



ADSTAR Distributed Storage Manager

SH26-4065-00

**ADSMConnect Agent for
Lotus Notes on Windows NT
Installation and User's Guide**

Version 2



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Note

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

First Edition (August 1997)

This edition applies to Version 2 of the ADSMConnect Agent for Lotus Notes on Windows NT, 5639-C70, 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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About This Book

This publication provides information to help you use the ADSMConnect Agent* for Lotus Notes** on Windows** NT**.

In this publication, we assume that you know how to use your Windows NT workstation and that you understand the general concepts of the operating system. We also assume that you know how to use Lotus Notes databases.

You might need further assistance using ADSM after you have installed the ADSMConnect Agent for Lotus Notes. The following publications provide additional information.

Title	Order Number
ADSTAR* Distributed Storage Manager: Using the Microsoft** Windows Backup-Archive Client	SH26-4056
ADSTAR Distributed Storage Manager: Using the Application Programming Interface	SH26-4002
ADSTAR Distributed Storage Manager: Installing the Clients	SH26-4049
ADSTAR Distributed Storage Manager: Using the Microsoft Windows Backup-Archive Clients	SH26-4056

Reading Syntax Diagrams

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

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

- The ►— symbol indicates the beginning of a syntax diagram.
- The —> symbol at the end of a line indicates the syntax diagram continues on the next line.
- The —► symbol at the beginning of a line indicates a syntax diagram continues from the previous line.
- The —>◄ 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)

Abbreviations

Uppercase letters denote the shortest acceptable truncation. If an item appears entirely in uppercase letters, it cannot be truncated.

You can type the item in any combination of uppercase or lowercase letters.

In this example, you can enter KEYWO, KEYWORD, or KEYWOrd.

▶—KEYWOrd—▶

Symbols

Enter these symbols exactly as they appear in the syntax diagram.

*	Asterisk
{ }	Braces
:	Colon
=	Equal sign
-	Hyphen
()	Parentheses
.	Period
	Space

Variables

Italicized lowercase items (*var_name*) denote variables.

In this example, you can specify a *var_name* when you enter the **KEYWORD** command.

▶—KEYWOrd—*var_name*—▶

Repetition

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

▶— $\overleftarrow{\text{repeat}}$ —▶

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

▶— $\overleftarrow{\text{'repeat}}$ —▶

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

▶— $\overleftarrow{\text{'repeat}}^{(1)}$ —▶

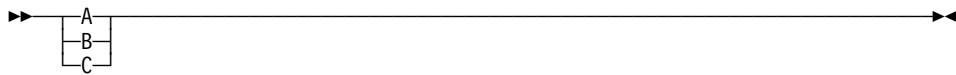
Note:

¹ Specify *repeat* as many as 5 times.

Required Choices

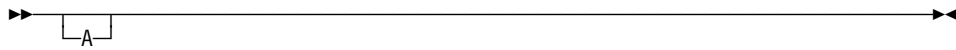
When two or more items are in a stack and one of them is on the line, you *must* specify one item.

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

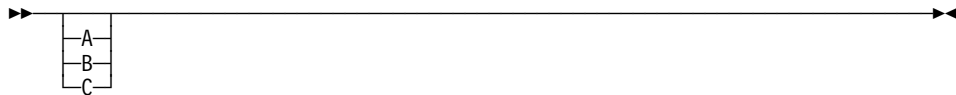


Optional Choice

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



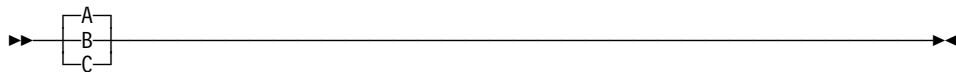
When two or more items are in a stack below the line, all of them are optional. In the second example, you can choose A, B, C, or nothing at all.



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.

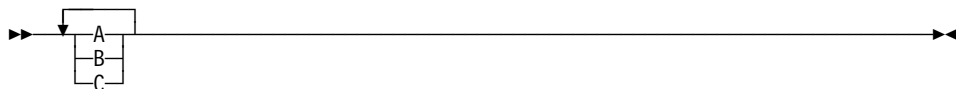
In this example, A is the default. You can override A by choosing B or C. You can also specify the default explicitly.



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.

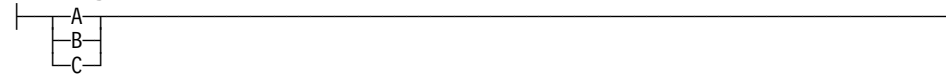


Syntax Fragments

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 |————▶

The fragment name:



Chapter 1. Introducing the ADSMConnect Agent for Lotus Notes on Windows NT

The ADSMConnect Agent for Lotus Notes on Windows NT is a Lotus Notes application that provides backup and restore of individual notes within a Lotus Notes database. Each Lotus Notes database can consist of two types of notes:

- Non-data notes such as forms and views
- Data notes such as documents

See Figure 1 for the logical components of the ADSMConnect Agent for Lotus Notes.

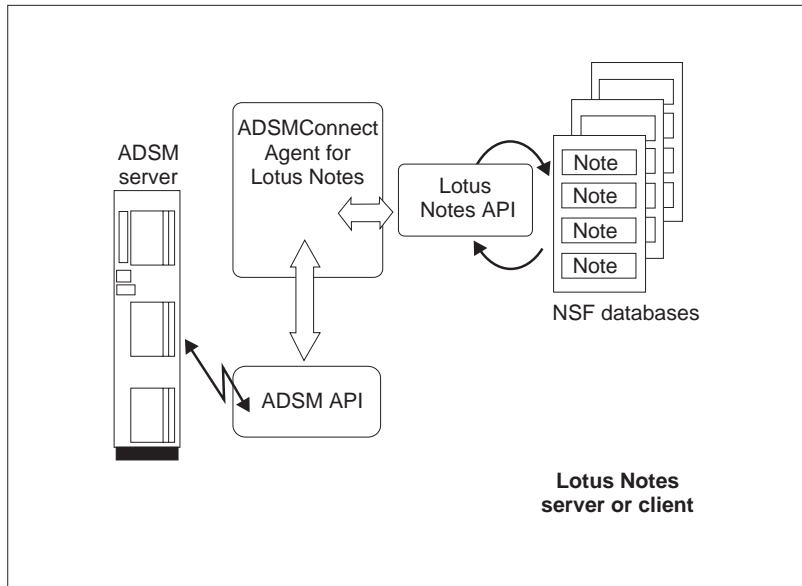


Figure 1. Overview of Components of ADSMConnect Agent for Lotus Notes

The ADSMConnect Agent for Lotus Notes application uses the Lotus Notes API to communicate with the Lotus Notes databases. The ADSMConnect Agent uses the ADSM API to communicate with the ADSM server. The ADSM API is configured in a way similar to the standard ADSM backup-archive client. It has its own **dsm.opt** client user options file, which contains standard ADSM options such as node name, connectivity options, and include-exclude filter lists. The syntax for the include-exclude list for the ADSMConnect Agent is different from the ADSM backup-archive client. It is highly recommended that you use a unique node name for the ADSMConnect Agent. Then the ADSM server will view the application as a separate, self-contained workstation client.

The ADSMConnect Agent for Lotus Notes helps you protect your Lotus Notes databases by using the backup and recovery services of ADSM. Functions are available that enable you to:

- Incrementally back up only those portions of a database that have changed since the last back up.
- Restore selected documents from a database (graphical user interface only).
- Restore documents that have been deleted but not yet purged from a database.
- Restore an entire Lotus Notes database.

Some of these tasks can be performed by using a graphical user interface (the Lotus Notes Workspace). Others can be accomplished through a command line interface.

Using the ADSM Backup-Archive Client

You can also use the regular ADSM backup-archive client to back up or restore an entire Lotus Notes database. ADSM can do this because a single Lotus Notes database is self-contained within a single flat file.

The ADSM backup-archive client and the ADSMConnect Agent for Lotus Notes can run simultaneously on the same workstation. This approach is useful because each application provides capabilities that the other does not have.

- The ADSM backup-archive client can back up or archive an entire database, but not individual portions of it.
- The ADSMConnect Agent for Lotus Notes can back up and restore smaller pieces of data (notes), but it lacks archiving capabilities.

