

VERITAS NetBackup™ 3.4

User's Guide

Microsoft Windows 95/98/2000/NT

May 2000
100-001512


VERITAS

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Printed in the USA, May 2000.

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Introduction to *NetBackup User's Guide - Microsoft Windows*

This guide is written for the end user and for the system administrator. It describes how to use NetBackup to back up and restore folders that reside on a Microsoft Windows PC.

Organization of *NetBackup User's Guide - Microsoft Windows*

The *NetBackup User's Guide - Microsoft Windows* is structured to help you find the information you need, quickly. The following table describes each major section:

Table 1.

Section	Description
Introduction	Provides an overview of NetBackup, describes how the end user operates NetBackup, and describes technical terms and concepts. Read this chapter to become familiar with the world of NetBackup.
User Directed Operations	Explains how to use NetBackup to perform backup, archive, and restore operations.
Reference	Describes the various windows, screens, and menus associated with NetBackup.
System Administrators	Contains information important to the NetBackup system administrator.
NetBackup Commands	A detailed listing of commands available for use on the NetBackup client.

Related Documentation

The following documents provide related information. For a more detailed listing of NetBackup documents, refer to *NetBackup Release Notes*.

◆ *NetBackup Installation Guide - PC Clients*

Explains how to install NetBackup PC client software. The PC clients are Windows NT/2000, Windows 95, Windows 98, Macintosh, OS/2 Warp, and Novell NetWare.



If you have a Unix server, refer to these documents:

- ◆ *NetBackup Release Notes*
Provides important information about NetBackup software, such as the platforms and operating systems that are supported and operating notes that may not be in the manuals or the online help.
- ◆ *NetBackup Datacenter System Administrator's Guide - UNIX*
Explains how to configure and manage NetBackup Datacenter on a UNIX system.
- ◆ *NetBackup BusinessServer System Administrator's Guide - UNIX*
Explains how to configure and manage NetBackup BusinessServer on a UNIX server.
- ◆ *NetBackup Troubleshooting Guide - UNIX*
Provides troubleshooting information for UNIX based NetBackup products.

If you have a Windows NT/2000 server, refer to these documents:

- ◆ *NetBackup Release Notes*
Provides important information about NetBackup software, such as the platforms and operating systems that are supported and operating notes that may not be in the manuals or the online help.
- ◆ *NetBackup Datacenter System Administrator's Guide - Windows NT/2000*
Explains how to configure and manage NetBackup Datacenter on a Windows NT/2000 server system.
- ◆ *NetBackup BusinessServer System Administrator's Guide - Windows NT/2000*
Explains how to configure and manage NetBackup BusinessServer on a Windows NT/2000 server.
- ◆ *NetBackup Troubleshooting Guide - Windows NT/2000*
Provides troubleshooting information for Windows NT/2000 based NetBackup products.

Conventions

The following explains typographical and other conventions used in this guide.



Type Style

Table 2. Typographic Conventions

Typeface	Usage
Bold fixed width	Input. For example, type <code>cd</code> to change directories.
Fixed width	Paths, commands, filenames, or output. For example: The default installation directory is <code>/opt/VRTSxxx</code> .
<i>Italics</i>	Book titles, new terms, or used for emphasis. For example: <i>Do not</i> ignore cautions.
<i>Sans serif (italics)</i>	Placeholder text or variables. For example: Replace <i>filename</i> with the name of your file.
Sans serif (no italics)	Graphical user interface (GUI) objects, such as fields, menu choices, etc. For example: Enter your password in the Password field.

Notes and Cautions

Note This is a Note and is used to call attention to information that makes it easier to use the product or helps you to avoid problems.

Caution This is a Caution and is used to warn you about situations that can cause data loss.

Key Combinations

Some keyboard command sequences use two or more keys at the same time. For example, you may have to hold down the Ctrl key before you press another key. When this type of command is referenced, the keys are connected by plus signs. For example:

Press `Ctrl+t`

Command Usage

The following conventions are frequently used in the synopsis of command usage.

brackets []

The enclosed command line component is optional.

Vertical bar or pipe (|)

Separates optional arguments from which the user can choose. For example, when a command has the following format:

`command arg1 | arg2`



the user can use either the *arg1* or *arg2* variable.

Getting Help

For updated information about this product, including system requirements, supported platforms, supported peripherals, and a list of current patches available from Technical Support, visit our web site:

`http://www.veritas.com/`

For product assistance, contact VERITAS Customer Support.

US and Canadian Customers: 1-800-342-0652

International Customers: +1 (650) 335-8555

VERITAS Customer Support can also be reached through electronic mail at:

`support@veritas.com`



During installation, the NetBackup Browser is configured to work with a specific NetBackup client. When a user starts an operation using the NetBackup Browser, the browser software sends the appropriate messages to its designated NetBackup client. The software on the NetBackup client then communicates with the server and handles the client side of the operation.

NetBackup client software enables *server directed* backup, archive, and restore operations on entire folders or individual files that reside on your NetBackup client. This software also allows you to perform *user directed* backup, archive, and restore operations on your NetBackup client, without logging into the NetBackup master server. Once you start a user directed operation, the NetBackup process runs under the control of the NetBackup master server. You request the service and the NetBackup master server manages the rest, including storage and retrieval of data.

In NetBackup terminology, the system that requires the backup or archive is the NetBackup client. The system that manages the storage and retrieval of the backup data is called the NetBackup master server.



Backup and Archive Operations

A backup saves copies of selected files and folders from a NetBackup client to a storage device on a NetBackup master server or NetBackup media server.

An archive saves copies of selected files and folders to a storage device on a NetBackup master server or NetBackup media server, then deletes the original files from the NetBackup client.

User Directed Backups and Archives

You can perform a user directed backup during the time period scheduled by the NetBackup system administrator. NetBackup allows you to select a combination of files, folders with files, or entire drives to back up.

Files can be backed up through the NetBackup client interface or, if NetBackup Explorer Extensions are installed and enabled, through Windows Explorer.

Server Directed Backups and Archives

The NetBackup administrator can schedule full backups and incremental backups that occur automatically and unattended, under control of the NetBackup master server. Full, incremental and true image backups can only be performed by the NetBackup master server. When properly scheduled, the server directed backups will meet most of your backup requirements.

Note In previous versions of NetBackup for Windows, server directed backups could be only partially successful since some applications retain locks on files when left open. NetBackup DataCenter is packaged with OTM (Open File Manager), which resolves this problem. If OTM is disabled, be sure to shut down all applications on the NetBackup client before proceeding with server directed backups.

OTM is a separately priced option for BusinessServer.

Full Backup

When the NetBackup master server is configured to perform a full backup, NetBackup backs up all files in a specified folder or drive to a storage unit. The archive bit is cleared as each file is backed up. If the full backup fails, NetBackup will attempt another full backup at the same time each day until successfully completed. A successfully completed backup will include all files.



Cumulative-Incremental Backup

When the NetBackup master server is configured to perform a cumulative-incremental backup, NetBackup backs up all files that have changed since the last successful *full backup*.

Cumulative incremental backups can be configured to use either the datetime stamp or the archive bit. If the datetime stamp is used, the cumulative-incremental backup includes all files with a datetime stamp that are more recent than the last full backup. If the archive bit is used, the cumulative-incremental backup includes all files that have their archive bit set. Archive bits are not cleared on cumulative-incrementals. Refer to “General Property Sheet” on page 54 for more details on performing incremental backups with archive bits.

Differential-Incremental Backup

When the NetBackup master server is configured to perform a differential-incremental backup, NetBackup backs up all files that have changed since the last successful backup.

Differential incremental backups can be configured to use either the datetime stamp or the archive bit. If the datetime stamp is used, the differential-incremental backup includes all files with datetime stamps that are more recent than the last backup, full or incremental. If the archive bit is used, the differential-incremental backup includes all files that have their archive bit set. Archive bits are cleared on differential-incrementals if the file is successfully backed up. Refer to “General Property Sheet” on page 54 for more details on performing incremental backups with archive bits.

True Image Backup

A True Image Backup takes place when the True Image Restore Information attribute has been set on the NetBackup master server. When this attribute is set, NetBackup collects additional information necessary to restore a folder to exactly what it was at the time of the full backup or incremental backup.

Only those backups, performed with the True Image Recovery Information attribute set on the NetBackup master server, can be used for the true image restore. For complete details, refer to the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT/2000*.



Restore Operations

A restore reads backups from the storage device on the NetBackup master server or the NetBackup media server and restores them to the NetBackup client. NetBackup allows you to select a combination of files, folders with files, or entire drives to restore.

File Permissions and Open Files

File permissions require write permission on the destination folder in order to restore a file. A file will not be restored when a file with the identical name is open on the NetBackup client.

Access Control Lists

If the access control list to a file on a Windows NT/2000 system has changed since the file was backed up, the file will be restored by NetBackup as follows:

- ◆ A user that has been granted access to the file since the backup will *not* have access to the file after the restore
- ◆ A user that has had access to the file removed since the backup will again have access after the file is restored

If the access control list has changed since the backup, it will be restored to what it was at the time of the backup.

Server Directed Restore

The administrator on the NetBackup master server can direct restores to any NetBackup client (regardless of which NetBackup client the files came from). Refer to “Alternate Client Restores” on page 82 for details.

A client can prohibit server directed restores by clearing the Allow Server-Directed Restores option on the General property sheet.

User Directed Restores

You can start a restore operation at any time. Restored folders and drives include all files that were backed up or archived during a range of backups. NetBackup is also able to perform an alternate-client restore and a true image restore.



Alternate Client Restore

With the necessary permissions and configuration, users can browse the NetBackup database for files backed up by another NetBackup client and restore files to their own computer.

System administrators can direct restores to the client that originally backed up the files or to another (alternate) client. This type of restore must be performed on the master server and is called a server directed restore.

Refer to “Alternate Client Restores” on page 82 for details on using the NetBackup Browser on the NetBackup server for alternate client restores.

Restore from True Image Backup

A Restore from True Image Backup can be performed only on server directed backups and archives in which the True Image Restore Information attribute has been set. Refer to the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT/2000* for details.

A true image restore of a folder, by default, restores the folder so its contents are exactly what they were at the time of the most recent server directed full backup or incremental backup. Files deleted prior to the specified backup are not restored.

During a true image restore of a folder, NetBackup determines which files belong in the folder and then reconstructs it by using the most recent backup of these files.

NetBackup does not allow a true image restore that is based on the time of a user operation. However, NetBackup does use the backups from a user directed operation if they are more recent than the latest server directed full backup or incremental backup.

A true image restore is the best choice if, for example, you have recently cleaned up a folder by deleting unwanted files and now want to restore the latest version without having to repeat your cleanup. It is also possible to restore the true image of an earlier version of a folder.

View Status

You can view, print and delete status reports.

File Permissions Required By NetBackup

You need backup privileges to back up or archive a file. Without backup privileges, you must have read access to a file in order to back up the file and read and delete access to a file in order to archive the file (since the archive operation removes the file from the disk).

Listing and restoring files and directories require the following permissions:



- ◆ To list or restore files in a directory owned by someone else, you must have restore privileges. Without restore privileges, you can only restore from a user directed backup you have performed (unless Free Browse is turned on, see “Free Browse” on page 79 for more details).
- ◆ To restore a file to its original location, you must have write access to the file (if the file exists), or to the directory (if the file does not exist).

The following table shows how NetBackup restores files in various situations (for example, if a copy of the file or directory already exists).

Table 3. File Permissions

Type of Restore Attempted	Results
Restore a file that already exists and overwrite the existing file.	If you have restore privileges, NetBackup restores the file and sets file ownership to the same owner as the backup image. If you do not have restore privileges, NetBackup restores the file only if you have write access to it. In a case where the file is read only, but you have write access to the parent directory, NetBackup removes the file and restores the backup image with the original owner as the owner.
Restore a file that already exists and <i>not</i> overwrite the existing file.	Whether you have restore privileges or not, NetBackup does not restore the file and places a message in the progress log.
Restore a file that doesn't exist.	Whether you have restore privileges or not, NetBackup restores the file and sets file ownership to the same owner as the backup.
Restore a file when a directory exists with the same name as the file.	Whether you have restore privileges or not, NetBackup places a message in the log file indicating that the directory will be replaced with the file after the next system reboot. After the system boot, the directory is not replaced and the file is restored with a temporary filename in the parent directory of the directory. This occurs only when overwrite existing files is enabled. The log file will indicate the name the file was given and to which directory it was restored.
Restore a directory when a file exists with the same name as the directory.	The directory will not be restored.
Restore a file in a directory that does not exist.	NetBackup creates the directory with the owner set to the account used to start the NetBackup client service. The file is then restored in the same manner as one that does not exist (see above).

User Directed Operations

2

This section provides step-by-step instructions on using the NetBackup Browser to perform backups, archives and restores. For information on scheduled backups and other server directed operations, see the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT/2000*.

Start the Browser

1. Click the Windows Start menu.
2. Click Programs, VERITAS NetBackup, NetBackup .

The Backup, Archive, and Restore - NetBackup window will appear.



▼ Toolbar

For most operations, it is easier to use the buttons on the toolbar. The horizontal toolbar on the Backup, Archive, and Restore - NetBackup window opens windows to browse for backups or restores and to view the progress report of a NetBackup operation.

The NetBackup Backup window or the NetBackup Restore window has a vertical toolbar with buttons for frequently used menu commands. Clicking a button on a toolbar has the same effect as using the menu command. Any action initiated by the buttons on the vertical toolbar only pertains to the window it is associated with.



▼ **Helpful Hints**

Marking Files and Folders

- ◆ To mark a file for backup or restore, select the checkbox to left of a file.
- ◆ To mark a folder for backup or restore, select the checkbox to the left of a folder. A check mark will appear in the box. A slash mark in the box indicates only some of the files or subfolders within that folder are marked.
- ◆ To mark all the files (and folders) that currently appear in the <variable>Contents of '<folder>' pane, click Mark Displayed Files from the Edit menu.

Unmarking Files and Folders

- ◆ To unmark a file, clear the checkbox to the left of the file.
- ◆ To unmark a folder, and all its files and subfolders marked within that folder, clear the checkbox to the left of the folder.
- ◆ To unmark all files and folders that currently appear in the <variable>Contents of '<folder>' pane, select Unmark Displayed Files on the Edit menu.
- ◆ To unmark all previously marked files and folders, select Unmark All on the Edit menu. You can also use the Unmark All on the NetBackup Backup window or NetBackup Restore window toolbars.

Perform Backups or Archives

This section includes a tutorial. It walks you through a simple backup of the `readme.txt` file installed in the NetBackup folder. You can back up a file either through the NetBackup Browser or through Windows Explorer.

Backing Up a File Through Windows/Windows NT Explorer

Note Explorer Extensions must be enabled in order to be able to back up files through Windows Explorer. To enable this feature, open NetBackup and on the Actions menu select NetBackup Explorer Extensions.

1. Open Windows/Windows NT Explorer.
2. Right-click on the file (or folder) you wish to back up.
 - a. Open the `Program Files\VERITAS\NetBackup` folder.
 - b. Find the `ReadmeCl.txt` file and right-click on it.
3. Click Backup Now.
4. To show the progress of the backup operation, Automatically Show Progress Log.
5. To begin the backup operation, click Yes.

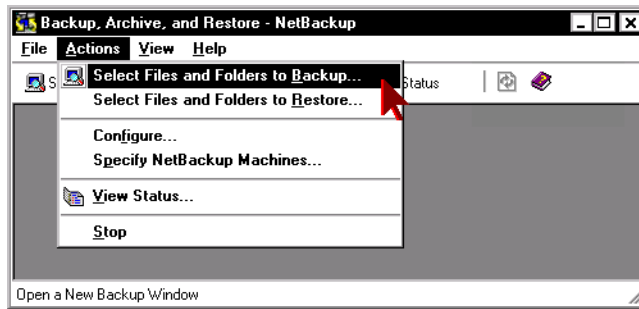
Backing Up a File Through the NetBackup Browser

1. Start NetBackup as described in “Start the Browser” on page 7. The Backup, Archive, and Restore - NetBackup window should appear.
2. Open the NetBackup Backup window.

There are two ways to open the NetBackup Backup window.

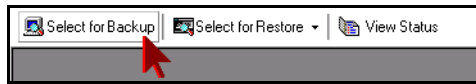


- ◆ Click Select Files and Folders to Backup on the Actions menu.

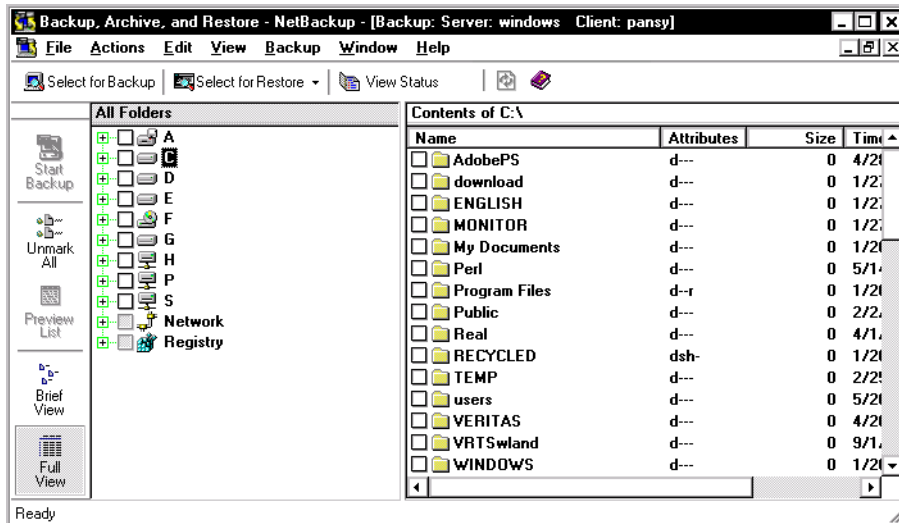


or

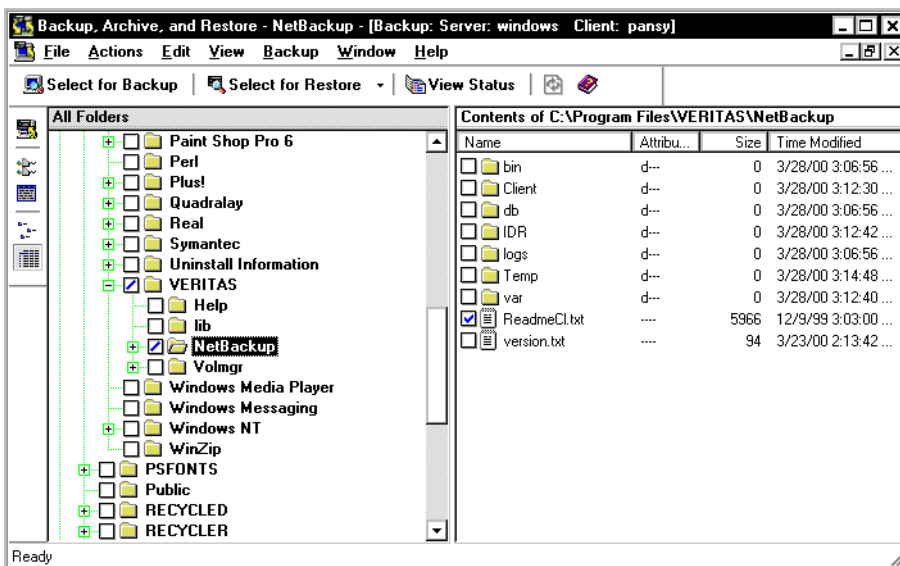
- ◆ Click Select for Backup on the Backup, Archive, and Restore - NetBackup window vertical toolbar.



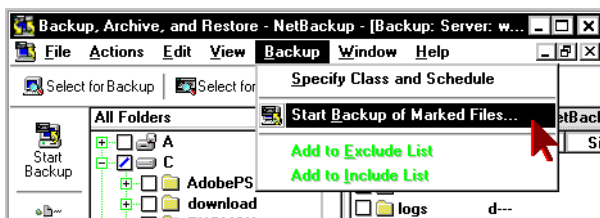
The NetBackup Backup window will appear.



3. Mark a file to backup.
 - a. Open the Program Files\VERITAS\NetBackup folder.
 - b. Find the ReadmeCl.txt file and select the checkbox to the left of the item.



4. Start the backup operation.
 - a. Click Start Backup of Marked Files on the Backup menu.

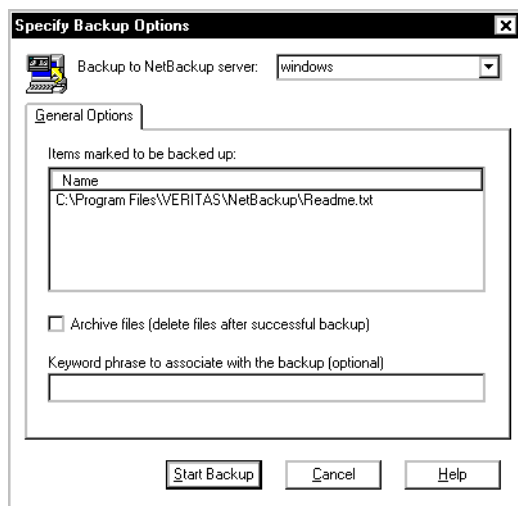


OR

Click Start Backup on the NetBackup Backup window vertical toolbar.

