure 4. Sample Schedule Log

In the following example, ADSM puts the schedule log in the **SYS:/error** directory with a file name **schedlog.dec**:

```

schedlogname SYS:/error/schedlog.dec

```

SCHEDLOGRETENTION: Use this option to set the number of days to keep log file entries from the schedule log before pruning it, and whether to save pruned entries. The pruning takes place when the client scheduler is stopped and restarted.

In the following example, ADSM keeps entries for 7 days and then prunes them. It discards the pruned entries:

```

schedlogretention 7,D

```

Changing the Scheduling Mode and TCP/IP Addresses

The following options change the scheduling mode, TCP/IP address, or TCP/IP port number. These options apply only if you are using the TCP/IP communication method.

SCHEDMODE: Use this option to indicate whether you want to use the client-polling mode or the server-prompted mode.

In the *client-polling mode*, the client scheduler queries the ADSM server for scheduled work at prescribed time intervals. This is the default schedule mode.

In the *server-prompted mode*, the client scheduler waits for the ADSM server to contact your client node when scheduled work needs to be done. This mode provides an ADSM administrator with more control and flexibility in processing scheduled work. For example, if you normally run a scheduled, system-wide incremental backup in the evening, but your host system is scheduled to be down for maintenance work, your ADSM administrator can choose to initiate a backup at an earlier time.

Your administrator can specify that either mode is supported by the ADSM server, or only one mode is supported. If your administrator specifies only one mode, you must specify that same mode in your client options file. Otherwise, scheduled work is not processed.

In the following example, the mode is polling:

```
schedmode polling
```

TCPCLIENTADDRESS: Use this option to specify a TCP/IP address if your client node has more than one address, and you want the ADSM server to contact a different address than the one used to make initial contact with the ADSM server. You can use this option only if you are using the server-prompted schedule mode.

In the following example, the address is **dscInt.sanjose.ibm.com**:

```
tcpclientaddress dscInt.sanjose.ibm.com
```

TCPCLIENTPORT: Use this option to specify a TCP/IP port number if you want the ADSM server to use a different port than the one used to make initial contact with the server. You can only use this if you are using the server-prompted schedule mode.

If the default or specified port is busy, ADSM attempts to use any other available port.

In the following example, the port number is **1503**:

```
tcpclientport 1503
```

Issuing Commands Before and After a Schedule Runs

The following options let you run commands before and after a schedule. The commands can be any commands that you could normally run from a NetWare prompt. These options are valid only on NetWare 4.0 and later.

PRESCHEDULECMD: Use this option to run a command before the schedule runs. For example, use PRESCHEDULECMD to quiesce a database before starting a schedule that runs an incremental backup of the database. Then, use POSTSCHEDULECMD to restart the database.

POSTSCHEDULECMD: Use this option to run a command after running a schedule. For example, after the schedule runs, use a post-schedule command that runs a program to scan the schedule log and send the results to your administrator.

Using Storage Management Policies

Storage management policies are rules that your ADSM policy administrator defines to tell ADSM how to manage backups and archives, based on the needs of users and the business. For example, policies determine:

- Whether a file is eligible for backup or archive services
- How many backup versions to keep
- How long to keep backup versions and archive copies
- Where to place the copies in storage

This section first explains more about storage management policies. Then, it shows you how to display what policies are available to you. Next, you can read about how to choose the best policies for your files and directories. Finally, this section explains some concepts about how ADSM associates your data with policies.

Understanding Storage Management Policies

Storage management policies have several components, as described by the following terms:

Copy group

The specific storage management attributes that describe how the ADSM server is to manage backed up or archived data. There are two kinds of copy groups: *backup copy groups* and *archive copy groups*.

Management class

A collection of backup and archive copy groups that establishes similar storage management requirements for backing up and archiving data. Most of the work you do with storage management policies is with management classes.

Policy set

A group of one or more management classes. The ADSM administrator uses a policy set to implement different management classes based on business and user needs.

Policy domain

A group of clients that have similar needs for backup and archive. Policy domains contain one or more policy sets.

Understanding Policy Domains and Sets

An ADSM administrator uses *policy domains* to manage a group of client nodes in a logical way. For example, a domain could consist of the following clients:

- An organization, such as payroll, technical writers, or the marketing team
- A physical location, such as a particular building or floor
- Local area networks, such as all clients associated with a particular file server

ADSM includes a policy domain named STANDARD. Initially, your client node is probably associated with that policy domain. However, your ADSM administrator can define additional policy domains if there are groups of users that have unique backup and archive requirements.

Each policy domain can hold numerous *policy sets*. Only one of these policy sets can be active at a time, called the *active policy set*. Each policy set contains a *default management class* and any number of additional management classes.

Understanding Management Classes and Copy Groups

A *management class* contains the specific requirements for backing up and archiving data. An ADSM administrator can establish separate management classes to meet the backup and archive requirements for different kinds of data, such as:

- System data critical for the business
- Application data that changes frequently
- Report data that management reviews monthly
- Legal information that needs to be retained for a long time and requires a lot of disk space

Each file and directory that you back up and each file that you archive must be associated with a management class. You are responsible for associating files, directories, the NDS, and the bindery with appropriate management classes.

If you do not associate a file, the NDS, or the bindery with a management class, ADSM uses the default management class in the active policy set. If you do not specify a management class for directories, ADSM uses the management class in the active policy set that specifies the longest retention period.

You associate files with management classes by using an include-exclude list. See “Choosing a Management Class for Files” on page 39 for more information. To associate directories with a management class, you use the DIRMC option. See “Choosing a Management Class for Directories” on page 41 for more information. To associate the NDS or the bindery with a management class, you use an INCLUDE statement in your include-exclude list. See “Choosing a Management Class for the NDS and the Bindery” on page 41 for more information.

Within a management class, the specific backup and archive requirements are in *copy groups*. There are two kinds of copy groups: backup copy groups and archive copy groups. A management class can have one backup copy group, one archive copy group, both, or neither.

Backup Copy Groups: A *backup copy group* contains attributes that ADSM uses during the backup process to determine the following:

- Whether a file is backed up only if it has changed since the last time it was backed up
- How many days must elapse before a file can be backed up again

- How a file is processed during backup if it is in use

It also contains attributes that ADSM uses to manage the backup versions of your files on the ADSM server. Those attributes control the following:

- Where the ADSM server stores backup versions of your files and directories
- How many backup versions the ADSM server keeps of your files and directories
- How long the ADSM server keeps backup versions of your files and directories

Archive Copy Groups: An *archive copy group* contains attributes that control the following:

- Whether a file is archived if it is in use
- Where the ADSM server stores archived copies of your files
- How long the ADSM server keeps archived copies of your files

Displaying Information About Management Classes

Before you choose the management classes you want to use, you need to see which ones are available. Use the QUERY MGMTCLASS command with the DETAIL option to display information about the available management classes in your active policy set:

```
load dsmc query mgmtclass -detail
```

ADSM displays the following information:

Policy Information

For policy information, you see this information:

Policy Domain

The name of the policy domain to which this management class belongs.

Active Policy Set

The policy set that is active at the time.

Activation Date/Time

The date and time that this policy set became the active one.

Default Management Class

The name of the default management class for this policy set.

Grace Period Backup Retention

The number of days to retain a backup version when the ADSM server is unable to rebind the file to an appropriate management class.

Grace Period Archive Retention

The number of days to retain an archived copy when the server is unable to rebind the file to an appropriate management class. For more information on grace periods, see "Using a Retention Grace Period" on page 42.

Management Class Information

For management class information, you see this information:

Management Class Name

The name of the management class.

Management Class Description

A description of the management class.

Copy Groups

You will see information for both backup and archive copy groups:

Copy Group Name

For backup and archive copy groups, the copy group name is always STANDARD.

Copy Type

For backup copy groups, the type is always BACKUP. For archive copy groups, the type is always ARCHIVE.

Copy Frequency

For backup copy groups, copy frequency is the minimum number of days that must elapse between successive incremental backups.

Copy frequency works with the Copy Mode parameter that is described later. For example, if frequency is 0, and mode is modified, a file or directory is backed up only if it has been changed since the last incremental backup.

If frequency is 0, and mode is absolute, a file is backed up every time you run an incremental backup against it.

ADSM does not check this attribute for selective backups.

For archive copy groups, the frequency is always CMD (command), that is, there is no restriction on how often you archive a file.

Versions Data Exists

For backup copy groups, the maximum number of different backup versions ADSM retains for files and directories currently in your file system.

If you select a management class that allows more than one backup version, the most current version is called the *active* version. All other versions are called *inactive* versions.

If the maximum number of versions allowed is 5, and you run a backup that creates a sixth version, ADSM deletes the oldest version from server storage.

Versions Data Deleted

For backup copy groups, the maximum number of different backup versions ADSM retains for files and directories that you have erased from your file system. ADSM ignores this parameter as long as the file or directory remains in your file system.

If you erase the file or directory, the next time you run an incremental backup, ADSM changes the active backup version to inactive and erases the oldest versions that are in excess of the number specified by this parameter.

The expiration date for the remaining versions is based on the Retain Extra Versions and Retain Only Version parameters described later.

Retain Extra Versions

For backup copy groups, how many days ADSM retains all but the most recent backup version. The most recent version is the active version, and active versions are never erased.

If Nolimit is specified, extra backup versions are deleted based on the Versions Data Exists or Versions Data Deleted parameters.

Retain Only Version

For backup copy groups, the number of days ADSM retains the last remaining inactive version of a file or directory.

If Nolimit is specified, the last version is retained indefinitely.

Copy Serialization

For backup and archive copy groups, whether a file can be in use during a backup or archive, and what to do if it is. The value for this parameter can be one of the following:

Static

A file or directory must not be modified during backup or archive. If the object is changed during the backup or archive attempt, it is not backed up or archived.

Shared Static

A file or directory must not be modified during backup or archive. ADSM attempts to perform a backup or archive as many as four additional times, depending on the value specified for the CHANGINGRETRIES option in your client options file. If the object is changed during every backup or archive attempt, it is not backed up or archived.

Dynamic

A file or directory is backed up or archived on the first attempt regardless of whether it changes during backup or archive. The only exception is if the open file has its share flag set to DENY_READ, in which case ADSM cannot back it up.

Shared Dynamic

A file or directory is backed up or archived regardless of whether it changes during backup or archive. However, ADSM tries as many as four additional times, depending on the value specified for CHANGINGRETRIES in your client options file, to back up or archive the file without the file changing during the attempt. The file is backed up or archived on the last try even if it has changed. The only exception is if the open file has its share flag set to DENY_READ, in which case ADSM cannot back it up.

Attention

Be careful about choosing a management class that contains a copy group that specifies dynamic or shared dynamic for serialization.

If you choose a management class that allows a file to be backed up or archived while it is in use, the backup or archive stored on the server might be a fuzzy copy. A fuzzy copy is a backup or archive that does not accurately reflect what is currently in the file. It might contain some, but not all, of the changes. If that is not acceptable, be sure to choose a management class that allows ADSM to create a backup or archive only if the file does not change during backup or archive.

If you restore or retrieve a file that contains a fuzzy copy, the file might not be usable, depending on the file's application.

Copy Mode

For backup copy groups, whether a file or directory is considered for incremental backup only if it has changed since the last backup or regardless of whether it has changed. ADSM does not check the mode for selective backups. The value for this parameter can be one of the following:

Modified

Indicates that the file is considered for incremental backup only if it has changed since the last backup. A file is considered changed if any of the following are true:

- The date or time of the last modification is different
- The file size is different
- The file attributes, except for the archive attribute, are different
- The trustee rights are different

Absolute

Indicates that the file is considered for incremental backup regardless of whether it has changed since the last backup.

For archive copy groups, the mode is always absolute, which indicates that a file is archived regardless of whether it has changed since the last archive request.

Copy Destination

For backup and archive copy groups, the name of the destination where ADSM stores the backup or archive. The destination can be either a storage pool of disk devices or a storage pool of devices that support removable media such as tape.

Retain Version

For archive copy groups, the number of days an archived file remains in ADSM storage.

When the specified number of days elapse for an archived copy of a file, ADSM deletes it from ADSM storage.

Default Values for Management Class STANDARD

ADSM includes a default management class named STANDARD. Figure 5 shows the default values for the backup and archive copy groups in this management class.

Figure 5. Default Values in the STANDARD Management Class

Attribute	Backup Default	Archive Default
Copy Group Name	STANDARD	STANDARD
Copy Type	BACKUP	ARCHIVE
Copy Frequency	0 days	CMD
Versions Data Exists	2 versions	N/A
Versions Data Deleted	1 version	N/A
Retain Extra Versions	30 days	N/A
Retain Only Version	60 days	N/A
Copy Serialization	shared static	shared static
Copy Mode	modified	absolute
Copy Destination	BACKUPPOOL	ARCHIVEPOOL
Retain Version	N/A	365 days

Choosing a Management Class for Files

If the default management class meets the backup and archive requirements for all the files on your workstation, you do not need to take any action to associate your files with that management class. ADSM does that automatically when you back up or archive your files.

Using the Include-Exclude List to Assign a Management Class

To assign a management class other than the default to a file or group of files, you use an INCLUDE statement in the include-exclude list. You create the include-exclude list in your client options file. For example, to associate all the files in the **costs** directory with a management class named BUDGET use the following include statement:

```
INCLUDE sys:/adsm/proj2/costs/*.* budget
```

Management class names are not case sensitive.

To specify a management class to be used for all files to which you do not explicitly assign a management class, use the following include statement:

```
INCLUDE */.../* managa11
```

where managa11 is the name of an available management class. For more information about using the include-exclude list, see “Using Management Classes with INCLUDE” on page 57.

Overriding the Management Class for Archived Files

When you archive a file, you can choose to override the assigned management class. Use the ARCHIVE command with the ARCHMC option to specify a different management class. For example, to associate the file **budget.jan** with the management class RET2YRS, you specify the following:

```
load dsmc archive -archmc=ret2yrs sys:/plan/proj1/budget.jan
```

For more information about ARCHMC, see “LOAD DSMC ARCHIVE—Archiving Files” on page 117.

Questions to Consider When Choosing a Management Class

If you need to choose a different management class for some of your files, consider the following questions.

- Does the management class contain a backup copy group?

If you attempt to back up a file that is associated with a management class that does not contain a backup copy group, the file is not backed up.

- Does the management class contain an archive copy group?

If you attempt to archive a file that is associated with a management class that does not contain an archive copy group, the file is not archived.

- Does the backup copy group contain attributes that allow your files to be backed up often enough?

Mode and frequency work together to control how often a file is backed up when you use incremental backup. ADSM does not check those attributes for selective backup.

- Do the copy groups specify either static or shared static for serialization?

If serialization is shared dynamic or dynamic, you might get fuzzy backups or archive copies. Be sure you understand whether that is acceptable.

For example, you might want to use shared dynamic or dynamic for a file to which log records are continuously added. If you used static or shared static, the file might not be backed up at all because it is constantly in use. With shared dynamic or dynamic, the file would be backed up, but the backup version of the file might contain a truncated message.

However, you would not want to use shared dynamic or dynamic for a file if it is critical that the backup version or archive copy contain all changes. That is probably the case for most of your files.

- Does the backup copy group specify an adequate number of backup versions to keep and an adequate length of time to keep them?
- Does the archive copy group specify an adequate length of time to keep archived copies of files?

Choosing a Management Class for the NDS and the Bindery

If you do not assign a management class to the NDS or the bindery, ADSM uses the default management class.

If you want to assign a different management class to the NDS and the bindery, you need to consider the same criteria that you would consider in assigning management classes to files.

Choose a management class that has both a backup copy group and an archive copy group, if you plan to back up *and* archive the NDS or bindery.

Be sure that the backup copy group in the management class you choose contains attributes that allow you to back up as often as you want and keep as many different backup versions as you want.

You should also be sure to choose a management class that specifies static or shared static for serialization to be sure that ADSM creates complete copies of the files when you request a backup or archive.

For information about assigning a management class to the NDS and the bindery, see “Assigning a Management Class to the NDS and the Bindery” on page 58.

Choosing a Management Class for Directories

If the management class in your active policy set that contains the longest retention period meets your backup requirements for directories, you do not need to take any action to associate directories with that management class. ADSM does it automatically when it backs up your directories.

If that default management class does not meet your requirements, be sure to choose a management class with an adequate retention period specified for Retain Only Version. You want to be sure that ADSM keeps directories at least as long as it keeps the files associated with those directories.

To assign a management class other than the default to directories, you use the DIRMC option in your client options file. For example, to assign a management class named DIRECT1 to your directories, you would enter:

```
DIRMC DIRECT1
```

For more information about using DIRMC, see “DIRMC” on page 66.

Binding and Rebinding Management Classes to Files

When you back up a file for the first time, ADSM binds it to either the default management class or the management class specified for the file in your include-exclude list. *Binding* is the term for associating a file with a management class.

If the backup copy group for the management class instructs ADSM to keep multiple backup versions of the file, and you request multiple backups, the ADSM server always has one active backup version (the most current version) and one or more inactive

backup versions of the file. All the backup versions of a file are bound to the same management class and are managed based on the attributes in the backup copy group.

When you archive a file, ADSM binds it to the default management class, to the management class specified for the file in your include-exclude list, or to a management class you specify.

There are several instances in which backup versions of a file can be rebound to a different management class. Archived files are never rebound to a different management class. If you change the management class for a file, any previous copies of the file that you have archived remain bound to the management class specified when you archived them.

Rebinding Backup Versions of Files

Backups of files are rebound to a different management class in the following cases. In each case, the files (active and inactive) are not rebound until the next backup.

- You change the management class for the file by specifying a different management class in an INCLUDE statement.

ADSM continues to manage the backups based on the old management class until you run another backup.

- Your ADSM administrator deletes the management class from your active policy set.

ADSM uses the default management class to manage the backup versions when you back up the file again.

- Your ADSM administrator assigns your client node to a different policy domain and the active policy set in that domain does not have a management class with the same name.

ADSM uses the default management class for the new policy domain to manage the backup versions.

Using a Retention Grace Period

ADSM also provides a *backup retention grace period* and an *archive retention grace period* that it uses to help protect your backup and archive data when it is unable to rebound a file to an appropriate management class.

For example, ADSM uses the backup retention grace period in these cases:

- You change the management class for a file, but the new management class does not contain a backup copy group, nor does the default management class.
- The management class to which a file is bound no longer exists, and the default management class does not contain a backup copy group.

ADSM begins using the backup retention grace period when you run an incremental backup.

The backup retention grace period is defined in your policy domain. The default is 30 days. However, your ADSM administrator can choose to change that value to a longer or shorter period.

After ADSM begins managing a file using the backup retention grace period, it does not create any new backup versions of the file. All existing backup versions of the file expire 30 days (or the number of days specified in your policy domain) from the day they are marked inactive.

For archived files, if the management class to which a file is bound no longer exists, and the default management class does not contain an archive copy group, ADSM uses the archive retention grace period defined in your policy domain. The default retention period is 60 days. Your ADSM administrator can choose to change that value to a longer or shorter period.

Chapter 6. Setting Processing Options

You can use defaults for processing options or you can tailor the processing options to meet specific needs. This chapter:

- Provides an overview of processing options
- Explains how to set options in a file
- Explains how to use options with commands

It also includes a client options reference section that provides detailed information about each option.

Understanding Processing Options

ADSM processing options reside in the client options file. This file, usually called **dsm.opt**, contains the following:

- Required communication options and scheduling options
- Options that relate to backup and archive processing
- Options that control processing for sessions with ADSM

If you want to use different options than those specified in the default client options file, you can create your own options file.

During the initial installation and setup of ADSM on your NetWare server, you are provided with a sample client options file called **dsm.smp**. As part of the installation, you copy **dsm.smp** to **dsm.opt** and modify the required options in the new file. Required options are those that provide information that the backup-archive client program needs to establish communication with an ADSM server. For more information, see *Installing the Clients*.

The default location for the client options file is the installation directory **sys:/adsm**. During installation, you can supply a different volume and directory name on your NetWare server, or you can specify a volume and directory on a remote NetWare server for the location of your client options file. The search add line in your **autoexec.ncf** file points to the directory where your options file resides.

This section provides an overview of the options you can enter in your client options file. The options are arranged in groups by these categories:

- Communication options
- Node option
- Backup and archive processing options
- Restore and retrieve processing options
- Scheduling options
- Format and language options
- Command processing options
- Authorization options
- Error processing options

Transaction processing option

You can use this information to help you decide whether to make any further changes to suit your needs.

You can use many of the options discussed in the following sections with applicable ADSM commands. If you enter an option with a command, it overrides what is specified for the option in your client options file, with the exception of the DOMAIN option. When you use the DOMAIN option with a command, it adds to what is specified in your client options file, rather than overriding what is specified.

There are also options that are used *only* with ADSM commands. For more information about these options, see Figure 20 on page 112.

Communication Options

You use communication options to specify how your client node communicates with an ADSM server. The particular options you specify depend on your choice of communication protocol.

Your NetWare server can communicate with the ADSM server using any of these communication methods: TCP/IP, SNA LU6.2 (APPC), and IPX/SPX. Use the COMMMETHOD option to specify which of these protocols you want to use. The default is TCP/IP. For more information, see "COMMMETHOD" on page 60.

Ask your ADSM administrator for assistance in setting your communication options.

TCP/IP Options

To use the TCP/IP protocol, you must include the TCPSERVERADDRESS option in your client options file. The other TCP/IP options have default values. You need to modify these other options only if you want to change the default value.

Figure 6. TCP/IP Options

Option	Description	Reference
TCPBUFFSIZE	Specifies the size, in kilobytes, of the ADSM internal TCP/IP communication buffer.	Page 101
TCPPORT	Specifies the TCP/IP port address for an ADSM server.	Page 104
TCPSERVERADDRESS	Specifies the TCP/IP address for an ADSM server.	Page 105
TCPWINDOWSIZE	Specifies the size, in kilobytes, of the TCP/IP sliding window for your client node.	Page 106

SNA LU6.2 Options

To use the SNA LU6.2 (APPC) protocol, you must include either the SYMBOLICDESTINATION option or all three of the following options: CPICMODENAME, PARTNERLUNAME, and TPNAME.

Figure 7. SNA LU6.2 Options

Option	Description	Reference
CPICBUFFERSIZE	Specifies the buffer size for SNA LU6.2 communication.	Page 63
CPICMODENAME	Specifies the mode name for SNA LU6.2 communication.	Page 64
PARTNERLUNAME	Specifies a logical unit name used by the transaction program to identify the ADSM server in the SNA network.	Page 84
SYMBOLICDESTINATION	Specifies a symbolic ADSM server name.	Page 99
TPNAME	Specifies a symbolic name for a transaction program in an SNA network. The transaction program identifies the target logical unit (LU), which is the ADSM server.	Page 108

IPX/SPX Options

The communication options for IPX/SPX, all of which have default values, are:

Figure 8. IPX/SPX Options

Option	Description	Reference
IPXBUFFERSIZE	Specifies the size, in kilobytes, of the IPX/SPX communication buffer.	Page 74
IPXSERVERADDRESS	Specifies the IPX/SPX address for an ADSM server.	Page 75
IPXSOCKET	Specifies the IPX/SPX socket number for an ADSM server.	Page 76

Node Option

Use the following option to specify the client node for which you want to request services.

Figure 9. Node Option

Option	Description	Reference
NODENAME	Specifies one of the following: <ul style="list-style-type: none">The name of your client node so that you can establish communications with the ADSM server.The name of another client node. Use this if you want to restore or retrieve your files from an ADSM server to a different client node than the one from which you stored the files.	Page 79

Backup and Archive Processing Options

You can use the following options to control some aspects of backup and archive processing:

Figure 10. Backup and Archive Processing Options

Option	Description	Reference
CHANGINGRETRIES	Specifies the number of retries for attempting to back up or archive a file that is in use.	Page 59
COMPRESSALWAYS	Whether to compress files or send them if compression causes them to grow.	Page 61
COMPRESSION	Specifies whether to compress files before sending them to the ADSM server.	Page 62
DIRMC	Specifies the management class to use for directories. If not specified, ADSM uses the management class with the longest retention period.	Page 66
DOMAIN	Specifies the volumes included in your default client domain for incremental backup.	Page 67
EXCLUDE	Specifies a file or group of files you want to exclude from backup services. Any file in your client domain that is not specifically excluded with this option is considered for backup.	Page 71
INCLUDE	Specifies one of the following: <ul style="list-style-type: none">Files within a broad group of excluded files that you want to specifically include for backup services.Files to which you want to assign a specific management class and the management class name.A management class to assign to all files to which you do not explicitly assign a management class.	Page 72
SLOWINCREMENTAL	Specifies a memory-saving backup algorithm for incremental backups for use with the INCREMENTAL command.	Page 97
SUBDIR	Specifies whether to include subdirectories of a specified directory.	Page 98
TAPEPROMPT	Specifies whether you want ADSM to wait for a tape required for a backup or archive to be mounted, or to prompt you for your choice.	Page 100

Restore and Retrieve Processing Options

The following options relate to restore and retrieve processing and apply most often when you issue a RESTORE or RETRIEVE command.