You should give a different node name to the ADSMConnect Agent for Lotus Notes than the one for the ADSM client that resides on the same machine.

There is an important distinction to make in the behavior of the ADSMConnect Agent for Lotus Notes and the ADSM backup-archive client. The ADSMConnect Agent for Lotus Notes can back up and restore individual documents in the Lotus Notes database. The ADSM backup-archive client can only back up and restore an entire Lotus Notes database. For performance reasons, if you have many changes to the database, it would be faster to use the ADSM backup-archive client to back up or restore your database. If you have few changes to the database, it would be faster to use the ADSMConnect Agent to back up or restore your database.

The ADSMConnect Agent also backs up Access Control List (ACL) information, if available, for the Lotus Notes databases. Because there is no way to know whether the database header information was changed or not, all of the header information is backed up every time the database is backed up, even if no notes are actually backed up. This provides the latest header information on the ADSM server.

The Lotus Notes Database

A Lotus Notes database is stored on a server or client workstation as a single notes structured file with a .NSF file extension. A Lotus Notes database is a single, self-contained entity as far as the workstation operating system is concerned. A workstation

operating system such as Windows NT has no knowledge of the structure or contents of a Lotus Notes database. Lotus Notes databases can become very large files, often growing to hundreds of megabytes in size.

Management Classes

Because each note is backed up as an individual object, it is important that a single management class be assigned to all the notes in a given Lotus Notes database. If all the notes in a database are not managed in the same way, then rebuilding an entire database from backup copies of single notes cannot be guaranteed. For more information on management classes, see *ADSTAR Distributed Storage Manager Using the Microsoft Windows Backup-Archive Client*. See also “Step 3D: Creating an Include-Exclude List (Optional)” on page 11.

Security

Users should make sure that they have access to the databases and documents they wish to back up. The ADSMConnect Agent generates an error message if it fails to open the Lotus Notes database. However, the ADSMConnect Agent does not warn users that some documents are inaccessible to them.

The ACL information is restored into a newly created Lotus Notes database, the Lotus Notes access restrictions apply in the newly created database. It is not possible for another user to access a note in a newly restored database if it was not possible in the original database.

The ADSMConnect Agent overwrites log and trace files without a warning message, or refuse to open them if the permissions do not allow it.

Remember, when you set up your client options file (**dsm.opt**) for the ADSMConnect Agent for Lotus Notes, it must include a unique node name, and that node must be registered with the ADSM server.

Performance Considerations

The first time you back up an entire Lotus Notes database, the operation is significantly slower using the ADSMConnect Agent for Lotus Notes than with using a regular ADSM backup-archive client. Extra processing occurs with the ADSMConnect Agent in order to break down the contents of the database into individual notes that can be restored later. You need to decide whether backup and restore through the ADSMConnect Agent for Lotus Notes or a regular ADSM backup-archive client better serves your purpose for a particular database.

Scheduling

The ADSMConnect Agent for Lotus Notes does not have its own scheduling mechanism. However, Lotus Notes provides a facility through which the ADSMConnect Agent backup commands only can be scheduled to run at some later time. You can

also use the scheduling facility of the ADSM backup-archive client to schedule the ADSMConnect Agent commands. The **dsmnotes restore** command, which restores notes to a new database, prompts you for a password from Lotus Notes in order to create the new ACL for the new database.

For example, you can set up a Lotus Notes Program form or an ADSM schedule to run a **dsmnotes incr** command on a particular database at a certain time each week.

See the *Lotus Notes Administrator's Guide* (published by Lotus Notes) or *Using the Windows Backup-Archive Clients* for more information on the automatic scheduling facility.

Compatibility

Note that the ADSMConnect Agent for Lotus Notes on Windows NT databases are not compatible with the Lotus Notes Backup Agent for other platforms. A Lotus Notes database backed up using other platforms such as ADSMConnect Agent for Lotus Notes on AIX or the OS/2 Backup Agent cannot be restored using the ADSMConnect Agent for Lotus Notes on Windows NT and vice versa. The ADSMConnect Agent for Lotus Notes on Windows NT displays an error message if it discovers an incompatible file format on the ADSM server.

Also, the ADSMConnect Agent for Lotus Notes on Windows NT does not support the backing up or restoring of a remote Lotus Notes database. You can install the ADSMConnect Agent for Lotus Notes on Windows NT on all systems that have Lotus Notes databases and use the local system to back up Lotus Notes databases.

Chapter 2. Installing the ADSMConnect Agent for Lotus Notes on Windows NT

This section provides instructions to install and set up the ADSMConnect Agent for Lotus Notes on Windows NT on your workstation.

The ADSMConnect Agent for Lotus Notes is ordered separately on a CD-ROM and has its own installation program. The CD-ROM also contains the permanent license.

The installation steps are:

- Step 1—Install the ADSMConnect Agent for Lotus Notes (required)
- Step 2—Set up the environment variables
- Step 3—Set up the client options file
- Step 4—Register your workstation with the server

ADSMConnect Agent for Lotus Notes Environment

This section contains client environment information, including hardware and software requirements, for installing the ADSMConnect Agent for Lotus Notes.

Hardware Requirements

The hardware requirements are:

- Intel 486 or higher
- Disk space of 8 MB
- Memory for Windows NT workstation-32 MB

Operating System

The operating system required is Windows NT Version 4.0 or later.

You do not need to have the Windows NT backup-archive client in order to run the ADSMConnect Agent for Windows NT.

Software Requirements

The ADSMConnect Agent for Lotus Notes requires the following to be installed:

- Access to an ADSM Version 2 server
- Lotus Notes Version 4.5 or later for Windows NT

Communication Method

The communication protocol that the ADSMConnect Agent for Lotus Notes can use is TCP/IP, NetBIOS, and NamePipe. TCP/IP is standard with the Windows NT product package. See *ADSTAR Distributed Storage Manager Installing the Clients* for other supported communication protocols.

Step 1: Installing the ADSMConnect Agent for Lotus Notes (Required)

The following instructions assume that Windows NT Version 4.0 is already running on the client workstation. To install the ADSMConnect Agent for Lotus Notes on Windows NT, do the following:

1 Insert the ADSMConnect Agent CD-ROM into the CD-ROM reader, such as the D drive.

2 Issue the following command:

```
agent1n -d
```

This extracts the zipped files.

3 Issue the command:

```
setup
```

The Welcome window displays. Click on the **Next** button.

4 The Setup Options window displays. You have the following options:

- Typical
- Compact
- Custom

Select **Custom**. This allows you to select the components you want to install or upgrade.

5 The Select Components window displays. The components to select are:

- ADSMConnect Agent for Lotus Notes Files
- ADSMConnect Agent for Lotus Notes HTML Files
- ADSMConnect for Lotus Notes License Files

You can also specify your Destination Directory by clicking on the **Browse** button. The Choose Directory window displays. You can specify the:

- Path
- Directory
- Drives. You can also map your network drives by clicking on the **Network** button. The Map Network Drive window displays. This window displays:
 - Drive
 - Path
 - Connect At

This window also displays the space required and the space available. Click on the **Disk Space** button and the Available Disk Space window displays. This window shows the drive and the space available and required.

Click on the **Next** button to continue.

6 The Select Program Folder window displays. This window allows you to add program icons to the Program Folder listed. You can type a new folder name or select one from the existing Folders list. Select ADSM for Windows NT, then click on the **Next** button.

7 The Start Copying Files window displays. This window shows the current settings for:

- Setup type
- Target Directory
- Program Folder

Click on the **Next** button.

8 The Setup Complete window displays. Click on the **Finish** button to complete the setup.

ADSMConnect Agent Files

Table 2 lists the files that are on your workstation after this installation.