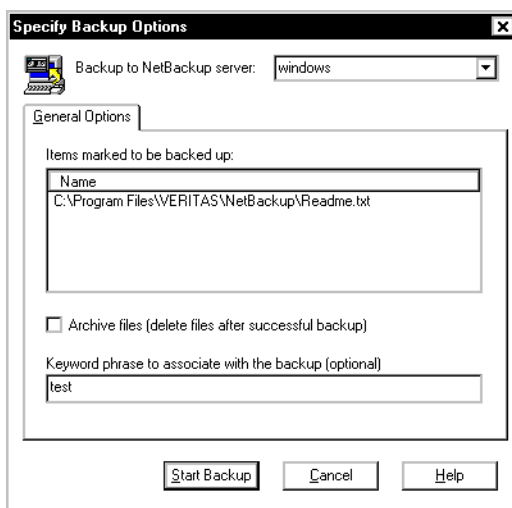


The Specify Backup Options dialog box will appear.



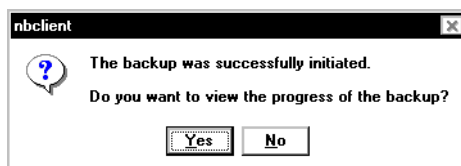
- b.** Review your selections in the Name list box.
 - ◆ If the `ReadmeCl.txt` file is not listed, click **Cancel**. This will return you to the NetBackup Backup window. Repeat step 3.

- c. Enter a keyword in the Keyword phrase to associate with the backup (optional) box. In this example use **test** as the keyword.



- d. Click Start Backup.

The backup request goes to the NetBackup master server. A NetBackup message will indicate that the backup was successfully started.



- e. Click Yes on the NetBackup Message dialog box to open the View Status dialog box.

The View Status dialog box allows you to view the progress report of a NetBackup operation. For more information see “View the Status of a User Directed Operation” on page 21.

Note The NetBackup operation may take a few minutes to complete. You can close the NetBackup Browser after starting a backup operation. NetBackup will continue the backup operation in the background.

Backing Up Shared Folders

For information on backing up shared folders, refer to the “Backup Network Drives” topic in the *NetBackup System Administrator's Guide*.



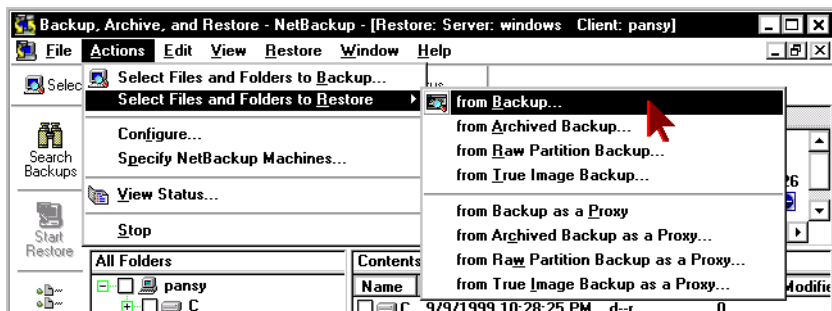
Perform Restores

This section walks you through a simple restore of the `ReadmeCl.txt` file backed up in “Perform Backups or Archives” on page 9 of this manual.

1. Start NetBackup as described in “Start the Browser” on page 7.
2. Open the NetBackup Restore window.

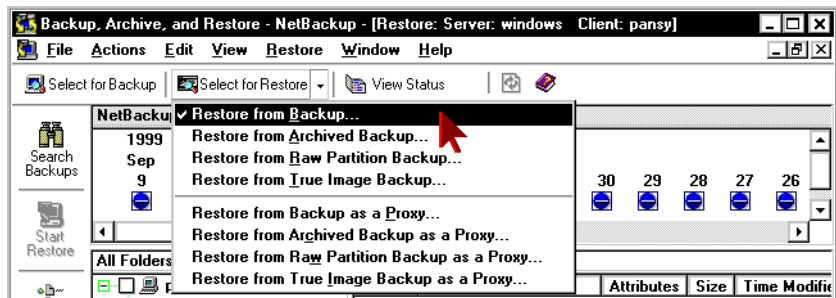
There are two ways to open the NetBackup Restore window.

- ◆ On the Actions menu, click Select Files and Folders to Restore, then from Backup.

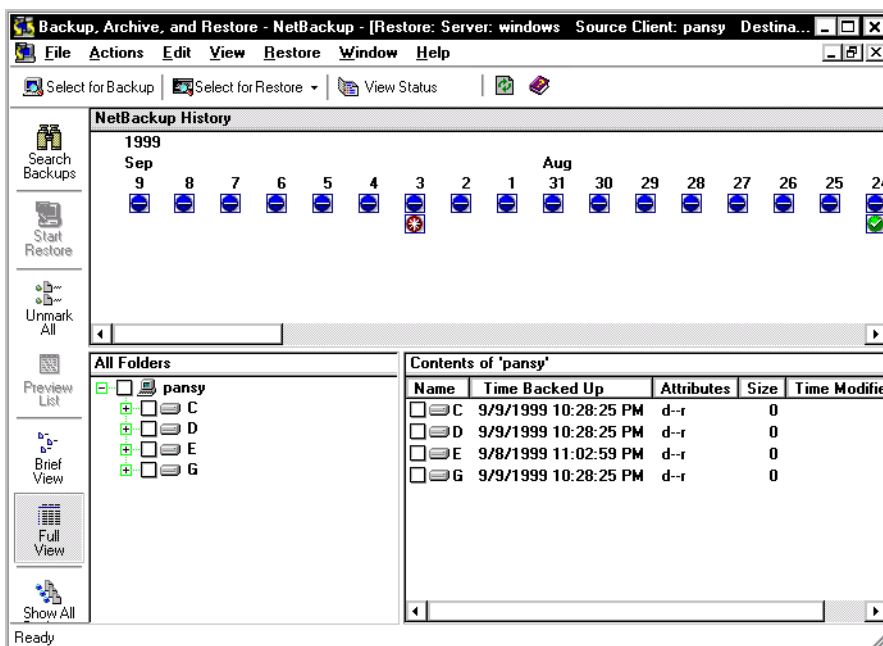


or

- ◆ On the horizontal toolbar, click the arrow on the Select for Restore button and select Restore from Backup.



The NetBackup Restore window will appear.



There may be a delay before lists appear in the NetBackup Restore window. NetBackup has to obtain the file information from the catalogs on the NetBackup master server.

If files or folders do not appear in the NetBackup Restore window, it can be due to one of the following:

- ◆ Perform Default Search is not enabled. In this case, start a search manually by clicking Search Backups on the Restore menu. Or to display the files in a backup, click a backup image.
- ◆ The NetBackup server does not have any backups of files for your client. Ensure that the client is connecting to the correct server (see “Servers Property Sheet” on page 61). Also, ensure that you are using the correct client name (see “General Property Sheet” on page 54). You can also refer to the title bar. If these settings are correct and you believe there are backups available, contact your system administrator.

3. Select a file to restore.

If you know the backup image (or the range of images) you can select it from the NetBackup History pane without going through the Search Backups dialog box.



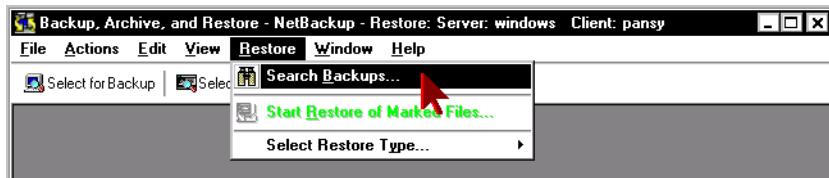
In this tutorial, we are going to use the Search Backups feature to restore the `ReadmeCl.txt` file backed up in the “Perform Backups or Archives” on page 9.

Tip Before initiating a search, collapse the tree in the All Folders pane as much as possible. NetBackup will expand the tree to the folders that match your search criteria.

- a. Open the Search Backups dialog box.

There are two ways to open the Search Backups dialog box.

- ◆ Click Search Backups on the Restore menu.



or

- ◆ Click Search Backups on the vertical toolbar.



The Search Backups dialog box will appear.

- b. Type the path to the backed up file in the Search Folder box. For this example we will enter `C:\Program Files\VERITAS\NetBackup\`.

- c. Type **test** in the Keyword Phrase (Optional) box.

Search Backups

Search Folder:
c:\Program Files\Veritas\NetBackup

Perform case-insensitive search

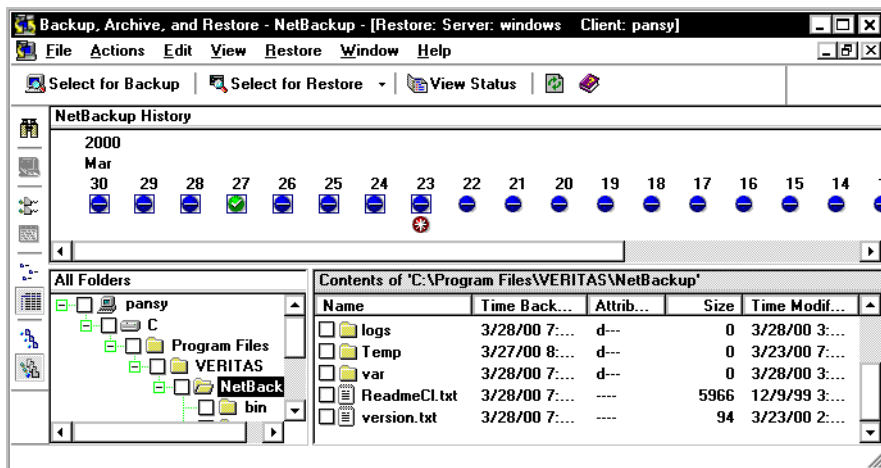
Keyword Phrase (optional):
test

Start Date:
3/27/00 8:19:37 PM

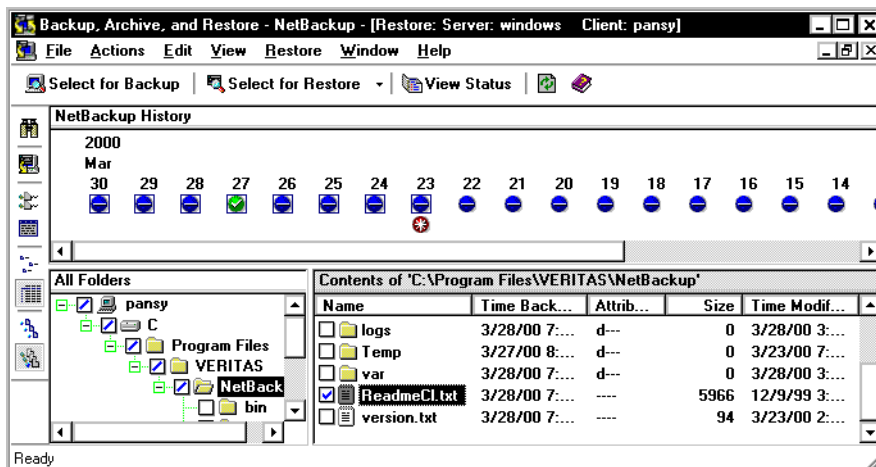
End Date:
3/30/00 7:24:55 PM

Search Cancel Help

- d. Press Search. NetBackup will display the tree to the lowest levels of folders which contain files that were backed up.



- e. Select the checkbox to the left of the `ReadmeCL.txt` file.

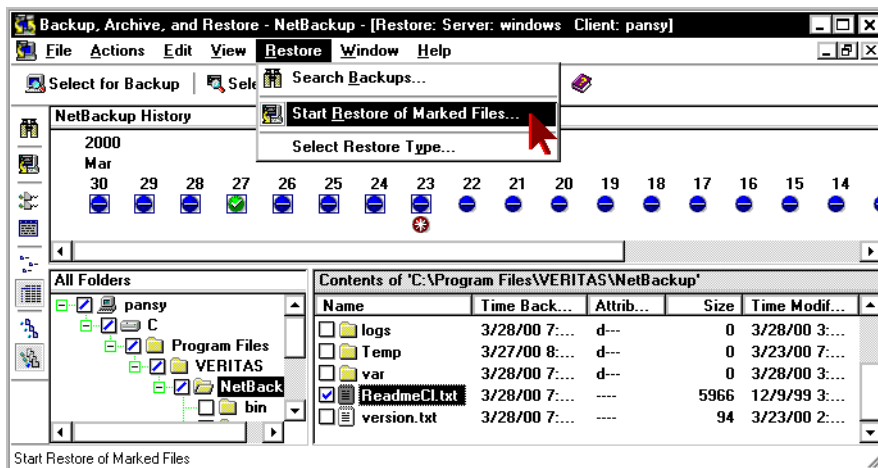


Notice that the checkboxes in the All Folders pane have a slash in them.

4. Start the restore operation.
 - a. Open the Restore Marked Files dialog box.

There are two ways to open the Restore Marked Files dialog box

- ◆ Click Start Restore of Marked Files on the Restore menu.



or

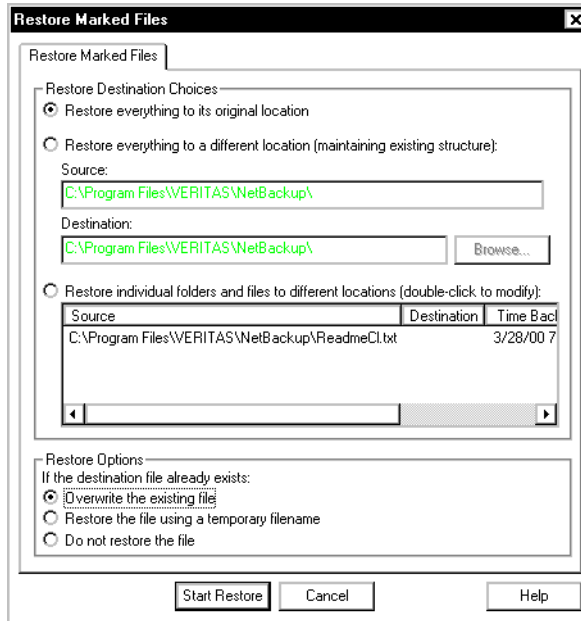
- ◆ Click Start Restore from the vertical toolbar.



The Restore Marked Files dialog box will open.

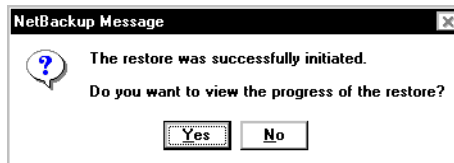


- b. Select the Overwrite the existing file checkbox.



- c. Click Start Restore to start the restore operation.

A NetBackup message will indicate that the restore was successfully started.



- d. Click Yes on the NetBackup Message box to open the View Status dialog box.

The View Status dialog box allows you to view the progress report of a NetBackup operation. For more information see “View the Status of a User Directed Operation.”

Note The NetBackup operation may take a few minutes to complete. After starting a restore operation, you can close the NetBackup browser and perform other tasks on your computer. NetBackup will continue the restore operation in the background.

View the Status of a User Directed Operation

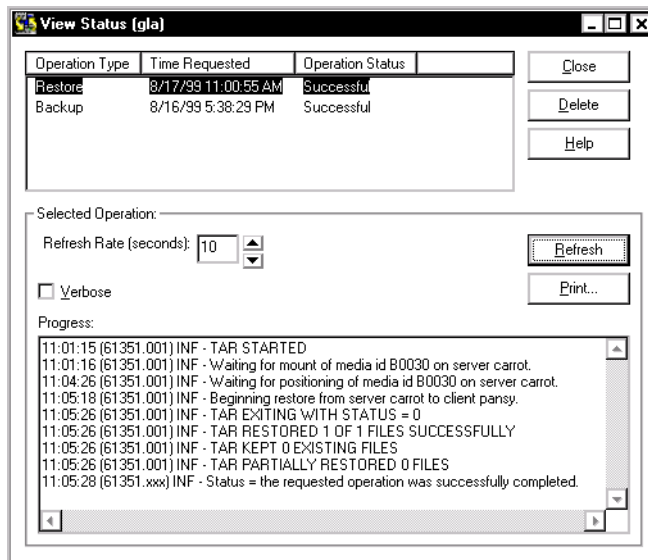
1. Open the View Status dialog box to check the progress report.

There are two ways to open this dialog box.

- ◆ Click the View Status button on the toolbar in the Backup, Archive, and Restore - NetBackup window.

or

- ◆ On the Actions menu click View Status.



The status will appear in the top pane under the Operation Status column.

2. Select the operation that you want to check the progress of.
3. Click Refresh.

The lower pane will reflect the progress of the item selected in the top pane.

4. Select a refresh interval. The default setting is 0 seconds, which means the status will not be automatically refreshed.
5. By default the progress file is displayed in an abbreviated form. If you wish to view the entire contents of the progress file, select Verbose.



The NetBackup operation is finished when the Status changes to `Successful`. If NetBackup was unable to back up or restore all of the requested files, a status code appears a few lines before the end of the progress report. The *NetBackup Troubleshooting Guide - UNIX* or the *NetBackup Troubleshooting Guide - Windows NT/2000* list the meaning of the final status code.

Advanced Restore Procedures

The following is a detailed explanation of how to perform advanced restores.

Selecting Specific Backup Dates to Restore

By default, the NetBackup Restore window shows the files and folders that were backed up from the time of the last full backup to the most-recent backup. If the client belongs to more than one ¹class, the default display starts with the last full backup that occurred first. For example, assume that the client belongs to ClassW1 and ClassW2. Full backups occur for both of them—ClassW1's most recent full backup occurred on Feb. 2 and ClassW2's most recent full occurred on Feb. 10. The display shows files ranging from the time of the ClassW1 full backup on Feb. 2.

The default range will satisfy the majority of your needs to restore files. There will be times, however, when you must restore a file that was not backed up during the default time period. For example, a file that was deleted prior to the last full backup does not appear in the default display. In this case, you must use the NetBackup History pane to select a backup that contains the file.

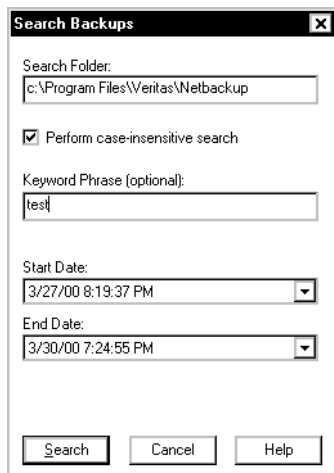
Searching for Files to Restore

1. Open the NetBackup Restore window.
2. Click Show All Backups on the View menu to display all copies of files and folders from all of the backups. Show Most Recent Backup will display the most recent copy of the file or folder.
3. Select the images, from the NetBackup History pane, that you believe contain the files and folders you want to restore.
4. Narrow the search range as much as possible to speed up your search.
 - ◆ Select a specific backup image in the NetBackup History pane.
 - ◆ To select a range of backup images, select the first one in the range and then, while holding the Shift key, select the last one in the range. In this case, NetBackup searches all the backup images in the selected range. The range search will start after the second image is selected.
 - ◆ Cancel previous selections by selecting another backup.

1. A NetBackup class defines the backup policies for a specific group of one or more clients that have similar backup requirements. The NetBackup system administrator configures the class for your PC.



5. Click Search Backups on the Restore menu to open the Search Backups dialog box.



6. Enter the search path that you want NetBackup to use in its search for files and folders.

The number of files you can list during a search is limited by the amount of free memory you have on your computer. If you reach the limit, modify the date or file path parameters to narrow the scope of the search.

By default, the Search Backups dialog box shows the information for the folder that is currently selected in the All Folders pane of the NetBackup Restore window. See “Search Backups Dialog Box” on page 71 for more information.

7. Click Search to start the search. When the search is complete, NetBackup updates the NetBackup Restore window.

Restore an Earlier Version of a Folder or File

This procedure will restore all files that were backed up during the range of backup dates. This includes files that were deleted from your online folder after they were backed up. If you do not want the deleted files, refer to “Restoring a True Image of a Folder” on page 25.

1. Open the NetBackup Restore window.
2. Open the backup NetBackup History pane.

If the NetBackup History pane is not open, click and drag the horizontal splitter bar down.

3. In the NetBackup History pane, select backup images for the dates of the backed up files or folders you want to restore.

NetBackup will search the backup images, and display the contents of the backup images in the All Folders and <variable>Contents of '<folder>' panes.