Figure 11 (Page 1 of 2). Restore and Retrieve Processing Options

Option	Description	Reference
REPLACE	Specifies whether to overwrite an existing file or prompt you for your choice when restoring or retrieving files.	Page 90

Figure 11 (Page 2 of 2). Restore and Retrieve Processing Options

Option	Description	Reference
SUBDIR	Specifies whether to include subdirectories of a specified directory.	Page 98
TAPEPROMPT	Specifies whether you want ADSM to wait for a tape required for a restore or retrieve to be mounted, or to prompt you for your choice.	Page 100

Scheduling Options

Some of the options in the client options file regulate central scheduling. You can use these options to provide information that ADSM needs when performing scheduled work. ADSM uses scheduling options only when the SCHEDULE command is running.

Most of the options discussed in this section can be overridden by ADSM server settings after the backup-archive client program on your client node makes contact with the ADSM server.

Figure 12. Scheduling Options

Option	Description	Reference
MAXCMDRETRIES	Specifies the maximum number of times the client scheduler attempts to process a scheduled command that fails.	Page 78
POSTSCHEDULECMD	Specifies a command to process after running a schedule.	Page 85
PRESCHEDULECMD	Specifies a command to process before running a schedule.	Page 86
QUERYSCHEDPERIOD	Specifies the number of hours the client scheduler waits between unsuccessful attempts to contact the ADSM server for scheduled work.	Page 88
RETRYPERIOD	Specifies the number of minutes the client scheduler waits between attempts to process a scheduled command that fails or between unsuccessful attempts to report results to the server.	Page 91
SCHEDLOGNAME	Specifies the name of the file where schedule log information is stored.	Page 92
SCHEDLOGRETENTION	Specifies the number of days to keep log file entries in the schedule log, and whether to save pruned entries.	Page 93
SCHEDMODE	Specifies the schedule mode to use, POLLING or PROMPTED.	Page 94
TCPCLIENTADDRESS	Specifies the TCP/IP address of your client node. Used only with the SCHEDULE command when SCHEDMODE is PROMPTED.	Page 102
TCPCLIENTPORT	Specifies the TCP/IP port number of your client node. Used only with the SCHEDULE command when SCHEDMODE is PROMPTED.	Page 103

Format and Language Options

You can use options to choose different formats for date, time, numbers, and different languages if you have the appropriate client installed for that language.

Figure 13. Format and Language Options

Option	Description	Reference
DATEFORMAT	Specifies the format for displaying dates.	Page 65
LANGUAGE	Specifies the language used to display messages.	Page 77
NUMBERFORMAT	Specifies the format for displaying numbers.	Page 80
TIMEFORMAT	Specifies the format for displaying times.	Page 107

Command Processing Options

The following options apply only when you use certain ADSM commands.

Figure 14. Command Processing Options

Option	Description	Reference
PROCESSORUTILIZATION	Controls ADSM's utilization of the CPU.	Page 87
QUIET	Specifies that you do not want processing information to appear on your screen.	Page 89
SCROLLLINES	Specifies the number of lines to display at one time when displaying a list of items. Used only when SCROLLPROMPT is YES.	Page 95
SCROLLPROMPT	Specifies whether you want ADSM to stop after displaying the number of lines specified by SCROLLLINES or to scroll to end of list.	Page 96
VERBOSE	Specifies that you want processing information to appear on your screen. The alternative is QUIET.	Page 110

Authorization Options

These options control access to NetWare servers.

Figure 15. Authorization Options

Option	Description	Reference
NWPWFILE	Specifies whether ADSM encrypts a NetWare user's ID and password and saves them to a .pwd file. Use if you want ADSM to save the NetWare user ID and password for subsequent connections.	Page 81
NWUSER	Specifies a user ID and password to connect to a NetWare server. The user must have NetWare supervisor equivalence. ADSM prompts the user for a user ID and password if each item is not specified.	Page 82

Error Processing Options

These options control the use of the error log file and how a client should proceed when it receives an error.

Figure 16. Error Processing Options

Option	Description	Reference
ERRORLOGNAME	Specifies the path and name of the error log.	Page 69
ERRORLOGRETENTION	Specifies the number of days to keep log file entries in the error log, and whether to save pruned entries.	Page 70
NWWAITONERROR	Specifies whether an error message is displayed if an error is encountered while exiting from an ADSM session.	Page 83

Transaction Processing Option

This option controls how ADSM processes transactions between the client and server.

Figure 17. Transaction Processing Option

Option	Description	Reference
TXNBYTELIMIT	Controls transaction processing	Page 109

Setting Options in a File

This section provides instructions for setting options in your client options file. For more information on creating the options file, see the *Installing the Clients* manual.

It also contains instructions for using options with ADSM commands and detailed information about each option.

You can set options in your options file so that you do not need to enter the options when you issue commands. The options file is called **dsm.opt**.

To set an option in your client options file, type the option name, followed by one or more blank spaces, followed by the option parameters. For example:

```
compression on
nodename client_a
```

Some options consist of only the option name. For example:

```
verbose
quiet
```

You can write the entire option name or an abbreviation for the option name. For example, for the INCLUDE option, you can write either of the following:

```
include
in
```

The following are additional general rules for entering options in a file:

- You can begin an option in any column of the line.
- You can leave blank lines between options.
- You can enter comments in an options file by entering an asterisk (*) as the first character in a line.
- Put each option on a separate line, and enter all parameters for an option on the same line.

For example, to specify a group of three different volumes as your default client domain, you could enter the following:

```
domain A5\SYS: B5\SYS: NW2\SYS:
```

- Put one or more blank spaces between each parameter.

Using Options With Commands

You can override many of the options set in your client options file by entering them with different values in the appropriate ADSM commands.

ADSM also includes a group of client command options that you can enter only on the command line with specific commands. For information about that group of options, see “Options” on page 112.

To use an option with an ADSM command, enter a dash (–), followed by the option name, followed by an equal sign (=), followed by the option parameters. For example:

```
load dsmc incremental -domain=SYS:
```

For options that do not include parameters, enter a dash (–), followed by the option name. For example:

```
load dsmc incremental -quiet
```

You can enter the entire option name or an abbreviation for the option name. For example, for the QUIET option, enter either of the following:

```
-quiet  
-q
```

The shortest acceptable abbreviations are shown in the syntax diagrams for each option. For information about how to read the syntax diagrams, see “Reading Syntax Diagrams” on page xv.

The following are additional general rules for entering options with a command:

- You can enter options in any order before or after command parameters.

For example, you can enter the SUBDIR option before or after a file specification:

```
load dsmc selective -subdir=yes SYS:/usr/home/proj1/*  
load dsmc selective SYS:/usr/home/proj1/* -subdir=yes
```

- When you enter more than one option in a command, separate each option with a blank space.

For example:

```
load dsmc selective -subdir=yes -quiet SYS:/usr/home/proj1/*
```

- If the value you enter for an option contains a blank space, you must enclose the value in quotes (" ").

For example:

```
load dsmc archive -description="Project A" SYS:/usr/home/proj1/*
```

When you enter an option on the command line, the value you specify overrides what is set in the client options file, except for the DOMAIN option. When you use the DOMAIN option with a command, it adds to the domain specified in your client options file instead of overriding it.

Creating an Include-Exclude List

Figure 18 provides brief descriptions of the INCLUDE and EXCLUDE options that you can specify in your client options file and references to more detailed information about each option.

Figure 18. Include-Exclude Options in the Client Options File

Option	Description	Reference
EXCLUDE	Specifies a file or group of files you want to exclude from backup services. Any file in your client domain that is not specifically excluded with this option is considered for backup.	Page 71
INCLUDE	Specifies one of the following: <ul style="list-style-type: none"> • Files within a broad group of excluded files that you want to specifically include for backup services. • Files to which you want to assign a specific management class and the management class name. • A management class to assign to all files to which you do not explicitly assign a management class. 	Page 72

Excluding System Files

You can always exclude the following log files:

```
SYS:/VOL$LOG.ERR
SYS:/TTS$LOG.ERR
SYS:/SYSTEM/SYS$LOG.ERR
SYS:/SYSTEM/EVENTS.LOG
SYS:/SYSTEM/SECAUDIT.LOG
SYS:/SYSTEM/SYSTEM.LOG
```

You should also exclude the following bindery files. The bindery can be backed up by using the BINDERY parameter with the INCREMENTAL command.

```
SYS:/SYSTEM/NET$OBJ.SYS
SYS:/SYSTEM/NET$PROP.SYS
SYS:/SYSTEM/NET$VAL.SYS
```

Also, consider excluding the following files. These files are always being accessed by the NetWare programs and are, therefore, unable to be opened for reading:

```
SYS:/SYSTEM/CMASTER.DBA
SYS:/SYSTEM/BTRIEVE.TRN
SYS:/SYSTEM/TSA/TSA$TEMP.*
```

Including and Excluding Groups of Files

To specify groups of files that you want to include or exclude, you can use the wildcard characters listed in Figure 19.

Note that this table only applies to include and exclude statements. For information on using wildcard characters in ADSM commands, see “Using Wildcard Characters” on page 114.

Figure 19 (Page 1 of 2). Wildcard and Other Special Characters

Character	Function
?	The match-one character matches any single character except the directory separator. It also does not match the end of the string. It can only be used in the volume name and file name, not in a directory name.
*	The match-all character matches zero or more characters, but it does not cross a directory boundary. It can only be used in the volume name and file name, not in a directory name.
/...	The match- <i>n</i> character matches zero or more directories.
/	The forward slash is used to separate directories.
[The open character-class character is used to begin the enumeration of a character class. For example: xxx[abc] matches xxxa, xxxb, or xxxc.
-	The character-class range includes characters from the first character specified up to and including the last character specified. For example: xxx[a-z] matches xxxa, xxxb, xxxc, ... xxxz.
]	The close character-class character ends the enumeration of a character class.

Figure 19 (Page 2 of 2). Wildcard and Other Special Characters

Character	Function
\	<p>The literal-escape character, when used within a character class, causes the next character to be treated literally. When used outside a character class, it is used as a directory separator.</p> <p>This is also a server name delimiter when it is placed before a volume delimiter (:). For example:</p> <pre>servername\volumename:/directoryname/file.nam</pre>
:	<p>The volume-separator character separates a file specification. The characters before the colon identify a volume name. The characters after the colon identify either a directory name or a file name.</p>

Examples Using Wildcards in EXCLUDE and INCLUDE Patterns

Example 1

Exclude all files with a **bak** extension, except those found on **servera** in the **one:/dev** directory.

```
exclude servera\*/.../*.bak
include servera\one:/dev/*.bak
```

Example 2

Exclude all files and directories under any **tmp** directory that may exist on **servera**, *except* for the one file **vol:/tmp/save.fil**. Include this file.

```
exclude servera\*/.../tmp/.../*
include servera\vol:/tmp/save.fil
```

Example 3

Evaluate the following EXCLUDE statements:

```
exclude servera\volume[ce-g]:.../*.obj
exclude servera\volume:/*.obj
exclude servera\*/tmp/.../*
```

This example is a bit more complex.

1. **volume[ce-g]:.../*.obj** matches any **.obj** file in any directory on the volumes **volumec**, **volumee**, **volumef**, and **volumeg**.
2. **volume:/*.obj** only matches the **.obj** files found in the root directory in the volume **volume**.
3. ***/tmp/.../*** matches any file found on any volume that resides under the **tmp** directory.

Processing INCLUDE and EXCLUDE Options

ADSM processes the EXCLUDE and INCLUDE options as follows:

- Directories are *not* checked, only files are. Therefore, if you have a server and a volume (such as **servera\data:**) defined in the DOMAIN option, all directories of that volume are backed up regardless of what you defined for your EXCLUDE and INCLUDE options, even if the files in those directories are not backed up.

- **The order that these options are checked is from the bottom up until a match is found.** If a match is found, the processing stops and looks at whether the option is INCLUDE or EXCLUDE. If the option is INCLUDE, the file is backed up. If the option is EXCLUDE, the file is *not* backed up.
- If a match is *not* found, files listed are implicitly included and therefore backed up.
- If policy administration is in effect, files are backed up according to the default management class or the management class you specify.

Here are some examples of *bottom up* processing.

Example 1

Assume that **servera\data:** is defined as the domain in the DOMAIN option, and you have this defined for the EXCLUDE and INCLUDE options.

```
exclude servera\*/*.obj
include servera\data:/foo/.../*.obj
exclude servera\data:/foo/junk/*.obj
```

The current file being processed is **servera\data:/foo/dev/test.obj**.

The processing follows these steps:

1. Rule 3 (the last INCLUDE or EXCLUDE defined) is checked first because of *bottom up* processing.
servera\data:/foo/junk/*.obj does not match the current filename being processed.
2. Processing moves to Rule 2 and checks.
This time, **servera\data:/foo/.../*.obj** matches the current file name being processed.
3. Processing stops, the option is checked, and it is INCLUDE.
4. **servera\data:/foo/dev/test.obj** is backed up.

Example 2

Assume that **servera\data:** is defined as the domain in the DOMAIN option, and you have this defined for the EXCLUDE and INCLUDE options.

```
exclude servera\*/*.obj
include servera\data:/foo/.../*.obj
exclude servera\data:/foo/junk/*.obj
```

The current file being processed is **servera\data:/widg/copyit.bat**.

The processing follows these steps:

1. Rule 3 is checked and finds no match.
2. Rule 2 is checked and finds no match.
3. Rule 1 is checked and finds no match.
4. Because no match is found, **servera\data:/widg/copyit.bat** falls into the implicit INCLUDE option and is backed up.

Example 3

Assume that **serveraldata:** is defined as the domain in the DOMAIN option and you have this defined for the EXCLUDE and INCLUDE options.

```
exclude servera\*/*.obj
include servera\data:/foo/.../*.obj
exclude servera\data:/foo/junk/*.obj
```

The current file being processed is **serveraldata:/lib/objs/printf.obj**.

The processing follows these steps:

1. Rule 3 is checked and finds no match.
2. Rule 2 is checked and finds no match.
3. Rule 1 is checked and a match is found.
4. Processing stops, the option is checked, and it is EXCLUDE.
5. **serveraldata:/lib/objs/printf.obj** is not backed up.

Using Management Classes with INCLUDE

A management class defines when your files are included in a backup or archive, how long they are kept on the ADSM server, and how many versions of the file the ADSM server should keep.

The ADSM server administrator chooses a default management class. You can override the default management class by specifying your own management class in an INCLUDE statement.

Management class names are not case sensitive.

This is an example of using a management class:

```
exclude */.../*.sno
include nw5\SYS:/winter/.../*.ice      mcweekly
include nw5\SYS:/winter/december/*.ice mcdaily
include nw5\SYS:/winter/january/*.ice  mcmonthly
include nw5\SYS:/winter/winter/white.sno
```

The processing follows these steps:

1. The file named **white.sno** is backed up because of *bottom up* processing. Because you did not specify a management class, the file is bound to the default management class.
2. Any file with an **ice** extension in the directory **nw5\SYS:/winter/january** is bound to the management class MCMONTHLY.
3. Any file with an **ice** extension in the directory **nw5\SYS:/winter/december** is bound to the management class MCDAILY.
4. Any other files with an **ice** extension in any directory under **nw5\SYS:/winter** are bound to MCWEEKLY.
5. Any file with a **sno** extension (except **nw5\SYS:/winter/winter/white.sno**) in any directory is excluded from backup.

To specify your own default management class for files that are not explicitly included, enter the following INCLUDE statement as the first statement in your include-exclude list:

```
INCLUDE */.../* mgmt_class_name
```

where MGMT_CLASS_NAME is the name of an available management class.

If archiving files with the ARCHIVE command, you can override the INCLUDE management class or choose the default management class using the ARCHMC option. For an example of its usage, see the ARCHIVE command on page 117.

To specifically define a management class for directories, use the DIRMC option. For details, see “DIRMC” on page 66.

Assigning a Management Class to the NDS and the Bindery

If you do not assign a management class to the NDS and the bindery, they are associated with the default management class. To associate them with a management class other than the default, enter the following INCLUDE statements in your include-exclude list:

```
include adsm\dir mgmtclname  
include bindery mgmtclname
```

where MGMTCLNAME is the name of the management class.

Client Options Reference

The following sections contain detailed information about each of the ADSM processing options. These options are arranged in alphabetical order. Information for each option includes:

- A description of the option
- A diagram that shows the syntax of the option

The option name is shown in a combination of uppercase and lowercase characters. The uppercase characters indicate the minimum abbreviation you can use for the option name.

See “Reading Syntax Diagrams” on page xv for an explanation of these diagrams.

- Detailed descriptions of the option parameters. If the parameter is a constant, its minimum abbreviation is shown in uppercase letters.
- Example of using the option in the client options file (if applicable)
- Example of using the option on the command line (if applicable)

CHANGINGRETRIES

CHANGINGRETRIES

Use the CHANGINGRETRIES option to specify how many additional times you want ADSM to attempt to back up or archive a file that is in use during the first attempt.

This option relates to serialization, which is an attribute in a management class copy group. ADSM uses this option only when serialization is shared static or shared dynamic.

With shared static, if a file is in use during the first backup or archive attempt, ADSM retries the operation the number of times specified with this option. If the file is in use during each attempt, the operation is not completed.

With shared dynamic, if a file is in use during the first backup or archive attempt, ADSM retries the operation the number of times specified with this option. The backup or archive occurs during the last attempt regardless of whether the file is currently in use. The only exception is if the open file has its share flag set to DENY_READ, in which case ADSM cannot back it up.

Syntax

▶▶—CHangingretries *numberretries*—————▶▶

Parameters

numberretries

The number of times ADSM retries a backup or archive operation if the file is in use during the first attempt.

The range of values is 0 to 4.

The default is 4.

Examples

Options file example: changingretries 3

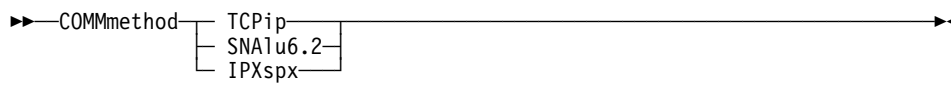
Command line example: -ch=0

COMMMETHOD

COMMMETHOD

Use the COMMMETHOD option to specify the communication method you are using to provide connectivity for client-server communication.

Syntax



Parameters

TCPip

The Transmission Control Protocol/Internet Protocol (TCP/IP) communication method.

This protocol is the default.

SNA1u6.2

The Systems Network Architecture (SNA) logical unit 6.2 (LU6.2) communication method.

IPXspx

The Internetwork Packet Exchange/Sequenced Packet Exchange (IPX/SPX) communication method. You can only use this communication method with OS/2 and AIX servers.

Examples

Options file example: COMM sna

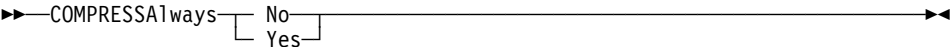
Command line example: -COMMMETHOD=IPX

COMPRESSALWAYS

COMPRESSALWAYS

Use the COMPRESSALWAYS option to control what ADSM does when a file grows during compression. You can cause ADSM to either continue compressing or not to send the object if it grows during compression. This option has no effect unless the COMPRESSION option is set to Yes.

Syntax



Parameters

No
Object is not sent if it grows during compression.
This is the default.

Yes
File compression continues even if the file grows as a result of compression.

Examples

Options file example: COMPRESSALWAYS Yes

Command line example: -COMPRESSA=No

COMPRESSION

COMPRESSION

Use the COMPRESSION option to specify whether ADSM should compress files before sending them to the ADSM server. Compressing your files decreases the amount of data storage required to store backup versions and archived copies of your files. However, it can affect ADSM throughput. Typically, a fast processor on a slow line benefits from compression, but a slow processor on a fast line does not.

This option controls compression only if your ADSM administrator specifies that the choice is determined by your client node.

ADSM does not compress a file if it determines that the compression process is increasing the size of the file. This might happen if a file has already been compressed by another program. These files are sent to the server without being compressed by ADSM.

Syntax

►—COMPression— No Yes ◄

Parameters

No

Files are not compressed before being sent to the server. You can also specify No as OFF, False, or 0.

This is the default.

Yes

Files are compressed before being sent to the server. You can also specify Yes as ON, True, or 1.

Examples

Options file example: COMPRESSION Yes

Command line example: -COMP=No

CPICBUFFERSIZE

CPICBUFFERSIZE

Use the CPICBUFFERSIZE option to specify the size of the CPIC buffer for SNA LU6.2 communication. A larger buffer can improve communication performance, but uses more memory.

Syntax

▶▶—CPicbuffersize *size*—————▶▶

Parameters

size

The size of an SNA LU6.2 communication buffer, in kilobytes.

The range of values is 1 to 31.

The default is 31.

Examples

Options file example: CPICBUFFERSIZE 31

Command line example: -CP=20

CPICMODENAME

CPICMODENAME

Use the CPICMODENAME option to define the mode name for the SNA LU6.2 communication method. For CPIC, this option identifies the SNA connection to the gateway and target logical unit. The CPIC mode name is used if the symbolic destination is not provided and the partner LU is located on another system. The mode name must be known on both the local and remote systems.

If you use this option, you must also use the TPNAME and the PARTNERLUNAME options.

Syntax

▶▶—CPICM0dename *name*—————▶▶

Parameters

name

The mode name for SNA LU6.2 communication. The name is case sensitive and should always be in upper case letters.

There is no default.

Examples

Options file example: cpicmodename VMMODE

Command line example: -cpicmo=VMMODE

DATEFORMAT

DATEFORMAT

Use the DATEFORMAT option to select the format you want ADSM to use for displaying dates.

Syntax

▶▶—DATEformat *format_number*—————▶▶

Parameters

format_number

One of the following date formats:

- 1 Displays the date in this format: MM/DD/YYYY
This is the default.
- 2 Displays the date in this format: DD-MM-YYYY
- 3 Displays the date in this format: YYYY-MM-DD
- 4 Displays the date in this format: DD.MM.YYYY
- 5 Displays the date in this format: YYYY.MM.DD

Examples

Options file example: DATEFORM 3

Command line example: -DATE=4

DIRMC

DIRMC

Use the DIRMC option to specify the management class you want ADSM to use for directories. If you do not use this option to associate a management class with directories, ADSM uses the management class in the active policy set of your policy domain that has the longest retention period.

When choosing a management class for directories, be sure to choose one that allows ADSM to retain directories at least as long as it retains the files associated with them.

Syntax

►—DIRMc *mgmtclassname*—————▶◀

Parameters

mgmtclassname

The name of the management class you want to associate with directories. ADSM uses the management class you specify for all directories it backs up. If you do not use this option, the management class with the longest retention period is associated with directories.

Examples

Options file example: DIRM managdir

Command line example: Not applicable

DOMAIN

Use the DOMAIN option to specify the volumes you want to include in your client domain for incremental backup. When you use this option in your client options file, it defines your *default client domain*. ADSM uses your default client domain to determine which volumes to process during an incremental backup in these situations:

- You run an incremental backup using the INCREMENTAL command without specifying which volumes to process.
- Your ADSM administrator defines a schedule to run an incremental backup for you, but does not specify which volumes to process.

If you do not specify volumes with the DOMAIN option in your client options file, the default is all locally mounted volumes and the bindery.

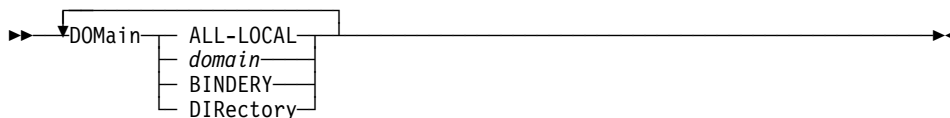
When you use this option with the INCREMENTAL command, it adds the volumes you specify to what is defined in your client options file. For example, if you enter DOMAIN SYS: DATA: BINDERY in your client options file, and you enter `load dsmc incremental -domain=USR:` on the command line, ADSM performs an incremental backup on the **SYS:**, **DATA:**, and **USR:** volumes, and the bindery.

If you use both the *volume* parameter and the DOMAIN option on the INCREMENTAL command, ADSM ignores the DOMAIN option and processes only those volumes in the *volume* parameter. For example, if you enter the following:

```
load dsmc incremental SYS: DATA: -domain=SERVERa\SYS:
```

ADSM performs an incremental backup only for the **SYS:** and **DATA:** volumes.

Syntax



Parameters

domain

In your client options file, specifies the volumes to include in your default client domain. The volumes you specify can include the NDS.

When used with the INCREMENTAL command, specifies the volumes to process in addition to those specified in your options file.

The default value for this parameter is ALL-LOCAL, which specifies that all local volumes and the bindery are to be backed up.

BINDERY

Specifies that the three system files that make up the bindery database are backed up.