File Name	Description
dsmnotes.exe	Executable for ADSMConnect Agent command-line functions
dsmnoted.dll	ADSMConnect Agent runtime library
notesdlg.dll	ADSMConnect Agent resources
dsmnoted.hlp	ADSMConnect Agent help file
dsm.smp	Sample options file
readme.dln	Last minute updates and other special information
dscameng.txt	ADSM API message file
agent.lic	License file

Step 2: Setting Environment Variables

Updating Your notes.ini File

The ADSMConnect Agent for Lotus Notes installation program automatically adds the AddInMenus variable to your **notes.ini** file. AddInMenus ties ADSM to the Lotus Notes Workspace. This is required to use the graphical user interface for ADSMConnect Agent for Lotus Notes. For example, the entry in your **notes.ini** file might look as follows:

```
AddInMenus=c:\dsmnotes\dsmnoted.dll
```

If this line is not added to the **notes.ini** file automatically during installation, you can add it manually. The path name is the fully qualified path name of the **dsmnoted.dll** file. It is always a good idea to check the **notes.ini** file to make sure all the variables used by ADSMConnect Agent have the right paths.

You can set the following environment variables in your **notes.ini** file. All of the variables are optional.

DSMNOTES_LOGDIR

Log messages are sent to a file called **log.dsm**. Use **DSMNOTES_LOGDIR** to point to the directory where the log file is located. For example, the entry in your **notes.ini** file might look as follows:

```
DSMNOTES_LOGDIR=c:\dsmnotes\logdir
```

If you do not set this environment variable, the default location for **log.dsm** is the Notes data directory.

If you do not have a Notes data directory, this environment variable is required.

DSMNOTES_STATS

Use **DSMNOTES_STATS** to send messages to the screen when a **dsmnotes** command line function is run. The messages show the current status of the command. For example, the entry in your **notes.ini** file might look as follows:

```
DSMNOTES_STATS=verbose
```

If **verbose** is specified, then two types of status indicators might appear on the screen:

- One or more dots (.), indicating that processing is continuing. Depending on the environment, you might experience delays between dots. For example, delays might occur when searching very large Lotus Notes databases for deleted documents. There might also be delays when waiting for off-line media to be mounted.
- Messages showing the result of the command when the command has completed processing. The messages display information such as the number of documents that have been transferred and whether the **dsmnotes** command completed without any errors.

The default is for status messages to not be displayed on your screen. You can specify this by adding the following entry to your **notes.ini** file:

```
DSMNOTES_STATS=quiet
```

Note: Displaying the status messages on your screen affects the performance of **dsmnotes** operations, such as incremental backup and restore.

After you modify the **notes.ini** file with these environment variables, you need to shut down the Lotus Notes workspace and bring it back up for the new changes to take effect.

Setting the System Environment

To set the system environment:

- 1 Find the Control Panel icon for your system and click on the system icon.
- 2 Select the environment folder and define the DSMI_CONFIG environment variable to point to where your client options file resides. For example:

```
DSMI_CONFIG=C:\ADSM\API\DSM.OPT
```

- 3 Define the DSMI_DIR environment variable to point to the directory where **dscameng.txt** should reside. For example:

```
DSMI_DIR=C:\ADSM\API
```

- 4 Define the DSMI_LOG environment variable to point to the path for the **dsierror.log** file. The error log file contains information about ADSM API errors that occur during processing.

The error log is intended for IBM* service personnel to help you diagnose severe errors.

Step 3: Setting Up the Client Options File

ADSM uses a client options file called **dsm.opt** to specify certain information related to your ADSMConnect Agent for Lotus Notes session. The **dsm.opt** file for the ADSMConnect Agent must include a unique node name, and that node must be registered on the ADSM server. The options in **dsm.opt** enable you to do the following tasks:

- Choose the communication protocol that you use to communicate with an ADSM server.
- Set various parameters associated with the chosen communication protocol.
- Specify which ADSM server to contact for services.
- Identify your node name.
- Set up an **include-exclude** list in which you can exclude specific databases from backup services and assign a management class to all databases affected by an incremental backup.

These options are in effect for the entire ADSM session.

During the initial installation and set up of ADSM on your workstation, you are provided with a sample client options file called **dsm.smp**. The **dsm.smp** file contains just the communication options, the NODENAME option, and a sample include-exclude list. These basic options are the ones you need to get started quickly.

Step 3A: Creating the Client Options File

The **dsm.smp** file contains the minimal options required to support communications between your workstation and the server.

To create the required options file, **dsm.opt**, open a window and change the current directory to the installation directory. Enter the following line after a command prompt:

```
copy dsm.smp dsm.opt
```

By keeping the original file intact, you can always go back to the default settings for options if necessary. You can also create the **dsm.opt** file through the Drives window.

Note that initially all of the entries in **dsm.opt** are commented out. You must remove the asterisk (*) from the start of each line that contains an option you want to use.

At a minimum, you need to set up the communication and NODENAME options, which provide information that the application client needs to establish communications with an ADSM server.

When entering include-exclude options in your client options file, follow these rules:

- A drive must be specified with a question mark (?).
- When specifying directory path names, a final back slash is required. If your data is not in the Lotus Notes data directory, you must specify a volume label. If your data is in the Lotus Notes data directory, specify \$NOTESDIR. For example:

```
?:\volume_label\ (data not in Lotus Notes data directory)  
?:\$NOTESDIR\ (data is in Lotus Notes data directory)
```
- Keywords may be in uppercase.
- Comment lines have an asterisk (*) as the first nonblank character in a line.
- Blank lines are allowed in the file and are interpreted as comments.

Step 3B: Enabling Communications

One of the most important functions of the options file is to define the communication protocol that enables communication between your workstation and the ADSM server. For Windows NT, you can use the TCP/IP method, NetBIOS, and NamePipe.

The default value for *commmethod* is TCP/IP. Therefore, you do not need to define *COMMmethod* in the options file. However, either a **dsm.opt** file or the options file you pointed to in the *DSMI_CONFIG* environment variable must exist.

Commmethod Options

For Windows NT, *commmethod=TCPip* (the default), and the following option must be defined:

```
TCPServeraddress server_address
```

Other TCP/IP options that are optional or have default values are:

- *TCPport port_address*

- TCPBuffsize *size*
- TCPWindowSize *window_size*

Contact your ADSM administrator for server information or if you need help defining these communication options.

Step 3C: Setting Your Node Name (Required)

Use the NODENAME option to indicate the name of your node so that you can register with the ADSM server. If your installation is using closed registration, the ADSM administrator must register you with the server and might select a name for you to use. Otherwise, in open registration, you can register your node with the server and choose your own name. For more information about registration requirements, see “Step 4: Registering Your Workstation with the Server (Required)” on page 13.

Step 3D: Creating an Include-Exclude List (Optional)

An include-exclude list contains statements that identify any databases you want to specifically include or exclude from backup services. The list can also contain a statement that assigns a particular management class to all Lotus Notes databases affected by an incremental backup.

You enter an include-exclude list in the **dsm.opt** file, just as you do for an ADSM backup-archive client. The statements you enter are processed from the bottom up. If you enter an INCLUDE option to assign a management class to the databases that are affected by an incremental backup, it must be the first statement in your include-exclude list.

However, there are differences in the way you use an include-exclude list for the ADSMConnect Agent for Lotus Notes. The example below shows a sample include-exclude list.

```
INCLUDE ?:* MGMT1
EXCLUDE ?:\NT4\db1.nsf\*\*
EXCLUDE ?:\NDATA\plan\...\*
```

The following sections explain how to use the EXCLUDE and INCLUDE options for the ADSMConnect Agent for Lotus Notes.

Excluding a Lotus Notes Database

To exclude a Lotus Notes database from an incremental backup, enter an EXCLUDE option as follows:

```
EXCLUDE ?:\NT4\abc.nsf\*\*
```

The drive letter in an include-exclude statement for the ADSMConnect Agent for Lotus Notes is always a question mark (?).

You must enter the wildcard characters (**) to indicate that the statement applies to all notes in the specified database (both data and non-data notes). If the database does not reside under the Lotus Notes data directory, you can use a volume label at the beginning of your path, such as NT4, in this example.