- ◆ To restore a version of a folder or file that existed prior to the last full backup, select only the backups that include the desired version of the folder or file.
 - ◆ To further narrow your search for a specific folder, file or keyword, go to step a.
- a. On the Restore menu, click Search Backups to open the Search Backups dialog box.
 - b. Enter a filename or keyword.
 - c. Click Search to start the search. When the search is complete, the NetBackup Restore window is updated.
4. Select the folder you want to restore in the All Folders pane of the NetBackup Restore window.
 5. Mark the files or folders you need in the <variable>Contents of '<folder>' pane. By default, NetBackup restores files and folders to their original location.
 6. Click Start Restore of Marked Files on the Restore menu.

Restoring a True Image of a Folder

Note You can restore a true image of a folder only if the NetBackup class that is backing up your files and folders is configured to collect true image restore information prior to backup. If in doubt, ask your NetBackup administrator.

What Is a True-Image Restore?

A true-image restore of a directory, by default, restores the directory so its contents are exactly what they were at the time of the most recent automatic full or incremental backup. Files deleted prior to the specified backup are not restored.

A true image restore is the best choice if, for example, you have recently cleaned up a directory by deleting unwanted files and now want to restore the latest version without having to repeat your cleanup. It is also possible to restore the true image of an earlier version of a directory.



Example of a True Image Restore

To illustrate the concept of a true image restore, consider the following table, which shows the contents of a directory named:

c:\doc

during a series of backups performed between 12/01/95 and 12/04/95.

Day Type of Backup	12/01/95 (Full)	12/02/95 (Incr)	12/03/95 (Incr)	12/04/95 (User Back)	12/04/95 (Incr)
	file1	file1	file1	file1	file1
	file2	file2	file2	file2	file2
	dirA/fileA	dirA/fileA	dirA/fileA	dirA/fileA	-
	dirB/fileB	-	-	-	-
	file3	-	-	-	-
				dirC/fileC	-
				file4	file4

Assume that you are going to restore the most recent version of the directory.

- ◆ If you perform a standard restore, NetBackup will restore all files and subdirectories that were backed up during the time period from 12/01/95 (last full backup) through 12/04/95.

```
file1
file2
dirA\fileA
dirB\fileB
file3
dirC\fileC
file4
```

- ◆ If you restore a true image backup, NetBackup restores only the files and directories that existed at the time of the incremental backup on 12/04/95.

```
file1
file2
file4
```

NetBackup does not restore anything deleted prior to the 12/04/95 incremental backup.



Notice that the restored directory does not include the dirA and dirC subdirectories, even though they were backed up on 12/04/95 with a user-directed backup. NetBackup did not restore these directories because they did not exist at the time of the incremental backup that was the reference for the true image restore.

True Image Restore and Overwriting

If you are overwriting the directory you are restoring, NetBackup does not delete files that are currently in the directory but not in the true image restore backups.

Using the previous example, if you had created a file5 after the incremental backup occurred on 12/04/95, but before doing the restore, then the contents of the directory after the restore would have been:

```
file1
file2
file4
file5 (this is the new file that is not in any of the backups)
```

True-Image Restore Procedure

1. From the Restore menu, choose Select Restore Type and point to True Image Backups.

If you get a `No Entity Found` message at this point, notify the administrator. The TIR option on the NetBackup server must be set before you can perform a true image restore. A backup with the TIR option set needs to exist before a TIR restore can happen.

2. In the All Folders pane of the NetBackup Restore (True Image) window, double-click the parent of the folder you want to restore.

The double-click updates the NetBackup Restore (True Image) window to show the folders that are available for true image restores. Notice that the lists show only folders. Individual files do not appear because true image restores are intended only for restoring entire folders. To list or select individual files, use Normal Backups.

If NetBackup cannot find any folders, check the Search Folder setting in the Search Backups dialog box. Also check the range of backups that you are searching (NetBackup History pane). If all of these settings are correct and no folders are found, ask the administrator to see if the NetBackup class that is backing up your files and folders is configured to collect true image restore information.

3. Select the folder you want to restore by marking it in the `<variable>Contents of '<folder>'` pane of the NetBackup Restore (True Image) window (you must select from this side of the window).



Note When a file in the folder has the same filename as a file in the true image backup, NetBackup will delete the file from the folder and replace, or restore, the file from the true image backup. NetBackup will not delete files from the folder that are not in the true image restore.

4. Click Start Restore of Marked Files on the Restore menu.

By default, NetBackup restores the folder to its original location.

Restoring Files to an Alternate Path

In some instances, you may want to restore items to a file or path other than the one from which they were backed up. This is called an alternate path restore.

Restoring Everything to a Different Location

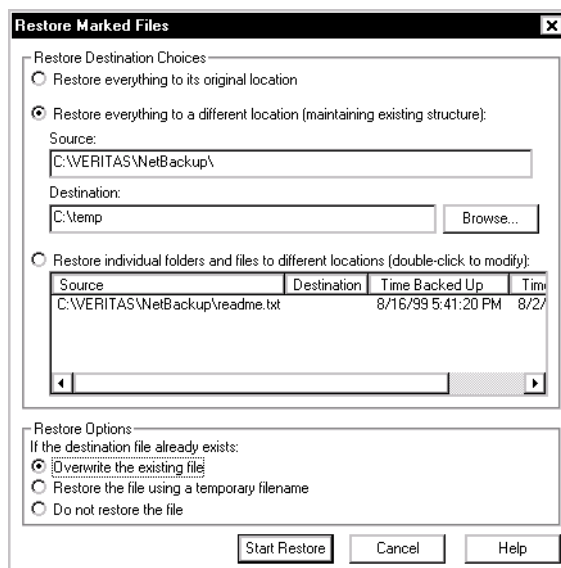
1. Open the NetBackup Restore window.
2. Select the items to restore.
3. Click Start Restore of Marked Files on the Restore menu. The Restore Marked Files dialog box will appear.
4. Click Restore everything to a different location.
5. In the Source box, enter the folder from which the items were backed up.

By default, the lowest level folder common to all the items being restored appears in the Source box. If this is changed to a folder that only contains some of the items, only those items will be restored to the folder specified in the Destination box. All other items will be restored to their original location.

6. In the Destination box, enter the alternate folder to which you want to restore the items.



- Under Restore Options, select the desired option.



- Click Start Restore.

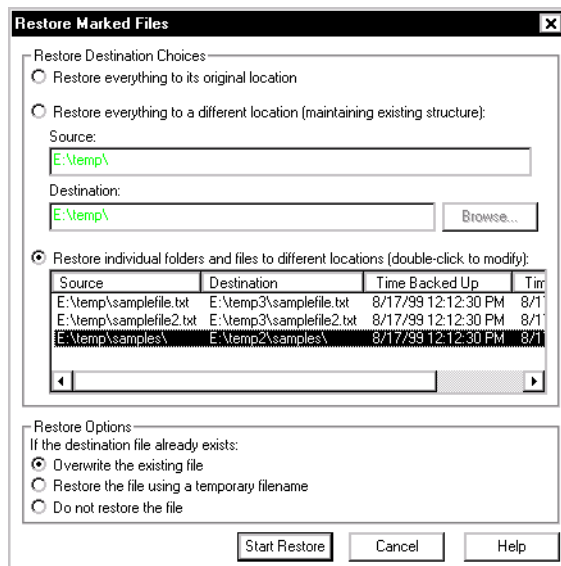
NetBackup will restore the items to the new destination folder.

Restoring to Individual Items Different Locations

- Open the NetBackup Restore window.
- Select the files or folders you wish to restore.
- Click Start Restore of Marked Files on the Restore menu. The Restore Marked Files dialog box will appear.
- Click Restore individual folders and files to different locations.
- To change the destination location for a file:
 - Double click on the file. The Enter New Destination dialog box opens.
 - Type a new path to restore to.
 - or
 - Click the Browse button to browse for and select a new path to restore to.



- c. Press OK. The new path entered appears in the Destination column.

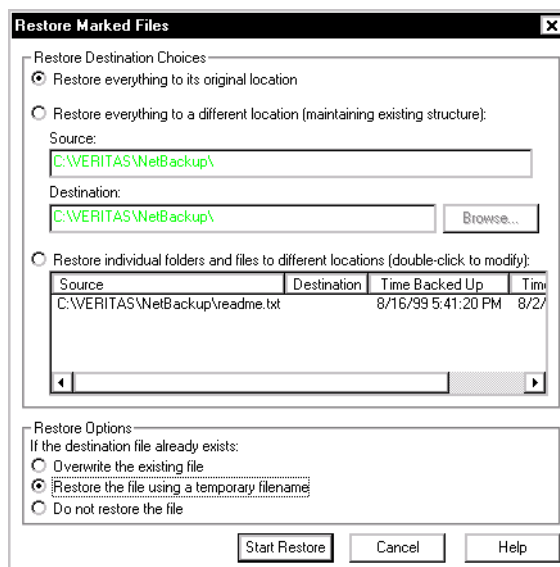


- d. Repeat these steps for each file, or folder you want to restore
6. Under Restore Options, select the desired option.
 7. Click Start Restore.

Restore Using a Temporary Filename

1. Open the NetBackup Restore window.
2. Select the item to restore.
3. Click Start Restore of Marked Files on the Restore menu. The Restore Marked Files dialog box will appear.

4. Select Restore the file using a temporary filename.



5. Click Start Restore.

NetBackup will restore the item to `filenameXXXXXX.TMP`. Where `filename` is the name of the file being restore and `XXXXXX` is generated based on the current date and time.

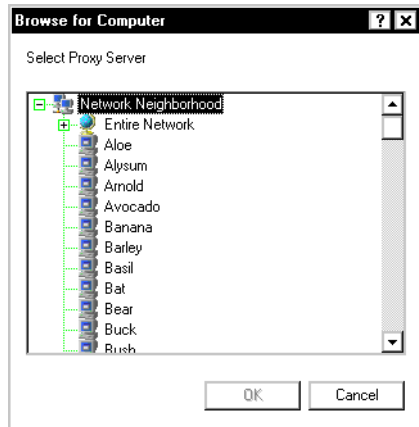
Proxy Restore

In some environments users store their files on a file server rather than on their PC. A proxy restore allows backups of the file server to be restored to the file server from the user's desktop PC.

Note Though you are able to view and mark any of the folders and files in a selected backup, you will not be able to restore any items you do not have write access to.



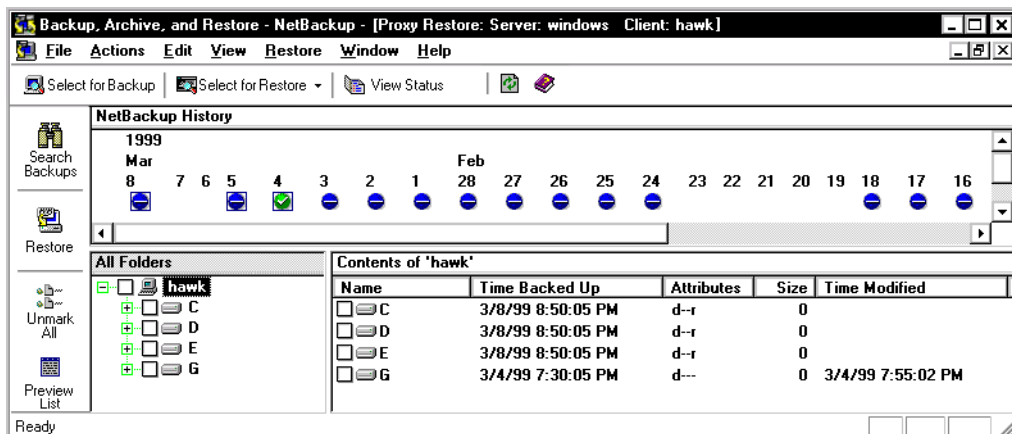
1. Open the NetBackup Restore window.
 - a. On the Actions menu, point to Select Files and Folders to Restore, then select from Backup as a Proxy. A Browse for Computer dialog box will appear.



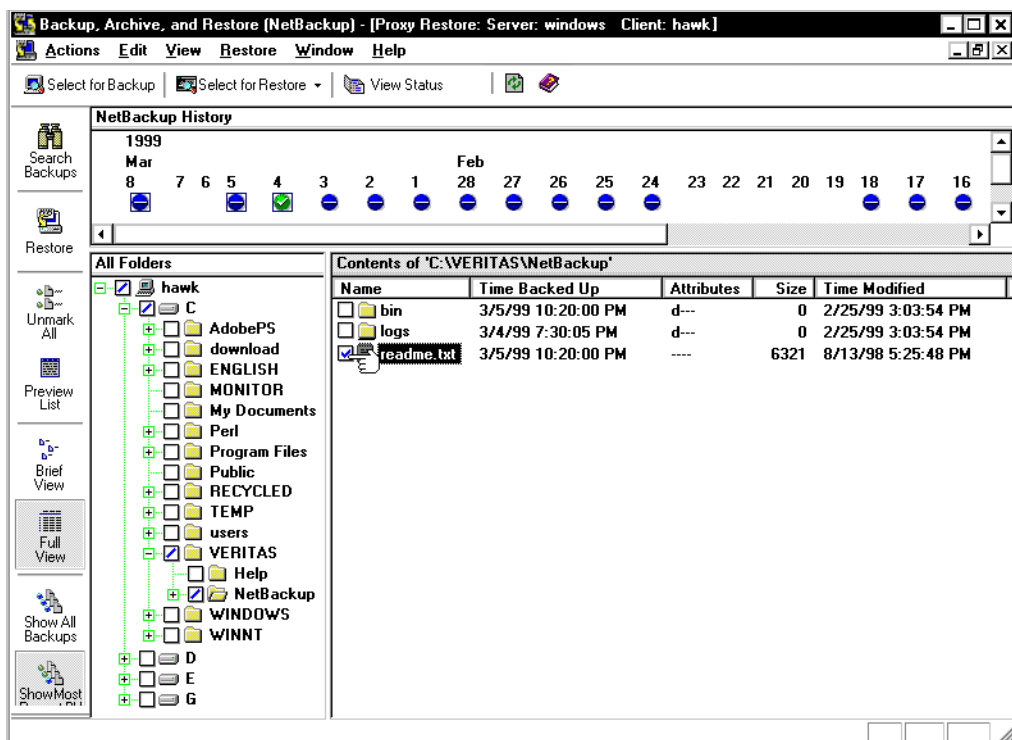
- b. Select the file server to which you want to restore folders and/or files and click OK. For this tutorial we will select a computer called hawk.

A NetBackup Restore window will appear.

The NetBackup server will change to the master server of the selected file server.



2. Select `readme.txt` from the NetBackup folder.



3. On the Restore menu, click Start Restore of Marked Files.

The Restore Marked Files dialog box will open.






4. Select Overwrite the existing file.
5. Click Start Restore.



This chapter provides reference information on the NetBackup Browser. It includes a description of the Browser menus, windows and dialog boxes.

NetBackup Icons

The following table describes NetBackup icons you may see on the Microsoft Windows desktop.

Icon	Description
	Represents NetBackup. It is used on the title bar in the Browser, in the program start menu, and Windows Explorer.
	Indicates that the NetBackup Client Job Tracker is running, but there are currently no backups or restores processing. Used in the system tray.
	Indicates that the NetBackup Client Job Tracker is running, with at least one restore processing. Used in the system tray. When the yellow arrow is blinking, you can open the NetBackup Client Job Tracker for an estimate of the restore operation.
	Indicates that the NetBackup Client Job Tracker is running, with at least one backup processing. Used in the system tray. When the yellow arrow is blinking, you can open the NetBackup Client Job Tracker for an estimate of the backup operation.
	Indicates that the NetBackup Client Job Tracker is running, with at least one backup and one restore processing. Used in the system tray with the yellow arrows blinking.

Menus

This section explains the menu bar commands on the NetBackup Browser.



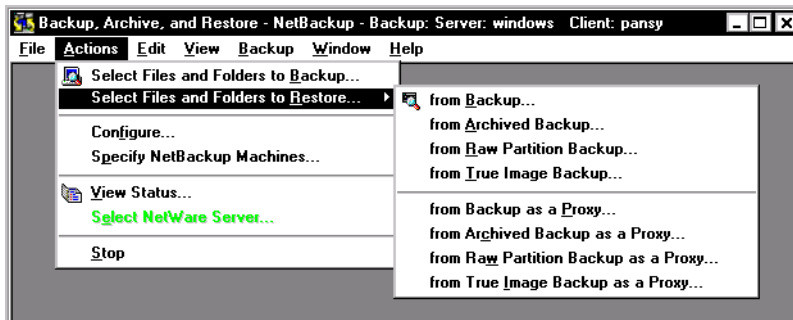
File Menu



The commands on the File menu allow you to close Backup and Restore windows and exit NetBackup.

- | | |
|-------|--|
| Close | This command appears in the File menu when a NetBackup Backup window or a NetBackup Restore window is open. Use this command to close a selected window. |
| Exit | Terminates the browser. Any backups or restores in progress will continue to completion. |

Actions Menu



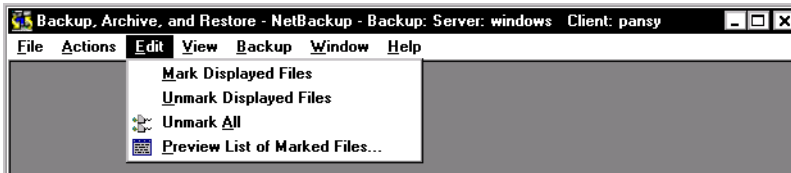
The commands on the Actions menu provide overall control of your NetBackup session.

- | | |
|-------------------------------------|---|
| Select Files and Folders to Backup | Opens the NetBackup Backup window. From this window, you can select files, folders, or registry keys to back up and then start a backup or archive operation. |
| Select Files and Folders to Restore | Opens the submenu and provides access to the following commands. |
| from Backup | Opens a NetBackup Restore window. From this window, you can select files, folders, or registry keys saved during previous backups and start a restore operation. |
| from Archived Backup | Opens a NetBackup Restore (Archive) window. From this window, you can select files, folders, or registry keys saved during previous archives and start a restore operation. |

from Raw Partition Backup	Opens a NetBackup Restore (Raw Partition) window. From this window, you can select raw partitions saved during previous raw partition backups and start a raw partition restore operation.
from True Image Backup	Opens a NetBackup Restore (True Image) window. From this window, you can select files, folders, or registry keys saved during previous true image backups and start a true image restore operation.
from Backup as Proxy	This feature allows a user on a Windows NT/2000 machine to browse the backups of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT/2000 machine.
from Archived Backup as a Proxy	This feature allows a user on a Windows NT/2000 machine to browse the archive backup of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote machine.
from Raw Partition Backup as a Proxy	This feature allows a user on a Windows NT/2000 machine to browse the Raw Partition backup of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote machine.
from True Image Backup as a Proxy	This feature allows a user on a Windows NT/2000 machine to browse the True Image backup of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the local machine. NetBackup will see all the requests as if they were coming from the remote machine.
Configure	Opens the NetBackup Configuration dialog box. From this dialog box, you can specify the parameters that control backups, archives and restores for your client.
Specify NetBackup Machines	Opens the Specify NetBackup Machines dialog box to the Servers property sheet. From this dialog you can change the settings for the master server and client machines.
View Status	Opens the View Status dialog box. From this dialog box, you can review the progress report of a user operation in progress. You can also review logs from past user directed NetBackup operations.
NetBackup Explorer Extensions	If the NetBackup Explorer Extensions feature is installed, this item toggles this feature off and on.
Stop	Stops network activities, such as browsing files, folders, or registry keys for restores. This has no affect on a backup or restore that is already in progress.



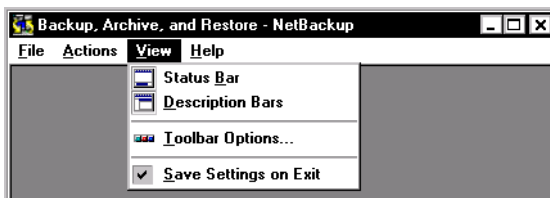
Edit Menu



The commands on the Edit menu modify your selections in the currently selected backup or restore window. It appears when the NetBackup Backup window or the NetBackup Restore window are opened.

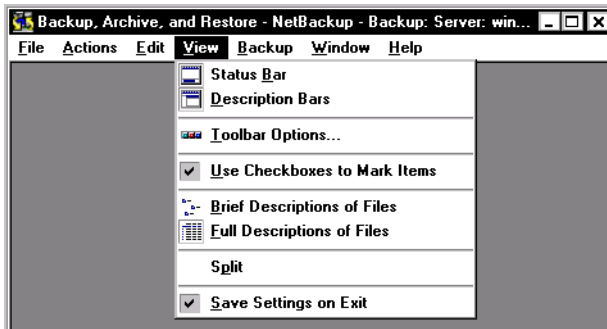
Mark Displayed Files	Marks only the files, folders, or registry keys that currently appear in the Contents of '<folder>' pane of the NetBackup Backup window or NetBackup Restore window.
Unmark Displayed Files	Unmarks only the selections that currently appear in the Contents of '<folder>' pane of the NetBackup Backup window or NetBackup Restore window.
Unmark All	Unmarks all files, folders, or registry keys in this window. You can also execute this command by clicking Unmark All on the NetBackup Restore window toolbar or the NetBackup Backup window toolbar.
Preview List of Marked Files	Opens the Preview List dialog box. This command is enabled when files, folders, or registry keys have been selected in the NetBackup Backup window or the NetBackup Restore window. You can also execute this command by clicking Preview List of Marked Files on the NetBackup Restore window toolbar or the NetBackup Backup window toolbar.