DOMAIN

DIRectory

Specifies the NDS.

Note: NDS is not included in DOMAIN ALL-LOCAL. To include NDS, code DIRectory in the DOMAIN option.

Examples

Options file example: domain adsm\dir

Command line example: -domain="servera\SYS: serverb\SYS:"

ERRORLOGNAME

ERRORLOGNAME

Use the ERRORLOGNAME option to specify the path and name of the file where you want ADSM to store information about errors that occur during processing.

Syntax

▶▶—ERRORLOGname *filespec*—————▶▶

Parameters

filespec

The path and file name where you want ADSM to store error log information.

The default is the installation directory with a file name of **dsmerror.log**.

Examples

Options file example: ERRORLOGNAME SYS:/tmp/adsmerr.log

Command line example: -ERRORLOG=SYS:/tmp/adsmerr.log

ERRORLOGRETENTION

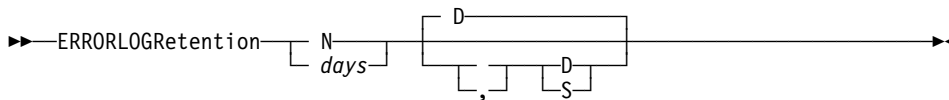
ERRORLOGRETENTION

Use the ERRORLOGRETENTION option to specify:

- The number of days to keep entries in the error log
- Whether to save the pruned entries

The error log is pruned when the first error is written to the log after an ADSM session is started. If the only ADSM session you run is the scheduler, and you run it 24 hours a day, the error log might not be pruned according to your expectations. You must stop the session and restart it to allow the log to be pruned when the next error is written.

Syntax



Parameters

N or *days*

How long to wait before pruning the error log.

N

Do not prune the error log. This allows the error log to grow indefinitely.

This is the default.

days

The number of days to keep log file entries before pruning the log.

The range of values is 0 to 9999.

D or **S**

Whether to save the pruned entries.

If you specify anything but D or S, ADSM uses the default D. You must use a space or comma between this parameter and the previous one.

D

Discard the log entries when pruning the log.

This is the default.

S

Save the log entries when pruning the log.

ADSM copies the entries pruned from the error log to **dsmerlog.pru**.

Examples

Options file example: ERRORLOGRETENTION 400 S

Command line example: -ERRORLOGRETENTION=400,S

EXCLUDE

EXCLUDE

Use the EXCLUDE option to exclude a file or group of files from ADSM backup services. When you back up files, any files you exclude with this option are not considered for backup.

For example, you might want to exclude all temporary files, any local caches of network files, all files that contain compiled object code that you can easily reproduce using other methods, and operating system files.

You can use wildcard characters to exclude a broad range of files. See “Including and Excluding Groups of Files” on page 54 for a list of wildcards you can use. Then, if necessary, you can use the INCLUDE option to make exceptions.

See “Creating an Include-Exclude List” on page 53 for more information. See also the list of files that should always be excluded in “Excluding System Files” on page 53.

Syntax

►► EXclude *pattern* ◄◄

Parameters

pattern

The file or group of files that you want to exclude from backup services. The pattern must end with a file specification.

If the pattern contains a blank space, you must enclose the pattern in quotation marks.

Examples

Options file example:

```
exclude servera\*/../swapper.dat
exclude N1\*/io.sys
exclude TFR\*/../spart.par
exclude nw2\sys:*/budget.fin
exclude nw6\sys:/devel/*
```

Command line example: Not applicable

INCLUDE

INCLUDE

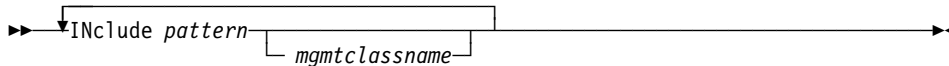
Use the INCLUDE option to specify one of the following:

- Files within a broad group of excluded files that you want to specifically include for backup services.
- Files to which you want to assign a specific management class and the management class name.
- A management class to assign to all files to which you do not explicitly assign a management class.

If you do not assign a specific management class to files, ADSM uses the default management class in the active policy set of your policy domain.

See “Creating an Include-Exclude List” on page 53 for more information.

Syntax



Parameters

pattern

The specific files you want to include for backup services, or the file or group of files to which you want to assign a specific management class. You can specify the NDS when you want to assign a management class to it.

You must end this variable with a file specification.

If the pattern contains a blank, you must enclose the pattern in quotation marks.

mgmtclassname

The name of the management class you want to assign to the files. If you do not specify a management class, ADSM uses the default management class.

Examples

Options file example:

Example 1

Explicitly include a subset of files that are excluded:

```
exclude servera\SYS:/proj/text/*
include servera\SYS:/proj/text/devel.*
```

Example 2

Assign a management class to a group of files:

```
include servera\SYS:/proj/text/* textfiles
```


INCLUDE

Example 3

Specify a management class to assign to all files to which you have not assigned a specific management class:

```
include */* managall
```

This must be the *first* statement in your include-exclude list.

Use this method to assign a management class to all files to which you have not already assigned a specific management class and for which you do not want ADSM to use the default management class.

Command line example: Not applicable

IPXBUFFERSIZE

IPXBUFFERSIZE

Use the IPXBUFFERSIZE option to specify the size you want to use for the IPX buffer used to transfer data between the client node and the server.

A larger buffer can improve communication performance, but uses more memory.

Syntax

►—IPXBuffersize *size*—————►

Parameters

number

The size you want to use, in kilobytes, for the IPX/SPX communication buffer.

The range of values is 1 to 16.

The default is 16.

Examples

Option file example: ipxb 8

Command line example: -ipxbuffersize=12

IPXSERVERADDRESS

IPXSERVERADDRESS

Use the IPXSERVERADDRESS option to specify the IPX/SPX address of an ADSM server on an OS/2 or AIX host that is not in the same network as the client node.

If the IPX/SPX address is not specified, the ADSM server must reside in the same network as the client node.

Syntax

►►—IPXServeraddress *server_address*—————►►

Parameters

server_address

An IPX/SPX address for an ADSM server. It must consist of exactly 20 hexadecimal digits.

An IPX/SPX address is a concatenation of the following:

- The first 8 hexadecimal digits identify the ADSM server network address.
- The last 12 digits identify the ADSM server node address.

Each field must be padded with leading zeros if the value is shorter than the specified length.

If an IPX/SPX address is not specified, the default address for the server is the same as the address for the client node.

Examples

Option file example: ipxse 0000000210005af6e7cc

Command line example: -ipxserveraddress=0000000210005af6e7cc

IPXSOCKET

IPXSOCKET

Use the IPXSOCKET option to specify the socket number for an ADSM server on an OS/2 or AIX host.

Syntax

▶—IPXSOcket *socketnumber*—————▶

Parameters

socketnumber

A 4 digit ADSM server socket number. The socket number is assigned by Novell.

The default is 8522.

Examples

Option file example: ipxso 8524

Command line example: -ipxsocket=8524

LANGUAGE

LANGUAGE

Use the LANGUAGE option to specify the national language for presenting client messages.

Syntax

►—LANGUAGE *language*—————►

Parameters

language

The language you want to use. You can use American English (AMENG) with all clients. To use a different language, you must order the client in that language. Not all clients are available in all languages.

The languages available are:

AMENG	American English. This is the default.
FRENCH	French.
GERMAN	German.
ITALIAN	Italian.
JAPAN	Japanese.
SPANISH	Spanish.
SWEDISH	Swedish.

Examples

Option file example: LANGUAGE AMENG

Command line example: Not applicable

MAXCMDRETRIES

MAXCMDRETRIES

Use the MAXCMDRETRIES option to specify the maximum number of times you want the client scheduler on your NetWare server to attempt to process a scheduled command that fails.

ADSM uses this option only when the SCHEDULE command is running.

Your ADSM administrator can also set this option. If your ADSM administrator specifies a value for this option, that value overrides what you specify in the client options file after your client node successfully contacts the ADSM server.

Syntax

▶—MAXCMDRetries *maxcmdretries*—————▶

Parameters

maxcmdretries

The number of times the client scheduler can attempt to process a scheduled command that fails.

The range of values is 0 to 9999.

The default value is 2.

Examples

Options file example: MAXCMDR 4

Command line example: -MAXCMDRETRIES=3

NODENAME

NODENAME

Use the NODENAME option to identify the name of your NetWare server to the ADSM server. The node name is required to register your NetWare server with the ADSM server.

You can use different node names to identify multiple systems on your NetWare server. For example, if your machine is running both DOS and OS/2, you can specify *dosuser* for the first client system and *os2user* for the second client system.

You can also use the NODENAME option if you want to restore or retrieve files from a NetWare server other than the one from which you backed up or archived the files. When you use the NODENAME option, ADSM prompts you for the ADSM password assigned to the node you specify if a password is required.

Syntax

►►—NODename *nodename*—————►►

Parameters

nodename

A 1 to 64 character name to identify the node for which you want to request ADSM services.

Examples

Option file example: NODENAME cougar

Command line example: -NOD=banshee

NUMBERFORMAT

NUMBERFORMAT

Use the NUMBERFORMAT option to specify the format you want ADSM to use for displaying numbers.

Syntax

►—NUMBERformat *number*—————►◄

Parameters

number

One of the following number formats:

- 1 Displays numbers in this format: 1,000.00
This is the default.
- 2 Displays numbers in this format: 1,000,00
- 3 Displays numbers in this format: 1 000,00
- 4 Displays numbers in this format: 1 000.00
- 5 Displays numbers in this format: 1.000,00
- 6 Displays numbers in this format: 1'000,00

Examples

Options file example: num 4

Command line example: -numberformat=4

NWPWFILE

NWPWFILE

Use the NWPWFILE option to encrypt the user ID and password for a local or remote NetWare server and to save them in a file in the installation directory.

Syntax

►► NWPWFile Yes No

Parameters

Yes

The first time you issue a command for a NetWare server, whether local or remote, ADSM encrypts the user ID and password you provide. The encrypted information is stored in a file with an extension of **.pwd** in your installation directory. When you issue subsequent commands for that server, ADSM obtains the password information from that file instead of issuing a prompt.

You can also specify Yes as ON, True, or 1.

This is the default.

No

A NetWare client user ID and password are not encrypted in a password file. Each time you issue a command to back up or archive files stored on a remote NetWare server, ADSM prompts you for the user ID and password for the server.

You can also specify No as OFF, False, or 0.

Examples

Options file example: NWPWF off

Command line example: -NWPWFILE=N

NWUSER

NWUSER

Use the NWUSER option to specify a user ID and password to connect to a local or remote NetWare server. The user must have NetWare supervisor equivalence. You can use this option as many times as necessary in your client options file to provide password information for each NetWare server.

If you do not use this option in your client options file, ADSM prompts you for a user ID and password when you initiate a backup or archive operation.

Syntax

► `NWUSER servername\user:password` ◄

Parameters

servername

A 1 to 48 character NetWare server name to which your client node has access.

user

A 1 to 48 character NetWare user with supervisor equivalence on the NetWare server.

password

A 1 to 128 character password for a user with supervisor equivalence on the NetWare server.

Examples

Options file example: NWUS servera\supervisor:secret

Command line example: -NWUSER=serverb\mary:secret1

NWWAITONERROR

NWWAITONERROR

Use the NWWAITONERROR option to control what happens if ADSM encounters an error while exiting. You can direct ADSM to do one of the following:

- Display an error message and wait before returning to the NetWare console.
- Return immediately to the NetWare console.

Syntax

►—NWWaitonerror — Yes —————►
 └ No ┘

Parameters

Yes

If ADSM encounters an error, it displays an error message. You must press Enter to return to the NetWare console. This is the default.

You can also specify Yes as ON, True, or 1.

No

If ADSM encounters an error while exiting, it immediately returns to the NetWare console. No error message is displayed.

You can also specify No as OFF, False, or 0.

Examples

Options file example: NWWAITONERROR NO

Command line example: -NWW=YES

PARTNERLUNAME

PARTNERLUNAME

Use the PARTNERLUNAME option to specify a logical unit name used by the transaction program to identify the ADSM server in the SNA network.

The partner logical unit name is used if the symbolic destination name is not provided for SNA LU6.2 communication.

If you use this option, you must also define the CPICMODENAME and TPNAME options.

Syntax

▶—PARTnerluname *logical_unit_name*—————▶

Parameters

logical_unit_name

A 1 to 17 character LU name used to identify the remote target in an SNA network. Contact your system administrator for this name.

The name is case sensitive and should always be in upper case letters.

There is no default.

Examples

Options file example: partnerlu ALMVMA

Command line example: -par=SANJOSEVM

POSTSCHEDULECMD

POSTSCHEDULECMD

Use the POSTSCHEDULECMD option to specify a command that ADSM should process after running a schedule.

ADSM does not wait for the command to complete before continuing with other processing.

This option works on Novell NetWare 4.0 and later only. The command always returns a return code of 0, even if there are errors. The command and any errors it generates are printed on the console.

Syntax

▶—POSTschedulecmd "*cmdstring*"—————▶

Parameters

"cmdstring"

The command to process. You can use any command that can be done at the NetWare console.

You can use only one POSTSCHEDULECMD option. You can also issue a command before a schedule using the PRESCHEDULECMD option.

Use a blank or null string for *cmdstring* if you want to prevent any commands that the ADSM administrator uses for POSTSCHEDULECMD and PRESCHEDULECMD from running. If you specify a blank or null string on *either* option, it prevents the administrator from using a command on *both* options.

However, if your administrator uses a blank or null string on the POSTSCHEDULECMD option, that prevents you from running a post-schedule command.

If the command string contains blanks, you must enclose it in double quotes. If you have double quotes within the command string, use single quotes to enclose them.

Examples

- Options file example:** postschedulecmd "restart database"
 where the command string is a valid command for
 restarting your database.
- Command line example:** Not applicable

PRESCHEDULECMD

PRESCHEDULECMD

Use the PRESCHEDULECMD option to specify a command that ADSM should process before running a schedule.

ADSM does not wait for the command to complete before continuing with other processing.

This option works on Novell NetWare 4.0 and later only. The command always returns a return code of 0, even if there are errors. The command and any errors it generates are printed on the console.

Syntax

►—PREschedulecmd "*cmdstring*"—————►

Parameters

"cmdstring"

The command to process. You can use any command that can be done at the NetWare console.

You can use only one PRESCHEDULECMD option. You can also issue a command after a schedule using the POSTSCHEDULECMD option.

Use a blank or null string for *cmdstring* if you want to prevent any commands that the ADSM administrator uses for POSTSCHEDULECMD and PRESCHEDULECMD from running. If you specify a blank or null string on *either* option, it prevents the administrator from using a command on *both* options.

However, if your administrator uses a blank or null string on the PRESCHEDULECMD option, that prevents you from running a pre-schedule command.

If the command string contains blanks, you must enclose it in double quotes. If you have double quotes within the command string, use single quotes to enclose them.

Examples

Options file example: preschedulecmd "quiesce database"
where the command string is a valid command for quiescing your database.

Command line example: Not applicable

PROCESSORUTILIZATION

PROCESSORUTILIZATION

Use the PROCESSORUTILIZATION option to control the amount of CPU time allotted to ADSM.

Because this option can affect other applications running on your client node, use it only when speed is of the utmost importance.

Syntax

▶▶—PROCESSORutilization *number*—————▶▶

Parameters

number

The length of time that ADSM will control the CPU, in hundredths of a second, before yielding the CPU to another application. For example, if *number* is 1000, ADSM will control the CPU for 10 seconds.

The minimum value is 0. There is no maximum value.

The default is 1.

Examples

Options file example: PROCESSOR 2

Command line example: -PROCESSORUTILIZATION=10

QUERYSCHEDPERIOD

QUERYSCHEDPERIOD

Use the QUERYSCHEDPERIOD option to specify the number of hours you want the client scheduler to wait between attempts to contact the ADSM server for scheduled work.

This option applies only when the SCHEDMODE option is set to POLLING. ADSM uses this option only when the SCHEDULE command is running.

Your ADSM administrator can also set this option. If your ADSM administrator specifies a value for this option, that value overrides what you specify in the client options file after your client node successfully contacts the ADSM server.

Syntax

►—QUERYSCHedperiod *hours*—————►◀

Parameters

hours

The number of hours the client scheduler waits between attempts to contact the ADSM server for scheduled work.

The range of values is 1 to 9999.

The default is 12.

Examples

Options file example: QUERYSCH 6

Command line example: -QUERYSCHEDPERIOD=8

QUIET

QUIET

Use the QUIET option to keep messages from being displayed on your screen during ADSM processing.

For example, when you run the INCREMENTAL or SELECTIVE command, ADSM displays information about each file it backs up. You can use the QUIET option if you do not wish to view that information.

When you use the QUIET option, certain error information still appears on your screen, and messages are written to log files.

If you do not specify QUIET, ADSM uses the VERBOSE option by default.

Syntax

►► Quiet ◄◄

Examples

Options file example: quiet

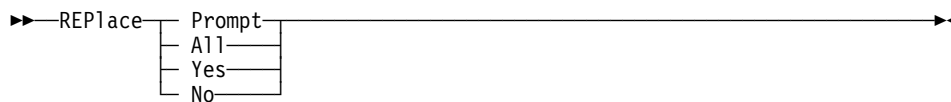
Command line example: -q

REPLACE

REPLACE

Use the REPLACE option to specify what you want ADSM to do when restoring files that already exist on your NetWare server. This applies only to the RESTORE and RETRIEVE commands.

Syntax



Parameters

Prompt

ADSM prompts you for your choice for overwriting a file when it encounters an existing file during a restore or retrieve process. If the existing file is a read-only file, you cannot overwrite it.

This is the default.

All

ADSM overwrites any existing files, including read-only files.

Yes

ADSM overwrites any existing files, except read-only files. You can also specify Yes as True, 1, or ON.

No

ADSM does not overwrite any existing files. You can also specify No as False, 0, or OFF.

Examples

Options file example: `replace all`

Command line example: `-replace=off`

RETRYPERIOD

RETRYPERIOD

Use the RETRYPERIOD option to specify the number of minutes you want the client scheduler to wait between attempts to process a scheduled command that fails or between unsuccessful attempts to report results to the server.

ADSM uses this option only when the SCHEDULE command is running.

Your ADSM administrator can also set this option. If your ADSM administrator specifies a value for this option, that value overrides what you specify in the client options file after your client node successfully contacts the ADSM server.

Syntax

►—RETRYPeriod *minutes*—————►

Parameters

minutes

The number of minutes the client scheduler waits between attempts to contact the ADSM server or attempts to process a scheduled command that fails.

The range of values is 1 to 9999.

The default is 20.

Examples

Options file example: RETRYP 10

Command line example: -RETRYPERIOD=15

SCHEDLOGNAME

SCHEDLOGNAME

Use the SCHEDLOGNAME option to specify the name and location of a file where you want ADSM to store the schedule log.

When you run the SCHEDULE command, output from scheduled commands appears on your screen. It is also directed to the file you specify with this option.

ADSM uses this option only when the SCHEDULE command is running.

Syntax

►—SCHEDLOGname *filespec*—————►◄

Parameters

filespec

The path and file name where you want ADSM to store schedule log information when processing scheduled work. If you specify only a file name, ADSM stores the file in your current directory.

The default is the installation directory and a file name of **dsmsched.log**.

Examples

Options file example: schedlogname SYS:/mydir/schedlog.jan

Command line example: -schedlog=SYS:/mydir/schedlog.jan

SCHEDLOGRETENTION

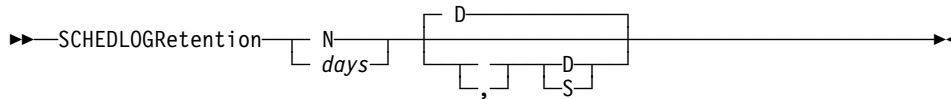
SCHEDLOGRETENTION

Use the SCHEDLOGRETENTION option to specify:

- The number of days to keep entries in the schedule log
- Whether to save the pruned entries

The schedule log is pruned after a scheduled event completes.

Syntax



Parameters

N or *days*

How long to wait before pruning the schedule log.

N

Do not prune the log. This allows the log to grow indefinitely.

This is the default.

days

The number of days to keep log file entries before pruning the log.

The range of values is 0 to 9999.

D or S

Whether to save the pruned entries.

If you specify anything but D or S, ADSM uses the default D. You must use a space or comma between this parameter and the previous one.

D

Discard the log entries when pruning the log.

This is the default.

S

Save the log entries when pruning the log. ADSM copies the entries pruned from the log to **dsmsched.pru**.

Examples

Options file example: SCHEDLOGRETENTION 30 S

Command line example: -SCHEDLOGRETENTION=30,S

SCHEDMODE

SCHEDMODE

This option only applies if you are using the TCP/IP communication method and the SCHEDULE command is running.

Use SCHEDMODE to specify which ADSM schedule mode to use. The schedule mode determines whether your client node periodically asks the ADSM server for scheduled work (POLLING), or whether the ADSM server contacts your client node when it is time to start a scheduled operation (PROMPTED).

All communication methods can use POLLING, but only TCP/IP can use PROMPTED.

Your ADSM administrator can specify that either mode is supported by the ADSM server, or only one mode is supported. If your ADSM administrator specifies either, you can choose the schedule mode. If your ADSM administrator specifies only one mode, you must specify that same mode in your client options file. Otherwise, scheduled work is not processed.

If the scheduling mode is PROMPTED, you can supply values for the TCPCLIENTADDRESS and TCPCLIENTPORT on the SCHEDULE command. This allows you to be contacted at an address or port other than the one that made initial contact with the server.

Syntax

► SCHEDMODE [POLLING | PROMPTED] ◄

Parameters

POLLING

The client scheduler queries the ADSM server for scheduled work at the prescribed time interval set with the QUERYSCHEDPERIOD option.

This is the default.

PROMPTED

The client scheduler waits for the ADSM server to contact your client node when scheduled work needs to be done.

Examples

Options file example: SCHEDMODE PROMPTED

Command line example: -SCHEDMOD=PO

SCROLLINES

SCROLLINES

Use the SCROLLINES option to specify the number of lines you want to appear at one time when ADSM displays lists of information on your screen.

ADSM uses this option only when you set the SCROLLPROMPT option to Yes and you are using ADSM commands.

Syntax

►►—SCROLLLines *number*—————►►

Parameters

number

The number of lines you want ADSM to display at one time when displaying lists of information on your screen.

The range of values is 1 to 80.

The default is 20.

Examples

Options file example: SCROLLINES 25

Command line example: -SCROLL=25

SCROLLPROMPT

SCROLLPROMPT

Use the SCROLLPROMPT option to specify whether you want ADSM to stop and wait after displaying the number of lines you specify with the SCROLLLLINES option, or scroll through all lines and stop at the end of the list.

Syntax

►—SCROLLPrompt— No
 Yes—►

Parameters

No

ADSM scrolls to the end of the list and stops. You can also specify No as OFF, False, or 0.

This is the default.

Yes

ADSM stops and waits after displaying the number of lines indicated with the SCROLLLLINES option. ADSM displays the following prompt at the bottom of the screen:

Press 'Q' to quit, 'C' to continuous scroll, or 'Enter' to continue.

You can also specify Yes as On, True, or 1.

Examples

Options file example: SCROLLPRO Yes

Command line example: -SCROLLP=Yes

SLOWINCREMENTAL

SLOWINCREMENTAL

Use the SLOWINCREMENTAL option to specify a slower algorithm for processing incremental backups. With the SLOWINCREMENTAL option, ADSM backs up one directory at a time, and so uses less memory. However, the backup operation takes longer to complete.

Use this option with the INCREMENTAL command when your machine is running low on memory.

Syntax

► Slowincremental Yes No ◄

Parameters

Yes

Your client node uses the method that uses less memory when processing incremental backups. You can also specify Yes as ON, True, or 1.

This is the default.

No

Your client node uses the fastest, most memory-intensive method when processing incremental backups. You can also specify No as OFF, False, or 0.

Examples

Options file example: slowincremental yes

Command line example: -sl=no

SUBDIR

SUBDIR

Use the SUBDIR option to specify whether you want ADSM to include subdirectories of specified directories on the following commands:

ARCHIVE
DELETE ARCHIVE
QUERY ARCHIVE
QUERY BACKUP
RESTORE
RETRIEVE
SELECTIVE

Syntax

►—Subdir No Yes

Parameters

No

ADSM does not process subdirectories. You can also specify No as OFF, False, or 0.

This is the default.

Yes

ADSM processes subdirectories. You can also specify Yes as ON, True, or 1.

Because ADSM searches all the subdirectories of a directory being processed, it can take longer for ADSM to complete the requested task than if SUBDIR were **No**. Therefore, you should use **Yes** only when necessary.

Examples

Options file example: SUBDIR Yes

Command line example: -SU=Yes

SYMBOLICDESTINATION

SYMBOLICDESTINATION

Use the SYMBOLICDESTINATION option to specify a symbolic ADSM server name. Contact your ADSM administrator to get the correct name. The symbolic destination name indexes SNA routing and security parameters that are stored in communication directory files.