To exclude a Lotus Notes database that resides in the Notes data directory, you need to specify \$NOTESDIR at the beginning of the path. For example:

```
EXCLUDE ?:\$NOTESDIR\abc.nsf\*\*
```

To exclude a Lotus Notes database that resides in a subdirectory of the Notes data directory, you need to specify the:

- Subdirectory name
- Database name
- Wildcard character (*)

For example, if the Notes data directory is **c:\notes\data**, and the path for the database is **c:\notes\data\example\abc.nsf**, enter the following:

```
EXCLUDE ?:\$NOTESDIR\example\abc.nsf\*\*
```

To exclude a subdirectory, for example, everything under **c:\notes\data\example**, enter the following:

```
EXCLUDE ?:\$NOTESDIR\example\...\*\*  
or     ?:\...\example\...\*\*
```

Assigning a Management Class to Lotus Notes Databases: You can use the INCLUDE option to assign a management class to all Lotus Notes databases that are affected by an incremental backup session. For example, to assign a management class named MGMT1 to all databases that are backed up during an incremental backup, enter this statement:

```
INCLUDE ?:*MGMT1
```

You cannot assign different management classes to individual databases during a single incremental backup session.

Note: After an incremental backup has been run against a database, it is important not to change the management class assigned to that database. When the ADSMConnect Agent for Lotus Notes backs up a database, it binds each note it backs up to the specified management class. If you subsequently change the assigned management class for a database to a management class that retains backup versions for a different length of time, it might be possible that it will not be able to restore the entire database.

Example of a Client Options File

Figure 2 on page 13 is an example of a **dsm.opt** file. This client options file includes the required NODENAME and communications options, as well as EXCLUDE statements and other options.


```
NODENAME mynodename
COMMMETHOD 3270
3270HOSTCOMMAND @Cst1vm30@E@ED serv1@E
3270HOSTCMDPAUSE 2
3270BUFFERSIZE 4000
3270LOGICALTERMINALID B
COMPRESSION on
INCLUDE ?:* MGMT2
EXCLUDE ?:\NT4\plan2.nsf\*\*
EXCLUDE ?:\$NOTESDIR\plan1.nsf\*\*
```

Figure 2. Example of a Client Options File

Step 4: Registering Your Workstation with the Server (Required)

Before you can begin requesting services from an ADSM server, the server must recognize your workstation. ADSM uses a node name and a password to identify each workstation. ADSM maintains a password for each node name. The process of setting up a node name and password is called *registration*. After you register your workstation with a server, you can begin using ADSM to back up, archive, restore, and retrieve files. It is recommended that you register a unique node name for each ADSMConnect Agent for Lotus Notes user.

ADSM provides two types of registration: *open* and *closed*. Your ADSM administrator chooses the type of ADSM registration for your site. The ADSMConnect Agent does not offer open registration, therefore, only closed registration is discussed here.

Using Closed Registration

With closed registration, an ADSM administrator must register your workstation as a client node with the server.

If your enterprise uses closed registration, you need to provide contact information, such as your name, user ID, and phone number, to your administrator.

Your administrator defines the following for you:

- Your node name. It is recommended that the node name be different from your HOSTNAME.
- The initial password you want to use, if required.
- The policy domain to which your client node belongs. A policy domain contains policy sets and management classes, defined by your ADSM administrator, that control how ADSM manages the database files you back up and restore.
- Whether you are allowed to choose if database files should be compressed before sending them to the server.
- Whether you are allowed to delete backup versions and archive copies from server storage.

Chapter 3. Before Using the ADSMConnect Agent

This section provides information you should know before you start using the ADSMConnect Agent for Lotus Notes.

The ADSMConnect Agent enables you to perform the following tasks:

- Back up a database (command-line only)
- Restore selected documents from a database
- Restore documents that have been deleted but not yet purged
- Restore a copy of an entire database
- Set and change the ADSM password
- Get online help

Some of these tasks can be performed by using a graphical user interface (the Lotus Notes Workspace). Others can be accomplished through a command line interface.

Note that backup and restore can occur only for databases that reside on the node on which the **dsmnotes** command or Lotus Notes Workspace runs with the AddInMenus library.

Security

From the Lotus Notes workspace, you can restore documents to databases on the local Lotus Notes servers. Because Lotus Notes security is honored, you cannot read or write documents in a restored database that the original database would not give you access to.

ADSM security is also honored. To gain access to an ADSM server, you must enter the corresponding ADSM password.

Path Name Specification

The path names for Lotus Notes databases and directories are treated a little differently for the ADSMConnect Agent. There is a relative path name (**dbl.nsf**) which is interpreted as relative to the Lotus Notes data directory.

The general rules to follow when a database path name is required are shown below.

A directory

Contains one or more Lotus Notes databases that are being backed up or restored. To include subdirectories, specify the SUBDIR=YES option.

A Lotus Notes database

Is a database that is being backed up or restored.

/dir/file.nsf or /dir

Back up or restore the indicated database or all databases in the indicated directory.

./file.nsf or ./dir

Back up or restore the indicated database, or all databases in the indicated directory, in the current working directory.

../file.nsf or ../dir

Back up or restore the indicated database, or all databases in the indicated directory, in the parent directory of the current working directory.

file.nsf or dir

Back up or restore the indicated database, or all databases in the indicated directory, under the Lotus Notes data directory.

Interrupting the ADSMConnect Agent

If you need to interrupt the **dsmnotes** command, you can use the **Ctrl-C** keys to interrupt the command.

If you are in the graphical user interface, you can stop the operation by quitting Lotus Notes.

What Happens Over Time

Backup versions of notes on an ADSM server are similar to the backup versions of files stored by the ADSM backup-archive client. The file space on an ADSM server in which a set of backup copies of notes resides corresponds to a Notes database.

Whether a particular version of a database can be rebuilt depends on the number of inactive copies that are kept on the ADSM server. When the maximum number allowed is reached, new backups cause the oldest inactive copies to be rolled off. Once a backup copy of a note has been removed from the ADSM server, it cannot be restored.

For example, suppose you have a Notes database with only two notes in it, **Note A** and **Note B**. **Note A** is updated frequently, while **Note B** seldom changes. An incremental backup is performed on the Notes database each night. Assume the ADSM server keeps one active copy and one inactive copy of a backed up note.

On day one, after the first incremental backup, the ADSM server contains an active copy of **Note A** and an active copy of **Note B**. On day two, **Note A** is updated, while **Note B** is not. After the nightly backup, the ADSM server contains one active and one inactive copy of **Note A** and the original active copy of **Note B**.

On day three, **Note A** is updated again, while **Note B** is not. During the next incremental backup, the current version of **Note A** becomes the active backup copy and the active copy on the ADSM server becomes the inactive copy. Because only one inactive backup copy is maintained on the ADSM server, the inactive copy created on day two is rolled off. The active copy of **Note B** remains unchanged.

Given this scenario, you can rebuild the database to either a day three or a day two version. You cannot rebuild a day one version of the database because the day one

version of **Note A** is no longer available. You could restore a day one version of **Note B** because that version is still available on the ADSM server.

This example illustrates the importance of determining the optimal number of backup copies to keep on the ADSM server. Your ADSM administrator might want to set up a separate domain with a suitable default management class specifically for Notes data.

To avoid the need for keeping many backup copies of individual notes on the ADSM server, the ADSM administrator might choose to combine periodic full file backups of Notes databases with more frequent incremental backups. For example, the ADSM backup-archive client could be used to perform full file backups once a week, while the ADSMConnect Agent for Lotus Notes could perform a daily incremental backup. If you needed to rebuild the database later, you could restore the last full file backup with the ADSM backup-archive client. Then you could use the ADSMConnect Agent for Lotus Notes **dsmnotes restore** command with the MERGE=YES option to combine the most recently backed up notes with the Lotus Notes database.

Chapter 4. Using the Command-Line Interface

This section documents the following commands:

dsmnotes change

Allows you to change the ADSM password without doing a backup or restore operation.

dsmnotes incr

Provides incremental backup capability for the Lotus Notes database.

dsmnotes restdel

Restores backup copies of data documents that have been deleted but not yet purged from the database.

dsmnotes restore

Provides restore capability when the Lotus Notes Workspace is inappropriate.

Using the Command Line

Enter commands for the ADSMConnect Agent on the command line.

Within a command, the path variable and the options can be in either order. For example, you might enter either of the following:

```
dsmnotes command path [options]
dsmnotes command [options] path
```

When an option is used, it must start with a hyphen and have no spaces around the equals sign. For example, use:

```
-adsmpw=mypass
```

not one of the following:

```
adsmpw=mypass
-adsmpw = mypass
```

The syntax diagrams show the minimum unique abbreviation for the commands and parameters in uppercase. For example, if you use the MOUNTWAIT option, you can enter MO as the abbreviation for this option.