View Menu

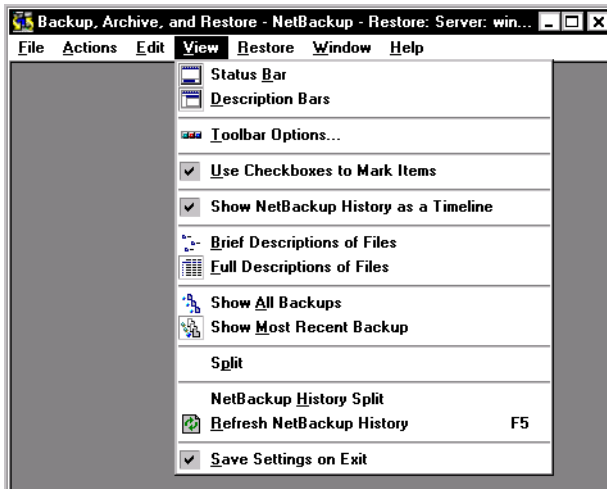


The commands on the View menu control the contents of the NetBackup Backup window and the NetBackup Restore window.

During a backup or archive operation, the following menu will appear.



During a restore operation the following menu will appear.

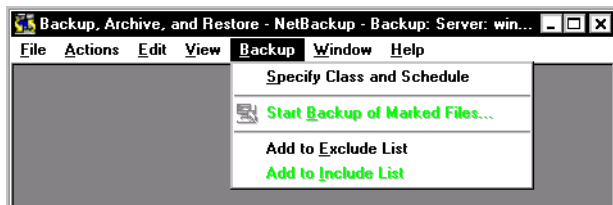


Status Bar	Shows the NetBackup status bar.
Description Bars	Shows the description bars on the backup and restore window panes. Clear this check box to turn off the description bars.
Toolbar Options	Opens the Toolbar Options dialog box. Go to “Toolbar Options Dialog Box” on page 68 for more details.
Use Checkboxes to Mark Items	When selected, checkboxes will be shown that are used to mark items for backup or restoring. When not selected, circles will be shown.
Show NetBackup History as a Timeline	Displays the NetBackup History pane as a timeline. To show the NetBackup History pane as a detailed list, clear this checkbox.



Brief Description of Files	Shows files, folders, or registry keys without details. You can also execute this command on the NetBackup Backup window toolbar and on the NetBackup Restore window toolbar.
Full Description of Files	Shows file, folder or registry key details such as size and file permissions. You can also execute this command on the NetBackup Backup window toolbar and on the NetBackup Restore window toolbar.
Show All Backups	Shows all instances of files, folders, or registry keys in the currently selected image(s). You can also execute this command on the NetBackup Restore window toolbar.
Show Most Recent Backup	Shows the most recent backup of files, folders, or registry keys from the currently selected backup image(s). You can also execute this command on the NetBackup Restore window toolbar.
Split	Changes the cursor to a double bar with two arrows and positions it over the vertical split bar between the All Folders and Contents of '<folder>' panes. You can then move the cursor left or right to position the split bar.
NetBackup History Split	Changes the cursor to a double bar with two arrows and positions it over the horizontal split bar between the NetBackup History pane and the All Folders and Contents of '<folder>' panes. You can then move the cursor up or down to position the split bar.
Refresh NetBackup History	Updates information in the NetBackup History pane.
Save Settings on Exit	When selected, this command will save window specific settings upon exit.

Backup Menu

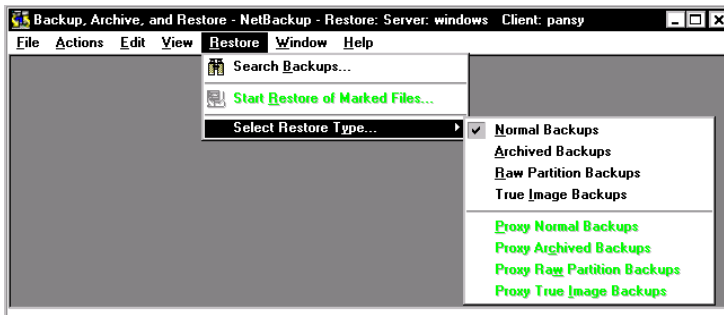


The Backup menu appears when the NetBackup Backup window is active. The commands on the Backup menu control backup operations.

Specify Class and Schedule	Opens the Backup Class and Schedule dialog box. Go to “Backup Class and Schedule Dialog Box” on page 69 for more details.
----------------------------	---

Start Backup of Marked Files	Opens the Specify Backup Options dialog box. You can also execute this command by clicking Start Backup on the NetBackup Backup window toolbar.
Add to Exclude List	Adds the selected files, folders, or registry keys to the Exclude File List. For more details, refer to “Exclude List Property Sheet” on page 95.
Add to Include List	Adds the selected files, folders, or registry keys to the Include File List. For more details, refer to “Include List Property Sheet” on page 96.

Restore Menu



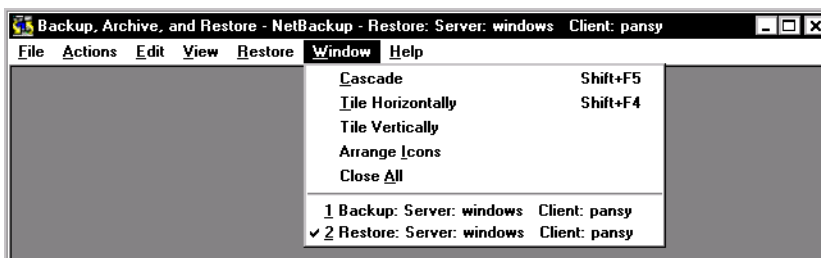
The Restore menu appears when the NetBackup Restore window is active. The commands on the Restore menu control restore operations.

Search Backups	Opens the Search Backups dialog box. You can also execute this command by clicking Search Backups on the NetBackup Restore window toolbar.
Start Restore of Marked Files	Opens the Restore Marked Files dialog box. You can also execute this command by clicking Start Restore on the NetBackup Restore window toolbar.
Select Restore Type	Opens the submenu and provides access to the following commands.
Normal Backups	Opens the NetBackup Restore window. You can select files, folders, or registry keys saved during previous backups and start a restore operation.
Archived Backups	Opens the NetBackup Restore (Archive) window. You can select files, folders, or registry keys saved during previous archives and start a restore operation.
Raw Partition Backups	Opens the NetBackup Restore (Raw Partition) window. You can select and start a raw partition restore operation.



True Image Backups	Opens the NetBackup Restore (True Image) window. You can select files, folders, or registry keys and start a true image restore operation.
Proxy Normal Backups	This feature allows a user on a Windows NT/2000 machine to browse the backups of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT/2000 machine.
Proxy Archived Backups	This feature allows a user on a Windows NT/2000 machine to browse the archives of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT/2000 machine.
Proxy Raw Partition Backups	This feature allows a user on a Windows NT/2000 machine to browse the raw partition backups of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT/2000 machine.
Proxy True Image Backups	This feature allows a user on a Windows NT/2000 machine to browse the true image backups of another Windows NT/2000 machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT/2000 machine.

Window Menu

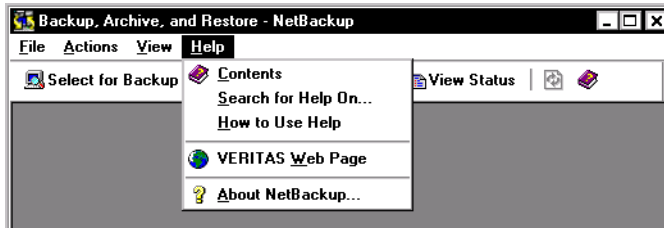


The Window menu has commands for arranging your NetBackup windows. It appears when the NetBackup Backup window or the NetBackup Restore window is opened.

Cascade	Arranges NetBackup windows so they overlap, but the title bars will still be visible.
Tile Horizontally	Modifies the size of NetBackup windows and arranges them horizontally on the desktop.

Tile Vertically	Modifies the size of NetBackup windows and arranges them vertically on the desktop.
Arrange Icons	Arranges icons so they are located in the lower left corner of the desktop.
Close All	Closes the NetBackup Backup windows and the NetBackup Restore windows.

Help Menu



This menu provides access to the online instructions for using NetBackup.

Contents	Opens the table of contents in the online help.
Search For Help On	Opens the search facility for the online help.
How to Use Help	Describes how to use the online help.
VERITAS Web Page	Opens the VERITAS Web site in your internet browser.
Copyrights	Displays additional copyright information for NetBackup.
About NetBackup	Displays information about NetBackup, including the version number.



























Windows

This section explains the windows on the NetBackup Browser.

NetBackup Window Icons

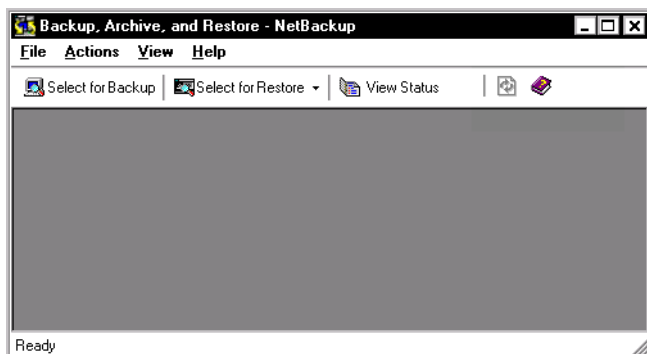
This section describes all icons displayed in the windows.

Icon	Description
	Represents NetBackup. It is used on the title bar in the Browser, in the program start menu, and Windows Explorer.
	Represents a backup. It is used on the title bar of the backup window.
	Represents a restore. It is used on the title bar of the restore window.
	Represents a floppy drive. Used in the All Folders pane.
	Represents a logical hard drive. Used in the All Folders pane.
	Represents a CD-ROM drive. Used in the All Folders pane.
	Represents a networked drive. Used in the All Folders pane.
	Represents a client PC. Used in the All Folders pane.
	Expand or collapse these structures to see more or fewer subentries. A plus sign indicates that the folder can be expanded. A minus sign indicates that the folder can be collapsed. Used in the All Folders pane.
	Represents a closed folder that may or may not contain other items. Used in the All Folders pane where only folders are displayed under drives. Also in the Contents of '<folder>' pane.
	Represents an opened folder that may or may not contain other items. Used in the All Folders pane where only folders are displayed under drives.
	Represents a file or a folder, with all of its contents, that has been marked for backup or restore. Used in the All Folders pane and the Contents of '<folder>' pane.
	Represents a folder with some of its contents marked for backup or restore. Used in the All Folders pane and the Contents of '<folder>' pane.
	Represents a file or folder that has not been marked for backup or restore, but could be. Used in the All Folders pane and the Contents of '<folder>' pane.
	Represents an object with all of its contents marked for backup or restore, but the object itself cannot be marked. Used in the All Folders pane and the contents.






Icon	Description
	Represents an object with some of its contents marked for backup or restore, but the object itself cannot be marked. Used in the All Folders pane and the contents and Contents of '<folder>'.
	Represents an object that cannot be marked for backup or restore but contains other objects that can be marked for backup or restore. Used in the All Folders pane and the contents and Contents of '<folder>'.
	Represents a folder that wasn't specifically backed up, but at least some of its contents were backed up. Used in the All Folders pane of the NetBackup Restore window.
	Represents a file that doesn't have an icon associated with it. Used in the Contents of '<folder>' pane.
	Represents the entire registry. Used in the All Folders pane. The registry opens to two base keys: HKEY_LOCAL_MACHINE and HKEY_USERS.
	Represents a registry key. Used in the All Folders pane. Also used in Contents of '<folder>' pane if it contains subkeys.
	Represents the entire network. Used in the All Folders pane.
	Represents a specific network. Used in the All Folders pane and the Contents of '<folder>' pane.
	Represents a domain within a network. Used in the All Folders pane and the Contents of '<folder>' pane.



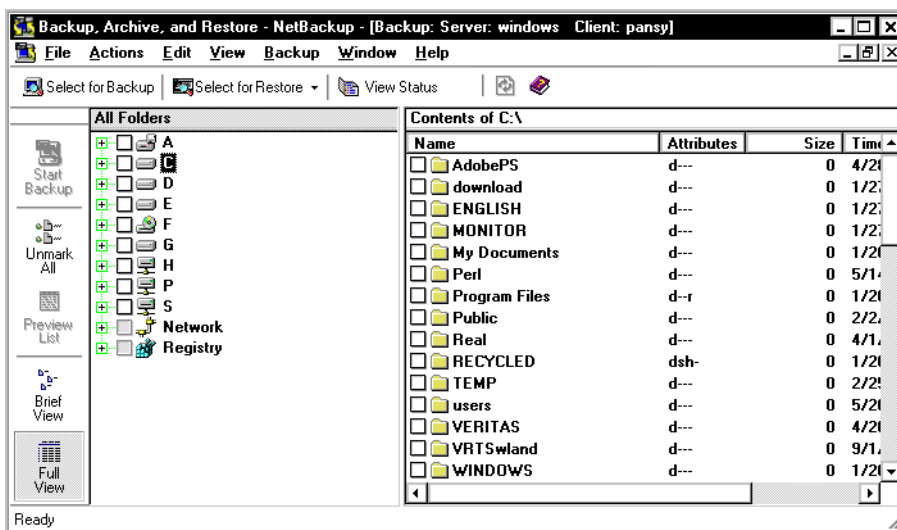
Backup, Archive, and Restore - NetBackup Window



This window appears when you start NetBackup. The following buttons appear on the toolbar.

Button	Description
	Opens the NetBackup Backup window.
	Opens the NetBackup Restore window.
	Opens the View Status dialog box.
	Updates the list of backup images. This button is only available when a Restore window is open has the focus.
	Opens the online help.

NetBackup Backup Window



This window shows the files, folders, or registry keys you can mark for back up. To access this window:

- ◆ From the Actions menu, choose Select Files and Folders to Backup
- ◆ From the toolbar, choose Select for Backup

You can position this window separately. You can also cascade, tile or minimize the window by using commands from the Window menu.

Buttons

Button Description



Opens the Specify Backup Options dialog box. From this dialog you can start the backup operation.



Unmarks all files, folders and registry keys in this window. You can also execute this command by selecting Unmark All from the Edit menu.



Opens the Preview List dialog box during a backup operation. You can also execute this command by selecting Preview List from the Edit menu.



Shows files and folders only. You can also execute this command by selecting Brief Descriptions of Files from the View menu.



Button	Description
--------	-------------



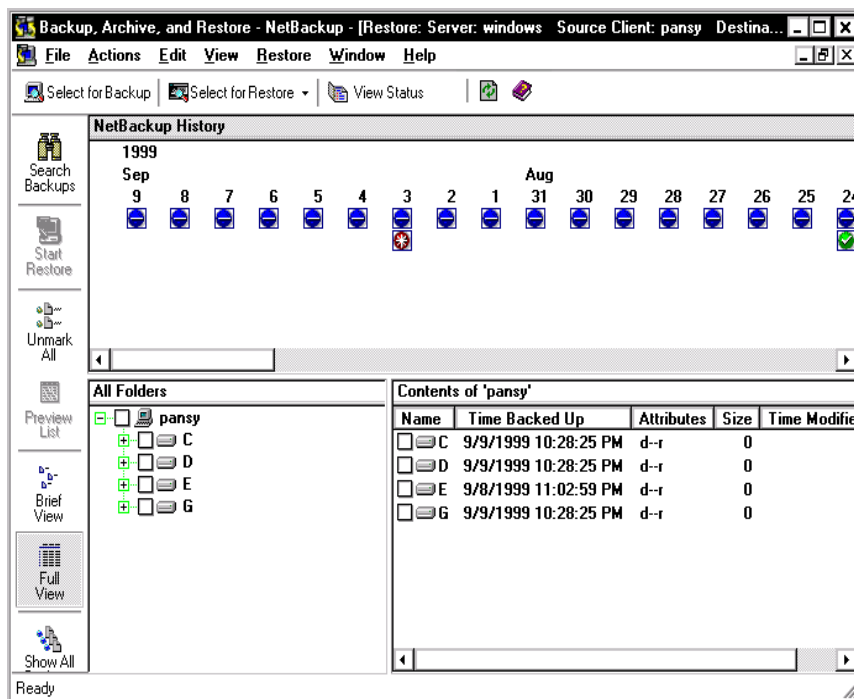
Shows file, folder and registry key details such as size and file permissions. You can also execute this command by selecting Full Descriptions of Files from the View menu.

Panes

The NetBackup Backup window contains two panes: All Folders and Contents of '<folder>'.

- ◆ To adjust the width of the panes, position the cursor over the split bar. The cursor will change to a double-headed arrow. Press the left mouse button and move the cursor left or right to position the split bar.
- ◆ To resize columns in a pane, move the mouse over the column header until the cursor changes to a double-headed arrow. Hold the left mouse button down and move the mouse left or right to decrease or increase the column width.
- ◆ To sort information in a pane, click on the column header for the information you wish to sort by. For example, to sort the pane by "Size," click on the Size column. This will sort the list from the smallest to largest size. Click the Size column again to sort from largest to smallest.

NetBackup Restore Window



This window shows the files, folders, or registry keys that you can mark for restore. To access this window:

- ◆ From the Actions menu, click Select Files and Folders to Restore, then choose the desired type of restore
- ◆ To open the same type of restore as opened previously, click Select for Restore on the toolbar
- ◆ To open a different type of restore, click the arrow next to the Select for Restore button, then select the desired type of restore

The folder trees in this window contain only files and folders that were backed up. You can position this window separately. You can also cascade, tile or minimize the window by using the command from the Window menu.

Note If the client belongs to more than one class, the default display starts with the last full backup that occurred first. For example, assume that the client belongs to Class A and Class B and full backups occur for both of them. If the last full backup for Class A occurred before the one for Class B, then the display shows files ranging from the time of the Class A full backup.

Note If you are restoring from a true image backup, the NetBackup Restore window shows only the folders that were included in true image backups. Files do not appear in this window because you cannot select individual files for a true image restore.

Note If the NetBackup Restore window does not show any files, folders, or registry keys, check the items below.

If files or folders do not appear in the NetBackup Restore window, it can be due to one of the following:

- ◆ Perform default search is not enabled. In this case, start a search manually by clicking Search Backups on the Restore menu. Or to display the files in a backup, click a backup image.
- ◆ The NetBackup server does not have any backups of files for your client. Ensure that the client is connecting to the correct server (see “Servers Property Sheet” on page 61). Also, ensure that you are using the correct client name (see “General Property Sheet” on page 54). You can also refer to the title bar. If these settings are correct and you believe there are backups available, contact your system administrator.

Buttons

Button	Description
--------	-------------



Opens the Search Backups dialog box.



Opens the Restore Marked Files dialog box. From this dialog you can start the restore operation.



Unmarks all files, folders, or registry keys in this window. You can also execute this command by selecting Unmark All from the Edit menu.



Opens the Preview List dialog box during a restore operation. You can also execute this command by selecting Preview List of Marked Files from the Edit menu.



Shows files and folders only. You can also execute this command by selecting Brief Descriptions of Files from the View menu.



Shows file, folder or registry key details such as size and file permissions. You can also execute this command by selecting Full Descriptions of Files from the View menu.

Button Description

Shows all instances of the files, folders, or registry keys in the currently selected image(s). You can also execute this command by selecting Show All Backups from the View menu.



Shows the most recent backup of files, folders, or registry keys in the selected backup images. You can also execute this command by selecting Show Most Recent Backup from the View menu.

Panes

The NetBackup Restore window is split into three panes: the NetBackup History pane on the top, the All Folders pane on the left and the Contents of '<folder>' pane on the right.

- ◆ To adjust the height of the NetBackup History pane, position the cursor over the horizontal split bar. The cursor will change to a double bar with two arrows. Press the left mouse button and move the cursor up or down to position the split bar.
- ◆ To adjust the width of the All Folders pane and the Contents of '<folder>' pane, position the cursor over the vertical split bar. The cursor will change to a double bar with two arrows. Press the left mouse button and move the cursor left or right to position the split bar.
- ◆ To resize columns in a pane, move the mouse over the column header until the cursor changes to a double-headed arrow. Hold the left mouse button down and move the mouse left or right to decrease or increase the column width.
- ◆ To sort information in a pane, click on the column header for the information you wish to sort by. For example, to sort the pane by "Size," click on the Size column. This will sort the list from the smallest to largest size. Click the Size column again to sort from largest to smallest.

NetBackup History Pane

The NetBackup History pane shows the NetBackup image(s). When first opened, the following backup images are selected by default:

- ◆ The most recent full backup.
- ◆ All cumulative-incremental backups and differential-incremental backups since the most recent full backup.
- ◆ All user directed backups that have occurred since the most recent full backup.