When a symbolic destination is used with the COMMMETHOD option for SNA LU6.2 communication, you do not have to specify the TPNAME, PARTNERLUNAME, or CPICMODENAME options.

This option is required if your communication protocol is SNA LU6.2 and a transaction program name or partner logical unit name is not provided.

Syntax

►—SYmbolicdestination *sym_dest_name*—————►

Parameters

sym_dest_name

A 1 to 8 character symbolic destination name for the ADSM server. Contact your ADSM administrator to get this name.

The name is case sensitive and should always be in upper case letters.

There is no default.

Examples

Options file example: symbolicdestination ADSM

Command line example: -sym=ANRSERV

TAPEPROMPT

TAPEPROMPT

Use the TAPEPROMPT option to specify whether you want ADSM to wait for a tape to be mounted if required for a backup, archive, restore, or retrieve process, or prompt you for your choice.

Syntax

▶—TAPEPrompt—┐ No
 └─┬─ Yes

Parameters

No

ADSM does not prompt you for your choice. It waits for the appropriate tape to be mounted. You can also specify No as OFF, False, or 0.

This is the default.

Yes

ADSM prompts you when a tape is required when you issue a command that backs up, archives, restores, or retrieves data. At the prompt, you can choose whether to wait for the appropriate tape to be mounted. If you choose not to wait, the file is not processed. You can also specify Yes as ON, True, or 1.

Examples

Options file example: TAPEPROMPT NO

Command line example: -TAPEP=NO

TCPBUFFSIZE

TCPBUFFSIZE

Use the TCPBUFFSIZE option to specify the size you want to use for the ADSM internal TCP/IP communication buffer.

A larger buffer can improve communication performance, but uses more memory.

Syntax

▶—TCPBuffsize *size*—————▶

Parameters

size

The size you want to use, in kilobytes, for the ADSM internal TCP/IP communication buffer.

The range of values is 1 to 32.

The default is 31.

Examples

Options file example: tcpb 2

Command line example: -tcpbuffsize=32

TCPCLIENTADDRESS

TCPCLIENTADDRESS

Use the TCPCLIENTADDRESS option to specify a TCP/IP address if your client node has more than one address, and you want the server to contact a different address than the one used to make initial contact with the server.

You can use this option only if you are using PROMPTED for SCHEDMODE.

ADSM uses this option only when the SCHEDULE command is running.

Syntax

▶—TCPCLIENTAddress *client_address*—————▶◀

Parameters

client_address

The TCP/IP address you want the ADSM server to use to contact your client node.

The value you specify for this parameter can be a TCP/IP Internet domain name or a dot address.

Examples

Options file example: tcpclienta dsmclnt.sanjose.ibm.com

Command line example: -tcpclientaddress=128.33.10.249

TCPCLIENTPORT

TCPCLIENTPORT

Use the TCPCLIENTPORT option to specify a TCP/IP port number if you want the ADSM server to contact a different port than the one used to make initial contact with the server.

You can use this option only if you are using PROMPTED for SCHEDMODE.

ADSM uses this option only when the SCHEDULE command is running.

If the default or specified port is busy, ADSM attempts to use any other available port.

Syntax

►—TCPCLIENTPort *client_port_address*—————►

Parameters

client_port_address

The TCP/IP port address you want the ADSM server to use to contact your client node.

The range of values is 1000 to 32767.

The default is 1501.

Examples

Options file example: tcpclientp 1502

Command line example: -tcpclientport=1492

TCPPORT

TCPPORT

Use the TCPPORT option to specify a server's TCP/IP port address.

Obtain this port address from your ADSM administrator.

Syntax

▶—TCPPort *port_address*—————▶◀

Parameters

port_address

The TCP/IP port address used to communicate with an ADSM server.

The range of values is 1000 to 32767.

The default is 1500.

Examples

Options file example: tcpp 1501

Command line example: -tcpport=1492

TCPSERVERADDRESS

TCPSERVERADDRESS

Use the TCPSERVERADDRESS option to specify the TCP/IP address for an ADSM server.

Obtain this server address from your ADSM administrator.

Syntax

▶—TCPServeraddress *server_address*—————▶

Parameters

server_address

A 1 to 64 character TCP/IP address for an ADSM server.

The value you specify for this parameter can be a TCP/IP Internet domain name or a dot address.

Examples

Options file example: tcps dsmchost.endicott.ibm.com

Command line example: -tcpserveraddress=129.33.249

TCPWINDOWSIZE

TCPWINDOWSIZE

Use the TCPWINDOWSIZE option to specify the size of the TCP/IP sliding window you want to use for your client node. This is the size of the buffer used when sending or receiving data.

A larger size can improve communication performance, but uses more memory.

Syntax

►—TCPWindowsize *window_size*—————▶◀

Parameters

window_size

The size you want to use, in kilobytes, for the TCP/IP sliding window for your client node.

The range of values is 1 to 64.

The default is 32.

Examples

Options file example: tcpwindowsize 1

Command line example: -tcpw=24

TIMEFORMAT

TIMEFORMAT

Use the TIMEFORMAT option to select the format you want ADSM to use for displaying the system time.

Syntax

▶▶—TIMEformat *format_number*—————▶▶

Parameters

format_number

One of the following time formats:

- 1 Displays time in this format: 23:00:00
This is the default.
- 2 Displays time in this format: 23,00,00
- 3 Displays time in this format: 23.00.00
- 4 Displays time in this format: 12:00:00A/P

Examples

Options file example: TIMEFORMAT 4

Command line example: -TIME=3

TPNAME

TPNAME

Use the TPNAME option to specify a symbolic name for the transaction program name. The transaction program name is required if the symbolic destination name is not provided for SNA LU6.2 communication.

If you use this option, you must also define the CPICMODENAME and PARTNERLUNAME options.

Syntax

▶—TPname *symbolic_name*—————▶

Parameters

symbolic_name

The 1 to 64 character transaction program name of the target logical unit (the ADSM server). Contact your ADSM administrator for this name.

The name is case sensitive and should always be in upper case letters.

There is no default.

Note: To communicate with an AIX ADSM server, the *symbolic_name* must be **dsmserv** in all lower-case letters.

Examples

Options file example: tpname ADSM

Command line example: -tp=ADSM

TXNBYTELIMIT

TXNBYTELIMIT

Use the TXNBYTELIMIT option to select the number of kilobytes ADSM should buffer before sending a transaction to the server.

A *transaction* for ADSM can have two meanings:

1. The action taken for each file or directory processed due to client request. This result is displayed in the GUI clients on the Status window, and in the command-line clients in the output associated with a command. These kinds of transactions can include successful backing up, archiving, deleting, and so forth, of a file or directory.
2. The action taken between ADSM server data commitments. Because ADSM can transfer more than one file or directory between the client and server before committing the data to server storage, a transaction in this sense can contain more than one file or directory. This is sometimes referred to as a *transaction group*.

The transaction processing option relates to the second meaning of *transaction*. This option allows you to control the amount of data sent between the client and server before the server commits the data and changes the server's database, thus altering the speed with which your client performs work. This limit applies when files are batched together during backup. It is also used when receiving files from the server during restore.

The server can limit the number of files or directories contained within a group transaction (with the server's TXNGROUPMAX option), however, so the actual size of a transaction can be less than your limit. TXNGROUPMAX determines the number of files or directories that can be sent in a single transaction. Once this number is reached, the client sends the files to the server even if the transaction byte limit is not reached.

Syntax

►►—TXNByteLimit *number*—————►►

Parameters

number

The number of kilobytes ADSM can buffer together in a transaction before sending data to the server.

The range of values is 1 to 25600 (25 MB).

The default is 2048.

Examples

Options file example: txnb 1024

Command line example: -txnb=1024

VERBOSE

VERBOSE

Use the VERBOSE option to specify that you want processing information to appear on your screen.

For example, when you run the INCREMENTAL command, ADSM generates information about each file it backs up. You can use the VERBOSE option if you want ADSM to display that information on your screen.

The alternative is the QUIET option. If you do not specify either option, VERBOSE is the default.

Syntax

▶—Verbose—▶

Examples

Options file example: VERBOSE

Command line example: -V

Chapter 7. Using Commands

This chapter provides information about the ADSM commands that you can use on a NetWare server. It contains information for entering commands, followed by a command reference section that provides detailed information about each ADSM command.

For information on starting and ending a client command session in batch or interactive mode, see Chapter 2, "Getting Started" on page 5.

Entering Client Commands

A client command can include one or more of these components:

- Command name
- Parameters
- Options

Command Name

The first component of a command is the command name. The command name is the unique identifier for the command. It can consist of a single action word, such as RETRIEVE, or it can consist of an action word and an object for the action, such as QUERY ARCHIVE.

You can enter the entire command name or its abbreviation. In a syntax diagram, uppercase letters indicate the shortest acceptable abbreviation. Here is an example of how a command name appears in a syntax diagram:

▶▶—LOAD DSMC Query Schedule—————▶▶

To issue the QUERY SCHEDULE command in batch mode, you can enter the full command name, the minimum abbreviation, or an abbreviation that contains at least the minimum abbreviation. For example, any of the following are correct versions of QUERY SCHEDULE in batch mode (for interactive mode, do not include the `load dsmc`):

```
load dsmc query schedule
load dsmc q s
load dsmc qu sched
load dsmc query s
```

Parameters

Some commands have required parameters, optional parameters, or both. You must enter the parameters in the order indicated in the syntax diagram for a command.

Required Parameters

Required parameters supply ADSM with information it needs to perform a task. The most common required parameter is a file specification. For example, when you use the ARCHIVE command, you must specify the file or files you want to archive.

For example, to archive a file named **budget** from the **project** directory on the **T3** server and the **SYS:** volume, you enter:

```
load dsmc archive T3\SYS:/project/budget
```

You do not need to enter the NetWare server name (**T3** in this example) if you are working on that server.

Optional Parameters

Some commands have optional parameters. If you do not enter a value for an optional parameter, ADSM uses a default value.

For example, the RESTORE command has a required parameter, *sourcefilespec*, that specifies the files you want to restore, and an optional parameter, *destinationfilespec*, that specifies where you want to place the restored files. If you do not use *destinationfilespec*, ADSM restores the file to the original source path by default.

However, if you want to restore the file to a different directory, enter a value for *destinationfilespec*.

For example, restore the file **budget** in the **project** directory on the **NW1\SYS:** volume to the **newproj** directory on the **NW2\SYS:** volume with a new file name of **planning**, enter:

```
load dsmc restore NW1\SYS:/project/budget NW2\SYS:/newproj/planning
```

Options

You can use options with all commands. For detailed information about entering options with commands see “Using Options With Commands” on page 52.

There are two groups of options from which you can choose:

- Client options—The group of options set in your client options file. You can override any option in that file by entering the option with an appropriate command.
Client user options specific to particular commands are discussed with those commands in the command reference. You can also find detailed information about each client option in “Client Options Reference” on page 58.
- Client command options—The group of options you can use with specific commands on the command line only. Figure 20 provides an alphabetical listing of these options, along with the commands for which each option is valid. For more information on these options, look under the specific commands in “Command Reference” on page 115.

Figure 20 (Page 1 of 2). Options Used on Command Line Only

Option	Command	Description
ARCHMC	ARCHIVE	Overrides the assigned management class for a file or group of files.
DELETEFILES	ARCHIVE	Deletes archived files from your NetWare server after the archives are committed to server storage.
DESCRIPTION	ARCHIVE DELETE ARCHIVE QUERY ARCHIVE RETRIEVE	Specifies a description for a file you are archiving, deleting, or retrieving.
DETAIL	QUERY MGMTCLASS	Displays management class attributes for available management classes.
DIRONLY	QUERY BACKUP	Displays directory names for files you have backed up.
FROMDATE	QUERY ARCHIVE QUERY BACKUP RESTORE RETRIEVE	Sets a date limit for files. ADSM does not include files processed before this date when processing the command, although older directories might be included.
FROMNODE	QUERY ARCHIVE QUERY BACKUP QUERY FILESPACE QUERY MGMTCLASS RESTORE RETRIEVE	Displays file spaces on an alternate node. Also specifies an alternate node from which to query information, or restore or retrieve files.
FROMTIME	QUERY ARCHIVE QUERY BACKUP RESTORE RETRIEVE	Used in conjunction with the FROMDATE option to specify a beginning time on the specified date.
IFNEWER	RESTORE	Replaces existing files with the latest backup version if the backup version is newer than the existing version.
INACTIVE	QUERY BACKUP RESTORE	Displays inactive backup versions of files.
INCRBYDATE	INCREMENTAL	Requests an incremental by date.
LATEST	RESTORE	Restores the most recent backup version of a file whether it is active or inactive.
NOPROMPT	DELETE ARCHIVE	Suppresses the confirmation prompt when deleting an archived file.
PASSWORD	Any command	Entered with a LOAD DSMC command when required.
PICK	DELETE ARCHIVE RESTORE RETRIEVE	Displays a list of files from which you can choose the ones to delete, restore, or retrieve.

Figure 20 (Page 2 of 2). Options Used on Command Line Only

Option	Command	Description
TODATE	QUERY ARCHIVE QUERY BACKUP RESTORE RETRIEVE	Sets a date limit for files. ADSM does not include files processed after this date when processing the command.
TOTIME	QUERY ARCHIVE QUERY BACKUP RESTORE RETRIEVE	Used in conjunction with the TODATE option to specify an ending time on the specified date.
VOLINFORMATION	RESTORE SELECTIVE	Backs up or restores NetWare volume restrictions such as volume or disk space restrictions and trustee directory assignments for the root directory of a volume.

Using Wildcard Characters

Use wildcard characters when you want to specify multiple files with similar names in *one* command. Without wildcards, you would have to repeat the command for each file.

In a command, wildcard characters can only be used in the file name or extension. They cannot be used to specify destination files, volume names, server names, NDS names, or the bindery.

The wildcard characters you can use are:

- * Asterisk. Matches zero or more characters.
- ? Question mark. Matches any single character at the current position.

Figure 21 shows examples of each wildcard.

Figure 21. Wildcard Characters

Pattern	Matches	Does Not Match
Asterisk (*)		
ab*	ab, abb, abxxx	a, b, aa, bb
ab*rs	abrs, abtrs, abrsrs	ars, aabrs, abrss
ab*ef*rs	abefrs, abefghrs	abefr, abers
abcd.*	abcd.c, abcd.txt	abcd, abcdc, abcdtxt
Question Mark (?)		
ab?	abc	ab, abab, abzzz
ab?rs	abrs	abrs, abllrs
ab?ef?rs	abdefjrs	abefrs, abdefrs, abefjrs
ab??rs	abcdrs, abzzrs	abrs, abjrs, abkkrs

Command Entry Rules

The following are general rules for entering commands:

- The command line allows up to 80 characters. You must enter the characters in a continuous string without using the return key.
- When you enter options with a command, always precede the option with a dash (-).
- You can enter more than one option in a command in any order before or after the file specification. You must separate each option with a blank space.

Command Reference

Figure 22 provides an alphabetical listing of the commands. For each command, the table provides a brief description and a reference for more detailed information.

Figure 22 (Page 1 of 2). Commands

Command	Description	Reference
ARCHIVE	Archive files from the NetWare server.	Page 117
DELETE ACCESS	Revoke authorization for a user to restore or retrieve files.	Page 120
DELETE ARCHIVE	Delete archived files from ADSM storage.	Page 122
DELETE FILESPACE	Delete file spaces from ADSM storage.	Page 127
HELP	Display online help for commands.	Page 130
INCREMENTAL	Back up new and changed files.	Page 131
LOOP	Start an interactive command session.	Page 136
MACRO	Use DSMC commands within a macro file.	Page 138
QUERY ACCESS	Display a list of current authorization rules.	Page 139
QUERY ARCHIVE	Display a list of archived files.	Page 141
QUERY BACKUP	Display a list of backup versions.	Page 146
QUERY FILESPACE	Display a list of file spaces in ADSM storage.	Page 151
QUERY MGMTCLASS	Display information about available management classes.	Page 153
QUERY SCHEDULE	Display information about scheduled events.	Page 155
RESTORE	Restore backup versions from ADSM storage.	Page 157
RETRIEVE	Retrieve archived files from ADSM storage.	Page 166
SCHEDULE	Start the client scheduler on the NetWare server.	Page 172
SELECTIVE	Back up selected files.	Page 175

Figure 22 (Page 2 of 2). Commands

Command	Description	Reference
SET ACCESS	Authorize another user to access your backup or archive copies.	Page 178
SET PASSWORD	Change the ADSM password for the NetWare server.	Page 180

The following sections contain detailed information about each command. The commands are arranged in alphabetical order. Information for each command includes the following:

- A description of the command
- A diagram that shows the syntax of the command
- Detailed descriptions of the command parameters
- Examples of using the command
- A list of related commands

ARCHIVE

LOAD DSMC ARCHIVE—Archiving Files

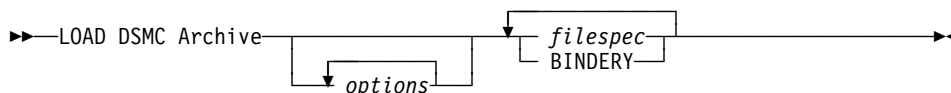
Use the ARCHIVE command to archive copies of files in ADSM storage. You can archive a single file, selected files, or all files in a directory on NetWare servers. You can also archive the bindery.

Archive files that you want to preserve in their current state, either for later use or for historical or legal purposes. Examples might be financial files from previous years that could be needed for tax audit purposes, down-level versions of programs, or personnel records of former employees. The ARCHIVE command allows you to make copies of these files and place them in long-term ADSM storage.

You can also archive files that you want to delete from your NetWare server, to free up disk space. You can retrieve the archived files whenever you need them back on your NetWare server.

If ADSM refuses to archive a file, check to see if it is marked for execute only or if it is opened and locked by another user.

Syntax



Parameters

options

Specifies an option that you want to use. Some of the options are:

-ARCHMc=managementclass

Specifies the name of an available management class in the active policy set of your policy domain. This management class overrides the assigned management class for the file or files you are archiving.

For example, to archive a file named **budget** and to use a management class named **mgcl3**, enter the following:

```
load dsmc Archive -ARCHMc=mgc13 T9\SYS:/user/home/proj1/budget
```

-DELETEFILES

Deletes the archived files from your workstation after ADSM commits the files to server storage.

-DEscription=description

Provides a description of the file you are archiving.

For example, to archive a file named **budget** and to assign a description to it, enter:

```
load dsmc A -DE="93 Proj1 Budget" T9\SYS:/user/proj1/budget
```

ARCHIVE

If you do not remember the name of a file you have archived, you can use the description to retrieve the file.

If you use the ARCHIVE command to archive more than one file, the description you enter is assigned to each of the files. For example, to archive all the files with the description **Project X**, enter:

```
load dsmc Archive -DE="Project X" T9\SYS:/u/allproj/*.x
```

You can use the description to retrieve all the files.

-Subdir=value

Whether ADSM should archive files in the subdirectories of the specified directory. The *value* is either **Yes** or **No**. The default is No.

For example, to archive only the files in the **SYS:/user/proj** directory, enter:

```
load dsmc Archive -Subdir=no SYS:/user/proj/*.*
```

To archive the files in the **SYS:/user/proj** directory and all of its subdirectories, enter:

```
load dsmc Archive -Subdir=yes SYS:/user/proj/*.*
```

-TAPEPrompt=value

Determines whether ADSM prompts you when a tape is required, so that you can choose whether to wait (**Yes**), or whether ADSM should automatically wait for a tape to be mounted (**No**).

The default is No.

For example, to have ADSM prompt you for a tape mount, use:

```
load dsmc archive sys:/script/* -tapeprompt=yes
```

Additional Options

CHANGINGRETRIES
COMPRESSION
DATEFORMAT
ERRORLOGNAME
NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
QUIET
TIMEFORMAT
VERBOSE

filespec

Specifies the path and name of the file you want to archive. You can use wildcard characters to specify a group of files or all the files in a directory. You can enter multiple file specifications in one command.

ARCHIVE

BINDERY

Specifies that you want to archive the bindery.

Examples

Task: Archive a single file named **budget**.

Command: `load dsmc Archive T9\SYS:/user/proj1/budget`

Task: Archive all files in the **T9\SYS:/user/proj1** directory that end with the characters **.txt**.

Command: `load dsmc Archive T9\SYS:/user/proj1/*.txt`

Task: Archive a single file named **budget** and also files with names that end with the characters **.txt** from the server **T9** and **SYS:** volume.

Command: `load dsmc A T9\SYS:/user/prj/budget T9\SYS:/user/prj/*.txt`

Task: Archive all files in the **T9\SYS:/home** directory. The **SUBDIR** option has no effect on archive processing. To archive files contained in any subdirectory of **T9\SYS:/home**, you must specify the subdirectory in an **ARCHIVE** command.

Command: `load dsmc Archive T9\SYS:/home/*`

Related Commands

Figure 23 provides references to related commands.

Figure 23. Related Commands for ARCHIVE

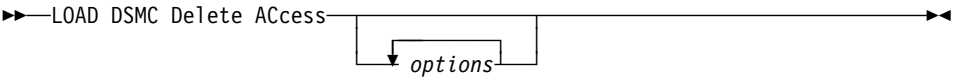
Command	Description	Reference
QUERY ARCHIVE	Displays a list of your archived files in ADSM storage.	Page 141
DELETE ARCHIVE	Deletes archived files from ADSM storage.	Page 122
RETRIEVE	Retrieves archived files from ADSM storage.	Page 166

DELETE ACCESS

LOAD DSMC DELETE ACCESS—Deleting Access to Files

Use the DELETE ACCESS command to delete current authorization rules for backup versions or archived copies of your files. When you delete an authorization rule, you revoke the access that another node has to any files specified by that rule.

Syntax



Parameters

options

Specifies an option that you want to use. Some of the options for this command are:

–SCROLLPrompt=value

The value can be:

Yes ADSM stops after displaying the number of lines specified with the SCROLLLLINES option and waits for you to scroll to the next group of lines.

No ADSM scrolls through all lines and stops at the end of the list.

The default value is No.

To display the authorization rules one screen at a time, enter:

```
load dsmc Delete ACcess –SCROLLPrompt=Yes
```

When prompted for an action at each screen, either press Enter to continue to the next screen, or type your selections, and then press Enter.

–SCROLLLines=number

Specifies the number of lines you want to appear at one time when ADSM displays a list of items. For example, if you are using the SCROLLPROMPT=Y option, and you want 20 lines displayed per screen, enter:

```
load dsmc Delete ACcess –SCROLLPrompt=Y –SCROLLLines=20
```

Additional Options

- ERRORLOGNAME
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD

DELETE ACCESS

Examples

Task: Display a list of current authorization rules and select the rules that you want to delete:

Command: load dsmc d ac

Output:

Index	Type	Node	User	Path
1	Backup	NODE1	*	M0\SYS:/U/DEV/PROJA/LIST
2	Archive	NODE3	*	M0\SYS:/U/FIN/BUDG/DEPTA
3	Backup	NODE4	*	M0\SYS:/U/PLAN/EXP/DEPTC
4	Archive	NODE5	*	M0\SYS:/U/MFG/INNV/PARTA

Enter Index of rule(s) to delete, or quit to cancel:

To delete the authorization rules that allow **NODE3** and **NODE5** to access your files, type **2,4** or type **2 4** (your selections can be separated by commas or spaces), and then press Enter.

You can quit without making a selection by entering **quit**. ADSM displays the following message:

'Delete Access' command successfully completed.

Related Commands

Figure 24 provides references to related commands.

Figure 24. Related Commands for DELETE ACCESS

Command	Description	Reference
SET ACCESS	Gives another node access to your files.	Page 178
QUERY ACCESS	Displays a list of nodes who have access to your files.	Page 139

DELETE ARCHIVE

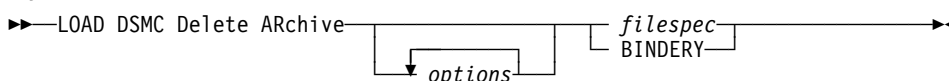
LOAD DSMC DELETE ARCHIVE—Deleting Archived Files

Use the DELETE ARCHIVE command to delete archived files from ADSM storage.

Whether you are allowed to delete archived files depends on whether your ADSM administrator has granted you that authority.

Attention: After you delete archived files, you cannot recover them. Verify that the files are obsolete before you delete them.

Syntax



Parameters

options

Specifies an option you want to use. Some of the options for this command are:

-Description=description

Specifies a description you assigned to the file when you archived it.

-NOPrompt

Suppresses the "delete archive ... ?" confirmation prompt that normally appears before an archived file is deleted. Using this option can speed up the delete operation. However, it also increases the danger of accidentally deleting an archived file you wanted to save. Use this option with caution.