For an explanation of the syntax diagrams that accompany each command, see "Reading Syntax Diagrams" on page vii.

dsmnotes change

This command allows the user to change the ADSM password without doing either a backup or restore operation. Changing the ADSM password requires the user to be a root user.

Syntax

```
▶▶—DSMNOTES CChange—-ADSMPW=oldpassword—-NEWADSMpw=newpassword—◀◀
```

Parameters

-ADSMPW=*oldpassword*

The old password. ADSM uses ADSMPW to validate the old ADSM password and then uses NEWADSMPW to set the new ADSM password.

-NEWADSMpw=*newpassword*

The new password. ADSM uses ADSMPW to validate the old ADSM password and then uses NEWADSMPW to set the new ADSM password.

Example

This example shows the setting of the old password to the new password.

```
dsmnotes change -ADSMPW=oldid -NEWADSMPW=newid
```

dsmnotes incr

Use the **dsmnotes incr** command to incrementally back up a Lotus Notes database. If no backup copy of the database file exists on the ADSM server, then a copy of the entire database is sent to the server. If the ADSMConnect Agent for Lotus Notes has previously been used to back up the database, then only the changes in the database since the last backup are sent to the server (incremental back up).

Both documents and design notes, such as forms and views, are backed up. Because each note is backed up as a separate object, individual data notes can be restored later. The database header information, such as replication information, Access Control List (ACL), and the database title are also backed up.

Be sure that each note in a given Lotus Notes database is assigned to the same management class. If all of the notes in a database are not managed in the same way, you might not be able to rebuild the entire database from the backup copies of the notes.

Each time a backup operation is performed, summary messages are sent to the **log.dsm** file. When a single database is backed up, the following information is sent to **log.dsm**.

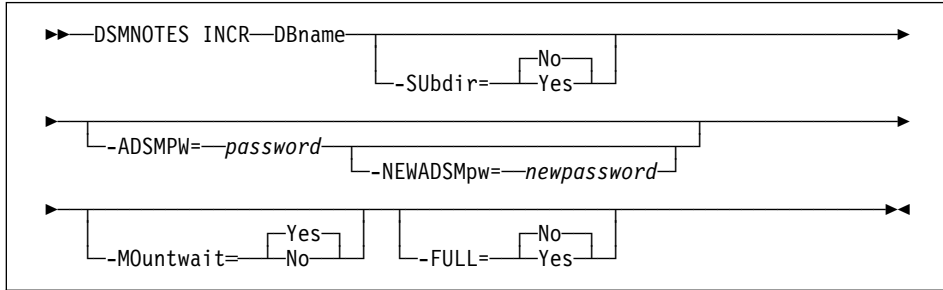
```
dsmnotes incr start
Database: d:\notes\data\test\abc.nsf
Documents backed up: 100, documents deleted: 1
Total number of bytes sent: 60873
ANS0900I dsmnotes completed
```

If you use a wildcard character in the path name to back up multiple databases, statistics on each database, as well as an overall total, are sent to **log.dsm**.

```
dsmnotes incr start
Database: d\notes\data\test\abc.nsf
Documents backed up: 100, documents deleted: 1
Database: d\notes\data\test\def.nsf
Documents backed up: 500, documents deleted: 1
Total number of documents backed up: 600
Total number of documents deleted: 2
Total number of bytes sent: 1256.1 KB
ANS0900I dsmnotes completed
```

Note that the **log.dsm** file continues to grow as **dsmnotes** operations send messages to it. You should monitor the size of the file and trim messages or archive the file regularly to control its growth.

Syntax



Parameters

DBname This is a required parameter and indicates one of the following path names:

A directory

That contains one or more Lotus Notes databases that are being backed up. To include subdirectories, specify the `SUBDIR=YES` option.

A Lotus Notes database

That is being backed up.

In either case, the path name can be either a relative or an absolute path name, with the following cases:

`/dir/file.nsf` or `/dir`

Back up the indicated database or all databases in the indicated directory.

`.file.nsf` or `.dir`

Back up the indicated database, or all databases in the indicated directory, in the current working directory.

`../file.nsf` or `../dir`

Back up the indicated database, or all databases in the indicated directory, in the parent directory of the current working directory.

`file.nsf` or `dir`

Back up the indicated database, or all databases in the indicated directory, under the Lotus Notes data directory.

`-SUBdir=value`

This parameter is optional. It indicates whether subdirectories are backed up or not. The default is **No**. Possible values are:

No If the `DBNAME` option specifies a directory, only the databases in the specified directory are backed up.

Yes If a directory is specified, all databases in the specified directory **and all subdirectories** are backed up.

-ADSMPW=*password*

The password for the ADSM server. If you specified PASSWORDACCESS GENERATE in the client options file, then ADSMPW is ignored. The password is sent to the ADSM server to authenticate the user.

-NEWADSMpw=*newpassword*

The new password for the ADSM server. The ADSMPW option must also be supplied to authenticate the user, even if PASSWORDACCESS GENERATE was specified in the client options file. This option can be used to change the password for the ADSM server, for example, if the old password has expired.

-MOUNTwait=*value*

This parameter is optional. This parameter is used if you do not want ADSM to wait for a tape mount if one is necessary. The default is **Yes**. Possible values are:

Yes The backup process will wait for a tape mount if one is necessary.

No The backup process will not wait for a tape mount. If a tape mount is necessary, the operation is cancelled.

-FULL=*value*

This parameter is optional. This parameter is used to initiate a complete backup, including notes that have not been modified since the last backup. The default is **No**. Possible values are:

No Back up only new and modified notes in the database.

Yes Back up all of the notes in the specified database, whether or not they have been modified since the last backup.

Example 1

Task Back up the database **lnotes1.nsf**. Do not wait for tape mounts. This example assumes you specified PASSWORDACCESS GENERATE in the client options file.

Command

```
dsmnotes incr c:\lotus\jiang\lnotes1.nsf -mountwait=no  
              -adsmpw=mypassword
```

Example 2

Task Perform a complete backup of all databases in the directory **lotus** and in any subdirectories on **lotus**. This example assumes you specified PASSWORDACCESS GENERATE in the client options file.

Command

```
dsmnotes incr c:\lotus -subdir=y -full=y
```

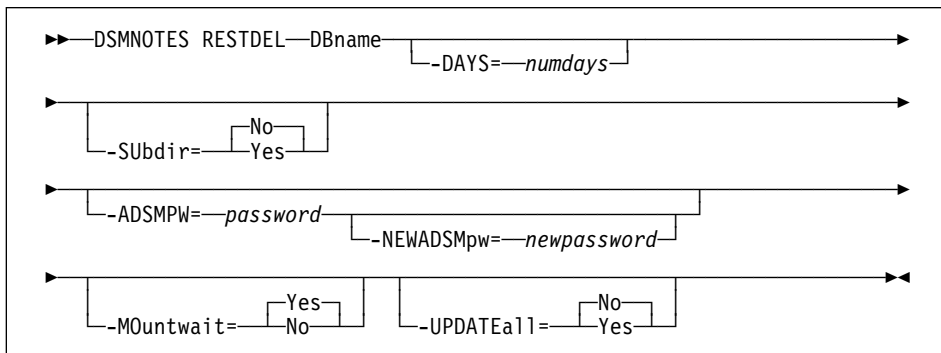
dsmnotes restdel

Lotus Notes documents that are deleted are actually made into **deletion stubs** which cannot be accessed directly but which still reside in the database. The deletion stubs are eventually removed from the database, according to a *purge* value set by the Lotus Notes administrator.

The **dsmnotes restdel** command allows you to restore all data documents saved on the ADSM server for which there exists valid deletion stubs in the indicated Lotus Notes database. The deleted documents are merged into the Lotus Notes database, which must exist.

Note that Lotus Notes deletes the deletion stubs after a user—adjustable time period. After the deletion stub is purged, **dsmnotes restdel** cannot be used to restore the document. Use **dsmnotes restore** to restore the whole database to an earlier version, and then copy the restored documents to the current database.