If there is no full backup, only the most recent image will be selected.



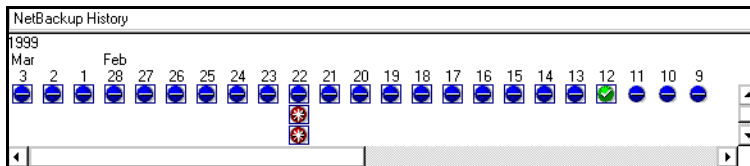
▼ To Open the NetBackup History Pane

- ◆ Position the cursor over the horizontal split bar. The cursor will change to a double-headed arrow. Press the left mouse button and move the cursor up or down to position the split bar.

or

- ◆ On the View menu, click NetBackup History Split. This changes the cursor to a double-headed arrow. Move the cursor up or down to position the split bar. Click the left mouse button to hold position.







▼ Backup History as a Timeline



To show the NetBackup History pane as a timeline, from the View menu click Show NetBackup History as a Timeline.

The icons, representing images, appear directly underneath the date of the backups. Icons with a square represent selected backup images. Several backup image icons may appear below a date. The most current backup image is on top of the list. As you move the cursor over the icons, tool tips will show the schedule type and the date and time of the backup.

Tip If you do not see tool tips, open the Toolbar Options dialog box from the View menu and select Show tool tips.

Icon	Description
	This green icon represents a full backup.
	This blue icon represents a differential incremental backup.
	This light blue icon represents a cumulative incremental backup.
	This red icon represents a user directed backup.
	This yellow icon represents a user directed archive.
	This grey icon represents an unknown type of backup.

▼ To Select Backup Images

- ◆ Select a single backup image by clicking on it
- ◆ Select a range of backup images by clicking on the first, holding down the Shift key, and clicking on the last image.

▼ Backup History as a Detailed List

NetBackup History							
Time Backed Up	Time Expires	Files	Size	Compressed	Schedule Type	Class Name	Key
3/3/99 9:59:12 PM	4/5/99	179	17240	N	Diff Incr Backup	production_pcs_NT_3-0	▲
3/2/99 8:43:07 PM	4/4/99	194	18416	N	Diff Incr Backup	production_pcs_NT_3-0	
3/1/99 8:29:45 PM	4/3/99	417	98053	N	Diff Incr Backup	production_pcs_NT_3-0	
2/28/99 10:15:59 PM	4/2/99	122	28944	N	Diff Incr Backup	production_pcs_NT_3-0	▼

To show the NetBackup History pane as a detailed list, clear the Show NetBackup History as a Timeline checkbox on the View menu. The list starts with the most recent backup and includes the following information (reading from left to right).

- ◆ Date and time when the backup occurred.
- ◆ Date when NetBackup will expire the backup and delete it from the NetBackup History pane.
- ◆ Number of files in the backup.
- ◆ Size of the backup in kilobytes.
- ◆ Whether the backup is compressed (Y for yes, N for no).
- ◆ Type of schedule.
- ◆ Name of the class associated with the backup. The system administrator configures the class names, as explained in the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT/2000*.
- ◆ Keyword assigned to the backup.



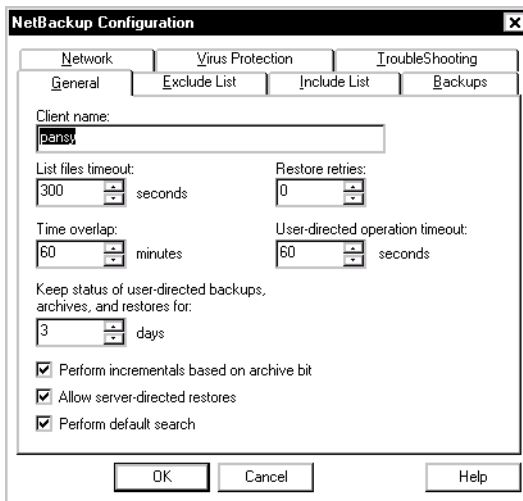
Dialog Boxes

This section describes the dialog boxes on the NetBackup Browser.

NetBackup Configuration Dialog Box

This section explains the property sheets found in the NetBackup Configuration dialog box.

General Property Sheet



The screenshot shows the NetBackup Configuration dialog box with the General tab selected. The dialog has a title bar with a close button. Below the title bar are three tabs: Network, Virus Protection, and TroubleShooting. The General tab is active and contains the following fields and options:

- Client name: A text box containing "pansy".
- List files timeout: A spin box set to 300 seconds.
- Restore retries: A spin box set to 0.
- Time overlap: A spin box set to 60 minutes.
- User-directed operation timeout: A spin box set to 60 seconds.
- Keep status of user-directed backups, archives, and restores for: A spin box set to 3 days.
- Three checked checkboxes: "Perform incrementals based on archive bit", "Allow server-directed restores", and "Perform default search".
- Buttons: OK, Cancel, and Help.

To access this property sheet:

1. From the Actions menu, select Configure.
2. Click the General tab.

Use this property sheet to set any of the configuration parameters for your client. Only the system administrator should change the following parameters.

- ◆ Client name
- ◆ List files timeout
- ◆ Restore retries
- ◆ Time overlap
- ◆ User-directed operation timeout:
- ◆ Perform incrementals based on archive bit

◆ Allow server-directed restores

System administrators should refer to “General Property Sheet” on page 92 for details on these parameters.

The NetBackup client user as well as the system administrator can change following parameters.

Keep status of user-directed backups, archives, and restores for: Specify the number of days to store progress reports before the system will automatically delete them. Default is 3 days. The minimum allowable value is zero. The maximum is 9,999.

Perform default search If selected, NetBackup will automatically search the default range of backup images and display the backed up folders and files whenever a restore window is opened.

Clear this box to disable the initial search. The NetBackup Restore window will not show any files or folders when initially opened. Clicking a backup image, or selecting a range of backup images, will initiate a search.

By default, this box is selected.

OK To accept changes to the parameters, click this button.

Cancel To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.

Help To view online help for this dialog box, click this button.

Exclude List Property Sheet

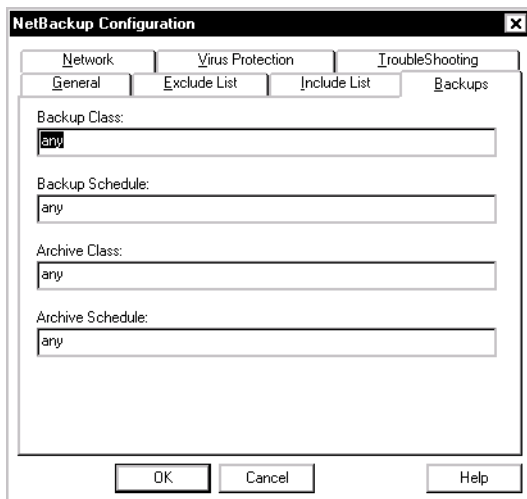
Only the system administrator should change the parameters on this property sheet. System administrators should refer to “Exclude List Property Sheet” on page 95 for details on these parameters.

Include List Property Sheet

Only the system administrator should change the parameters on this property sheet. System administrators should refer to “Include List Property Sheet” on page 96 for details on these parameters.



Backups Property Sheet



To access this property sheet:

1. From the Actions menu, select Configure.
2. Click the Backups tab.

Use this property sheet to specify specific class and schedules to use when you start a backup from the client.

Note Changes made to the this property sheet will not apply to currently open backup window. The changes will apply to all backup windows opened after the property sheet modifications have been saved.

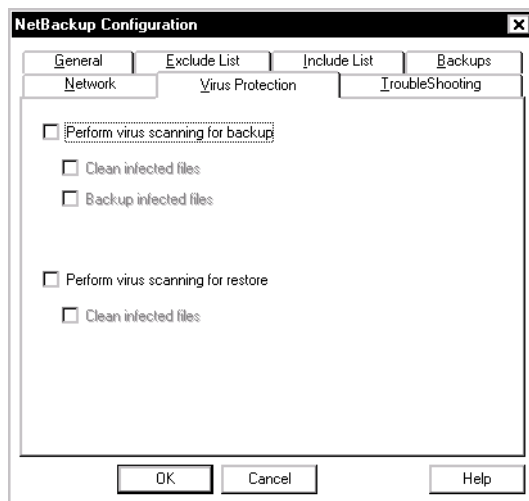
- | | |
|-----------------|---|
| Backup Class | Specify the class to use for user-directed backups of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed backup schedule. |
| Backup Schedule | Specify the schedule to use for the user-directed backups for this client. If you set this value to any (default), NetBackup uses the first user-directed backup schedule in the first class that it finds with both the client name and a user-directed backup schedule. |

- Archive Class** Specify the class to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed archive schedule.
- Archive Schedule** Specify the user-directed archive schedule to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first user-directed archive schedule in the first class that it finds with both the client name and a user-directed archive schedule.
- OK** To accept changes to the parameters, click this button.
- Cancel** To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
- Help** To view online help for this dialog box, click this button.

Network Property Sheet

Only the system administrator should change the parameters on this property sheet. System administrators should refer to “Network Property Sheet” on page 98 for details on these parameters.

Virus Protection Property Sheet



To access this property sheet:



1. From the Actions menu, select Configure.
2. Click the Virus Protection tab to open the property sheet.

Use this property sheet to configure the NetBackup client to pre-scan data before it is backed up. By default, virus scanning is turned off.

Note The changes and options in this dialog box do not apply to any open windows. The values are set on a machine basis. If an option's value is changed, the next backup or restore operation will see the changed value, no matter where the operation was initiated.

Perform Virus Scanning for Backup	Select this option to perform virus scanning and detect any infected files. NetBackup does not attempt to correct or backup the infected files. The activity log is updated with the total number of scanned files, and infected files.
Clean Infected Files	Select this option to correct the infected files. If a file cannot be cleaned, it is skipped and will not be backed up. The activity log is updated with the infected file name and its associated virus name.
Backup Infected Files	Select this option to include infected files in the backup. However, backing up infected files is not recommended. The data still contains the virus when restored to another system. The activity log is updated with the infected file name and its associated virus name.
Perform Virus Scanning for Restore	Select this option to perform virus scanning and detect any infected files. NetBackup does not attempt to correct or restore the infected files. The activity log is updated with the total number of scanned files, and infected files.
Clean Infected Files	Select this option to correct the infected files. If a file cannot be cleaned, it is skipped and will not be restored. The activity log is updated with the infected file name and its associated virus name.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view online help for this dialog box, click this button.

Activity Logs

NetBackup records the results in the activity logs on the client. To enable activity logging for virus scanning, create either the `bpbkar` or `bpcd` log directory on the client:

install_path\NetBackup\logs\bpbkar\ (on Windows NT/2000)

install_path\NetBackup\logs\bpcd\ (on Windows 95 and 98)

Logs are then written in the activity log directory in the form:

yymmdd.log

Messages about infected files are also sent to the server so they appear in the reports.

Limitations

- ◆ Files with the following conditions are not scanned for viruses:
 - ◆ Fully qualified file names longer than 255 characters
 - ◆ Open files that are locked
- ◆ A virus found in a compressed file cannot be cleaned, although the virus will be detected and reported in the activity log.

Notes About Virus Scanning

Before using NetBackup virus scanning, disable any virus protection software that is already installed on the system. Other anti-virus software can slow down NetBackup's virus scanning process. It can also cause unnecessary alerts or unexpected warning messages.

New viruses constantly appear, so it is important to keep the protection signature (.DAT) files up to date. VERITAS recommends that you manually download these files from our ftp site every 30 days. The download procedure is as follows (Internet access is required).

Recommended ftp site

1. Download the most recent .ZIP file from the VERITAS support ftp site:

`ftp://ftp.support.veritas.com/pub/support/Products/nai/NetBackup/`

Note Currently /nai is a hidden directory.

2. Unzip the .ZIP file to get CLEAN.DAT, NAMES.DAT, and SCAN.DAT files
3. Copy the .DAT files to the *install_path*\NetBackup\bin folder.
4. Delete the downloaded .ZIP file, if you wish.



Optional ftp site

1. Download the most recent standard .ZIP file from the McAfee ftp site:
`ftp://ftp.mcafee.com/pub/antivirus/datfiles/4.x/`
2. Unzip the .ZIP file to get CLEAN.DAT, NAMES.DAT, and SCAN.DAT files. NetBackup uses only these files, ignore the rest.
3. Copy CLEAN.DAT, NAMES.DAT, and SCAN.DAT files to the *install_path\NetBackup\bin* folder.
4. Delete the downloaded .ZIP file and other (unzipped) files, if you wish.

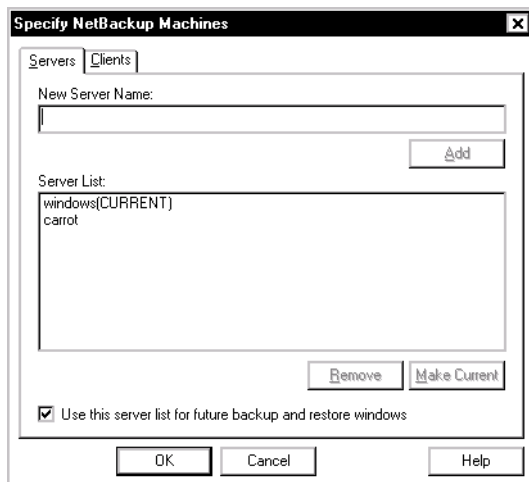
Troubleshooting Property Sheet

Only the system administrator should change the parameters on this property sheet. System administrators should refer to “Troubleshooting Property Sheet” on page 99 for details on these parameters.

Specify NetBackup Machines Dialog Box

This section explains the property sheets found in the Specify NetBackup Machines dialog box.

Servers Property Sheet



To access this property sheet:

1. On the Actions menu, choose Specify NetBackup Machines.
2. Click on the Servers property sheet.

Use this property sheet to add and remove NetBackup servers and to specify the current server to be used for user operations.

New Server Name To add another NetBackup server to the Server List, type the name of the new server in the New Server Name text box and click Add. The name must be as defined by the system administrator on that server.

If a new server is added to the list from this dialog box, it will appear in the server list for all windows currently opened and any new window that is opened. The new server will be saved in the Server List box after the current window is closed.

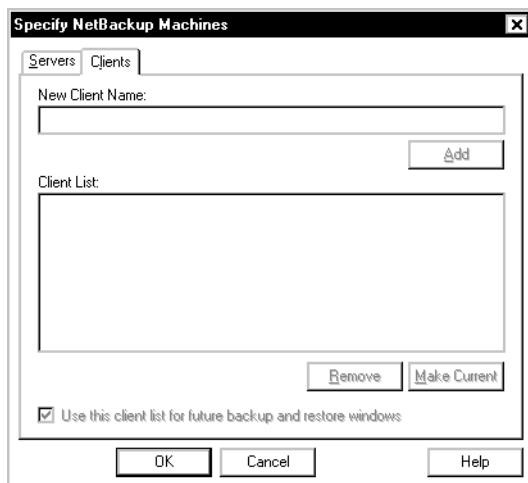
Add Adds the server, entered in the New Server Name box, to the Server List.



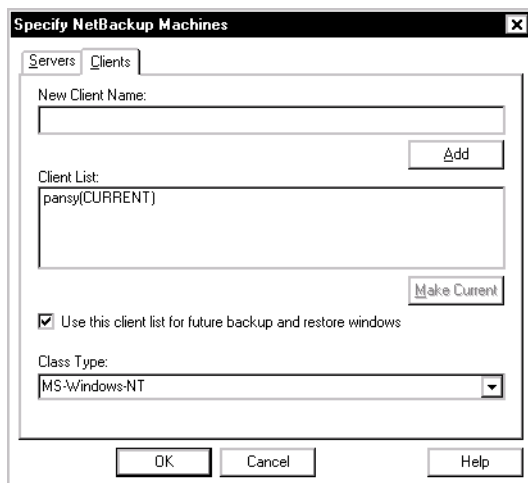
Server List	<p>Shows the names of the NetBackup servers that require access to the client for scheduled backups, and any other servers used when performing user directed backups. The master server and any remote media servers that perform scheduled backups of the client must appear in this list. The machine designated as CURRENT will be the server used for user directed operations.</p> <p>To mark a server as CURRENT, select a server from the Server List and click Make Current. The word CURRENT appears in parentheses beside the name.</p>
Remove	<p>Removes a server. First highlight the server in the Server List, then click Remove.</p> <p>Note: The master server cannot be removed from the Server List. While other servers can be removed from the list, be careful not to remove any remote media servers. Doing so will prevent scheduled backups from being performed. For more information on making changes to the Server List, refer to the <i>NetBackup System Administrator's Guide - UNIX</i> or the <i>NetBackup System Administrator's Guide - Windows NT/2000</i>.</p>
Make Current	<p>First highlight the server in the Server List, then click Make Current. Changing the current server will affect only the selected window. This setting will not be saved after the currently selected window is closed.</p>
OK	<p>To accept changes to the parameters, click this button.</p>
Cancel	<p>To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.</p>
Help	<p>To view online help for this dialog box, click this button.</p>

Clients Property Sheet

If the NetBackup Backup window is active when you open the Clients property sheet, you will see the following:



If the NetBackup Restore window is active when you open the Clients property sheet, you will see the following:



To access this property sheet:

1. From the Actions menu, select Specify NetBackup Machines
2. Select the Clients property sheet.



Use this property sheet to select the remote client whose backups you want to restore to your client. You can also add names of remote clients.

Note Most changes made to the this property sheet will not apply to currently open backup or restore windows. If, however, a client is added, the open windows will be able to switch to them.

New Client Name To add another client name to the Client List, type the name of the client in the New Client Name and click Add. The client name entered must also be defined in a class on the NetBackup server.

If a new client is added to the list it will be in the client list for all windows currently opened and any new window that is opened. The new client will be saved in the Client List box after the current window is closed.

Add Adds the client, entered in the New Client Name box, to the Client List.

Client List The Client List contains the client name for your computer. It can also contain the names of remote NetBackup clients. You can select local or remote NetBackup clients on which to perform NetBackup operations.

The NetBackup server administrator must set up the required permissions before you can browse and restore from any remote client.

To perform a NetBackup operation on a NetBackup client, select the name from the Client List and click Make Current. The word CURRENT appears in parentheses beside the name of the new default client.

Remove Removes a client. First highlight the client in the Client List, then click Remove.

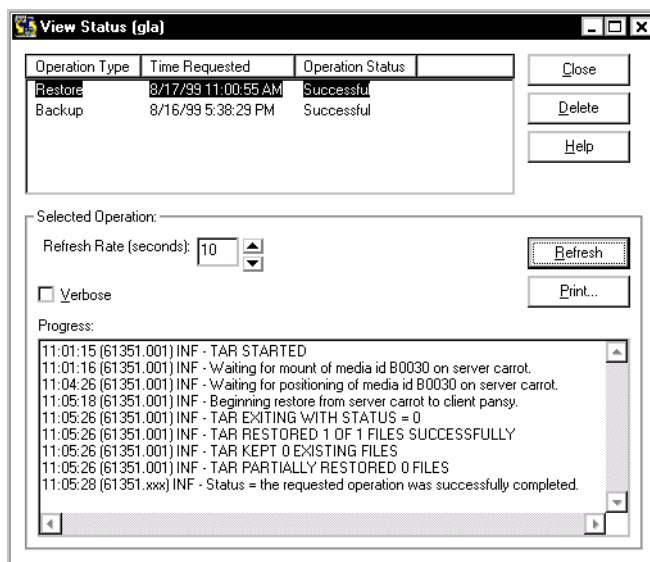
Make Current Designates the client backup images you can browse for restore operations. First highlight the client in the Client List, then click Make Current. Changing the current client will affect only the selected window. This setting will not be saved after the currently selected window is closed.

Class Type View and select class type for the client selected in the Client List. The class type must be the same as specified for the client in the NetBackup configuration on the NetBackup server.

Use this client list for future backup and restore windows If selected, NetBackup applies any changes to the client list to all backup and restore windows opened after the property sheet modifications have been saved.

OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view online help for this dialog box, click this button.

View Status Dialog Box



To access this dialog box:

- ◆ From the Actions menu, select View Status.
- ◆ From the toolbar on the Backup, Archive, and Restore - NetBackup window, click View Status.

Use this dialog box to view the results of each user operation in a progress report.

Note If a backup is split across more than one media ID, the Status lists all the media. NetBackup uses only what it needs to restore the requested files, folders, or registry keys.