For example, to suppress the confirmation prompt while deleting all files with a **.tmp** extension that you archived from the **c:\proj** directory, type:

```
Delete ARchive -nopr c:\proj\*.tmp
```

-Pick

Displays a list of archived files that match the file specification. You can select the archived files you want to delete from this list. See the last example in this section.

-Subdir=value

Whether ADSM should delete archive files in the subdirectories of the specified directory. The *value* is either **Yes** or **No**. The default is **No**.

For example, to delete only the files archived from the **SYS:/user/proj** directory, enter:

```
load dsmc Delete ARchive -Subdir=no SYS:/user/proj/*.*
```

To delete the archived files in the **SYS:/user/proj** directory and all of its subdirectories, enter:

```
load dsmc Delete ARchive -Subdir=yes SYS:/user/proj/*.*
```

DELETE ARCHIVE

Additional Options

DATEFORMAT
ERRORLOGNAME
NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
QUIET
TIMEFORMAT
VERBOSE

filespec

Specifies the name of the file that you want to delete, preceded by its directory and subdirectory names. You can use wildcard characters to specify a group of files or all the files in a directory.

BINDERY

Specifies that you want to delete the archived bindery.

Examples

Task: Delete a single archived file named **budget**.

Command: load dsmc Delete ARchive SYS:/user/home/proj1/budget

Task: Delete all archived files in the **SYS:/user/home/proj1** directory that end with the characters **.txt**.

Command: load dsmc Delete ARchive SYS:/user/home/proj1/*.txt

Task: Delete archived files in the **SYS:/user/project** directory. Use the PICK option.

Command: load dsmc Delete ARchive SYS:/user/project/* -PIck

Output:

DELETE ARCHIVE

```
ADSM Scrollable PICK Window - Archive Delete

#   Backup Date/Time   File Size A/I   File
-----
1.  04/02/1992 21:17    7362  A   T9\SYS:/USER/PROJECT/PROJB
2.  04/10/1992 12:19   83442  A   T9\SYS:/USER/PROJECT/EXPENSE
3.  10/22/1992 04:07    8117  A   T9\SYS:/USER/PROJECT/PROJX
4.  01/08/1993 12:12    4392  A   T9\SYS:/USER/PROJECT/SALARIES
5.  02/02/1993 11:27   287009  A   T9\SYS:/USER/PROJECT/PROJD
6.  04/28/1993 07:21    362   A   T9\SYS:/USER/PROJECT/REVENUE

0-----10-----20-----30-----40-----50-----60--
<U>=Up   <D>=Down <T>=Top <B>=Bottom <R#>=Right <L#>=Left
<G#>=Goto Line # <#>=Toggle Entry <+>=Select All <->=Deselect All
<#:#+>=Select A Range <#:#->=Deselect A Range <O>=Ok <C>=Cancel
pick>
```

When you use the PICK option with the DELETE ARCHIVE command, ADSM displays a list of archived files that match the file specification you entered.

The functions available to manipulate the display and make selections appear at the bottom of the screen. If it takes more than one screen to display the list, you can scroll forward and backward through the screens.

To make selections, at the pick> prompt, type the numbers that correspond to the files you want to delete. For example, to select the **PROJX** and **REVENUE** files for deletion, enter the following:

```
pick> 3 6
```

ADSM marks your selections with an **x** as shown in the following illustration.

DELETE ARCHIVE

```

ADSM Scrollable PICK Window - Archive Delete

#      Backup Date/Time  File Size A/I  File
-----
1.    04/02/1992  21:17      7362  A  T9\SYS:/USER/PROJECT/PROJB
2.    04/10/1992  12:19     83442  A  T9\SYS:/USER/PROJECT/EXPENSE
x 3.    10/22/1992  04:07      8117  A  T9\SYS:/USER/PROJECT/PROJX
4.    01/08/1993  12:12      4392  A  T9\SYS:/USER/PROJECT/SALARIES
5.    02/02/1993  11:27    287009  A  T9\SYS:/USER/PROJECT/PROJD
x 6.    04/28/1993  07:21       362  A  T9\SYS:/USER/PROJECT/REVENUE

0-----10-----20-----30-----40-----50-----60--
<U>=Up  <D>=Down <T>=Top <B>=Bottom <R#>=Right <L#>=Left
<G#>=Goto Line # <#>=Toggle Entry <+>=Select All <->=Deselect All
<#:#+>=Select A Range <#:#->=Deselect A Range <O>=Ok <C>=Cancel
pick>

```

To delete the files you selected, enter **O** at the pick> prompt. For example:

```
pick> o
```

Figure 25 provides an explanation of each Pick Window manipulation function.

Figure 25 (Page 1 of 2). Pick Window Manipulation Functions. The # symbol means number.

Legend	Description
<U>=Up	Scrolls the window up one page of files.
<D>=Down	Scrolls the window down one page of files.
<T>=Top	Positions the window at the top of the list.
=Bottom	Positions the window at the bottom of the list.
<R#>=Right	Positions the window # spaces to the right. Default is 20 if only R is entered.
<L#>=Left	Positions the window # spaces to the left. Default is 20 if only L is entered.
<G#>=Goto Line #	Positions the file # entered to top of screen.
<#>=Toggle Entry	Selects the file # entered or deselects it if already selected. More than one file # can be entered by separating each with a blank.
<+>=Select All	Selects all files.
<->=Deselect All	Deselects all files.
<#:#+>=Select a range	Selects a range of files. First file # entered is beginning of range. Second file # entered is end of range.

DELETE ARCHIVE

Figure 25 (Page 2 of 2). Pick Window Manipulation Functions. The # symbol means number.

Legend	Description
<#:#->=Deselect a range	Deselects a range of files. First file # entered is beginning of range. Second file # entered is end of range.
<O>=Ok	Deletes the archived files selected.
<C>=Cancel	Cancel the operation and returns to the command prompt.

Related Commands

Figure 26 provides references to related commands.

Figure 26. Related Commands for DELETE ARCHIVE

Command	Description	Reference
ARCHIVE	Archives files in ADSM storage.	Page 117
QUERY ARCHIVE	Displays a list of archived files in ADSM storage.	Page 141
RETRIEVE	Retrieves archived files from ADSM storage.	Page 166

DELETE FILESPACE

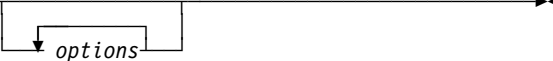
LOAD DSMC DELETE FILESPACE—Deleting File Spaces

Use the DELETE FILESPACE command to delete file spaces from ADSM storage. A file space is a logical space that contains a group of files backed up or archived from the same volume. The NDS and the bindery have their own file spaces.

To delete a file space, you must have the appropriate authorizations. If the file space you want to delete contains backup versions of files, you must have BACKDEL authority from your ADSM administrator. If the file space contains archived files, you must have ARCHDEL authority. If the file space contains both backup versions of files and archived files, you must have both types of authority.

Attention: When you delete a file space, you delete *all* backup versions and archived files within the file space. After you delete a file space, you cannot recover the files. You should be certain that the files are no longer needed before you delete them.

Syntax

►►—LOAD DSMC Delete Filespace—►►


Parameters

options

Specifies an option you want to use. Some options you might find useful for this command are:

- DATEFORMAT
- NODENAME
- NUMBERFORMAT
- NWPWFILE
- NWUSER
- NWWAITONERROR
- PASSWORD
- QUIET
- TIMEFORMAT
- VERBOSE

Examples

Task: Delete a file space.

Command: load dsmc Delete Filespace

Output:

DELETE FILESPACE

Num	Last Incr Date	Type	File Space Name
1	08/31/1993 14:00:14	NWDIRECT	ADMIN\DIRECTORY
2	00/00/0000 00:00:00	NTWFS	ADSM\SYS:
3	00/00/0000 00:00:00	NTWFS	SERVERC\SYS:
4	08/31/1993 17:45:44	NWDIRECT	ADSM2\DIRECTORY
5	08/31/1993 17:46:13	NWBINDRY	ADSM\BINDERY:
6	00/00/0000 00:00:00	NTWFS	ADSM2\SYS:

Which file space number to remove? (1 - 6 or Quit):

To delete **SERVERC\SYS:**, type **3** and press Enter. The following is displayed:

```
***** WARNING *****  
Removing an ADSM server file space is irreversible!!  
Are you absolutely certain you want to remove:  
File Space: 'SERVERC\SYS:' (Yes/No)
```

To continue with the deletion, type **Yes**. ADSM responds with:

```
ANS4130I Initiating the removal of 'SERVERC\SYS:'  
file space...  
ANS4132I Removal of file space 'SERVERC\SYS:'  
successfully completed.
```

Task: Delete a file space. Use the DATEFORMAT and TIMEFORMAT options to reformat the dates and times:

Command: load dsmc Delete Filespace -DATEformat=1 -TIMEformat=4

Output:

DELETE FILESPACE

Num	Last	Incr	Date	Type	File Space Name
1	07/09/1993	09:16:38AM	NTWFS	S\$\SYS:	
2	07/09/1993	09:16:59AM	NTWFS	SERVER_A\SYS:	
3	07/09/1993	09:17:01AM	NTWFS	S\$\DATA:	
4	07/09/1993	09:17:01AM	NTWFS	SERVER_B\SYS:	
5	07/09/1993	09:10:02PM	NTWFS	SERVER_C\SYS:	
6	08/05/1993	03:01:55PM	NWBINDRY	S\$\BINDERY:	

Which file space number to remove? (1 - 6 or Quit):

The format of both the dates and the times changed from the previous example. By entering the DATEFORMAT and TIMEFORMAT options in the command, you have changed to formats that might be easier for you to use.

You can also set formats in the client options file. If you do not specify formatting options in the command, ADSM uses the settings in the client options file. There are five different format settings for the DATEFORMAT option and four for the TIMEFORMAT option.

After the screens are reformatted, you can continue with the deletion as outlined in the previous example.

Related Commands

Figure 27 provides references to related commands.

Figure 27. Related Commands for DELETE FILESPACE

Command	Description	Reference
QUERY FILESPACE	Displays a list of your file spaces in ADSM storage.	Page 151

HELP

LOAD DSMC HELP—Displaying Online Information

Use the HELP command to display online help information.

Syntax

▶—LOAD DSMC —▶

Examples

Task: Display a list of help topics.

Command: load dsmc Help

Command: load dsmc ?

When you issue the HELP command, a list of help topics appears. Type the number of the topic you wish to display, and then press Enter.

To scroll through the help table of contents, type **d**, and then press Enter to go down a screen, or type **u** to go up a screen. To scroll through a help topic, press Enter.

To exit online help or a particular help topic, type **q**, and then press Enter.

INCREMENTAL

LOAD DSMC INCREMENTAL—Backing Up New and Changed Files

Use the INCREMENTAL command to back up all files in your default client domain or on the NetWare volumes you specify that are not excluded from backup services, and that meet management class requirements for frequency, mode, and serialization. You can also back up the NDS and the bindery.

There are two types of incremental backups: full and partial.

- A full incremental backup ensures that the backups kept on the ADSM server are managed according to your installation's storage management policies. It ensures that your backup storage accurately reflects the state of your NetWare server.
- A partial incremental backup should complete more quickly than a full incremental backup, and requires less memory. Thus, if you are constrained for time or machine memory, you might want to perform a partial incremental backup.

Normally, you use incremental backup to back up all files created or changed since the last time you ran a backup. However, you can exclude specific files or groups of files from backup services by using the EXCLUDE option in your client option file's include-exclude list.

In addition, the following attributes in the management class assigned to a file affect whether the file is actually backed up.

- Frequency—The number of days that must elapse between successive backups for the file.
- Mode—Whether a file is backed up only if it has changed since the last backup.
- Serialization—Whether a file is backed up if it changes during the backup process.

The management class assigned to a file is either the default management class or one that you specifically assign to the file using an INCLUDE option in the client option file's include-exclude list.

If you are running NetWare Btrieve on your NetWare server (or any other server-based database), stop the database application before backing up the files associated with the database. Many database applications place locks on files that can prevent ADSM from backing them up. Because ADSM is a Storage Management Services (SMS) backup application, it supports database Target Service Agents (TSA's) as soon as they are available. This allows ADSM to maintain database integrity without manual interaction.

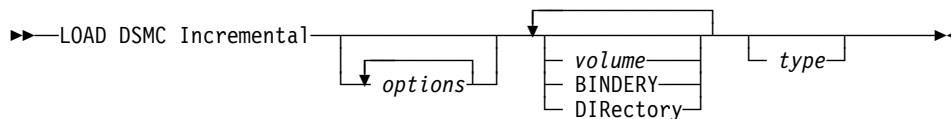
If you are running your communication with SNA LU6.2 (NetWare for SAA), you cannot stop the Btrieve database application because NetWare for SAA requires Btrieve to be running. Therefore, you cannot back up the file named **btrieve.trn** in the system subdirectory. As a result, you might be unable to maintain true data integrity here.

If ADSM refuses to back up a file, check to see if it is marked for execute only or if it is opened and locked by another user.

INCREMENTAL

If your system fails during an incremental backup, ADSM checks all files again when you start the next incremental backup. Any files that have not changed are not backed up.

Syntax



Parameters

options

Specifies an option you want to use. Some of the more useful options for this command are:

-CHangingretries=numberretries

Specifies the number of times you want ADSM to try to back up a file that is in use during the first attempt. This option relates to serialization, which is an attribute in a management class copy group. ADSM uses this option only when serialization is shared static or shared dynamic.

You can specify a number from **0** to **4**.

-DOMain=domain

Specifies the volumes for which you want ADSM to perform an incremental backup in *addition* to the volumes specified with the DOMAIN option in your client options file.

For example, to run an incremental backup for the **A\SYS:** and **B\SYS:** volumes, enter:

```
load dsmc Incremental -DOMain="A\SYS: B\SYS:"
```

If the DOMAIN option in your client options file specifies the **C\SYS:** and **D\SYS:** volumes, ADSM also backs up files in those volumes.

If you specify the DOMAIN option and specify a value for *volume*, ADSM ignores the DOMAIN option. For example, if you add the **E\SYS:** volume to the previous command example in the following manner, *only* the files in the **E\SYS:** volume are backed up:

```
load dsmc I -DOMain="A\SYS: B\SYS:" E\SYS:
```

-Quiet

Prevents messages from being displayed on your screen during processing. Certain error information is still displayed, and messages are posted to ADSM log files.

If you are running an incremental backup for the **serverA\SYS:** and **serverB\SYS:** volumes, and you do not want ADSM to display information about each file it backs up, enter:

INCREMENTAL

```
load dsmc I serverA\SYS: serverB\SYS: -Quiet
```

-SLOWINCREMENTAL

Does the incremental backup one directory at a time. This is useful if you are backing up many files and want to use less short term memory on the NetWare server. However, using SLOWINCREMENTAL will cause the incremental operation to take longer.

The default for this option is Yes.

-TAPEPrompt=*value*

Determines whether ADSM prompts you when a tape is required, so that you can choose whether to wait (**Yes**), or whether ADSM should automatically wait for a tape to be mounted (**No**).

The default is No.

For example, to have ADSM prompt you for a tape mount, use:

```
dsmc load incremental -tapeprompt=yes
```

Additional Options

COMPRESSION
ERRORLOGNAME
NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
SLOWINCREMENTAL
TIMEFORMAT
VERBOSE

Note: The VOLINFORMATION option is not needed for the INCREMENTAL command because the volume information is backed up each time a full incremental is run.

volume

The volume on which to perform the incremental backup. You can enter one or more volumes. They must be separated by a blank space. For example:

```
load dsmc I SYS: DATA: SERVERC\SYS:
```

The default server is the local NetWare server. If you do not specify any volumes, ADSM performs an incremental backup for the volumes specified with the DOMAIN option in your client options file. If you have not added the DOMAIN option to that file, the default is all locally mounted volumes and the bindery on the local NetWare server.

BINDERY

Specifies that you want to include the bindery information in this backup. BINDERY can also be specified in the DOMAIN option. For example:

INCREMENTAL

```
load dsmc I BINDERY
```

The default server is the local NetWare server.

DIRectory

Specifies that you want to back up the NDS. If you want to back up the entire directory, specify `directory` or `directory/full`. If you want to back up only one container in the directory, specify `directory/.o=container_name`. You can abbreviate `DIRECTORY` to `DIR`.

type

The type of incremental backup.

The default is a full incremental backup.

In a *full* incremental backup, the client queries the ADSM server so that it knows the exact state of your storage as of your last incremental backup. During a full incremental backup, ADSM uses this information to:

- Back up new files
- Back up files whose contents have changed
- Back up files whose directory contents have changed, including changes to access control lists
- Expire backup versions on the server for files that have been deleted from the NetWare server.
- Rebind backup versions to management classes if you have changed management class assignments, even if the associated file is not backed up.

All of this processing is required to maintain your backups according to the policies defined in the management classes.

If you use any of the following for *type*, you are requesting a partial incremental backup as described.

Run partial incremental backups only if you must meet a limited backup time window, and a full incremental backup takes longer than the allotted time. Periodically perform full incremental backups to bring the ADSM server in line with your NetWare server's status. For example, if you have only a limited time during the week to perform backups, but extra time on the weekend, you can run partial incremental backups on the weekdays, and then run full incremental backups on the weekends.

-INCRBYDate

Requests an incremental backup by date.

In an *incremental backup by date*, the client only asks the server for the date and time of the last incremental backup. This is the only information used to determine which files are backed up, so any changes that do not change the date and time are not recognized. If a file's last changed date and time is after that of the last backup, the file is backed up. Otherwise, it is not, even if the file is new to the NetWare server.

INCREMENTAL

Also, in an incremental backup by date, files are not expired or re-bound on the server, and the copy mode frequency attribute of the management classes is ignored. Because they do not change the last changed date and time, changes to anything but file data are not backed up during an incremental backup by date.

Examples

Task: Run an incremental backup for the default client domain specified with the DOMAIN option in your client options file.

Command: `load dsmc Incremental`

Task: Run an incremental backup for the **SYS:** volume, the **DATA:** volume, and the BINDERY on server **B9**.

Command: `load dsmc Incremental B9\SYS: B9\DATA: B9\BINDERY`

Task: Run an incremental backup of the NDS.

Command: `load dsmc Incremental T9\directory`

Task: Run an incremental backup by date using the INCRBYDATE option.

Command: `load dsmc Incremental -incrbydate`

Related Commands

Figure 28 provides references to related commands.

Figure 28. Related Commands for INCREMENTAL

Command	Description	Reference
QUERY BACKUP	Display a list of backup versions of your files.	Page 146
RESTORE	Restore backup versions of files from ADSM storage.	Page 157
SELECTIVE	Back up selected files.	Page 175

LOOP

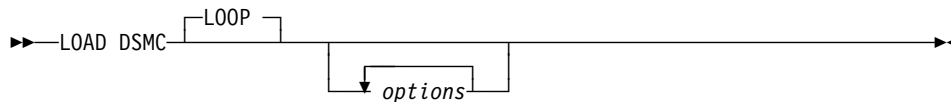
LOAD DSMC LOOP—Starting an Interactive Command Line Session

Use the LOOP command to start an interactive command line session that is maintained until you enter **quit**. Using an interactive command line session eliminates the need for you to precede each command name with **load dsmc**. It also eliminates the need to enter your password with each command if you are required to enter a password.

If you are entering more than one ADSM command, interactive mode is faster than batch mode because ADSM only needs to load itself and establish a connection to the server once for the session, instead of for every command.

You can also use LOAD DSMC without the LOOP command to start an interactive session. LOAD DSMC is the default method for starting the interactive command line ADSM session. You can enter all ADSM commands in interactive mode except the SCHEDULE and LOOP commands.

Syntax



Parameters

options

Specifies an option you want to use. One of the more useful options for this command is:

-PASsword=*password*

Entered with a LOAD DSMC command when required. If your password is **notell**, enter:

```
load dsmc LOOP -PASsword=notell
```

If you do not enter your password when it is required, ADSM prompts you for it after you have entered your first command in interactive mode.

This option remains in effect throughout the session. You cannot change ADSM servers while in interactive mode.

Additional Options

DATEFORMAT
ERRORLOGNAME
NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
QUIET

LOOP

SCROLLINES
SCROLLPROMPT
SUBDIR
TIMEFORMAT
VERBOSE

Examples

Task: Start an ADSM interactive command line session.

Command: `load dsmc LOOP`

Output: ADSM provides you with a command prompt:

```
dsmc>
```

Enter ADSM commands at this prompt, along with the appropriate options and parameters. For example:

```
dsmc> query archive G$\SYS:/budget
```

There are four methods for ending an ADSM interactive command line session from the `dsmc>` prompt. Choose one of the following:

- Enter **quit**
- Press the Escape key, and then enter **Q**.
- Type the following at the NetWare console's prompt:

```
unload dsmc
```

Using UNLOAD DSMC is *not* recommended for backup-archive operations. However, UNLOAD DSMC is the *only* way to exit the scheduler.

- If all else fails, you can enter the keystroke combination of Ctrl-c at the DSMC> prompt.

MACRO

LOAD DSMC MACRO—Using Commands Within a Macro File

Use the MACRO command to issue a series of ADSM commands as specified in a macro file.

You can nest commands to a maximum of 10 levels by including the MACRO command within a macro file.

Syntax

▶—LOAD DSMC MACRO *macroname*—————▶

Parameters

macroname

The name of a file containing ADSM client commands.

Examples

Task: Selectively back up files in the **SYS:/project/proja**, **SYS:/project/projb**, and **SYS:/project/projc** directories.

Command: MACRO backabc.mac

where **backabc.mac** is a macro file containing the statements:

```
Selective SYS:/project/proja/*.*
Selective SYS:/project/projb/*.*
Selective SYS:/project/projc/*.*
```

QUERY ACCESS

LOAD DSMC QUERY ACCESS—Displaying File Access Information

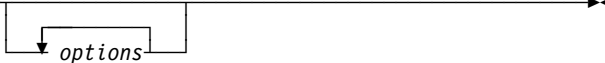
Use the QUERY ACCESS command to display a list of nodes to which you have granted access to backup versions of specific files or archived copies of specific files.

When you issue the QUERY ACCESS command, ADSM displays a list of authorization rules you defined using the SET ACCESS command.

The information ADSM displays includes the following:

- Whether you granted a node the authority to restore backup versions of your files or to retrieve archived copies of your files.
- The name of the node to which you granted authorization.
- The file or group of files to which the node has access.

Syntax

►►—LOAD DSMC Query ACcess—

Parameters

options

Specifies an option that you want to use. Some of the options for this command are:

—SCROLLPrompt=*value*

The *value* can be:

Yes

ADSM stops after displaying the number of lines specified with the SCROLLLINES option and waits for you to scroll to the next group of lines.

No ADSM scrolls through all lines and stops at the end of the list.

The default value is **No**.

To display the authorization rules one screen at a time, enter:

```
Query ACcess —SCROLLPrompt=Yes
```

—SCROLLLines=*number*

Controls the number of lines that are displayed on a screen. For example, if you are using the SCROLLPROMPT option and you want 10 lines displayed per screen, enter:

```
Query ACcess —SCROLLPrompt=Yes —SCROLLLines=10
```

QUERY ACCESS

Additional Options

ERRORLOGNAME
NODENAME
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD

Examples

Task: Display a list of your files that can be accessed by other nodes.

Command: load dsmc Query ACcess

Output:

Type	Node	User	Path
Backup	NODE1	*	SERVERA\SYS:/DEV/PROJA/LIST
Archive	NODE3	*	SERVERA\SYS:/FIN/BUDG/DEPTA
Backup	NODE4	*	SERVERA\SYS:/PLAN/EXP/DEPTC
Archive	NODE5	*	SERVERA\SYS:/MFG/INVN/PARTA

Related Commands

Figure 29 provides references to related commands.

Figure 29. Related Commands for QUERY ACCESS

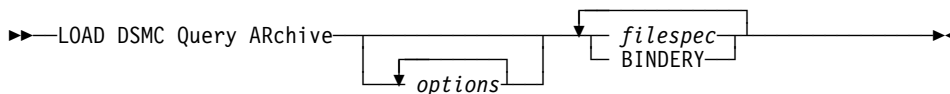
Command	Description	Reference
SET ACCESS	Authorizes another node to access backup versions or archived copies of your files.	Page 178
DELETE ACCESS	Revokes authorization for a node to restore or retrieve your files.	Page 120

QUERY ARCHIVE

LOAD DSMC QUERY ARCHIVE—Displaying A List of Archived Files

Use the QUERY ARCHIVE command to display a list of files that are archived in ADSM storage. When you enter the command, a list of currently archived files is displayed containing the file size, archive date, file specification, expiration date, and file description.

Syntax



Parameters

options

Specifies an option you want to use. Some of the options for this command are:

-Description=description

Specifies a description you assigned to the file when you archived it. For example, to search files that were archived with a description that starts with the word *valid*, enter:

```
Query ARchive SYS:/script/* -Description="valid"
```

-FROMDate=date

The date from which you want ADSM to look for archives. ADSM does not list files that were archived before this date.