Syntax



Parameters

DBname This is a required parameter and indicates one of the following path names:

A directory

That contains one or more Lotus Notes databases that are being restored. To include subdirectories, specify the SUBDIR=YES option.

A Lotus Notes database

That is being restored.

In either case, the path name can be either a relative or an absolute path name, with the following cases:

/dir/file.nsf or /dir

Restore the indicated database or all databases in the indicated directory.

.file.nsf or /dir

Restore the indicated database, or all databases in the indicated directory, in the current working directory.

../file.nsf or ../dir

Restore the indicated database, or all databases in the indicated directory, in the parent directory of the current working directory.

file.nsf or dir

Restore the indicated database, or all databases in the indicated directory, under the Lotus Notes data directory.

-DAYS=numdays

If this option is set to a nonzero value, only documents deleted within the last *numdays* days are restored. If this option is not specified or is set to 0, then all documents that have been deleted but not yet purged from the database are restored.

-Subdir=value

This parameter is optional. It indicates whether subdirectories are restored or not. This option is not available in the graphical user interface. The default is **No**. Possible values are:

No If the DBNAME option specifies a directory, only the databases in the specified directory are restored.

Yes If a directory is specified, all databases in the specified directory *and all subdirectories* are restored.

-ADSMPW=password

The ADSM password for the ADSM server. If you specified PASSWORDACCESS GENERATE in the client options file, then ADSMPW is ignored. The password is sent to the ADSM server to authenticate the user.

-NEWADSMpw=newpassword

The new password for the ADSM server. The ADSMPW option must also be supplied to authenticate the user, even if PASSWORDACCESS GENERATE was specified in the client options file. This option can be used to change the password for the ADSM server, for example, if the old password has expired.

-MOutwait=value

This parameter is used if you do not want ADSM to wait for a tape mount if one is necessary. The default is **Yes**. Possible values are:

Yes The restore process will wait for a tape mount if one is necessary.

No The restore process will not wait for a tape mount. If a tape mount is necessary, the operation is cancelled.

-UPDATEall=value

If you specify **Yes** for this option, all of the Lotus Notes documents in the database are updated to have the current date and time. The default is **No**. Possible values are:

No No, do not update the Lotus Notes documents in the database.

Yes Yes, update all of the Lotus Notes documents in the database to have the current date and time. This forces replication to all replica databases.

Example

Task Restore all documents which have been deleted in the past 30 days from the **Inotes2.nsf** database, but not yet purged.

Command

```
dsmnotes restdel c:\plan\lnotes2.nsf -days=30
```

dsmnotes restore

This command restores all data documents saved on the ADSM server to the indicated Lotus Notes database. If needed, the new database is created. In this case, the database header information and all non-data documents are also restored.

The **dsmnotes restore** command is provided for those times when use of the Lotus Notes Workspace is inappropriate. An example is when the restore needs to be scheduled. Because there is no database view available on the command line, the command—line restore is used:

- To rebuild copies of the databases
- To restore a range of notes to a database that was restored from an ADSM client

Restoration of individual notes must be done through the Lotus Notes workspace.

For the options indicating a date, a format of **month/day/year** is used. The **month** field is a numeric value indicating the month of the year from 1 through 12. January is represented by 1 and December is represented by 12. The **day** field is a numeric value indicating the day of the month from 1 through 31. The **year** field is a numeric value indicating the year value of the date.

If the year value is less than 1000, special rules apply. If the year is less than 90, 2000 is added to it. If the year is 90 or more but less than 1000, 1900 is added to it. For example, 1/1/90 is January 1, 1990, but 12/31/89, 12/31/189, and 12/31/2089 all indicate December 31, 2089.

For options indicating a time, a format of **hour:minute:second** is used, with the **second** field being optional. The **hour** field is a numeric value indicating the hour of the day. Twelve is added to the hour value for the afternoon time. For example, 3:00 in the afternoon is represented by the value 15. The **minute** field is a numeric value indicating the minute of the hour. The **second** field is a numeric value indicating the second of the minute. Both minute and second default to zero. For example, 12:0 is noon, 0:0 is midnight, and 23:59:59 is a second before midnight.

When you restore a backed up Lotus Notes database, you can either restore it to a new database or merge the documents from the backed up database into a database that already exists on your workstation.

If you restore the backed up database to a new database, restore either the active version of the database or an inactive version that is closest to a specified date. You must choose a target name for the new database that is not the same name of an existing file. The database header is restored along with the views, forms, other non-data documents, and data documents.

If you choose to merge the restored documents into an existing Lotus Notes database, you can select a date and time range from which to draw the documents. This operation is useful if you have used the ADSM backup-archive client to restore a database file and want to update it with any notes that have been incrementally backed up since

the database itself was backed up. Only data documents are restored. Non-data documents such as the ones listed below are **not** restored:

- Views
- Forms
- Database header information

Using collocation when storing documents can help performance when you restore or merge a large number of objects into a database.

Each time a restore operation is performed, summary messages are sent to the **log.dsm** file. When the notes are restored to a single database, the following information is sent to **log.dsm**:

```
ADSMConnect Agent for Lotus Notes Restore Start
Database: d:\notes\data\test\abc.nsf
Documents restored: 28, overwritten: 0, deletion stubs overwritten: 0
ANS0930I Database Rebuild Done
```

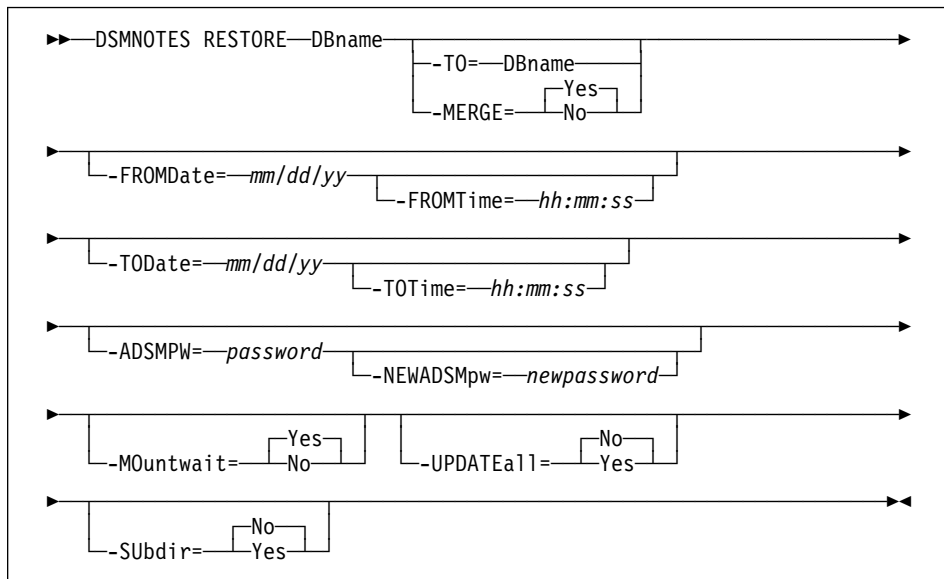
If the DBNAME option is used to specify a directory, statistics on each database are sent to **log.dsm**:

```
ADSMConnect Agent for Lotus Notes Restore Start
Database: d:\notes\data\test\abc.nsf
Documents restored: 28, overwritten: 0, deletion stubs overwritten: 0
Database: d:\notes\data\test\xyz.nsf
Documents restored: 78, overwritten: 0, deletion stubs overwritten: 0
ANS0900I dsmnotes completed
```

Note that the **log.dsm** file continues to grow as **dsmnotes** operations send messages to it. You should monitor the size of the file and trim messages or archive the file regularly to control its growth.

Note: An unsorted view in a rebuilt database might show the documents in a different order from what you would see in the original database. A sorted view is not affected.