Operations List	<p>Lists operation status reports for NetBackup operations. The most current NetBackup operation is on top of the list.</p> <p>By default NetBackup operation status reports will be stored on the NetBackup client for three days. Refer to “General Property Sheet” on page 54 for more information on changing the configuration setting called Keep status of user-directed backups, archives, and restores for:.</p>
Operation Type	Shows the type of NetBackup operation for the selected progress report: backup, archive or restore.
Time Requested	Shows the start date and time of the selected NetBackup operation. The format of the start date and time depends upon how the date and time display has been configured on the computer.
Operation Status	Shows the status of a NetBackup operation.
Close	Closes the dialog box. Close does not terminate NetBackup or affect other dialog boxes or windows.
Delete	<p>Deletes the progress report selected in the Operations List. First select the progress report in the Operations List then click Delete.</p> <p>Operation status reports are automatically deleted after a specified number of days. The Keep status of user-directed backups, archives, and restores for: parameter in the General Property Sheet on the NetBackup Configuration dialog box specifies the number of days.</p>
Help	To view online help for this dialog box, click this button.
Refresh Rate (seconds)	<p>Changes the rate at which NetBackup updates the Status display for the selected operation. Recommended value is 10. This parameter can be set at any time during a NetBackup operation.</p> <p>Enter a value (in seconds) in Refresh Rate (seconds).</p> <p>or</p> <p>Use the spin buttons to the right of Refresh Rate (seconds). A value of 0 turns off automatic refreshing.</p>
Refresh	Updates the Status display for the selected NetBackup operation. Refresh is enabled when a NetBackup operation is selected from the Operations List.
Verbose	Generates a more detailed progress report for the selected NetBackup operation.
Print	Opens the Microsoft Windows print dialog box and prints out the progress report for the selected NetBackup operation.

Progress Displays the progress of the selected operation. If the Refresh Rate (seconds) parameter is set to 0, the user can click Refresh to view the progress of the selected NetBackup operation.

Each message begins with the time of the related event and an acronym that indicates the nature of the message. Status also lists all the media IDs used to store the data.

Select Verbose for a more detailed progress report.

Following is a list of acronyms.

Note: If the drive on which NetBackup is installed is full, no progress messages are displayed except those indicating the job has been initiated and the job has been completed.

DAT Informational messages that are helpful in debugging.

ERR Error message.

FTL Fatal error message.

INF Informational message (no error occurred).

TRV Trivial error message.

WRN Warning error message.

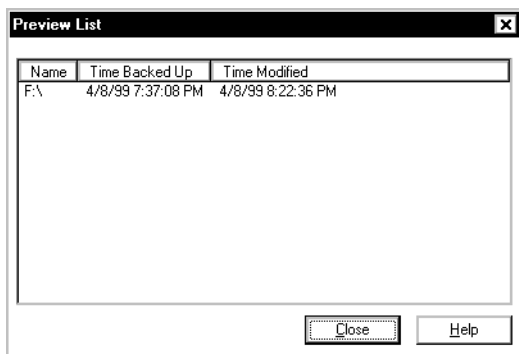
Preview List Dialog Box

To access this dialog box:

- ◆ From the NetBackup Backup window, click the Preview List button. The following will appear.



- ◆ From the NetBackup Restore window, click the Preview List button. The following will appear.

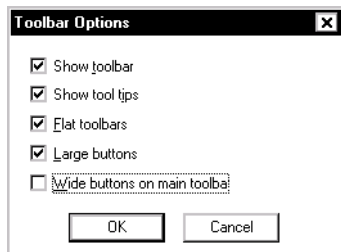


- ◆ From the Edit menu, select Preview List of Marked Files. The Preview List dialog box which appears depends upon the backup or restore window currently selected.

Use this dialog box to view all of the files, folders, or registry keys you have marked. This is a view-only dialog box.

Name	Lists the file or folder being restored.
Time Backed Up	Lists the time the backup was initiated.
Time Modified	Lists the time that the file or directory, that was backed up, was changed.
Close	Closes the dialog box. Close does not terminate NetBackup or affect other dialog boxes or windows.
Help	To view online help for this dialog box, click this button.

Toolbar Options Dialog Box



To access this dialog box, select Toolbar Options from the View menu. Use this dialog box to control display options on the NetBackup Browser.

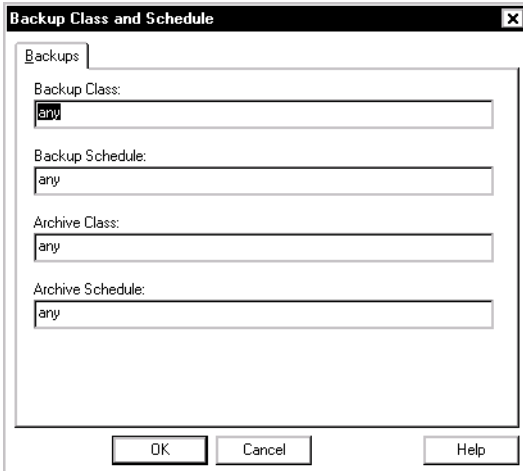
Show toolbar	Shows the NetBackup toolbars.
--------------	-------------------------------

Show tool tips	Shows tool tips. When the mouse pointer moves over the different elements of the NetBackup Browser, the tool tips appear.
Flat Toolbars	When selected, the main (or horizontal) toolbar buttons are displayed as two-dimensional buttons. If not selected, buttons are displayed as three-dimensional buttons.
Large Buttons	When selected, large button icons and text are shown on the toolbar buttons. If not selected, only small icons are shown on the buttons.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.

Backup Class and Schedule Dialog Box

This section explains the property sheets found in the Backup Class and Schedule dialog box.

Backups Property Sheet



The screenshot shows a dialog box titled "Backup Class and Schedule" with a close button (X) in the top right corner. The "Backups" tab is selected. The dialog contains four text input fields, each with a label and a value:

- Backup Class: any
- Backup Schedule: any
- Archive Class: any
- Archive Schedule: any

At the bottom of the dialog, there are three buttons: "OK", "Cancel", and "Help".

To access this property sheet:

1. From the Backup menu, select Specify Class and Schedule.
2. Click the Backups tab to open the property sheet.



Use this property sheet to specify specific class and schedules to use when you start a backup from the client.

- Backup Class** Specify the class to use for user-directed backups of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed backup schedule.
- Backup Schedule** Specify the schedule to use for the user-directed backups for this client. If you set this value to any (default), NetBackup uses the first user-directed backup schedule in the first class that it finds with both the client name and a user-directed backup schedule.
- Archive Class** Specify the class to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed archive schedule.
- Archive Schedule** Specify the user-directed archive schedule to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first user-directed archive schedule in the first class that it finds with both the client name and a user-directed archive schedule.
- OK** To accept changes to the parameters, click this button.
- Cancel** To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
- Help** To view online help for this dialog box, click this button.



Search Backups Dialog Box

To access this dialog box:

- ◆ From the Restore menu, select Search Backups
- ◆ From the NetBackup Restore window toolbar, select Search Backups

Use this dialog box to narrow the backup history search parameters for your restore.

Search Folder Shows the folder or registry key for which you are searching. The initial value for the Search Folder is “:\”. If you select a folder in the NetBackup Restore window, that folder becomes the new default.

To change the path, enter a new value and press Return.

If you enter a full path name, NetBackup will search for the specific path and file in the selected backup images. Or you can enter only the filename (`csb.tmp` or `*.tmp`) and NetBackup will show, in the All Folders pane, the folders where the specified files were found.

You can use these wildcard characters:

*

?

Helpful Hint: Before initiating a search, collapse the tree in the All Folders pane as much as possible. NetBackup will expand the tree to the folders that match your search criteria.



Perform case insensitive search	<p>Select Perform case insensitive search to perform case insensitive searches.</p> <p>The search path is case sensitive and must match what is in the database on the NetBackup server. When the Perform case insensitive search checkbox is selected, NetBackup can start a case insensitive search. By default the checkbox is not checked.</p>
Keyword Phrase (Optional)	<p>Enter a keyword phrase associated with a backup image.</p>
Start Date and End Date	<p>View and select the Start Date and the End Date. The Start Date and End Date show the range of backups that NetBackup will search. By default, the start date will be the time of the last full backup and the end date will be the time of the most-recent backup.</p> <p>To change the dates, click in the box and select from the list of available backup images.</p> <p>If you change the Start Date or End Date, NetBackup clears all the restore selections that you have previously made.</p>
Search	<p>Initiates a search for specified files, folders, or registry keys. The NetBackup Restore window will show the folders that match the search criteria.</p>
Cancel	<p>To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.</p>
Help	<p>To view online help for this dialog box, click this button.</p>

Specify Backup Options Dialog Box



To access this dialog box:

- ◆ Click the Backup button on the NetBackup Backup window.
- ◆ From the Backup menu, select Backup Marked Files.

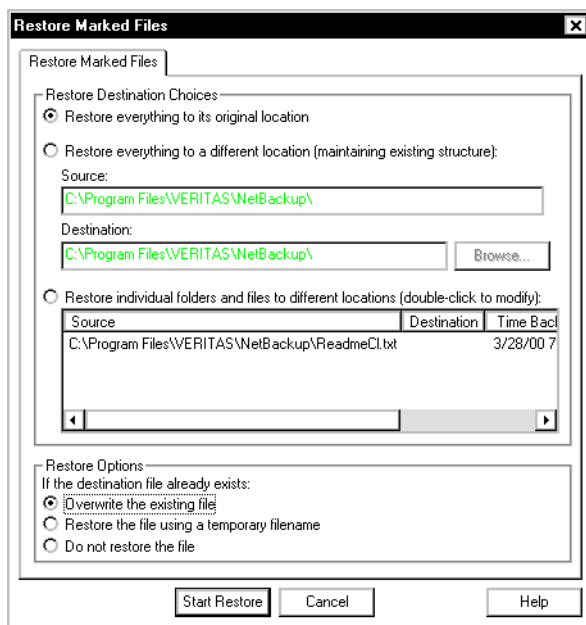
Backup to NetBackup Server	To change the NetBackup server that will perform the backup operation, select another server from the drop-down list.
List box	Contains a list of objects to be backed up.
Archive files (delete files after successful backup)	Select to perform an archive instead of a backup. Files or folders will be deleted after they have been backed up successfully.
Keyword Phrase to Associate With the Backup (Optional)	Specifies a keyword phrase, up to 128 characters in length, that NetBackup will associate with the image created by this backup operation. You can then restore the image by specifying the keyword phrase in the Search Backups dialog box. All printable characters are permitted including space (“ ”) and period (“.”). The default keyword phrase is the null (empty) string.
Start Backup	Initiates the backup or archive operation.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.



Help

To view online help for this dialog box, click this button.

Restore Marked Files Dialog Box



This dialog box appears after you have initiated a restore operation. Use this dialog box to view your selections before proceeding with the operation. If the list is longer than the list box, a vertical scroll bar appears along the right edge of the pane.

Restore Destination Choices This pane contains radio buttons which determine the destination for restored files. The user must choose one of the radio buttons in the pane.

Restore everything to its original folder Restore files, folders, or registry keys to the folder from which they were backed up. This is the default.

Restore everything to a different location Enter the alternate folder you want to use to restore files, folders, or registry keys.

Source Enter the path from which the files, folders, or registry keys was backed up.

Destination	<p>Enter the path to which the files, folders, or registry keys will be restored.</p> <p>By default, the lowest level folder common to all the items being restored appears in the Source box. If this is changed to a folder that only contains some of the items, only those items will be restored to the folder specified in the Destination box. All other items will be restored to their original location.</p>
Browse	<p>This button is enabled when the Restore everything to a different location checkbox is selected. Click this button to open the Browse for Folder dialog box. You can then select a destination folder.</p> <p>Note: You will be browsing the local machine where the NetBackup browser is running, even if you are performing an alternate client restore.</p>
Restore individual folders and files to different locations	<p>Restore files, folders, or registry keys to an alternate path on a file by file, folder by folder, or registry key by registry key basis. The default is to restore to the original path.</p> <p>Select this option, then double-click on an item in the list, and the Enter New Destination dialog box will pop up on top of the Restore Marked Files dialog box. In the new dialog box, you can either manually enter a new destination path, or press a browse button to browse for a new destination path. If you select OK, that path will then show up in the “Destination” field of the list for that item.</p> <p>The individual items you marked for restore will appear in the Restore individual folders and files to different locations list box. If you mark a folder to be restored, that folder name, not the individual files, will appear in the list box. To be able to restore individual files to different locations, files must be selected individually.</p>
Restore Options	<p>This pane contains radio buttons which specify how to restore files, folders, or registry keys onto a system which may contain files, folders, or registry keys with identical names. The user must choose one of the radio buttons in the pane.</p>
Overwrite the existing file	<p>Overwrites existing files, folders, or registry keys. The default is to not overwrite. In this mode, the restore does not occur if the files, folders, or registry keys exist.</p> <p>Select Overwrite the existing file to overwrite existing files, folders, or registry keys.</p>



Restore the file using a temporary filename NetBackup will rename a file so as not to copy over an existing file. NetBackup will restore the item to `filenameXXXXXX.TMP`, where filename is the name of the file being restore and XXXXXX is generated based on the current date and time. This option is only valid when the restore has been requested by, and performed on, the same machine. This option is not supported by server directed restores.

Do not restore the file This is the default.

Start Restore Initiates the restore operation.

Cancel To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.

Help To view online help for this dialog box, click this button.

NetBackup Client Job Tracker Dialog Box

NetBackup Client Job Tracker

Job ID

Job Type

Status

Time Started

Time Stopped

Current File Name

Current File Size Bytes

Actual

Files KBytes Data

Folders KBytes Image

KBytes/Sec

Estimated

Files KBytes Data

Folders KBytes Image

OK Previous Next

To open the NetBackup Client Job Tracker dialog right click on the NetBackup Client icon in the system tray and select Details. If Details is disabled, there have not been any backups or restores since the NetBackup Client Job Tracker was started. If the NetBackup Client icon is not in the system tray, click Start and choose VERITAS NetBackup and NetBackup Client Job Tracker.

NetBackup Client Job Tracker's purpose is to inform the user that a backup or restore is being done on the client machine. The NetBackup Client Job Tracker gives an estimate of the size of the job. It is not intended to replace the View Status dialog box available through the NetBackup Browser or the Activity Monitor available through the NetBackup Server.

Once the NetBackup Client Job Tracker is started, it reports on server directed operations, scheduled operations, and user operations. When the NetBackup Client Job Tracker is shut down, it "forgets" about the jobs it has been tracking (this includes logging off the system).

Job Tracker only reports on the status of a backup as it is running on the client. Once a backup is sent to the NetBackup Server, it will not update the status of that job. Example: the client sends all of the data to be backed up to the server successfully. It reports the backup status as `Successful`. Later an error occurs on the server which causes the backup to fail, the status shown by the Job Tracker is not updated.

Job ID	Displays the NetBackup Job ID.
Job Type	Shows the type of NetBackup operation for the selected job: backup, archive and restore.
Status	Displays the progress of the selected operation.
Time Started	Displays the time the NetBackup operation started.
Time Stopped	Displays the time the NetBackup operation stopped.
Current File Name	Displays the name of the file currently being backed up, archived, or restored.
Current File Size	Displays the size in bytes of the file currently being backed up, archived, or restored.
Actual	Displays the status of the NetBackup operation.
Files	Displays the number of the files currently backed up, archived, or restored.
Folders	Displays the number of folders backed up. A folder is counted each time a file or sub folder contained in the folder is backed up.
KBytes Data	Displays the amount of data, in kilobytes, currently backed up, archived, or restored. This is rounded to the nearest whole number, so it is possible this number may be 0 if the number of bytes being backed up is less than 500.



KBytes Image	Displays the current size, in kilobytes, of the image backed up or archived.
KBytes/Sec	Displays the rate of the NetBackup operation in kilobytes per second.
Estimated	Displays an estimate of the finished NetBackup operation.
Files	Displays the total number of files to be processed by the NetBackup operation.
Folders	Displays the number of folders being backed up. A folder is counted each time a file or sub folder contained in the folder is backed up.
KBytes Data	Displays the total amount of data, in kilobytes, to be processed by the NetBackup operation. This is rounded to the nearest whole number, so it is possible this number may be 0 if the number of bytes being backed up is less than 500.
Previous	Shows the operating status of the previous NetBackup operation in the queue.
Next	Shows the operating status of the next NetBackup operation in the queue.
OK	Closes the NetBackup Client Job Tracker dialog box.

This section contains information for the NetBackup Administrator.

Free Browse

The Free Browse feature allows users without restore privileges to restore from scheduled backups. In previous versions of NetBackup, when a scheduled backup was performed by a system administrator using a root user id, the client user was not able to restore from that backup. The Free Browse feature allows the user to use a scheduled backup to restore files. The user will be able to restore only those files to which they have write access.

There are three different settings - Use, Deny, and Allow.

- ◆ When the client is set to Use, the user will be allowed to browse scheduled backups if the NetBackup server is set to Allow or Use.
- ◆ When the client is set to Deny, the user will not be allowed to browse backups no matter how the NetBackup server is configured.
- ◆ If the client is set to Allow, the user will be able to browse scheduled backups if the NetBackup server is set to Use.

The NetBackup master server setting is configured using the `bpclient` command.

Note By default, the NetBackup master server setting is set to Allow.

To set Use:

```
# bpclient <clientname> -free_browse 2
```

To set Deny:

```
# bpclient <clientname> -free_browse 1
```

To set Allow:

```
# bpclient <clientname> -free_browse 0
```

To verify the configuration:

```
# bpclient <clientname> -L
```



The following table displays the different combinations.

NetBackup Client	NetBackup Server	Use 'Free Browse'
Deny	Deny	No
Deny	Allow	No
Deny	Use	No
Allow	Deny	No
Allow	Allow	No
Allow	Use	Yes
Use	Deny	No
Use	Allow	Yes
Use	Use	Yes

The Free Browse feature will only be used when either the NetBackup client or the NetBackup server has been configured to Use it, and neither have been set to Deny it. By default, all users get the Allow privilege.

In order to make use of the feature on the client, two registry keys need to be created using the NT `regedt32.exe` utility.

1. Use the registry editor to create the following two keys.

```
'HKEY_LOCAL_MACHINE\  
  SOFTWARE\  
    VERITAS\  
      NetBackup\  
        CurrentVersion\  
          Security\  
            FreeBrowse\  
              Use'
```

and

```
'HKEY_LOCAL_MACHINE\  
  SOFTWARE\  
    VERITAS\  
      NetBackup\  
        CurrentVersion\  
          Security\  
            FreeBrowse\  
              Deny' .
```



2. Set the user share permissions on each key.
3. Enter a data value for each key with the name of Flag (type = DWORD). Only when a key has a non-zero Flag value will that privilege be turned on. If both of the Flag values are zero, then all users will get the Allow privilege.

For example:

- ◆ If USERA has read access to the Deny key and the Flag value is non-zero, then USERA will get the Deny privilege.
- ◆ If USERA has read access to the Use key and the Flag value is non-zero, then USERA will get the Use privilege.
- ◆ If USERA has read access to both the Use and Deny keys and they both have Flag values of non-zero, then USERA will get the Use privilege.
- ◆ If USERA has read access to both the Use and Deny keys and the Use key has a Flag value of zero and the Deny key has a Flag value of non-zero, then USERA will get the Deny privilege.
- ◆ If USERA does not have any access to either the Use and Deny keys, then USERA will get the Allow privilege no matter what the values of Flag.



Alternate Client Restores

The administrator on the NetBackup master server can use the Backup, Archive, and Restore interface on that server to direct a restore to any client of the same type that backed up the files. However, it is not possible to perform a server-directed restore through a database-extension product such as NetBackup for Oracle.

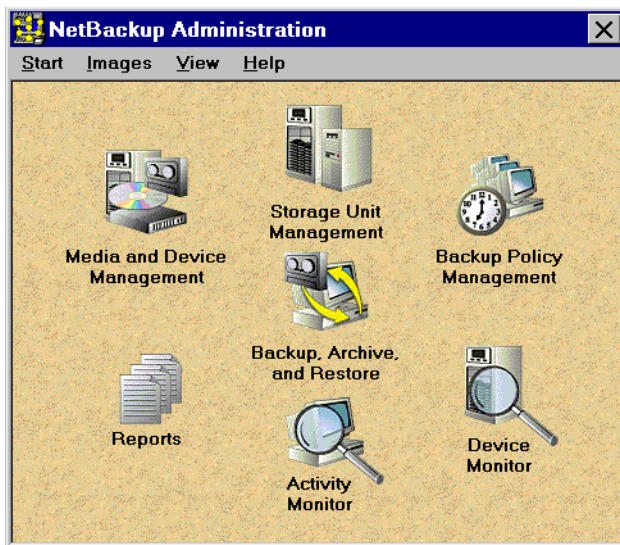
To prevent server-directed restores, either add or delete settings on the client as specified in the table below.