You can use this option in conjunction with the TODATE option to create a time window for archives. This can help you list files that were archived between two dates.

The *date* must be in the format you select with the DATEFORMAT option. For example, the date for date format 1 is mm/dd/yyyy, which is the American English standard. If you include DATEFORMAT with the command, it must precede FROMDATE and TODATE.

-FROMNode=node

An alternate node whose archived files you want to list. To list files, you must specify the file space on the server where the files reside. You can determine another node's file space names by using the QUERY FILESPACE command with the FROMNODE option.

-FROMTime=time

Used in conjunction with the FROMDATE option to specify a beginning time on the specified date. For example, with FROMTIME and FROMDATE, you can request that ADSM list files beginning with those that were archived on or after 6:00 AM on June 1, 1995.

You can also use FROMTIME and FROMDATE with TOTIME and TODATE to request that ADSM list only files that were archived within a particular window

QUERY ARCHIVE

of time. For example, you can request that ADSM list only files that were archived between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for FROMTIME is 00:00:00.

Note: If you want ADSM to use a value you specify for FROMTIME, you must also include FROMDATE with the command. Otherwise, ADSM ignores FROMTIME.

-SCROLLPrompt=*value*

The *value* can be:

Yes ADSM stops after displaying the number of lines specified with the SCROLLLINES option and waits for you to scroll to the next group of lines.

No ADSM scrolls through all lines and stops at the end of the list.

The default value is No.

To display the list of archived files one screen at a time, enter:

```
load dsmc Query ARchive -SCROLLPrompt=Yes SYS:*
```

-SCROLLLines=*number*

Controls the number of lines that are displayed on a screen. For example, if you are using the SCROLLPROMPT option, and you want 25 lines displayed per screen, enter:

```
load dsmc Q AR -SCROLLPrompt=Yes -SCROLLLines=25 SYS:*
```

-Subdir=*value*

Displays the subdirectories of the directory specified in *filespec*. The *value* is either **Yes** or **No**. The default is No.

-TODate=*date*

The date to which you want ADSM to look for archives. ADSM does not list files that were archived after this date.

You can use this option in conjunction with the FROMDATE option to create a time window for archives. See the discussion of FROMDATE for more information on using TODATE.

-TOTime=*time*

Used in conjunction with the TODATE option to specify an ending time on the specified date. For example, with TOTIME and TODATE, you can request that ADSM list only files that were archived on or before 11:59 PM on June 15, 1995.

You can also use TOTIME and TODATE with FROMTIME and FROMDATE to request that ADSM list only files that were archived within a particular window

QUERY ARCHIVE

of time. For example, you could request that ADSM list only files that were archived between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for TOTIME is 23:59:59.

Note: If you want ADSM to use a value you specify for TOTIME, you must also include TODATE with the command. Otherwise, ADSM ignores TOTIME.

Additional Options

DATEFORMAT
ERRORLOGNAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
TIMEFORMAT

filespec

Specifies the path and name of the file you want to display. Use wildcard characters to specify a group of files or all the files in a directory. Specify * to query all archived files.

BINDERY

Display a list of archived bindery files.

QUERY ARCHIVE

Examples

Task: Display a list of all your archived files on serverA's **SYS:** volume.

Command: load dsmc Query ARchive -Subdir=Yes serverA\SYS:*

Output:

Size	Archive Date	File - Expires on - Description
1184	1992.03.08 10:01:10	SERVERA\SYS:/U/PROJ/PROJB 1993.09.24 PROJECT B
311	1992.03.08 16:02:22	SERVERA\SYS:/U/ACCT/EXP 1993.03.08 EXPENSE
1722	1993.03.08 10:04:36	SERVERA\SYS:/U/PLAN/SAL 1994.09.24 SALARIES
1522	1993.04.12 14:44:06	SERVERA\SYS:/U/PROJ/PROJX 1994.09.24 PROJECT X
344	1993.06.07 18:02:11	SERVERA\SYS:/U/ACCT/REV 1995.03.08 REVENUE
2112	1993.07.31 10:11:40	SERVERA\SYS:/U/PROJ/PROJD 1994.09.24 PROJECT D

Task: Display a list of all your archived files on **serverA\SYS:**. Use the DATEFORMAT and TIMEFORMAT options to reformat the dates and times.

Command: load dsmc Q AR -Subdir=Yes -DATE=1 -TIME=4 serverA\SYS:*

Output:

Size	Archive Date	File - Expires on - Description
1184	03/08/1993 10:01:10A	SERVERA\SYS:/U/PROJ/PROJB 09/24/1993 PROJECT B
311	03/08/1993 04:02:22P	SERVERA\SYS:/U/ACCT/EXP 03/08/1993 EXPENSE
1722	03/08/1993 10:04:36A	SERVERA\SYS:/U/PLAN/SAL 09/24/1994 SALARIES
1522	04/12/1993 02:44:06P	SERVERA\SYS:/U/PROJ/PROJX 09/24/1994 PROJECT X
344	06/07/1993 06:02:11P	SERVERA\SYS:/U/ACCT/REV 03/08/1995 REVENUE
2112	07/31/1993 10:11:40A	SERVERA\SYS:/U/PROJ/PROJD 09/24/1994 PROJECT D

The format of both the dates and the times are changed from the previous example. By entering the DATEFORMAT and TIMEFORMAT options in the command, you have changed to formats that might be easier for you to use.

You can also set formats in the client options file. If you do not specify formatting options in the command, ADSM uses the current settings in the client options file. There are five different format settings for the DATEFORMAT option and four TIMEFORMAT option settings.

Task: Display the list of files that were archived from the **serverA\SYS:/u/proj** directory whose first four characters of the file name begin with **proj**. Use the DATEFORMAT and TIMEFORMAT options.

QUERY ARCHIVE

Command: load dsmc Q AR -DATE=1 -TIME=4 serverA\SYS:/u/proj/proj*

Output:

Size	Archive Date	File - Expires on - Description
1184	03/08/1993 10:01:10A	SERVERA\SYS:/U/PROJ/PROJB 09/24/1993 PROJECT B
1522	04/12/1993 02:44:06P	SERVERA\SYS:/U/PROJ/PROJX 09/24/1994 PROJECT X
2112	07/31/1993 10:11:40A	SERVERA\SYS:/U/PROJ/PROJD 09/24/1994 PROJECT D

Related Commands

Figure 30 provides references to related commands.

Figure 30. Related Commands for QUERY ARCHIVE

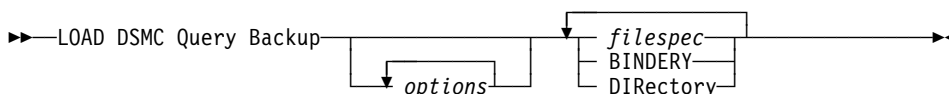
Command	Description	Reference
ARCHIVE	Archives files to the ADSM server.	Page 117
DELETE ARCHIVE	Deletes archived files on the ADSM server.	Page 122
RETRIEVE	Retrieves archived files from the ADSM server.	Page 166

QUERY BACKUP

LOAD DSMC QUERY BACKUP—Displaying A List of Backup Versions

Use the QUERY BACKUP command to display a list of backup versions of your files in ADSM storage. The list includes the file size, backup date, the management class, whether the file is active or inactive, and the file specification. If the management class name is longer than 10 characters, ADSM displays only the first 10 characters.

Syntax



Parameters

options

Specifies an option you want to use. Some of the options for this command are:

-Dironly

Displays only the directory and subdirectory names for files you have backed up on the ADSM server. For example, to display only directory and subdirectory information, enter:

```
load dsmc Query Backup -Dironly servA\SYS:*
```

-FROMDate=*date*

The date from which you want ADSM to look for backups. ADSM does not list files that were backed up before this date.

You can use this option in conjunction with the TODATE option to create a time window for backups. This can help you list files that were backed up between two dates.

The *date* must be in the format you select with the DATEFORMAT option. For example, the date for date format 1 is mm/dd/yyyy, which is the American English standard. If you include DATEFORMAT with the command, it must precede FROMDATE and TODATE.

-FROMTime=*time*

Used in conjunction with the FROMDATE option to specify a beginning time on the specified date. For example, with FROMTIME and FROMDATE, you can request that ADSM list files beginning with those that were backed up on or after 6:00 AM on June 1, 1995.

You can also use FROMTIME and FROMDATE with TOTIME and TODATE to request that ADSM list only files that were backed up within a particular window of time. For example, you can request that ADSM list only files that were backed up between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the

QUERY BACKUP

format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for FROMTIME is 00:00:00.

Note: If you want ADSM to use a value you specify for FROMTIME, you must also include FROMDATE with the command. Otherwise, ADSM ignores FROMTIME.

-INActive

Displays information about both active and inactive backup versions of files. If you do not use this option, ADSM displays information about active backup versions only.

To display information about both active and inactive backup versions, enter:

```
load dsmc Query Backup -INActive servA\SYS:*
```

-SCROLLPrompt=value

The *value* can be:

Yes ADSM stops after displaying the number of lines specified with the SCROLLLINES option and waits for you to scroll to the next group of lines.

No ADSM scrolls through all lines and stops at the end of the list.

The default value is No.

To display the list of files one screen at a time, enter:

```
load dsmc Query Backup -SCROLLPrompt=Yes SYS:*
```

-SCROLLLines=number

Controls the number of lines that are displayed on a screen. For example, if you are using the SCROLLPROMPT option, and you want 10 lines displayed per screen, enter:

```
load dsmc Q B -SCROLLP=yes -SCROLLL=10 servA\SYS:*
```

-SUBdir=value

Displays the subdirectories of the directory specified in *filespec*. The *value* is either **Yes** or **No**. The default is No.

-TODate=date

The date to which you want ADSM to look for backups. ADSM does not list files that were backed up after this date.

You can use this option in conjunction with the FROMDATE option to create a time window for backups. See the discussion of FROMDATE for more information on using TODATE.

-TOTime=time

Used in conjunction with the TODATE option to specify an ending time on the specified date. For example, with TOTIME and TODATE, you can request that ADSM list only files that were backed up on or before 11:59 PM on June 15, 1995.

QUERY BACKUP

You can also use TOTIME and TODATE with FROMTIME and FROMDATE to request that ADSM list only files that were backed up within a particular window of time. For example, you could request that ADSM list only files that were backed up between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for TOTIME is 23:59:59.

Note: If you want ADSM to use a value you specify for TOTIME, you must also include TODATE with the command. Otherwise, ADSM ignores TOTIME.

Additional Options

DATEFORMAT
ERRORLOGNAME
FROMNODE
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
TIMEFORMAT

filespec

Specifies the path and name of the file you want to display. Use wildcard characters to specify a group of files or all the files in a directory. Specify **volumename:*** to query all backed up files.

BINDERY

Displays a list of backed up bindery files.

DIRectory

Displays a list of backed up NDS files. If you want to display a list of the entire directory, specify `directory` or `directory/full`. If you want to display a list of only one container in the directory, specify `directory/.o=container_name`. You can abbreviate DIRECTORY to DIR.

Examples

Task: Display a list of all your backed up files on the **SYS:** volume.

Command: `load dsmc Query Backup -Subdir=Yes servA\SYS:*`

QUERY BACKUP

Output:

Size	Backup Date	Mgmt Class	A/I	File
1184	1993.03.08 10:01:08	Daily_Back	A	servA\SYS:/PROJ/PROJA
311	1993.03.08 16:02:11	Daily_Back	A	servA\SYS:/ACCTG/EXPENSE
1722	1993.03.08 10:04:53	Weekly_Bac	I	servA\SYS:/PLAN/SALARY
1522	1993.04.12 14:44:10	Weekly_Bac	A	servA\SYS:/PROJ/PROJN
344	1993.06.07 18:02:23	Weekly_Bac	I	servA\SYS:/ACCTG/REVENUE
2112	1993.07.31 10:11:55	Month_Back	A	servA\SYS:/PROJ/PROJZ

Task: Display a list of all your backed up files. Use the DATEFORMAT and TIMEFORMAT options to reformat the dates and times.

Command: load dsmc Q B -DATE=1-TIME=4 -Subdir=Yes servA\SYS:*

Output:

Size	Backup Date	Mgmt Class	A/I	File
1184	03/08/1993 10:01:08A	Daily_Back	A	servA\SYS:/PROJ/PROJA
311	03/08/1993 04:02:11P	Daily_Back	A	servA\SYS:/ACCTG/EXPENSE
1722	03/08/1993 10:04:53A	Weekly_Bac	I	servA\SYS:/PLAN/SALARY
1522	04/12/1993 02:44:10P	Weekly_Bac	A	servA\SYS:/PROJ/PROJN
344	06/07/1993 06:02:23P	Weekly_Bac	I	servA\SYS:/ACCTG/REVENUE
2112	07/31/1993 10:11:55A	Month_Back	A	servA\SYS:/PROJ/PROJZ

The format of both the dates and the times are changed from the previous example. By entering the DATEFORMAT and TIMEFORMAT options in the command, you can change to formats that might be easier to use.

You can also set formats in the your client options file. If you do not specify formatting options in the command, ADSM uses the settings in the client options file. There are five different format settings for the DATEFORMAT option and four TIMEFORMAT option settings.

Task: Display a list of files that were backed up from the **servA\SYS:/proj** directory that have file names that begin with the four characters **proj**. Use the DATEFORMAT and TIMEFORMAT options.

Command: load dsmc Q B -DATE=1 -TIME=4 servA\SYS:/proj/proj*

Output:

QUERY BACKUP

Size	Backup Date	Mgmt Class	A/I	File
1184	03/08/1993 10:01:08A	Daily_Bac	A	servA\SYS:/PROJ/PROJA
1522	04/12/1993 02:44:10P	Weekly_Bac	A	servA\SYS:/PROJ/PROJN
2112	07/31/1993 10:11:55A	Month_Bac	A	servA\SYS:/PROJ/PROJZ

Task: Display the list of files that were backed up from the NDS.

Command: load dsmc Query Backup adsm2\dir

Output:

Size	Backup Date	Mgmt Class	A/I	File
2,048,000	11/05/1993 17:09:48	DEFAULT	A	servA\DIRECTORY /.0=IBM/.CN=ADMIN.0=IBM
2,048,000	11/05/1993 17:09:48	DEFAULT	A	servA\DIRECTORY /.0=IBM/.CN=ADSM40.0=IBM

Related Commands

Figure 31 provides references to related commands.

Figure 31. Related Commands for QUERY BACKUP

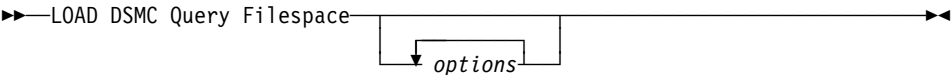
Command	Description	Reference
ARCHIVE	Archives files to ADSM storage.	Page 117
INCREMENTAL	Backs up new and changed files to ADSM storage.	Page 131
RESTORE	Restores backed up files from ADSM storage.	Page 157
SELECTIVE	Backs up selected files to ADSM storage.	Page 175

QUERY FILESPACE

LOAD DSMC QUERY FILESPACE—Displaying a List of File Spaces

Use the QUERY FILESPACE command to display a list of a node's file spaces on the ADSM server.

Syntax



Parameters

options

Specifies an option that you want to use. One of the more useful options for this command is:

-FROMNode=node

Specifies an alternate node whose file spaces you want to query. You need to know the names of another node's file spaces to restore or retrieve any files from that node.

For example, to query the file spaces for the node named **BOB**, enter:

```
Query Filespace -FROMNode=BOB
```

Additional Options

- DATEFORMAT
- ERRORLOGNAME
- NODENAME
- PASSWORD
- TIMEFORMAT

Examples

Task: Display a list of your file spaces.

Command: load dsmc Query Filespace

Output:

Num	Last Incr Date	Type	File Space Name
1	1993.07.09 09:16:38	NTWFS	servT1\SYS:
2	1993.07.09 09:16:59	NTWFS	servT2\SYS:
3	1993.07.09 09:17:01	NTWFS	servT3\SYS:
4	1993.07.09 09:17:01	NTWFS	servT4\SYS:
5	1993.07.09 21:10:02	NTWFS	servT5\SYS:
6	1993.08.05 15:01:55	NTWFS	servT6\SYS:

QUERY FILESPACE

Task: Display a list of your file spaces. Use the DATEFORMAT and TIMEFORMAT options to reformat the dates and times:

Command: load dsmc Q F -DATE=1 -TIME=4

Output:

Num	Last Incr Date	Type	File Space Name
1	07/09/1993 09:16:38A	NTWFS	servT1\SYS:
2	07/09/1993 09:16:59A	NTWFS	servT2\SYS:
3	07/09/1993 09:17:01A	NTWFS	servT3\SYS:
4	07/09/1993 09:17:01A	NTWFS	servT4\SYS:
5	07/09/1993 09:10:02P	NTWFS	servT5\SYS:
6	08/05/1993 03:01:55P	NTWFS	servT6\SYS:

The format of both the dates and the times are changed from the previous example. If you enter the DATEFORMAT and TIMEFORMAT options in the command, the formats change to a form that might be easier for you to use.

You can also set formats in the client options file. If you do not specify formatting options in the command, ADSM uses the settings in your client options file. There are five different format settings for the DATEFORMAT option and four TIMEFORMAT option settings.

Related Commands

Figure 32 provides references to related commands.

Figure 32. Related Commands for QUERY FILESPACE

Command	Description	Reference
DELETE FILESPACE	Deletes file spaces from ADSM storage.	Page 127

QUERY MGMTCLASS

LOAD DSMC QUERY MGMTCLASS—Displaying Management Classes

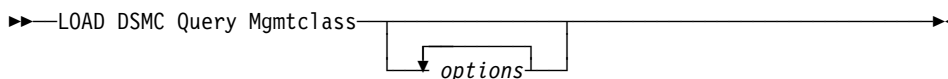
Use the QUERY MGMTCLASS command to display information about the management classes available in your active policy set.

Management classes are defined by your ADSM administrator. They contain attributes that control whether a file is eligible for backup or archive services, and attributes that determine how ADSM manages the backup versions and archived copies of your files after they reach the server.

Your active policy set contains a default management class, and can contain any number of additional management classes. You can assign specific management classes to files using INCLUDE options in your include-exclude list. If you do not assign a management class to a file, ADSM uses the default management class.

When you archive files, you can choose to override the assigned management class by using the ARCHMC option.

Syntax



Parameters

options

Specifies an option you want to use. One of the more useful options for this command is:

-DETail

Displays detailed information about each management class in your active policy set. If you do not use the DETAIL option, ADSM displays only the management class name and a brief description.

When you specify the DETAIL option, ADSM also displays information about the attributes contained in each copy group contained in each management class. A management class can contain a backup copy group, an archive copy group, both, or no copy groups.

For information about the attributes contained in the backup and archive copy groups, see “Displaying Information About Management Classes” on page 35.

To display detailed information about available management classes in your active policy set, enter:

```
Query Mgmtclass -DETail
```

QUERY MGMTCLASS

Additional options

DATEFORMAT
ERRORLOGNAME
FROMNODE
NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
TIMEFORMAT

Examples

Task: Display default and available management classes.

Command: load dsmc Query Mgmtclass -DEtail

Output:

```
MgmtClass Name: STANDARD
Description   : Installed default management class.
Copy Group
Copy Group Name.....: STANDARD
Copy Type.....: Backup
Copy Frequency.....: 0 day(s)
Versions Data Exists...: 2 version(s)
Versions Data Deleted..: 1 version(s)
Retain Extra Versions..: 30 day(s)
Retain Only Version....: 60 day(s)
Copy Serialization.....: Shared Static
Copy Mode.....: Modified
Copy Destination.....: BACKUPPOOL

Copy Group Name.....: STANDARD
Copy Type.....: Archive
Copy Frequency.....: Cmd
Retain Version.....: 365 day(s)
Copy Serialization.....: Shared Static
Copy Mode.....: Absolute
Copy Destination.....: ARCHIVEPOOL
```

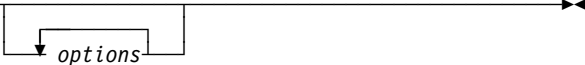
QUERY SCHEDULE

LOAD DSMC QUERY SCHEDULE—Displaying Scheduled Events

Use the QUERY SCHEDULE command to display the events scheduled for your client node.

Your ADSM administrator can set up automatic backup and archive schedules for you. To plan your work, you can use this command to determine when the next of these scheduled events occurs.

Syntax

►►—LOAD DSMC Query Schedule 

Parameters

options

Specifies an option that you want to use. One of the more useful options for this command is:

—**PAS**sword=*password*

Entered with a LOAD DSMC command when required. For example, if your password is **notell**, enter:

```
load dsmc Query Schedule -PASsword=notell
```

Additional Options

DATEFORMAT
ERRORLOGNAME
NODENAME
NWWAITONERROR

Examples

Task: Display your scheduled events.

Command: load dsmc Query Schedule

QUERY SCHEDULE

Output:

```
Schedule Name: DAILY_INCR
Description: Daily Backup of SYS: volume
Action: Incremental
Options: -Quiet
Objects: BINDERY SYS: serverB\DATA:
Priority: 5
Next Execution: 10 Minutes
Duration: 4 Hours
Period: 1 Day
Day of Week: Any
Expire: Never
```

Related Commands

Figure 33 provides references to related commands.

Figure 33. Related Commands for QUERY SCHEDULE

Command	Description	Reference
SCHEDULE	Starts the client scheduler.	Page 172

RESTORE

LOAD DSMC RESTORE—Restoring Files from Backup

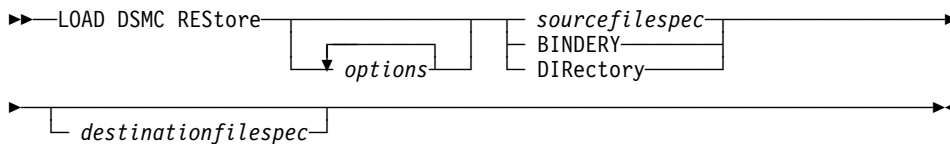
Use the RESTORE command to obtain copies of backup versions of your files from an ADSM server.

You can restore files by specifying directories, by specifying selected files, or by choosing files from a list. You can also restore files to the directory from which you backed them up or to a different directory.

Notes:

1. If you do not want to restore an entire directory along with all its subdirectories, be sure that the SUBDIR option is set to NO either before or when you enter this command.
2. If you are restoring files to a different directory than the originally backed up directory, the file names become the names you specify with the *destinationfilespec* option. Also, because only DOS names are valid within the ADSM NetWare client, the file name becomes a DOS name.

Syntax



Parameters

options

Specifies an option you want to use. Some of the options for this command are:

-FROMDate=date

The date from which you want ADSM to look for backups. ADSM does not restore files that were backed up before this date, although ADSM might restore directories that are older than this date.

You can use this option in conjunction with the TODATE option to create a time window for backups. This can help you restore a set of files to their state as of that window.

The *date* must be in the format you select with the DATEFORMAT option. For example, the date for date format 1 is mm/dd/yyyy, which is the American English standard. If you include DATEFORMAT with the command, it must precede FROMDATE and TODATE.

The file selected for restore depends on the other options you use:

INACTIVE or LATEST

Restores the latest backup version in the fromdate-todate window, even if it is an inactive version. If a file does not have a backup within the window, the file is not restored.

RESTORE

Using the INACTIVE or LATEST option with FROMDATE and TODATE is likely to get the results you want.

SUBDIR=YES

Restores the most recent backup of a directory up to the TODATE date. The FROMDATE option is ignored for directories.

If you also use the INACTIVE or LATEST option, ADSM restores the most recent backup of the directory up to the TODATE date, even if the backup is inactive. If you do not use INACTIVE or LATEST, ADSM only restores active backup versions. If the directory you are restoring does not have an active backup before the TODATE date, ADSM recreates the directory instead of restoring it.

-FROMNode=node

Specifies an alternate NetWare client node whose files you want to restore. To successfully use this option, the node must have granted you access to the files. To restore a file, you must specify the file space where the file resides on the server. You can determine another node's file space names using the QUERY FILESPACE command with the FROMNODE option.

Note: You must also specify the DESTINATIONFILESPEC parameter. If you do not, ADSM tries to restore the files to the alternate client node.

To restore files from directory **servC\SYS:/projecta** on another node identified as **nwserver2**, to a local directory **temp** on the **SYS:** volume, enter:

```
load dsmc RES -FROMN=nwserver2 servC\SYS:/projecta/* SYS:/temp/
```

-FROMTime=time

Used in conjunction with the FROMDATE option to specify a beginning time on the specified date. For example, with FROMTIME and FROMDATE, you can request that ADSM restore only files that were backed up on or after 6:00 AM on June 1, 1995.

You can also use FROMTIME and FROMDATE with TOTIME and TODATE to request that ADSM restore only files that were backed up within a particular window of time. For example, you can request that ADSM restore only files that were backed up between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for FROMTIME is 00:00:00.