Syntax



Parameters

- DBname** This is a required parameter and indicates one of the following path names:
- A directory** That contains one or more Lotus Notes databases that are being restored. To include subdirectories, specify the SUBDIR=YES option.
 - A Lotus Notes database** That is being restored.
- In either case, the path name can be either a relative or an absolute path name, with the following cases:
- /dir/file.nsf or /dir**
Restore the indicated database or all databases in the indicated directory.
 - .file.nsf or ./dir**
Restore the indicated database, or all databases in the indicated directory, in the current working directory.
 - ..file.nsf or ../dir**
Restore the indicated database, or all databases in the indicated directory, in the parent directory of the current working directory.
 - file.nsf or dir**
Restore the indicated database, or all databases in the indicated directory, under the Lotus Notes data directory.

-TO=*DBname*

The documents are restored to the indicated database instead of the database indicated with the DBNAME option. If this option is set, the MERGE option cannot be used. If this option nor the MERGE option is set, then MERGE is implied. The *DBname* value is handled the same way as the DBNAME option. This option cannot be used for a directory operation.

-MERGE=*value*

Specifying **—merge=yes** merges the restored documents into the database indicated by the DBNAME option. If neither this option nor the TO option is set, then MERGE is implied.

This option cannot be used with the TO option. The default is **Yes**. Possible values are:

Yes Merge the restored notes into an existing database file, given by the DBNAME option. If you specify **yes**, then the TO option cannot be specified.

No Put the restored notes into a new database file.

-FROMDate=*mm/dd/yy*

This option is used to help specify a date and time range. All notes backed up within this date and time range will be restored. If more than one backup copy of a note is made during that time range, then only the most recently backed up version is restored. If this option is not specified, it defaults to the date the database was first backed up. This option cannot be used with the TO option.

-FROMTime=*hh:mm:ss*

This option works with FROMDATE to specify a date and time range. The FROMTIME option can only be used if the FROMDATE option is also used. If this option is not specified, it defaults to **00:00:00**, or midnight of the specified date.

-AFTERDate=*mm/dd/yy*

This option is the same as the FROMDATE option. This option cannot be used with the TO option.

-AFTERTime=*hh:mm:ss*

This option is the same as the FROMTIME option.

-TODate=*mm/dd/yy*

This option is used with FROMDATE to help specify a date and time range. All notes backed up within this date and time range will be restored. If more than one backup copy of a note were made during that time range, then only the most recently backed up version will be restored. If this option is not specified, it defaults to the current date.

-TOTime=*hh:mm:ss*

This option works with the TODATE option to specify a date and time range. The TOTIME option can only be used if the TODATE option is also used. If this option is not specified, it defaults to **23:59:59**, or a second before midnight of the specified date.

-BEFOREDate=mm/dd/yy

This option is the same as the TODATE option.

-BEFORETime=hh:mm:ss

This option is the same as the TOTIME option.

-ADSMPW=password

The ADSM password for the ADSM server. If you specified PASSWORDACCESS GENERATE in the client options file, then ADSMPW is ignored. The password is sent to the ADSM server to authenticate the user.

-NEWADSMpw=newpassword

The new password for the ADSM server. The ADSMPW option must also be supplied to authenticate the user, even if PASSWORDACCESS GENERATE was specified in the client options file. This option can be used to change the password for the ADSM server, for example, if the old password has expired.

-MOUNTwait=value

This parameter is used if you do not want ADSM to wait for a tape mount if one is necessary. The default is **Yes**. Possible values are:

Yes The restore process will wait for a tape mount if one is necessary.

No The restore process will not wait for a tape mount. If a tape mount is necessary, the operation is cancelled.

-UPDATEall=value

If you specify **Yes** for this option, all of the Lotus Notes documents in the database are updated to have the current date and time. The default is **No**. This option cannot be used with the TO option. Possible values are:

No No, do not update the Lotus Notes documents in the database.

Yes Yes, update all of the Lotus Notes documents in the database to have the current date and time. This forces replication to all replica databases.

-SUBdir=value

This parameter is optional. It indicates whether subdirectories are restored or not. This option is not available in the graphical user interface. The default is **No**. Possible values are:

No If the DBNAME option specifies a directory, only the databases in the specified directory are restored.

Yes If a directory is specified, all databases in the specified directory **and all subdirectories** are restored.

Examples

Task Restore the last version of the database named **Inotes3.nsf** that was backed up in 1996. Call the new database **Inotes3a.nsf**.

Command

```
dsmnotes restore c:\plan\proj1\lnotes3.nsf  
-to=c:\plan\proj1\lnotes3a.nsf -beforedate=1/1/97  
-beforetime=00:00
```

Task Restore all notes that were backed up in April 1996 and merge them into a database named **lnotes4.nsf**. Change the modification date for all notes in the database to the current date.

Command

```
dsmnotes restore -updateall=y -fromdate=4/1/96  
-todate=4/30/96 c:\plan\lnotes4.nsf
```

Chapter 5. Using the Graphical User Interface

The ADSMConnect Agent for Lotus Notes graphical user interface enables you to perform the following tasks:

- Restore selected documents from a database
- Restore documents that have been deleted but not yet purged
- Restore a copy of an entire database
- Set and change the ADSM password
- Get online help

Note: You can continue to interact with the Lotus Notes Workspace and other processes while the restore operation is taking place. However, you cannot start another restore operation while one is already active.

Using the Lotus Notes Workspace

When you run Lotus Notes workspace, click on the Actions menu to display the following commands in the pop-up window:

- ADSM Restore Documents(s)
- ADSM Rebuild Database
- ADSM Restore Deleted Documents(s)

These commands can only be selected when a database is open. If no database is open, the commands are disabled.

Using the ADSMConnect Agent Graphical User Interface

You can move between the fields by clicking on each field separately, or by using the **Tab** key. Only the highlighted field accepts keyboard input. Use the up and down arrow keys to navigate the radio button fields and the space bar to change them.

Restoring Selected Documents from a Database

You can restore backed up copies of individual documents from the ADSM server to a Lotus Notes database on your workstation. The documents must still be present in the database. If the documents have been deleted, see "Restoring Deleted Documents" on page 35.

This operation is only available in the Lotus Notes workspace.

Lotus Notes Workspace

Follow these steps to restore selected documents to your Lotus Notes database.

- 1** Open a view of the database that has the documents you want to restore..

- 2** Check mark the documents you want to restore.
- 3** Click on the Actions menu.
- 4** Select **ADSM Restore Documents(s)**.
- 5** If the ADSM Password dialog box displays, type in the ADSM password and click on the **OK** button or press **Enter**.
The ADSM Restore Documents dialog box appears (Figure 3).

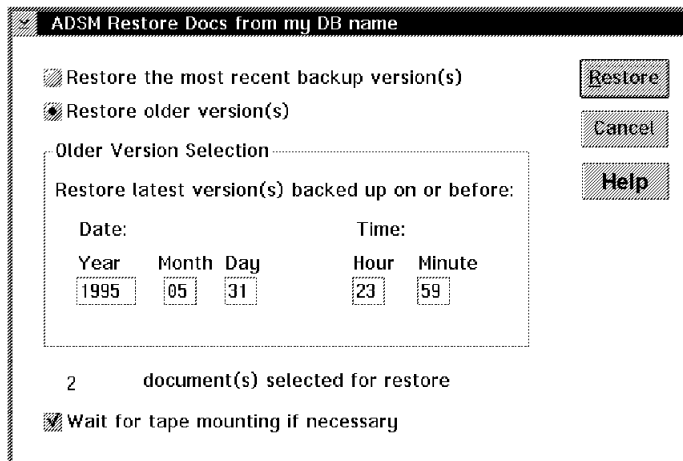


Figure 3. Restoring Specific Documents from a Database

- 6** Select one of these options:
 - **Restore the most recent backup versions(s)**—This option restores each of the selected documents with its most recent backup version.
 - **Restore older versions(s)**—This option restores each of the selected documents with the latest version that was backed up before the date and time in the **Older Version Selection** box. Type the date and time from which you want to restore in the **Older Version Selection** box.
- 7** Select **Wait for tape mounting if necessary** (selected as the default). You can deselect this option if you do not want ADSM to wait for files that are on the tape.
Also check to make sure the number of documents selected matches the number of documents you check marked.

8 Click on **Restore** to restore your documents.

9 To see the restored documents, click on the View menu, then select **Refresh** or press **F9**.

Click on the **Cancel** button at any time to exit the dialog box without restoring any documents.