Client Type	Location of Setting	To Prevent Server Directed Restores
Microsoft Windows 95/98/NT/2000	General tab in NetBackup Configuration dialog box on the client (click Configure on the Actions menu to display this dialog box)	Clear Allow server directed restores box
UNIX	/usr/opensv/netbackup/bin/bp.conf	Add DISALLOW_SERVER_FILE_WRITES
Macintosh	/NetBackup Admin/Configuration Files Dist/bp.conf	Add DISALLOW_SERVER_FILE_WRITES
NetWare (Target and Non-Target)	General tab in NetBackup Configuration dialog box on the client (click Configure on the Actions menu to display this dialog box)	Clear Allow server directed restores box
IBM OS/2	c:\veritas\netbackup\bp.ini	Delete Allow_Server_Write



▼ To restore files to another client (server directed restore):

1. Log on to the master server as administrator.
2. Start the NetBackup Administration Program.



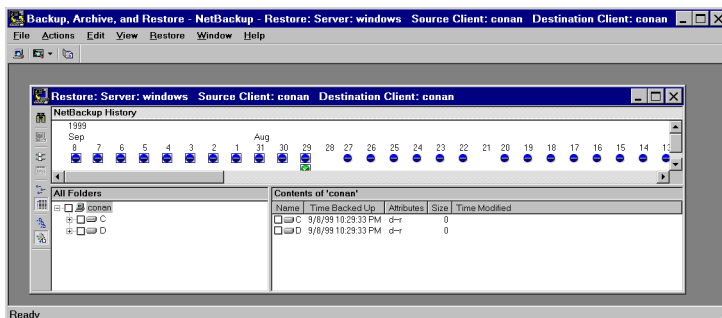
3. Select the Backup, Archive and Restore icon. The NetBackup Client Window appears.



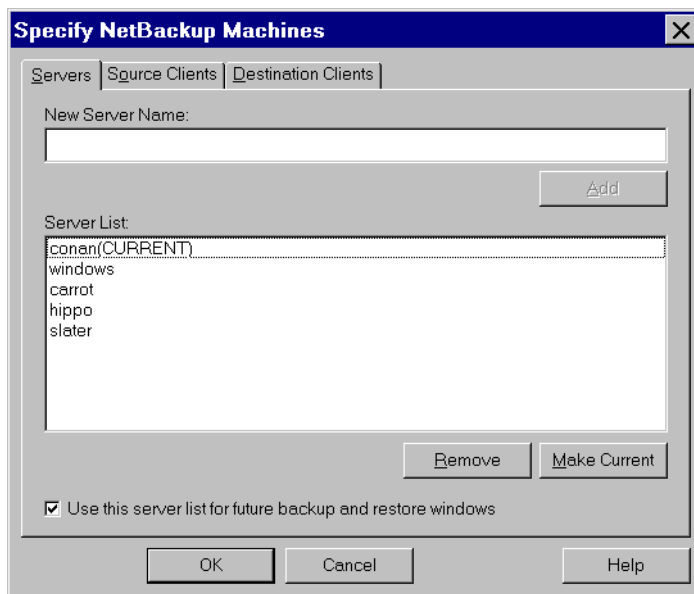
4. On the Actions menu, point to Select Files and Folders to Restore and on the submenu, select the type of restore from those listed (From backup, From archived backup, and so on).



The Restore window appears (Restore from backup window in this example).

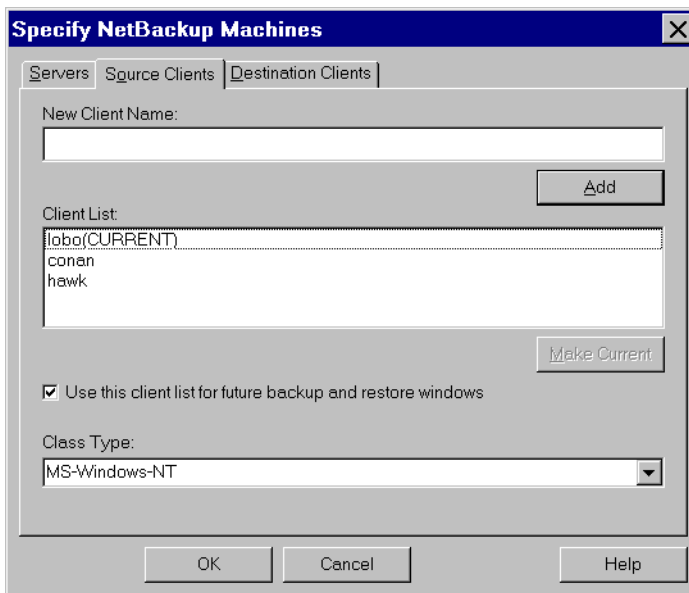


5. Follow these instructions to set up an alternate client restore.
 - a. On the Actions menu, click Specify NetBackup Machines. The NetBackup Restore Options dialog box appears.

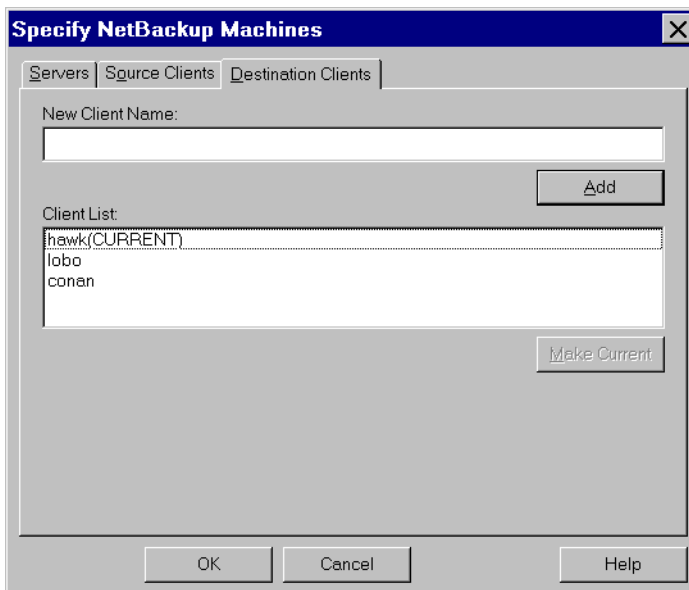


- b. Select the server that you are using and click Make Current. In this example, we select conan.

- c. Select the Source Clients tab.



- d. Select the client whose backup image you are going to restore files from. In this example, we select lobo.
- e. Select the Destination Clients tab.



- f. Select the client to which you are going to restore the files. In this example, we select hawk.
 - g. Click OK.
6. Open the NetBackup Restore Window and select files for restore.
 7. Click Start Restore. The Restore Marked Files dialog box appears.
 8. Follow these instructions to restore to a path other than the one from which the files were originally backed up.
 - a. In the Restore Marked Files dialog box, select Restore Everything To a Different Location.
 - b. Enter the alternate restore path in the Destination box.

The paths in the Source and Destination boxes must use the formats required by the clients as shown in Table 4.

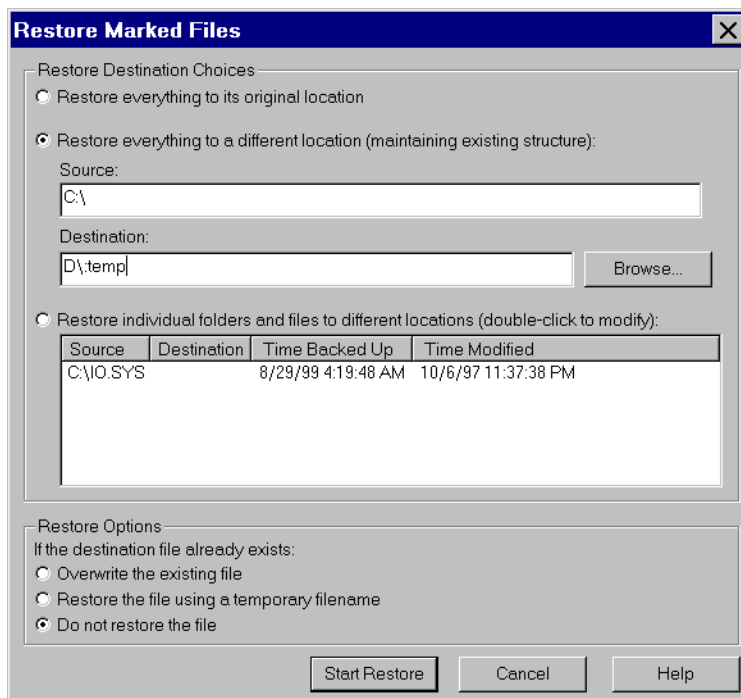
Note When restoring to a UNIX client, you must use the Windows NT format. For example, to restore a file from /etc to /tmp, you specify etc:\ as the source and tmp:\ as the destination.

Table 4. Restore Path Formats

Client	Path Format	Example
UNIX	directory:\	usr:\openv\netbackup\
Macintosh	folder/folder/	NetBackup Admin/Configuration Files Dist/
Microsoft Windows, NetWare Non-Target	drive:\directory\	c:\Veritas\NetBackup\
NetWare Target	/target/volume/data_path	/SYS/MARGE/veritas/netbackup/
IBM OS/2	drive:\directory	c:\veritas\netbackup



In this example, we are restoring a file from one Windows NT client (lobo) to another Windows NT client (hawk) and specify the path where the files will go on hawk.



9. Click Start Restore to start the restore.



NetBackup Specify NetBackup Machines Dialog Box for System Administrators

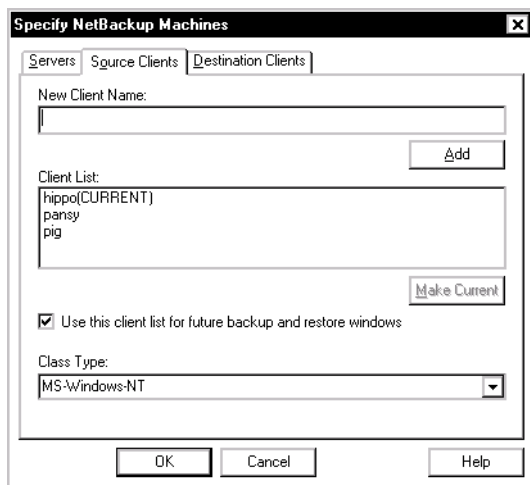
When the current window is a Restore window and the Specify NetBackup Machines dialog is opened on a NetBackup server, three property sheets are displayed:

- ◆ Servers
- ◆ Source Clients
- ◆ Destination Clients

Specify NetBackup Machines - Servers Property Sheet

Refer to “Servers Property Sheet” on page 61 for more information.

Source Clients Property Sheet



To access this dialog box:

1. Make a Restore window active.
2. From the Actions menu, choose Specify NetBackup Machines.
3. Select the Source Clients property sheet.

Use this dialog box to select the client whose backups you want to restore. Files or folders that were backed up or archived from one NetBackup client can be restored to a different NetBackup client. This is called an alternate client restore.

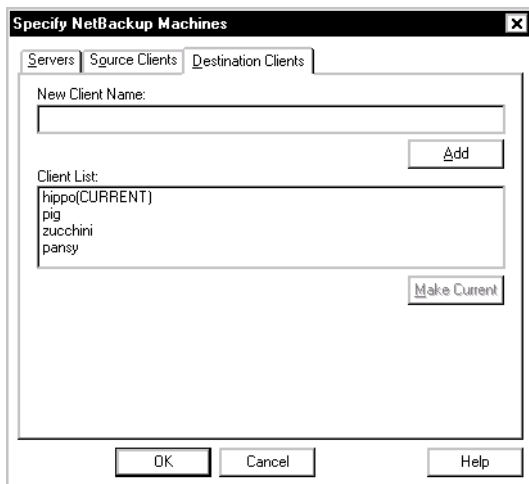
Notes:

- ◆ The NetBackup master server must be configured to allow alternate client restores. (Refer to the section on server directed restores in the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT/2000* for details.)
- ◆ For information on file permissions required, see page 5

New Client Name	To add another client name to the Client List, type the name of the client in the New Client Name and click Add. The client name entered must also be defined in a class on the NetBackup server. If a new client is added to the list it will be in the client list for all windows currently opened and any new window that is opened. The new client will be saved in the Client List box after the current window is closed.
Add	Adds the client, entered in the New Client Name box, to the Client List.
Client List	The Client List shows the names of the NetBackup clients that your client can access. To change the name of the client whose backups you can browse for files to restore, select a name from the Client List and click Make Current. The word CURRENT now appears in parentheses beside the name of the new source client.
Make Current	Designates the client backup images you can browse for restore operations. First highlight the client in the Client List, then click Make Current. Changing the current client will affect only the selected window. This setting will not be saved after the currently selected window is closed.
Use this client list for future backup and restore windows	If selected, NetBackup applies any changes to the client list to all backup and restore windows opened after the property sheet modifications have been saved.
Class Type	View and select class type for the client selected in the Client List. The class type must be the same as specified for the client in the NetBackup configuration on the NetBackup server.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view online help for this dialog box, click this button.



Destination Clients Property Sheet



To access this dialog box:

1. Make a Restore window active.
2. From the Actions menu, choose Specify NetBackup Machines
3. Select the Destination Clients property sheet.

Use this dialog box to select the client which will receive the restored backups. Restoring files to another client is a type of server directed restore.

Notes:

- ◆ The NetBackup master server must be configured to allow alternate client restores. (Refer to the section on server directed restores in the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT/2000* for details.)
- ◆ For information on file permissions required, see page 5.
- ◆ A client can prohibit server directed restores by clearing the Allow server-directed restores option on the General property sheet in the Configure dialog. See "General Property Sheet" on page 54.

New Client Name	To add another client name to the Client List, type the name of the client in the New Client Name and click Add. The client name entered must also be defined in a class on the NetBackup server. If a new client is added to the list it will be in the client list for all windows currently opened and any new window that is opened. The new client will be saved in the Client List box after the current window is closed.
Add	Adds the client, entered in the New Client Name box, to the Client List.
Client List	The Client List shows the names of the NetBackup clients that your client can access. To change the name of the client whose backups you can browse for files to restore, select a name from the Client List and click Make Current. The word CURRENT now appears in parentheses beside the name of the new source client.
Make Current	Designates the client that will receive the restore operations. First highlight the server in the Client List, then click Make Current. Changing the current client will affect only the selected window. This setting will not be saved after the currently selected window is closed.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view online help for this dialog box, click this button.

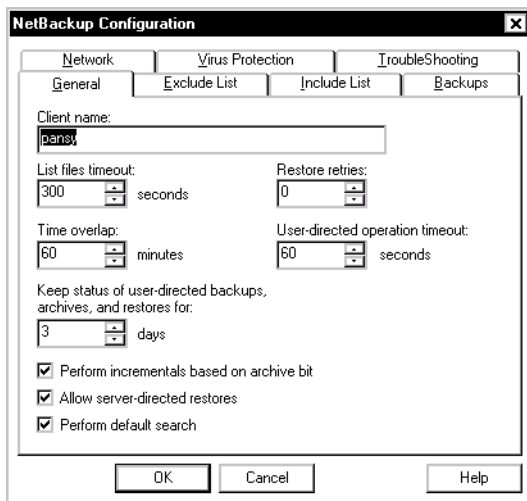


NetBackup Configuration Dialog Box

This section contains information on the NetBackup Configuration dialog box for the system administrator.

Configuration information is kept in the registry key
\\HKEY_LOCAL_MACHINE\\Software\\VERITAS\\NetBackup
\\CurrentVersion\\Config.

General Property Sheet



To access this property sheet:

1. From the Actions menu, select Configure.
2. Click the General property sheet.

Use this property sheet to set any of the configuration parameters for your client.

Client name This parameter should be changed only by a system administrator. Specify the NetBackup client name of your client. This name is used when backing up, archiving and restoring files, folders, or registry keys. The client name in NetBackup server class configuration must match the client name specified here.

List files timeout	This parameter should be changed only by a system administrator. Specify the number of seconds to wait for a response from the NetBackup master server when listing files. If this amount of time is exceeded, the user receives the socket read failed error even if the server is still processing the user's request. The default is 300 seconds. The minimum setting is zero. The maximum setting is 36,000 seconds.
Restore retries	This parameter should be changed only by a system administrator. Specify the number of times to retry a restore after a failure. The default is zero, which is no retries. The maximum setting is 999.
Time overlap	This parameter should be changed only by a system administrator. Specify the extra number of minutes to add to the date range for incremental backups when using date based backups. This value can be used to compensate for differences in the speed of the clock between the client and NetBackup server. The default is 60 minutes. The minimum setting is zero. The maximum setting is 1,440 minutes.
User-directed operation timeout:	Specify the number of seconds to wait for a response from the NetBackup master server when performing user-directed operations. If this amount of time is exceeded, the user receives the socket read failed error even if the server is still processing the users request. The default is 60 seconds. The minimum setting is zero. The maximum setting is 36,000 seconds.
Keep status of user-directed backups, archives, and restores for:	Specify the number of days to store progress reports before the system will automatically delete them. Default is 3 days. The minimum allowable value is zero. The maximum is 9,999.



Perform incrementals based on archive bit	<p>This parameter should be changed only by a system administrator. Select this check box to have NetBackup include files in an incremental backup only if their archive bit is set. The system sets this bit whenever a file is changed and it will remain set until NetBackup clears it. A full backup always clears the archive bit. A differential-incremental backup clears the archive bit if the file is successfully backed up within the number of seconds indicated by <code>Clear_Archive_Bit_Incr_Wait</code>. A cumulative-incremental backup or user backup has no effect on the archive bit.</p> <p>Clear this checkbox to have NetBackup include a file in an incremental backup only if the file's datetime stamp has been changed since the last backup. For a cumulative-incremental backup, NetBackup compares the file's timestamp against the last full backup. For a differential-incremental backup, NetBackup compares the timestamp against the last full backup or incremental backup.</p> <p>If you install or copy files from another computer, the new files retain the datetime stamp of the originals. If the original date is before the last backup date on this computer, then the new files will not be backed up until the next full backup, whichever is most recent. Windows 95/98 and Windows NT/2000 clients use the create and modify datetime stamp.</p>
Allow server-directed restores	<p>This parameter should be changed only by a system administrator. Select this check box to let the administrator on the NetBackup server initiate restores to this client. The default is to allow server directed restores.</p>
Perform default search	<p>If selected, NetBackup will automatically search the default range of backup images and display the backed up folders and files whenever a restore window is opened.</p> <p>Clear this box to disable the initial search. The NetBackup Restore window will not show any files or folders when initially opened. Clicking a backup image, or selecting a range of backup images, will initiate a search.</p> <p>By default, this box is selected.</p>
OK	<p>To accept changes to the parameters, click this button.</p>
Cancel	<p>To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.</p>
Help	<p>To view online help for this dialog box, click this button.</p>

Exclude List Property Sheet

Note Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

1. From the Actions menu, select Configure
2. Click the Exclude property sheet.

Use this property sheet to view and change the list of files to exclude from a master server directed backup. For example, if you add `C:*.bat` to the Exclude File List, all files with a `.bat` extension that appear in the root of the `C:` drive will not be backed up. If you want to exclude all `.bat` files, use `*.bat`. Exclude lists only apply to full backups, cumulative-incremental backups, and differential-incremental backups initiated by the NetBackup server. Refer to “Syntax Rules for Exclude and Include Lists” on page 102 for more details.

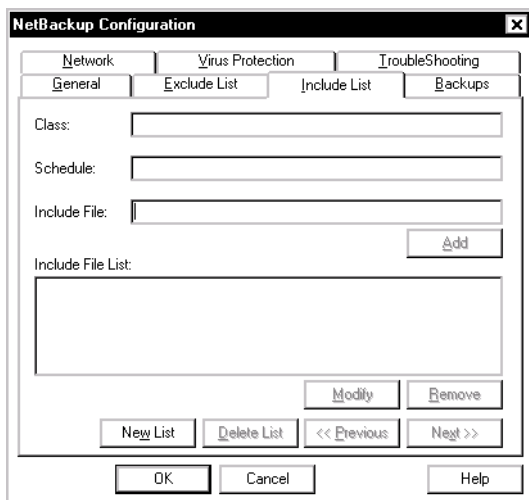
Exclude lists can be created for specific classes and schedules. The first exclude list has the class and schedule disabled. The list cannot be deleted, but it can be empty.

Class	The Exclude File List applies only to server directed backups for the specified class.
Schedule	The Exclude File List applies only to server directed backups for the specified schedule. This requires that a class be specified.



- Exclude File** Enter the file or folder, that you want to exclude, in the list box. Click Add to move the file or folder to the Exclude File List.
The exclude list is case sensitive unless the case_sensitive_exclude_list data value in the registry is set to no.
- Add** Click this button to add a file or folder to the Exclude List File.
- Exclude File List** The file list applies only to scheduled backups. It shows the names of the files that will be excluded in a scheduled backup. To remove a file from the list, select the name and click Remove.
- Modify** Select a list entry, then click this button to edit the selected file or folder from the file list.
- Remove** Click this button to remove a selected file or folder from the file list.
- New List** Use this button to create a new list with a class and schedule. Duplicates of class and schedule are not allowed.
- Delete List** Use this button to delete the current list.
- Previous** Use this button to view the previous list.
- Next** Use this button to view the next list.
- OK** To accept changes to the parameters, click this button.
- Cancel** To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
- Help** To view online help for this dialog box, click this button.