Note: If you want ADSM to use a value you specify for FROMTIME, you must also include FROMDATE with the command. Otherwise, ADSM ignores FROMTIME.

The actual files selected for restore are also determined by other options you use with the command. See the discussion of FROMDATE for more information.

RESTORE

-IFNewer

ADSM should replace an existing file with the backup if the backup is newer than the existing file. This option is ignored if the REPLACE option is NO.

Only active backups are considered unless you also use the INACTIVE or LATEST options.

-INActive

Displays both active and inactive versions of files when you use the PICK option. See the last example in this section.

-LAtest

Restores the most recent backup version of a file. If you delete files, and then run an incremental backup, ADSM changes the status of the *active* backup versions of the deleted files to *inactive*. You can restore inactive backup versions of deleted files using this option.

The LATEST option tells ADSM to search both active and inactive files for the latest backup versions. If you do not specify LATEST, ADSM searches only for active files and does not restore any backup versions for deleted files. For example, to restore the latest backup versions of files from the

servC\SYS:/devel/projecta directory, enter:

```
load dsmc RES -LA servC\SYS:/devel/projecta/*
```

-Pick

Displays a list of active backup versions that match the file specification. From that list, you can select the backup versions to restore.

If you also use the INACTIVE option, ADSM displays both active and inactive versions. See the last example in this section.

-REPlace=*value*

When restoring a file, allows you to either overwrite or keep the existing file. This option is helpful when you want to restore backup versions of only those files you have deleted.

For example, assume that you have deleted several files from your directory of **SYS:/devel/projecta** because you thought you would no longer need them. Later in the day, after making changes to many of your files in this directory, you discover that you need the files you deleted after all.

You can restore the deleted files to the **SYS:/devel/projecta** directory without restoring (and overwriting) any of the existing files, by setting the REPLACE option to **no** in the following command:

```
load dsmc RES -REP=no SYS:/devel/proja/*
```

ADSM has saved you the effort of trying to remember which files you deleted and of entering numerous RESTORE commands to recover them.

Other values for REPLACE allow you to overwrite files that already exist on your NetWare server. If the original file is a read-only file, it can only be overwritten if REPLACE is set to ALL.

RESTORE

-Subdir=value

Indicates whether you want files in subdirectories of the directory specified in *sourcefilespec* to be restored. To restore directory trustee rights when the directory exists on your system, you must use a value of **yes**. For example, to restore only the files in the directory of **SYS:/devel**, enter:

```
load dsmc RES -SU=no servC\SYS:/devel/*
```

However, to restore the files in the directory of **SYS:/devel** and all its subdirectories, enter:

```
load dsmc RES -SU=Yes servC\SYS:/devel/*
```

The default is **no**.

-TAPEPrompt=value

The *value* can be:

Yes Prompts you for your choice (wait for a tape to be mounted or not) when required for a restore process.

No ADSM waits for the tape to be mounted.

The default is **No**.

-TODate=date

The date to which you want ADSM to look for backups. ADSM does not restore files that were backed up after this date.

You can use this option in conjunction with the FROMDATE option to create a time window for backups. See the discussion of FROMDATE for more information on using TODATE.

-TOTime=time

Used in conjunction with the TODATE option to specify an ending time on the specified date. For example, with TOTIME and TODATE, you can request that ADSM restore only files that were backed up on or before 11:59 PM on June 15, 1995.

You can also use TOTIME and TODATE with FROMTIME and FROMDATE to request that ADSM restore only files that were backed up within a particular window of time. For example, you could request that ADSM restore only files that were backed up between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for TOTIME is 23:59:59.

Note: If you want ADSM to use a value you specify for TOTIME, you must also include TODATE with the command. Otherwise, ADSM ignores TOTIME.

RESTORE

The actual files selected for restore are also determined by other options you use with the command. See the discussion on FROMDATE for more information.

-VOLinformation

Restores NetWare volume restrictions such as volume or disk space restrictions and trustee directory assignments for the root directory of a volume.

For example, to restore volume restrictions for the **SYS:** volume, enter:

```
load dsmc RES -VOL SYS:
```

Additional Options

DATEFORMAT
ERRORLOGNAME
NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
QUIET
TIMEFORMAT
VERBOSE

sourcefilespec

The path and file name of the file you want to restore. You can use wildcard characters to restore backup versions for multiple files.

BINDERY

Restores the bindery. If you want to restore the bindery, enter `LOAD DSMC RESTORE BINDERY`

Note: Always restore the bindery first to ensure the trustee data (permissions) are restored correctly.

If you want to restore each volume on the server, enter `LOAD DSMC RESTORE SYS:* -SUB=YES -REP=YES`

Note: Any changes made after the backup version was made are lost.

DIRectory

Restores the NDS. If you want to restore the entire directory, specify `directory` or `directory/full`. If you want to restore only one container in the directory, specify `directory/.o=container_name`. You can abbreviate `DIRECTORY` to `DIR`.

Note: Objects added after the backup version was made are NOT deleted.

destinationfilespec

The path and file name where you want to place the restored files. The path and file name must follow DOS naming conventions. If you do not specify a destination, ADSM restores the files to the original source path.

RESTORE

Examples

Task: Restore a single file named **budget**.

Command: load dsmc RES SYS:/u/projecta/budget

Task: Restore all files from the **SYS:/projecta** directory that end with the characters **.BAK**.

Command: load dsmc RES SYS:/projecta/*.BAK

Task: Restore all files from the **SYS:/projecta** directory that end with the characters **.BAK** to the **SYS:/projectn** directory.

Command: load dsmc RES SYS:/projecta/*.BAK SYS:/projectn/

Attention: If the destination directory does not exist, you must specify the directory delimiter (/) as the last character of the destination directory. Otherwise, ADSM assumes that the destination is a file and repeatedly overwrites each file restored to this destination file if the REPLACE option is set to YES.

Task: Restore all files from the **SYS:/projecta** directory that end with the characters **.BAK** to another directory on a different NetWare server, **serverb\SYS:/projectn**. **Projectn** need not exist on **serverb**.

Command: load dsmc RES SYS:/projecta/*.BAK serverb\SYS:/projectn/

Task: Restore the NDS.

Command: load dsmc REStore T9\directory

Task: Restore the .o=ibm organization in the NDS.

Command: load dsmc REStore ADSM40\directory/.o=ibm

Task: Restore files in the **SYS:/user/project** directory. Use the PICK option and the INACTIVE option.

Command: load dsmc RES servB\SYS:/user/project/* -Pick -INActive

Output:

RESTORE

```
ADSM Scrollable PICK Window - Restore

#      Backup Date/Time  File Size A/I  File
-----
1.    01/02/1993 21:17   7362  I  SERVERB\SYS:/USER/PROJECT/PROJB
2.    02/10/1993 12:19  83442 I  SERVERB\SYS:/USER/PROJECT/EXPENSE
3.    03/22/1993 04:07   8117  I  SERVERB\SYS:/USER/PROJECT/PROJX
4.    04/06/1993 12:12   4392  I  SERVERB\SYS:/USER/PROJECT/SALARIES
5.    04/07/1993 11:27 287009 I  SERVERB\SYS:/USER/PROJECT/PROJD
6.    04/08/1993 07:21    362  I  SERVERB\SYS:/USER/PROJECT/REVENUE

0-----10-----20-----30-----40-----50-----60--
<U>=Up   <D>=Down <T>=Top <B>=Bottom <R#>=Right <L#>=Left
<G#>=Goto Line # <#>=Toggle Entry <+>=Select All <->=Deselect All
<#:#+>=Select A Range <#:#->=Deselect A Range <O>=Ok <C>=Cancel
pick>
```

When you use the PICK option with the RESTORE command, ADSM displays a list of files that match the file specification you entered. When you use the INACTIVE option with the PICK option, ADSM displays inactive files as well as active files. To only display active files, do not use the INACTIVE option.

The functions available to manipulate the display and to make selections appear at the bottom of the screen. If it takes more than one screen to display the list, you can scroll forward and backward through the screens. You can also make selections by typing them at the pick> prompt. For example, to select the **projectx** file and the **revenue** file for restore, enter the following at the pick > prompt:

3 6

ADSM displays the Pick Window with your selections marked:

RESTORE

```

ADSM Scrollable PICK Window - Restore

# Backup Date/Time File Size A/I File
-----
1. 01/02/1993 21:17 7362 I SERVERB\SYS:/USER/PROJECT/PROJB
2. 02/10/1993 12:19 83442 I SERVERB\SYS:/USER/PROJECT/EXPENSE
x 3. 03/22/1993 04:07 8117 I SERVERB\SYS:/USER/PROJECT/PROJX
4. 04/06/1993 12:12 4392 I SERVERB\SYS:/USER/PROJECT/SALARIES
5. 04/07/1993 11:27 287009 I SERVERB\SYS:/USER/PROJECT/PROJD
x 6. 04/08/1993 07:21 362 I SERVERB\SYS:/USER/PROJECT/REVENUE

0-----10-----20-----30-----40-----50-----60--
<U>=Up <D>=Down <T>=Top <B>=Bottom <R#>=Right <L#>=Left
<G#>=Goto Line # <#>=Toggle Entry <+>=Select All <->=Deselect All
<#:#+>=Select A Range <#:#->=Deselect A Range <O>=Ok <C>=Cancel
pick>

```

To complete the restore operation, enter the following at the pick > prompt:

o

ADSM completes the restore operation and responds with:

Restore processing finished.

Figure 34 provides an explanation of each Pick Window manipulation function.

Figure 34 (Page 1 of 2). Pick Window Manipulation Functions

Legend	Description
<U>=Up	Scrolls the window up one page of files.
<D>=Down	Scrolls the window down one page of files.
<T>=Top	Positions the window to the top of the list.
=Bottom	Positions the window to the bottom of the list.
<R#>=Right	Positions the window # spaces to the right. Default is 20 if only R is entered.
<L#>=Left	Positions the window # spaces to the left. Default is 20 if only L is entered.
<G#>=Goto Line #	Positions the file # entered to top of screen.
<#>=Toggle Entry	Selects the file # entered or deselects it if already selected. More than one file # can be entered by separating each with a blank.
<+>=Select All	Selects all files.

RESTORE

Figure 34 (Page 2 of 2). Pick Window Manipulation Functions

Legend	Description
<->=Deselect All	Deselects all files.
<#:#+>=Select a range	Selects a range of files. First file # entered is beginning of range. Second file # entered is end of range.
<#:#->=Deselect a range	Deselects a range of files. First file # entered is beginning of range. Second file # entered is end of range.
<O>=Ok	Restores the files selected.
<C>=Cancel	Cancels the operation and returns to the command prompt.

Related Commands

Figure 35 provides references to related commands.

Figure 35. Related Commands for ARCHIVE

Command	Description	Reference
INCREMENTAL	Backs up changed or new files.	Page 131
QUERY BACKUP	Displays backed up files on an ADSM server.	Page 146
SELECTIVE	Backs up selected files on an ADSM server.	Page 175

RETRIEVE

LOAD DSMC RETRIEVE—Retrieving Files from Archive

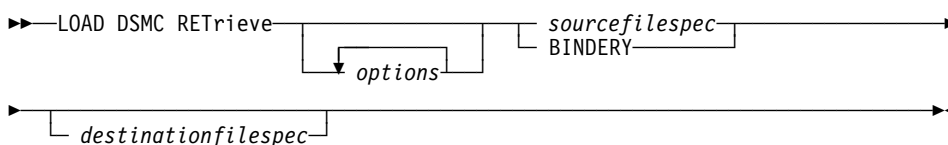
Use the RETRIEVE command to obtain copies of archived files from the ADSM server.

You can retrieve archived files by specifying selected files or whole directories. To help focus your selection, use the available options. For example, the DESCRIPTION option allows you to search on the descriptions that were assigned to the files when they were archived.

You can also place the retrieved files in the same directory from which they were archived or in a different directory.

Note: If you are retrieving files to a different directory than the original directory, the file names become the names you specify with the *destinationfilespec* option. Also, because only DOS names are valid within the ADSM NetWare client, the file name becomes a DOS name.

Syntax



Parameters

options

Specifies an option you want to use. Some of the options for this command are:

-DE*description*

Provides a filter that narrows down the files that meet the *sourcefilespec* parameter to those files that also meet the DESCRIPTION specification. If you do not remember the name of a file you want to retrieve, you can use the description you gave it when it was archived. For example, if you want to retrieve a file that you archived from the **SYS:/proj1** directory with a description of **1993 Budget for Proj 1**, enter:

```
load dsmc RET -DE="1993 Budget for Proj 1" servC\SYS:/proj1
```

You can also use wildcard characters to retrieve a group of files you previously archived with the same description. For example, if you want to retrieve all files whose names end with **.x**, that you archived with the description of **Project X** from the directory of **SYS:/allproj**, enter:

```
load dsmc RET -DE="Project X" servB\SYS:/allproj/*.x
```

You can also use wildcard characters to retrieve files with similar descriptions. For example, to retrieve files whose descriptions are **Project X**, **Project XZ**, and **Project YZ**, enter:

```
load dsmc RET -DE="Project*" SYS:/*
```

RETRIEVE

ADSM also retrieves all files whose descriptions start with the same characters as those entered in the DESCRIPTION option in the command.

-FROMDate=*date*

The date from which you want ADSM to look for archives. ADSM does not retrieve files that were archived before this date.

You can use this option in conjunction with the TODATE option to create a time window for archives. This can help you retrieve a set of files to their state as of that window.

The *date* must be in the format you select with the DATEFORMAT option. For example, the date for date format 1 is mm/dd/yyyy, which is the American English standard. If you include DATEFORMAT with the command, it must precede FROMDATE and TODATE.

If you use SUBDIR=YES, ADSM retrieves the most recent archive of a directory up to the TODATE date. The FROMDATE option is ignored for directories.

-FROMNode=*node*

Specifies an alternate client node whose files you want to retrieve. To successfully use this option, the node must have granted you access to the files. To retrieve a file, you must specify the file space where the file resides on the server. For example, to retrieve files for the **servB\SYS:/projecta** directory, from the node **nodeCS**, to your local **DATA:** volume, enter:

```
load dsmc RET -FROMN=nodeCS servB\SYS:/projecta DATA:/projecta/
```

Note: You must also specify the DESTINATIONFILESPEC parameter. If you do not, ADSM tries to retrieve the files to the alternate client node.

-FROMTime=*time*

Used in conjunction with the FROMDATE option to specify a beginning time on the specified date. For example, with FROMTIME and FROMDATE, you can request that ADSM retrieve only files that were archived on or after 6:00 AM on June 1, 1995.

You can also use FROMTIME and FROMDATE with TOTIME and TODATE to request that ADSM retrieve only files that were archived within a particular window of time. For example, you can request that ADSM retrieve only files that were archived between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for FROMTIME is 00:00:00.

Note: If you want ADSM to use a value you specify for FROMTIME, you must also include FROMDATE with the command. Otherwise, ADSM ignores FROMTIME.

RETRIEVE

If you use SUBDIR=YES, ADSM retrieves the most recent archive of a directory up to the time specified with TOTIME on the date specified with TODATE. ADSM ignores FROMTIME for directories.

-Pick

Displays a list of archived files that match the file specification. From that list, you can select the archived copy to retrieve.

-Quiet

Prevents messages from being displayed during processing. Certain error information is still displayed, and messages are written to log files.

If you are retrieving many files from an ADSM server, you might not want them displayed on the screen. For example, to stop files being retrieved from the **SYS:/devel** directory from displaying on the screen, enter:

```
load dsmc RET -Q serv9\SYS:/devel/*
```

-REPlace=*value*

When retrieving a file, allows you to either overwrite or keep the existing file. This option is helpful when you want to retrieve only those files that you have deleted.

For example, assume that you archived and then deleted several files from your directory of **SYS:/devel/projecta** because you thought you no longer needed them. Later in the day, after making changes to many of your files in that directory, you discover that you need the files you deleted after all.

You can retrieve the deleted files to the **SYS:/devel/projecta** directory without retrieving (and overwriting) any of the existing files by setting the REPLACE option to **no** in the following command:

```
load dsmc RET -REP=no serv9\SYS:/devel/projecta/*
```

ADSM saves you the effort of trying to remember which files you deleted and of entering numerous RETRIEVE commands to recover them.

Other values for REPLACE allow you to overwrite files that already exist on your NetWare server. If the original file is a read-only file, it can only be overwritten if REPLACE is set to ALL.

-Subdir=*value*

Whether ADSM should retrieve files in the subdirectories of the specified directory. The *value* is either **Yes** or **No**. The default is **No**.

For example, to retrieve only the files in the **SYS:/user/proj** directory, enter:

```
load dsmc RETrieve -Subdir=no SYS:/user/proj/*.*
```

To retrieve the files in the **SYS:/user/proj** directory and all of its subdirectories, enter:

```
load dsmc RETrieve -Subdir=yes SYS:/user/proj/*.*
```

-TAPEPrompt=*value*

The *value* can be:

RETRIEVE

Yes Prompts you for your choice (wait for a tape to be mounted or not) when required for a restore process.

No ADSM waits for the tape to be mounted.

The default is **No**.

-TODate=*date*

The date to which you want ADSM to look for archives. ADSM does not retrieve files that were archived after this date.

You can use this option in conjunction with the FROMDATE option to create a time window for archives. See the discussion of FROMDATE for more information on using TODATE.

-TOTime=*time*

Used in conjunction with the TODATE option to specify an ending time on the specified date. For example, with TOTIME and TODATE, you can request that ADSM retrieve only files that were archived on or before 11:59 PM on June 15, 1995.

You can also use TOTIME and TODATE with FROMTIME and FROMDATE to request that ADSM retrieve only files that were archived within a particular window of time. For example, you could request that ADSM retrieve only files that were archived between 6:00 AM on June 1, 1995 and 11:59 PM on June 15, 1995.

The *time* must be in the format you select with the TIMEFORMAT option. For example, if TIMEFORMAT is set to the default of 1, the time must be in the format 23:00:00. If you include the TIMEFORMAT option with the command, it must precede the FROMTIME and TOTIME options.

The default for TOTIME is 23:59:59.

Note: If you want ADSM to use a value you specify for TOTIME, you must also include TODATE with the command. Otherwise, ADSM ignores TOTIME.

If you use SUBDIR=YES, ADSM retrieves the most recent archive of a directory up to the time specified with TOTIME on the date specified with TODATE. ADSM ignores FROMTIME for directories.

Additional Options

NODENAME
NUMBERFORMAT
NWPWFILE
NWUSER
NWWAITONERROR
PASSWORD
VERBOSE

RETRIEVE

sourcefilespec

The path and file name of the file you want to retrieve. You can use wildcard characters to retrieve more than one archived file.

BINDERY

Retrieves the bindery.

destinationfilespec

The path and file name where you want to place the retrieved files. If you do not specify a destination, ADSM returns the files to the original source path.

Examples

Task: Retrieve a single file named budget.

Command: load dsmc RET SYS:/projecta/budget

Task: Retrieve all files from the SYS:/projecta directory that end with the characters **.BAK**.

Command: load dsmc RET SYS:/projecta/*.BAK

Task: Retrieve all files in the **SYS:/home** directory.

Command: load dsmc RET SYS:/home/*

The SUBDIR option has no effect when retrieving files. To retrieve files contained in any subdirectories of **SYS:/home**, you must specify the subdirectory in another RETRIEVE command.

Task: Retrieve all files from the **SYS:/projecta** directory that end with the characters **.BAK** to the **SYS:/projectn** directory.

Command: load dsmc RET SYS:/projecta/*.BAK servB\SYS:/projectn/

If the destination directory does not exist, you must specify the directory delimiter (/) as the last character of the destination directory. Otherwise, ADSM assumes the destination is a file and repeatedly overwrites each file retrieved to this destination file if the REPLACE option is set to YES.

Task: Retrieve all files from the **SYS:/projecta** directory that end with the characters **.BAK** to the **SYS:/projectn** directory, where the **projectn** directory does not exist.

Command: load dsmc RET SYS:/projecta/*.BAK SYS:/projectn/

RETRIEVE

Related Commands

Figure 36 provides references to related commands.

Figure 36. Related Commands for RETRIEVE

Command	Description	Reference
ARCHIVE	Archives files in ADSM storage.	Page 117
DELETE ARCHIVE	Deletes archived files from ADSM storage.	Page 122
QUERY ARCHIVE	Displays a list of archived files in ADSM storage.	Page 141

SCHEDULE

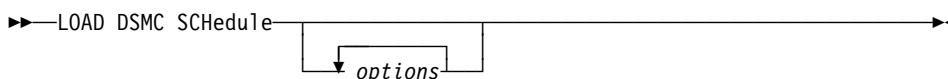
LOAD DSMC SCHEDULE—Running Scheduled Events

Use the SCHEDULE command to start the client scheduler on your NetWare server. The client scheduler must be running before work scheduled by your ADSM administrator can be started. Your ADSM administrator can define schedules to run incremental or selective backups or to archive specific files.

When the SCHEDULE command is running, ADSM uses the options listed below. You can allow ADSM to use defaults for these options, set them in your client options file, or override them when you issue the SCHEDULE command.

You cannot issue the SCHEDULE command in interactive mode.

Syntax



Parameters

options

Specifies an option that you want to use. One of the more useful options for this command is:

–MAXCMDRetries=*maxcmdretries*

Specifies the maximum number of times the client scheduler on your NetWare server can retry a scheduled command that fails. If a value for MAXCMDRETRIES is not specified in the client options file, ADSM uses a default value of **2** retries.

Note: If the server administrator has globally set a value for MAXCMDRETRIES for all nodes, entering this option in the SCHEDULE command has no effect.

–PASsword=*password*

Specifies the ADSM password for your NetWare server.

–QUERYSchedperiod=*query_period*

Specifies the maximum number of hours the client scheduler on your NetWare server must wait between attempts to contact the ADSM server for scheduled work. If a value for QUERYSCHEDPERIOD is not specified in the client options file, ADSM uses a default value of **12** hours.

Note: If the server administrator has globally set a value for QUERYSCHEDPERIOD for all nodes, entering this option in the SCHEDULE command has no effect.

–RETRYPeriod=*retry_period*

Specifies the number of minutes the client scheduler on your NetWare server must wait between retry attempts for a scheduled command that fails or unsuccessful attempts to contact the ADSM server. If a value for

SCHEDULE

RETRYPERIOD is not specified in the client options file, ADSM uses a default value of **12** minutes.

Note: If the server administrator has globally set a value for RETRYPERIOD for all nodes, entering this option in the SCHEDULE command has no effect.

–SCHEDLOGname=*file_spec*

Specifies where ADSM stores the schedule log that contains detailed information about schedule processing. If SCHEDLOGNAME is not defined in the client options file, ADSM assigns the default name of **dsmsched.log** and places it in the current directory.

–SCHEDMODE=*Polling or PROMPTed*

Specifies the schedule mode to use, either POLLING or PROMPTED. If SCHEDMODE is POLLING, your client node periodically asks the ADSM server for scheduled work. If SCHEDMODE is PROMPTED, the ADSM server contacts your client node when it is time to start a scheduled service.

Your ADSM administrator determines whether one or both modes are supported by the ADSM server. You can only specify PROMPTED if you are using TCP/IP communication (COMMMETHOD option set to TCPIP).

–TCPCLIENTAddress=*client_address*

Specifies the TCP/IP address you want the ADSM server to use to contact your client node. You can only specify this option when SCHEDMODE is PROMPTED.

–TCPCLIENTPort=*client_port*

Specifies the TCP/IP port number you want the ADSM server to use to contact your client node. You can only specify this option when SCHEDMODE is PROMPTED. If the default or specified port is busy, ADSM tries to use any other available port.

Additional Options

ERRORLOGNAME
NWPWFILE
NWUSER
NWWAITONERROR

Examples

Task: Starts the client scheduler.

Command: `load dsmc SChedule –password=notell`

When you run the SCHEDULE command, all messages regarding scheduled work are sent to a file called **dsmsched.log** or to an alternate file specified in the SCHEDLOGNAME option in your client options file.

If you do not specify a directory path along with the file name in the SCHEDLOGNAME option, ADSM stores the file in the default installation directory (**SYS:/adsm**).

SCHEDULE

Related Commands

Figure 37 provides references to related commands.

Figure 37. Related Commands for SCHEDULE

Command	Description	Reference
QUERY SCHEDULE	Displays scheduled events.	Page 155

SELECTIVE

LOAD DSMC SELECTIVE—Backing up Selected Files

Use the SELECTIVE command to selectively back up files that you work with on a day-to-day basis. If any of those files become damaged or lost, you can obtain backup versions from the ADSM server to replace them.