Click on the **Help** button at any time to get online help.

Restoring Deleted Documents

You can restore deleted Lotus Notes documents from ADSM storage, if the deletion stubs have not been purged from the database. The deleted documents are replaced with documents backed up on the ADSM server.

For more information about restoring deleted documents, see the **dsmnotes restdel** command (“dsmnotes restdel” on page 24).

Lotus Notes Workspace

Follow these steps to restore documents that have been deleted but not yet purged from your Lotus Notes database:

1 Open a view of the database that contained the deleted documents.

2 Click on the Actions menu.

3 Select **ADSM Restore Deleted Documents(s)**.

4 If the **ADSM Password** dialog box displays, type in the ADSM password and click on the **OK** button or press **Enter**.

5 The **ADSM Restore Deleted Docs** dialog box displays.

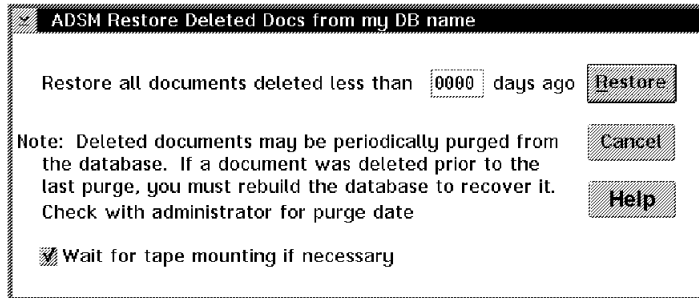


Figure 4. Restoring Data Documents From Deletion Stubs

- 6** If you want to restore only those documents deleted less than a certain number of days ago, type this number of days in the **Restore all documents deleted less than nnnn days ago** field.
If you leave this field blank, it uses the zero default. Then all the deleted, but not yet purged, documents are restored.
- 7** Select **Wait for tape mounting if necessary** (selected as the default). You can deselect this option if you do not want ADSM to wait for files that are on tape.
- 8** Click on **Restore** or press **Enter** to restore your documents.
- 9** To see the restored documents, click on the View menu and select Refresh or press **F9**.

Click on the **Cancel** button at any time to exit the dialog box without restoring any documents.

Click on the **Help** button at any time to get online help.

Rebuilding a Database

When you restore a backed up Lotus Notes database, you can either restore it to a new database or merge the documents from the backed up database into a database that already exists on your workstation.

You can use either the Lotus Notes Workspace or the command line to rebuild a Lotus Notes database. For information on the command, see “dsmnotes restore” on page 27.

Lotus Notes Workspace

Follow these steps to rebuild a database or merge selected documents into a database that already exists:

- 1 Open a view of the database that you want to rebuild. If the database no longer exists, you must restore it using the **dsmnotes restore** command. For examples of this command, see “dsmnotes restore” on page 27.

After performing the **dsmnotes restore** command, return to your Lotus Notes workspace.

- 2 Click on the Actions menu.

- 3 Select **ADSM Rebuild Database**.

- 4 If the ADSM Password dialog box displays, type in the ADSM password and click on the **OK** button or press **Enter**.

The ADSM Rebuild Database dialog box appears as shown in Figure 5.

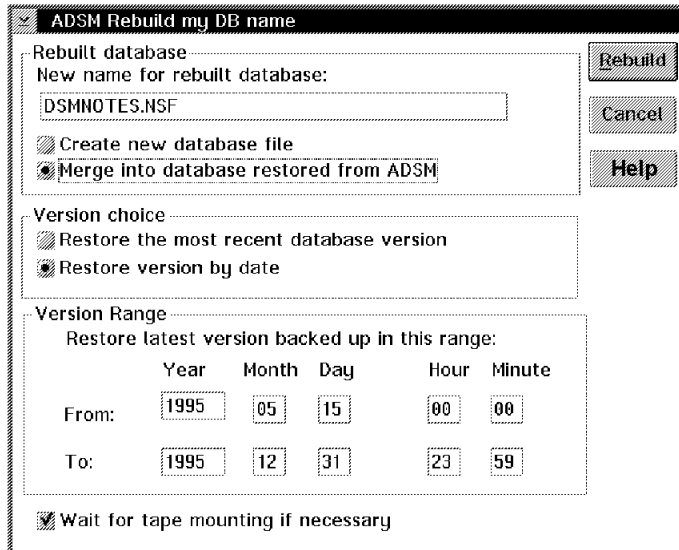


Figure 5. Rebuilding a Database

- 5 In the box labeled **Rebuilt database**, use the default name, or type another name in the **New name for rebuilt database** field.

Select one of these options:

- **Create new database file**—ADSM restores the entire database from backup copies of individual Lotus Notes documents into the new database. You must choose a name that is not the same name of an existing file. For more information on path names, see “Path Name Specification” on page 15

- **Merge into database restored from ADSM**—You can select this option if you have restored a backup version of the database through the ADSM backup-archive client.

This option merges a backup version of individual Lotus Notes documents into a Lotus Notes database restored by the ADSM backup-archive client.

6 Select one of these options in the **Version choice** box:

- **Restore the most recent database version**—This option restores all of the documents in the database with their most recent backup versions.
- **Restore version by date**—This option restores all the documents in the database with the latest versions that were backed up within the dates and times in the **Version Range** box. Type the **From** and **To** dates and times, which you want to restore, in the **Version Range** box.

Note: This option can only be used if **Merge into database restored from ADSM** is selected.

7 Select **Wait for tape mounting if necessary** (selected as the default). You can deselect this option if you do not want ADSM to wait for files that are on tape.

8 Click on **Rebuild** button or press **Enter** to rebuild the database.

9 Open the rebuilt database in the Lotus Notes workspace to view the restored documents. If **Merge into database restored from ADSM** was selected, click on the View menu, then select **Refresh** or press **F9** to see the documents that were merged into the database.

Click on the **Cancel** button at any time to exit the dialog box without rebuilding the database.

Click on the **Help** button at any time to get online help.

Entering and Changing the ADSM Password

Each time you access a Lotus Notes database, whether to back it up or to restore documents to it, ADSM needs to know your password.

To supply your password on the command line, use the ADSMPW option with the command you are entering. In the Lotus Notes Workspace, ADSM brings up the dialog box shown in Figure 6 on page 39.

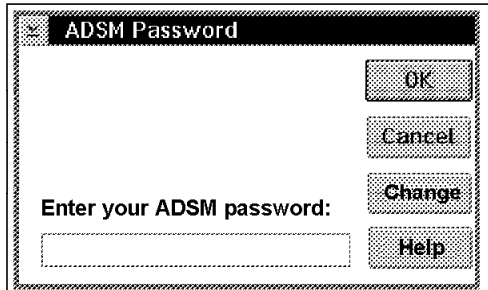


Figure 6. Entering Your Password

- 1** Type the password for your ADSMConnect Agent for Lotus Notes in the **Enter your ADSM password** field.
- 2** Click on the **OK** button or press **Enter**.

Click on the **Change** button and the dialog box in Figure 7 appears.

Click on the **Cancel** button at any time to exit the dialog box.

Click on the **Help** button at any time to get online help.

If your password has expired or you clicked on the **Change** button, ADSM provides the dialog box shown in Figure 7. Enter your old password and a new one, then click on **OK**.



Figure 7. Changing Your Password

- 1** In the **Enter current ADSM password** field, type the current password for your ADSMConnect Agent for Lotus Notes. If you already typed your password in the **ADSM Password** dialog box, you can skip this field now.
- 2** In the **Enter new ADSM password** field, type the new password for your ADSMConnect Agent for Lotus Notes.
- 3** In the **Enter new ADSM password again** field, retype the new password for your ADSMConnect Agent for Lotus Notes again. This verifies the new password.
- 4** Click on the **OK** button or press **Enter** to update your ADSMConnect Agent for Lotus Notes password and to proceed with your request.

Click on the **Cancel** button at any time to exit the dialog box without updating your password and to cancel your request.

Click on the **Help** button at any time to get online help.

To update an expired password or to change a password from the command line, use the NEWADSMPW option with the **dsmnotes incr**, **dsmnotes restdel**, or **dsmnotes restore** command, or use the **dsmnotes change** command.

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