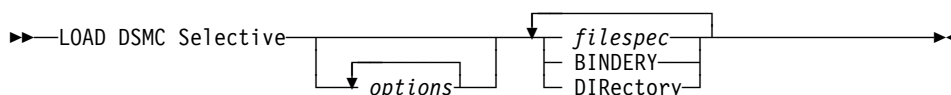
You can selectively back up single files and directories from the NetWare server. You can also selectively back up the NDS and the bindery. You can use wildcard characters to back up groups of related files.

When you run a selective backup, ADSM backs up all the files you specify as long as they are not excluded from backup services in your include-exclude list, and they meet management class requirements for serialization.

During a selective backup, ADSM sends copies of the files to the server regardless of whether they have changed since the last backup. As a result, you could have more than one copy of the same file on the server. If that occurs, you might not have as many different down-level versions of the file on the server as you intended. Your version limit could be made up of identical files. You can use the INCREMENTAL command to back up only changed and new files if you want to avoid that possibility.

If ADSM refuses to back up a file, check to see if it is marked for execute only or if it is opened and locked by another user.

Syntax



Parameters

options

Specifies an option that you want to use. Some of the options for this command are:

-NWUSER=servername\user:password

Gives a server (**T9** in our example) the NetWare password so that all files can be backed up for **projn** in our example. When you use this option with the SELECTIVE command, ADSM does not prompt for a NetWare user ID or password. If the servername is **T9**, the user name is **superv**, and your password is **secret**, enter:

```
load dsmc SEL -NWUSER=T9\superv:secret T9\SYS:projn/*
```

-Quiet

Prevents messages from being displayed during processing. Certain error information is still displayed, and messages are written to log files.

If you are selectively backing up the directory of **SYS:/u/proj** and do not want the files being backed up to display on the screen, enter:

SELECTIVE

```
load dsmc Selective -Q SYS:/u/proj/*
```

-SUBdir=value

Specifies whether you want to include subdirectories of the directory specified for the *filespec* option. To restore directory trustee rights when the directory exists on your system, you must use a value of **yes**. For example, to back up only the files in the directory of **SYS:/u/proj**, enter:

```
load dsmc S -SU=no SYS:/u/proj/*
```

However, to back up the files in the directory of **SYS:/u/proj** and all its subdirectories, enter:

```
load dsmc S -SU=yes SYS:/u/proj/*
```

The default is SUBdir=No.

-TAPEPrompt=value

Determines whether ADSM prompts you when a tape is required, so that you can choose whether to wait (**Yes**), or whether ADSM should automatically wait for a tape to be mounted (**No**).

The default is No.

For example, to have ADSM prompt you for a tape mount, use:

```
load dsmc selective SYS:/script/* -tapeprompt=yes
```

-VOLinformation

Backs up NetWare volume restrictions such as volume or disk space restrictions and trustee directory assignments for the root directory of a volume.

For example, to back up volume restrictions for the **SYS:** volume, enter:

```
load dsmc sel -VOL SYS:
```

Additional Options

```
CHANGINGRETRIES  
COMPRESSION  
NODENAME  
NWPWFILE  
NWWAITONERROR  
PASSWORD  
VERBOSE
```

filespec

Specifies the path and name of the file you want to back up. You can use wildcard characters to specify a group of files or all the files in a directory. You can enter multiple file specifications in one command.

BINDERY

Specifies that you want to selectively back up the bindery.

SELECTIVE

DIRectory

Specifies that you want to back up the NDS. If you want to back up the entire directory, specify `directory` or `directory/full`. If you want to back up only one container in the directory, specify `directory/.o=container_name`. You can abbreviate `DIRECTORY` to `DIR`.

Examples

Task: Back up the **proja** file in the **SYS:/u/devel** directory.

Command: `load dsmc Selective SYS:/u/devel/proja`

Task: Back up all files in **SYS:/u/devel** directory whose file names begin with **proj**.

Command: `load dsmc Selective SYS:/u/devel/proj*`

Task: Back up all files in **SYS:/u/devel** directory whose file names begin with **proj**. Also, back up the single file **budget** in the **SYS:/user** directory.

Command: `load dsmc Selective SYS:/u/devel/proj* SYS:/user/budget`

Task: Back up the bindery on **serverC**.

Command: `load dsmc Selective serverC\BINDERY`

Task: Back up the NDS.

Command: `load dsmc Selective T9\directory`

Task: Back up the **tfr** organization container of the NDS.

Command: `load dsmc Selective T9\dir/.o=tfr`

Related Commands

Figure 38 provides references to related commands.

Figure 38. Related Commands for SELECTIVE

Command	Description	Reference
INCREMENTAL	Backs up new or changed files.	Page 131
QUERY BACKUP	Displays files that are backed up on the ADSM server.	Page 146
RESTORE	Restores files from the ADSM server.	Page 157

SET ACCESS

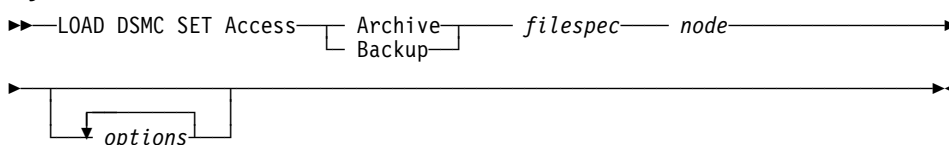
LOAD DSMC SET ACCESS—Granting Access to Files

Use the SET ACCESS command to allow other NetWare nodes to access backup versions or archived copies of your files. When you grant access to another user, that user can restore or retrieve your files.

Using the SET ACCESS command, you can grant another user access to all your files or specific files. However, you must specifically state in the command whether you are granting access to archived copies *or* backup versions. You cannot grant access to both types of files with a single command.

Access is enabled only between like platforms. You can grant access only to another NetWare client node.

Syntax



Parameters

Archive

Grants access to archived files.

Backup

Grants access to backup versions of files.

filespec

The path and file name to which you want to grant access. Use wildcard characters to provide access to multiple files. Specify * to provide access to all archived or backed up files.

node

Specifies the ADSM client node to which you are granting access. You can use wildcard characters to grant access to multiple nodes with similar node names.

options

Specifies an option that you want to use. One of the more useful options for command is:

–PASsword=password

Entered with a LOAD DSMC command when required. If your password is **notell**, and you are giving ADSM40 authority to restore all files from the directory of **SYS:/system**, enter:

```
load dsmc SET Access Backup SYS:/system/* ADSM40 –PASsword=notell
```

SET ACCESS

Additional Options

ERRORLOGNAME
NWPWFILE
NWUSER
NWWAITONERROR

Examples

Task: Give **node3** the authority to restore the **budget** file from the directory of **SYS:/user**.

Command: load dsmc SET Access Backup SYS:/user/budget node3

Task: Give **node3** the authority to retrieve all files from the directory of **SYS:/devel/proja** whose file names end with **.SYS**.

Command: load dsmc SET A Archive SYS:/devel/proja/*.SYS node3

Task: Give **node3** the authority to retrieve all files from the directory of **SYS:/u/devel/proja**.

Command: load dsmc SET A Archive SYS:/u/devel/proja node3

Task: Give **node3** the authority to restore all your backed up files.

Command: load dsmc SET Access Backup * node3

Task: Give all nodes whose names end with **bldgb** the authority to restore all your backed up files.

Command: load dsmc SET A Backup * *bldgb

Related Commands

Figure 39 provides references to related commands.

Figure 39. Related Commands for SET ACCESS

Command	Description	Reference
DELETE ACCESS	Deletes access that other nodes have to your backed up or archived files.	Page 120
QUERY ACCESS	Displays other nodes that have access to your backed up or archived files.	Page 139

SET PASSWORD

LOAD DSMC SET PASSWORD—Changing Your ADSM Password

Use the SET PASSWORD command to change the ADSM password for your client node. If you do not enter your old and new passwords, you are prompted for them.

When you are prompted for passwords, the actual passwords you enter do not appear on your screen.

ADSM prompts you for the new password twice to protect you from error.

An ADSM password can be up to 64 characters. Valid characters are:

Characters	Description
A–Z	any letter, A through Z, upper or lower case
0–9	any number, 0 through 9
+	plus
.	period
_	underscore
-	hyphen
&	ampersand

A password is not case sensitive.

Syntax

```
▶▶LOAD DSMC SET Password [ oldpw newpw ] [ options ] ▶▶
```

Parameters

oldpw

Specifies your current ADSM node name password.

newpw

Specifies a new ADSM node name password.

options

Specifies an option that you want to use.

Examples

Task: Changes your current node password from **osecret** to **nsecret**.

Command: load dsmc SET Password osecret nsecret

The terms in this glossary are defined as they pertain to the ADSM library. If you do not find a term you are looking for, you can refer to the *IBM Dictionary of Computing*, McGraw-Hill, 1994. In the United States and Canada you can order this publication by calling McGraw Hill at 1-800-2MC-GRAW.

This glossary may include terms and definitions from:

- The *American National Standard Dictionary for Information Systems*, ANSI X3.172-1990, copyright (ANSI). Copies may be purchased from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036.
- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC2/SC1).

A

absolute. A copy group mode value that indicates that a file is considered for incremental backup even if it has not changed since the last time it was backed up. See *mode*. Contrast with *modified*.

active policy set. The policy set within a policy domain that contains the most recently activated policy. This policy set is used by all client nodes assigned to the current policy domain. See *policy set*.

active version. The most recent backup copy of a file stored in ADSM storage for a file that currently exists on a file server or workstation. An active version remains active and exempt from deletion until it is replaced by a new backup version, or ADSM detects during an incremental backup that the user has deleted the original file from a file server or workstation.

administrative client. A program that runs on a file server, workstation, or mainframe. This program allows administrators to control and monitor ADSM servers through ADSM administrator commands. Contrast with *backup-archive client*.

administrator. A user who has been registered to the server as an administrator. Administrators can be assigned one or more privilege classes. Administrators can use the administrative client to enter ADSM server commands and queries according to their privileges.

ADSM. ADSTAR Distributed Storage Manager

ADSTAR Distributed Storage Manager (ADSM). A client/server program that provides storage management and data access services to customers in a multivendor computer environment.

Advanced Program-to-Program Communications (APPC). An implementation of the SNA LU6.2 protocol that allows interconnected systems to communicate and share the processing of programs. See *Systems Network Architecture Logical Unit 6.2* and *Common Programming Interface Communications*.

APPC. Advanced program-to-program communications.

archive. A function that allows users to copy one or more files to a long-term storage device. Archive copies may be accompanied by descriptive information, may imply data compression software usage, and may be retrieved by archive date, file name, or description. Contrast with *retrieve*.

archive copy. A file or group of files residing in an archive storage pool in ADSM storage.

archive copy group. A policy object that contains attributes which control the generation, destination, and expiration of archive files. The archive copy group belongs to a management class.

archive retention grace period. The number of days ADSM retains an archive copy when the server is unable to rebind the file to an appropriate management class.

authentication. The process of checking and authorizing a user's password before allowing that user access to the ADSM server. Authentication can be turned on or off by an administrator with system privilege.

authorization rule. A specification that allows another user to either restore or retrieve a user's files from ADSM storage.

B

backup. A function that allows users to copy one or more files to a storage pool to protect against data loss. Contrast with *restore*.

backup-archive client. A program that runs on a file server, PC, or workstation and provides a means for ADSM users to back up, archive, restore, and retrieve files. Contrast with *administrative client*.

backup copy group. A policy object that contains attributes which control the generation, destination, and expiration of backup files. The backup copy group belongs to a management class.

backup retention grace period. The number of days ADSM retains a backup version when the server is unable to rebind the file to an appropriate management class.

backup version. A file, directory, or file space that a user has backed up that resides in a backup storage pool in ADSM storage. Though there may be more than one backup version of a file in ADSM storage, only one is considered the active version. See *active version* and *inactive version*.

bindery. A database that consists of three system files for a NetWare 3.11 or 3.12 server. The files contain user IDs and user restrictions.

binding. The process of associating a file with a management class name.

C

central scheduling. A function that allows an administrator to schedule backup and archive operations from a central location. The operations can be scheduled on a periodic basis or on an explicit date.

client. A program running on a file server, PC, workstation or terminal that requests services of another program called the server. There are two types of ADSM clients: administrative client and backup-archive client. See *administrative client* and *backup-archive client*.

Client Access/400. A software product that supports advanced program-to-program communications (APPC) in the DOS, OS/2, and Microsoft Windows environments and provides a set of end user services.

client domain. The set of drives, file systems, or volumes selected by a user for processing during a backup or archive operation.

client node. A file server or workstation on which the backup-archive client program has been installed that has been registered with the server.

client options file. A user-editable file that contains processing options to identify ADSM servers, select communication methods, specify backup, archive,

restore, and retrieve options, define scheduling options, and to choose formats for date, time, and numbers. Also called the **dsm.opt** file.

client polling. A client/server communication technique where the client node queries the server for scheduled work.

client/server. A communications network architecture in which one or more programs (clients) request computing or data services from another program (the server).

client system options file. A file, used on UNIX clients, that contains a number of processing options which identify the ADSM servers to be contacted for services. This file also specifies communications options, backup and archive processing options, and scheduling options. Also called the **dsm.sys** file. See *client user options file*.

client user options file. A user-editable file, used on UNIX clients, that contains processing options to identify the ADSM server to contact, to specify backup, archive, restore, and retrieve options, and to select formats for date, time, and numbers. Also called the **dsm.opt** file. See the *client systems options* file.

closed registration. A registration process in which an ADSM administrator must register workstations as client nodes with the server. Contrast with *open registration*.

command line interface. A type of user interface where commands are specified on the command line. Contrast with *graphical user interface*.

Common Programming Interface Communications (CPIC). A programming interface that allows program-to-program communication using SNA LU6.2. See *Systems Network Architecture Logical Unit 6.2*.

communication method. The method by which a client and server exchange information. For ADSM backup-archive clients, the method can be 3270, PWSCS, SNA LU6.2, or TCP/IP. See *Programmable Workstation Communication Service*, *Systems Network Architecture Logical Unit 6.2*, and *Transmission Control Protocol/Internet Protocol*.

communication protocol. A set of defined interfaces that allows computers to communicate with each other.

copy group. A policy object that contains attributes which control the generation, destination, and expiration of backup and archive files. There are two kinds of copy

groups: backup copy group and archive copy group. Copy groups belong to management classes. See *frequency*, *destination*, *mode*, *retention*, *serialization*, and *version*.

CPIC. Common Programming Interface Communications.

D

default management class. A management class assigned to a policy set that is used to govern backed up or archived files when a user does not explicitly associate a file with a specific management class through the include-exclude list.

destination. A copy group attribute that specifies the storage pool to which a file will be backed up or archived. At installation, ADSM provides two storage destinations named BACKUPPOOL and ARCHIVEPOOL.

domain. See *policy domain* or *client domain*.

dsm.opt file. See *client options file* and *client user options file*.

dsm.sys file. See *client system options file*.

dynamic. A copy group serialization value that specifies that ADSM accepts the first attempt to back up or archive an object, regardless of any changes made during backup or archive processing. See *serialization*. Contrast with *shared dynamic*, *shared static*, and *static*.

E

error log. A text file written on disk that contains ADSM processing error messages. These errors are detected and saved by the ADSM server.

exclude. The process of identifying files in an include-exclude list to prevent them from being backed up whenever a user or schedule issues an incremental or selective backup operation.

expiration. The process by which files are identified for deletion because their expiration date or retention period has passed. Backed up or archived files are marked for

deletion based on the criteria defined in the backup or archive copy group.

F

file server. A dedicated computer and its peripheral storage devices that are connected to a local area network that stores both programs and files that are shared by users on the network.

file space. A logical space on the ADSM server that contains a group of files. In ADSM, users can restore, retrieve, or delete file spaces from ADSM storage. On systems such as DOS or OS/2, a file space is a logical partition and is identified by a volume label. On UNIX systems, a file space is a logical space that contains a group of files backed up or archived from the same file system (or part of a file system defined with the VIRTUALMOUNTPOINT option in the client system options file).

frequency. A copy group attribute that specifies the minimum interval, in days, between incremental backups.

fuzzy backup. A backup version of a file that might not accurately reflect what is currently in the file because ADSM backed up the file while the file was being modified.

fuzzy copy. An archive copy of a file that might not accurately reflect what is currently in the file because ADSM archived the file while the file was being modified.

G

gigabyte (GB). (1) One billion (10⁹) bytes. (2) When referring to memory capacity, 1 073 741 824 in decimal notation.

graphical user interface (GUI). A type of user interface that takes advantage of a high-resolution monitor, includes a combination of graphics, the object-action paradigm, and the use of pointing devices, menu bars, overlapping windows, and icons. Contrast with *command line interface*. See *windowed interface*.

GUI. Graphical user interface.

H

hierarchical storage management client. A program that runs on a workstation or file server to provide space management services. It automatically migrates eligible files to ADSM storage to maintain specific levels of free space on local file systems, and automatically recalls migrated files when they are accessed. It also allows users to migrate and recall specific files.

hive. On Windows NT, a registry subkey that corresponds to a set of files in the `\system32\config` directory.

HSM. Hierarchical Storage Management

I

inactive version. A copy of a backup file in ADSM storage that either is not the most recent version or the corresponding original file has been deleted from the client file system. Inactive backup versions are eligible for expiration according to the management class assigned to the file.

include-exclude file. On UNIX clients, a file that contains statements which ADSM uses to determine whether to back up certain files and to determine the associated management classes to use for backup or archive. See *include-exclude list*.

include-exclude list. A list of INCLUDE and EXCLUDE options that include or exclude selected files for backup. An EXCLUDE option identifies files that should not be backed up. An INCLUDE option identifies files that are exempt from the exclusion rules or assigns a management class to a file or a group of files for backup or archive services. The include-exclude list is defined either in the include-exclude file (for UNIX clients) or in the client options file.

incremental backup. A function that allows users to back up files or directories from a client domain that are not excluded in the include-exclude list and that meet the requirements for frequency, mode, and serialization as defined by a backup copy group of the management class assigned to each file. Contrast with *selective backup*.

IPX/SPX. Internetwork Packet Exchange/Sequenced Packet Exchange.

L

Local Area Network (LAN). A variable-sized communications network placed in one location. It connects servers, PCs, workstations, a network operating system, access methods, and communications software and links.

M

management class. A policy object that is a named collection of copy groups. A management class is associated with a file to specify how the server should manage backup versions or archive copies of workstation files. See *binding* and *copy group*.

migration. The process of copying a file from a local file system to ADSM storage and replacing the file with a stub file on the local file system.

mode. A copy group attribute that specifies whether a backup file should be created for a file that was not modified since the last time the file was backed up. See *absolute* and *modified*.

modified. A backup copy group attribute that indicates that a file is considered for backup only if it has been changed since the last backup. A file is considered changed if the date, size, owner, or permissions have changed. See *absolute* and *mode*.

N

Named Pipe. A type of interprocess communication which allows message data streams to be passed between peer processes, such as between a client and a server.

NDS. NetWare Directory Services.

NETBIOS. Network Basic Input/Output System. An operating system interface for application programs used on IBM personal computers that are attached to the IBM Token-Ring Network.

NetWare Directory Services (NDS). A database used by Novell NetWare to organize resources for an entire network of NetWare servers. The database itself can be distributed across the network and accessed by all servers. The NDS is available in NetWare Version 4.0 and higher.

NetWare Loadable Module (NLM). Novell NetWare software that provides extended server capability. Support for various ADSM and NetWare platforms are examples of NLMs.

Networking Services/DOS (NS/DOS). A software product that supports advanced program-to-program communications (APPC) in the DOS and Microsoft Windows 3.1 environments. With NS/DOS, communications applications on your workstation can 'talk to' partner applications on other systems that support APPC.

NLM. NetWare Loadable Module.

node. See *client node*.

node name. A unique name used to identify a workstation, file server, or PC to the server.

NS/DOS. Networking Services/DOS.

NTFS. The NT file system on Windows NT.

O

open registration. A registration process in which users can register their own workstations or PCs as client nodes with the server. Contrast with *closed registration*.

owner. The owner of backup-archive files sent from a multi-user client node, such as AIX.

P

pattern-matching character. See *wildcard character*.

PC Support/400. A software product that supports advanced program-to-program communications (APPC) in the DOS, OS/2, and Microsoft Windows environments and provides a set of end user services.

policy domain. A policy object that contains one or more policy sets. Client nodes are associated with a policy domain. See *policy set*, *management class*, and *copy group*.

policy set. A policy object that contains a group of management class definitions that exist for a policy domain. At any one time, there can be many policy sets within a policy domain, but only one policy set can be active. See *active policy set* and *management class*.

Programmable Workstation Communication Services (PWSCS). A product that provides transparent high performance communications between programs running on workstations or on host systems.

PWSCS. Programmable Workstation Communication Services.

R

registration. The process of identifying a client node or administrator to the server by specifying a user ID, password, and contact information. For client nodes, a policy domain, compression status, and deletion privileges are also specified.

registry. On Windows NT, a central database that contains information about hardware, applications, and operating system settings for each machine on the network. Provides security and control over system, security, and account settings.

restore. A function that allows users to copy a version of a backup file from the storage pool to a workstation or file server. The backup copy in the storage pool is not affected. Contrast with *backup*.

retention. The amount of time, in days, that inactive backed up or archived files are retained in the storage pool before they are deleted. The following copy group attributes define retention: retain extra versions, retain only version, retain version.

retrieve. A function that allows users to copy an archive file from the storage pool to the workstation or file server. The archive copy in the storage pool is not affected. Contrast with *archive*.

S

scheduling mode. The type of scheduling operation for the server and client node. ADSM supports two scheduling modes: client-polling and server-prompted.

selective backup. A function that allows users to back up files from a client domain that are not excluded in the include-exclude list and that meet the requirement for serialization in the backup copy group of the management class assigned to each file. Contrast with *incremental backup*.

serialization. A copy group attribute that specifies whether a file can be modified during a backup or

archive operation and what to do if it is. See *static*, *dynamic*, *shared static*, and *shared dynamic*.

server. A program running on a mainframe, workstation, or file server that provides shared services such as back up and archive to other various (often remote) programs called clients.

server-prompted scheduling. A client/server communication technique where the server contacts the client node when work needs to be done.

session. A period of time in which a user can communicate with a server to perform backup, archive, restore, or retrieve requests.

shared dynamic. An ADSM copy group serialization mode. This mode specifies that if a file changes during backup or archive and continues to be changed after a number of retries, the last retry commits the file to the ADSM server whether or not it changed during backup or archive.

shared static. A copy group serialization value that specifies that a file must not be modified during a backup or archive operation. ADSM attempts to retry the operation a number of times. If the file is in use during each attempt, the file is not backed up or archived. See *serialization*. Contrast with *dynamic*, *shared static*, and *static*.

SNA LU6.2. Systems Network Architecture Logical Unit 6.2.

space management attributes. Attributes contained in a management class that specify whether automatic migration is allowed for a file, whether selective migration is allowed for a file, how many days must elapse since a file was last accessed before it is eligible for automatic migration, whether a backup version of a file must exist before the file can be migrated, and the ADSM storage pool to which files are migrated.

static. A copy group serialization value that specifies that a file must not be modified during a backup or archive operation. If the file is in use during the first attempt, ADSM will not back up or archive the file. See *serialization*. Contrast with *dynamic*, *shared static*, and *static*.

storage pool. A named set of storage volumes that is used as the destination of backup or archive copies.

system drive or partition. On Windows NT, the drive or partition on which Windows NT is installed. The

Windows NT directory is usually called WINNT or WINNT35.

Systems Network Architecture Logical Unit 6.2 (SNA LU6.2). A set of rules for data to be transmitted in a network. Application programs communicate with each other using a layer of SNA called Advanced Program-to-Program Communication (APPC).

T

TCP/IP. Transmission Control Protocol/Internet Protocol

timeout. (1) An event that occurs at the end of a predetermined period of time that began at the occurrence of another specified event. (2) A time interval allotted for certain operations to occur; for example, response to polling or addressing before system operation is interrupted and must be restarted. (3) A terminal feature that logs off a user if an entry is not made within a specified period of time.

Transmission Control Protocol/Internet Protocol (TCP/IP). A standard set of communication protocols that supports peer-to-peer connectivity of functions for both local and wide-area networks.

V

version. The maximum number of different backup copies of files retained for files. The following backup copy group attributes define version criteria: versions data exists and versions data deleted.

W

wildcard character. An asterisk (*) or question mark (?) character that is used to search for various or certain combinations of alphanumeric and symbolic names. These names can reflect file names or character strings within a file, for example.

windowed interface. A type of user interface that is either a graphical user interface or a text-based interface. The text-based interface maintains a close affinity to the graphical user interface, including action bars and their associated pull-down menus and windows. See *graphical user interface*.

workstation. A programmable high level workstation (usually on a network) with its own processing hardware such as a high-performance personal computer. In a

local area network, a personal computer that acts as a single user or client. A workstation can also be used as a server.

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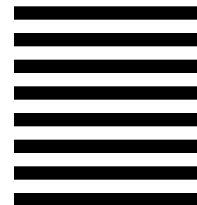
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