Include List Property Sheet



Note Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

1. From the Actions menu, select Configure
2. Click the Include property sheet.

Use this property sheet to make exceptions to the list of files that are excluded from a server-directed backup (those files listed in the Exclude List). For example, if you want to exclude all files with a `.bat` extension *except* the `autoexec.bat` file from backups, you would add `*.bat` to the Exclude File List and `autoexec.bat` to the Include List. Include lists only apply to backups, initiated by the NetBackup master server. Refer to “Syntax Rules” on page 102 for details.

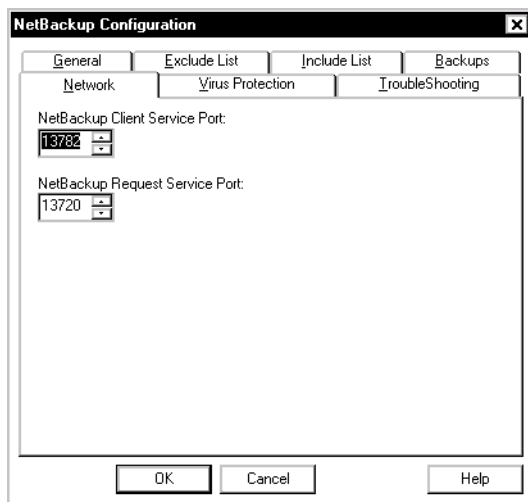
Include lists can be created for specific classes and schedules. The first include list has the class and schedule disabled. The list cannot be deleted, but it can be empty.

Class	The Include File List applies only to server directed backups for the specified class.
Schedule	The Include File List applies only to server directed backups for the specified schedule. This requires that a class be specified.
Include File	Enter the file or folder, that you want to include, in the list box. Click Add to move the file or folder to the Include File List. The include list is case sensitive unless the <code>case_sensitive_exclude_list</code> data value in the registry is set to <code>no</code> .
Add	Click this button to add a file or folder to the Include List File.
Include File List	The file list applies only to scheduled backups. It shows the names of the files that will be included in a scheduled backup. To remove a file from the list, select the name and click Remove.
Modify	Select a list entry, then click this button to edit the selected file or folder from the file list.
Remove	Click this button to remove a selected file or folder from the file list.
New List	Use this button to create a new list with a class and schedule. Duplicates of class and schedule are not allowed.
Delete List	Use this button to delete the current list.
Previous	Use this button to view the previous list.
Next	Use this button to view the next list.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.



Help To view online help for this dialog box, click this button.

Network Property Sheet



Note Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

1. From the Actions menu, select Configure.
2. Click the Network property sheet.

Use this property sheet to view and change the port numbers used during communications between your client and the NetBackup master server.

NetBackup Client Service Port: Specify the port the NetBackup server uses to communicate with the NetBackup client. The default is 13782.

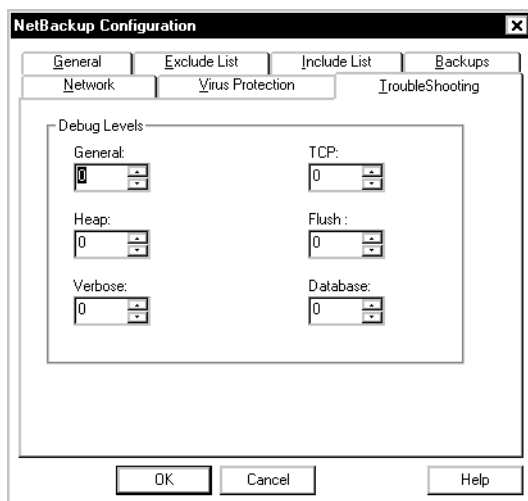
NetBackup Request Service Port: Specify the port to which the client should send requests to the NetBackup request service, `bprd`, on the NetBackup server. The default is 13720.

OK To accept changes to the parameters, click this button.

Cancel To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.

Help To view online help for this dialog box, click this button.

Troubleshooting Property Sheet



Note Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

1. From the Actions menu, select Configure.
2. Click the Troubleshooting property sheet.

Use this property sheet to view and change the amount of information that NetBackup saves in its activity/troubleshooting logs. NetBackup only creates log files if the log folders are created. See “Troubleshooting Logs” on page 101 for more details. Also see the *NetBackup Troubleshooting Guide - UNIX* or the *NetBackup Troubleshooting Guide - Windows NT/2000* for information on using these logs.

General	Controls the amount of information that NetBackup writes to the troubleshooting logs. Supported values are 0, 1, or 2. The higher the level, the more information is written. The default is 0.
---------	---



TCP	<p>Used for debug purposes and enables TCP debugging. Supported values are:</p> <ul style="list-style-type: none">0 No extra logging. This is the default.1 Log basic TCP/IP functions.2 Log all TCP/IP functions, including all read and write requests.3 Log contents of each read/write buffer. <p>Note: Setting Debug TCP Level to 2 or 3 can cause the status reports to be very large. It can also slow performance of a backup or restore operation.</p>
Heap	<p>Enables memory heap debugging. Supported values are:</p> <ul style="list-style-type: none">0 No memory heap debugging information. This is the default.1 Memory heap information at the start and end of program2 Near memory heap information at the start and end of program.3 Near and far memory heap information at the start and end of program.
Flush	<p>NetBackup periodically flushes the progress reports on NetBackup operations. This setting specifies the frequency of the flushes or how often the internal buffer gets written to the progress report. The higher the flush level, the more often the buffer is written to the file. Supported values are 0, 1 or 2. The default is 0.</p>
Verbose	<p>Verbose controls the amount of information that the NetBackup NT Server writes to its logs. This parameter is only in effect when the local machine (where the NetBackup client is being run) is also a NetBackup NT server.</p> <p>The values can be 0 to 99.</p> <p>Supported values are:</p> <ul style="list-style-type: none">0 No extra logging. This is the default.1- 99 Verbose logging. <p>Use the default setting of zero unless advised otherwise by VERITAS Technical Support.</p>
Database	<p>Controls the amount of information the NetBackup Database Extensions write to their log files.</p> <p>Supported values are 0 through 9. The higher the level, the more information is written. The default is 0.</p>
OK	<p>To accept changes to the parameters, click this button.</p>



Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view online help for this dialog box, click this button.

Troubleshooting Logs

NetBackup will generate troubleshooting logs only if you create the following folders on your client.

Windows NT/2000

```
C:\
  \VERITAS
    \Program Files
      \NetBackup
        \logs
          \BPBKAR
          \BPCD
          \BPINETD
          \NBWIN
          \TAR
```

Windows 95/98

```
C:\
  \VERITAS
    \Program Files
      \NetBackup
        \logs
          \BPCD
          \NBWIN
```

All log files use the format `yyymmdd.LOG`.

BPBKAR	Log files in this folder contains info about backups, both user and server directed.
BPCD	Log files in this folder have information useful for troubleshooting communications between your NetBackup client and the NetBackup server.
BPINETD	Log files in this folder have information on the NetBackup Client Service operation.
NBWIN	Log files in this folder have information on user operations.
TAR	Log files in this folder contain information about restores, both user and server.



Note If you use Notepad to view the log files, the file will appear as one long line. Wordpad recognizes the line breaks and properly displays the lines.

Syntax Rules for Exclude and Include Lists

Syntax Rules

The following syntax rules apply to exclude lists and include lists.

- ◆ Only one pattern per line is allowed.
- ◆ The following meta or wildcard characters are recognized:
 - []
 - ?
 - *
- ◆ To use the wildcard characters literally (that is, as non wildcard characters), precede them with a backslash (\). For example, assume that the brackets in the following example are not being used as wildcards:

```
\home\abc\fun[name
```

In your exclude list, precede the brackets with a backslash as in

```
\home\abc\fun\[ny\[name
```

to have NetBackup interpret the brackets literally.

Note Note that a backslash (\) acts as an escape character only when it precedes a wildcard as in the above example. This means that NetBackup normally interprets a backslash literally and it is a legal character to use in pathnames.

- ◆ Spaces are considered legal characters. Be careful to omit extra spaces unless they are part of the file name.

For example, if you want to exclude a file named

```
C:\home\testfile (with no extra space character at the end)
```

and your exclude list entry is

```
C:\home\testfile (with an extra space character at the end)
```

NetBackup will not be able to find the file until you delete the extra space from the end of the file name.

- ◆ End a file path with `\` to exclude only folders with that path name (for example, `C:\home\test\`). If the pattern does not end in `\` (for example, `C:\usr\test`) NetBackup excludes both files and folders with that path name.
- ◆ To exclude all files with a given name, regardless of their folder path, just enter the name without a preceding slash. For example:

```
test
```

rather than

```
C:\test
```

This is equivalent to prefixing the file pattern with

```
C:\
```

```
C:\*\
```

```
C:\*\*\
```

```
C:\*\*\*\
```

and so on.

Example of an Exclude List

If an exclude list has the following entries:

```
C:\home\doe\john
```

```
C:\home\doe\abc\
```

```
C:\home\*\test
```

```
C:\*\temp
```

```
temp
```

the following are excluded from server directed backups:

- ◆ The file or folder named `C:\home\doe\john`.
- ◆ The folder `C:\home\doe\abc` (because the exclude entry ends with `\`).
- ◆ All files or folders named `test` that are two levels below home.
- ◆ All files or folders named `temp` that are two levels below the root.
- ◆ All files or folders named `temp` at any level.





NetBackup Commands

B

This section describes commands specific to the NetBackup product. Execute these commands in an MS-DOS window so you can see the results.

The following are special conventions used in the command descriptions.

- ◆ Brackets [] mean that the enclosed command line component is optional.
- ◆ A vertical bar (or pipe) symbol | separates optional arguments from which the user can choose. For example, assume that a command has the following format:

```
command [arg1 | arg2]
```

Here, the user can choose either arg1 or arg2 (but not both).

- ◆ Italics indicate that the information is user supplied. For example, the user supplies *class*, *schedule*, and *filename* in the following command:

```
bpbackup -c class -s schedule filename
```

- ◆ An ellipses (...) means that you can repeat the previous parameter. For example, consider the following command:

```
bpbackup [-S master_server [,master_server,...]] filename
```

Here, the -S option requires the first master server name. Additional names can be added, separated by commas and followed by a file name as in:

```
bpbackup -S mars,coyote,shark,minnow memofile.doc
```



bparchive

NAME

bparchive - archive files to the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bparchive [-c class] [-s schedule] [-S  
  master_server [, master_server, ...]] [-t class_type] [-L  
  progress_log] [-w [hh:mm:ss]] [-help] [-k  
  "keyword_phrase" ] -f listfile | filenames
```

DESCRIPTION

bparchive processes files that you list on the command line or in the file you specify with the -f *listfile* option. Any file path entered can be a file or directory name. If the list of files includes a directory, bparchive archives all files and subdirectories of that directory starting at the directory itself.

By default, you are returned to the system prompt after bparchive is successfully submitted. The command works in the background and does not return completion status directly to you. The -w option lets you change this behavior so bparchive works in the foreground and returns completion status after a specified time period.

bparchive writes its informative and error messages to a progress-log file. You must create this file prior to the execution of the bparchive command and then specify it with the -L *progress_log* option. If bparchive cannot archive any of the requested files or directories, you can use the progress log to determine the reason for the failure.

If you create an *install_path*\NetBackup\logs\bparchive\ directory with write access, bparchive creates an activity log file in this directory that you can use for troubleshooting.

The following restrictions apply to this command:

- ◆ To archive files with the bparchive command, you must have permission to delete the file and the file must not be read-only. Otherwise, NetBackup saves the files but does not delete them from the disk.
- ◆ bparchive does not archive the "." or ".." directory entries, and does not archive disk-image backups.

OPTIONS

-c *class* Names the class to use for the user archive. If it is not specified, the NetBackup server uses the first class it finds that includes the client and a user archive schedule.

`-s schedule`

Names the schedule to use for the user archive. If it is not specified, the NetBackup server uses the first user archive schedule it finds in the class it is using (see the `-c` option).

`s master_server [, master_server, . . .]`

Specifies the name of the NetBackup master server. The default is the server designated as current on the Servers tab of the Specify NetBackup Machines dialog box. To display this dialog box, start the user interface on the client and click Specify NetBackup Machines on the Actions menu.

`-t class_type`

Specifies one of the following numbers corresponding to the class type (the default is 0 on all clients except Apollo, where the default is 3):

- 0 = Standard
- 4 = Oracle
- 6 = Informix-On-BAR
- 7 = Sybase
- 10 = NetWare
- 13 = MS-Windows-NT
- 14 = OS/2
- 15 = MS-SQL-Server
- 16 = MS-Exchange-Server
- 19 = NDMP

Note The following class types (Apollo-wbak, DataTools-SQL-BackTrack, Auspex-FastBackup, SAP, DB2, FlashBackup, Split-Mirror, and AFS) apply only to NetBackup DataCenter.

- 3 = Apollo-wbak
- 11 = DataTools-SQL-BackTrack
- 12 = Auspex-FastBackup
- 17 = SAP
- 18 = DB2
- 20 = FlashBackup
- 21 = Split-Mirror
- 22 = AFS

`-L progress_log`

Specifies the name of an existing file in which to write progress information.

For example: `c:\proglog.`



The default is to not use a progress log.

-w [*hh:mm:ss*]

Causes NetBackup to wait for a completion status from the server before returning you to the system prompt.

You can optionally specify a wait time in hours, minutes, and seconds. The maximum wait time you can specify is 23:59:59. If the wait time expires before the archive is complete, the command exits with a timeout status. The archive, however, still completes on the server.

If you use **-w** without specifying the wait time or if you specify a value of 0, NetBackup waits indefinitely for the completion status.

-help Displays a synopsis of command usage when it is the only option on the command line.

-k *keyword_phrase*

Specifies a keyword phrase that NetBackup associates with the image created by this archive operation. You can then restore the image by specifying the keyword phrase with the **-k** option on the `bprestore` command.

The keyword phrase is a textual description of the archive that is a maximum of 128 characters in length. All printable characters are permitted including space (" ") and period ("."). Enclose the phrase in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

-f *listfile* Specifies a file (*listfile*) containing a list of files to be archived and can be used instead of the *filenames* option. In *listfile*, place each file path on a separate line.

The format required for the file list depends on whether the files have spaces or returns in the names.

To archive files that do not have spaces or returns in the names, use this format:

filepath

Where *filepath* is the path to the file you are archiving. For example:

c:\Programs

c:\winnt

c:\documents\old_memos

To archive files that have spaces or returns in the names, use this format:

filepathlen filepath

Where *filepath* is the path to the file you are archiving and *filepathlen* is the number of characters in the file path.

For example:

```
11 c:\Programs
8 c:\winnt
22 c:\documents\old memos
```

filenames

Names one or more files to be archived and can be used instead of the `-f` option.

Any files that you specify must be listed at the end, after all other options.

EXAMPLES

EXAMPLE 1

To archive a single file, enter:

```
bparchive c:\usr\user1\file1
```

EXAMPLE 2

To archive files listed in a file named `archive_list`, enter:

```
bparchive -f archive_list
```

EXAMPLE 3

To associate the keyword phrase "Archive My Home Directory 01/01/97" to the archive of the directory `c:\home\kwc` and use a progress log named `c:\home\kwc\arch.log` enter the following (all on one line):

```
bparchive -k "Archive My Home Directory 01/01/97" -L
c:\home\kwc\arch.log c:\home\kwc
```

FILES

install_path\NetBackup\logs\bparchive*.log



bpbackup

NAME

bpbackup - back up files to the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bpbackup [-c class] [-s schedule] [-S  
master_server [ , master_server, . . . ] [-t class_type] [-L  
progress_log] [-w [ hh:mm:ss ] [-help] [-k  
" keyword_phrase " ] -f listfile | filenames
```

```
install_path\NetBackup\bin\bpbackup -c class -i [-h hostname] [-s  
schedule] [-S master_server [ , master_server, . . . ] [-t  
class_type] [-w [ hh:mm:ss ] [-k " keyword_phrase " ]
```

DESCRIPTION

bpbackup starts either of the following:

- ◆ A user backup that is the equivalent to what is performed by using the interface on the client (see the first form of the command shown above). This type of backup can be started from any NetBackup client in order to back up files from that client.

The bpbackup command processes the files that you list on the command line or in the file that you specify with the -f *listfile* option. A file path can be a file or directory name. If the named files include a directory, bpbackup backs up all files and subdirectories of that directory starting at the directory itself.

- ◆ An immediate-manual backup of a client (see the second form of the command shown above). This variation requires the -i option on the bpbackup command and is available only to the administrator on the master server. It is the equivalent starting a manual backup from the NetBackup administrator's interface. Use the -h option to specify the host.

The following restrictions apply to this command:

- ◆ You must be the owner of the file or an administrator to back up a file with bpbackup.
- ◆ You can back up files and directories owned by other users if you have the necessary permissions.
- ◆ bpbackup does not back up the "." or ".." directory entries.

By default, you are returned to the system prompt after bpbackup is successfully submitted. The command works in the background and does not return completion status directly to you. The -w option lets you change this behavior so the command works in the foreground and returns completion status after a specified time period.

bpbackup writes informative and error messages to a progress-log file if you create the file prior to the execution of the bpbackup command and then specify the file with the `-L progress_log` option. If bpbackup cannot back up the requested files or directories, use the progress log to determine the reason for the failure.

If you create a directory named `install_path\NetBackup\logs\bpbackup` with write access, bpbackup creates an activity log file in this directory that can be used for troubleshooting.

OPTIONS

- `-c class` Names the class to use for the backup.
If this option is not specified for a user backup, NetBackup uses the first class it finds that includes the client and a user backup schedule.
The `-c` option is required for an immediate-manual backup (`-i` option).
- `-i` Starts an immediate-manual backup. This is the equivalent of starting a manual backup from the NetBackup administrator interface. You must be the administrator on the master server to use the `-i` option.
- `-h hostname`
Use this option only in conjunction with the `-i` option. It names the client host on which to run the backup. If it is not specified, NetBackup runs the backup on all clients in the class.
- `-s schedule`
Names the schedule to use for the backup. If it is not specified, the NetBackup server uses the first user backup schedule it finds for the client in the class it is using (see the `-c` option).
- `-S master_server [, master_server, . . .]`
Specifies the name(s) of the NetBackup master server(s). The default is the server designated as current on the Servers tab of the Specify NetBackup Machines dialog box. To display this dialog box, start the user interface on the client and click Specify NetBackup Machines on the Actions menu.
- `-t class_type`
Specifies one of the following numbers corresponding to the class type (the default is 0 on all clients except Apollo, where the default is 3):
0 = Standard
4 = Oracle
6 = Informix-On-BAR
7 = Sybase
10 = NetWare
13 = MS-Windows-NT



14 = OS/2
15 = MS-SQL-Server
16 = MS-Exchange-Server
19 = NDMP

Note The following class types (Apollo-wbak, DataTools-SQL-BackTrack, Auspex-FastBackup, SAP, DB2, FlashBackup, Split-Mirror, and AFS) apply only to NetBackup DataCenter.

3 = Apollo-wbak
11 = DataTools-SQL-BackTrack
12 = Auspex-FastBackup
17 = SAP
18 = DB2
20 = FlashBackup
21 = Split-Mirror
22 = AFS

-L *progress_log*

Specifies the name of an existing file in which to write progress information.

For example: `c:\proglog`

The default is to not use a progress log.

-w [*hh:mm:ss*]

Causes NetBackup to wait for a completion status from the server before returning you to the system prompt.

You can optionally specify a wait time in hours, minutes, and seconds. The maximum wait time you can specify is 23:59:59. If the wait time expires before the backup is complete, the command exits with a timeout status. The backup, however, still completes on the server.

If you use **-w** without specifying a wait time or you specify a value of 0, NetBackup waits indefinitely for the completion status.

If you include **-i** with **-w**, NetBackup waits until all initiated jobs have completed before returning status. However, if more than one job starts, the status is unpredictable. If the multiple jobs are due to there being more than one client and the class does not have Allow Multiple Data Streams selected, you can include the **-h** option to restrict the operation to one client and obtain predictable status. However, if the class has Allow Multiple Data Streams selected and there is more than one job from the selected client, the status is still unpredictable.

- help** Displays a synopsis of command usage when it is the only option on the command line.
- k *keyword_phrase***
 Specifies a keyword phrase that NetBackup associates with the image being created by this backup operation. You can then restore the image by specifying the keyword phrase with the `-k` option on the `bprestore` command.
 If you use the `-i` option with `-k`, NetBackup establishes an association between the keyword phrase and the backup class and image.
 The keyword phrase is a textual description of the backup that is a maximum of 128 characters in length. All printable characters are permitted including space (" ") and period ("."). Enclose the phrase in double quotes ("...") or single quotes ('...').
 The default keyword phrase is the null (empty) string.
- f *listfile***
 Specifies a file (*listfile*) containing a list of files to be backed up. This option can be used instead of the *filenames* option, but cannot be used with the `-i` option. List each file on a separate line.
 The format required for the file list depends on whether the files have spaces or returns in the names.
 To back up files that do not have spaces or returns in the names, use this format:
filepath
 Where *filepath* is the path to the file you are backing up. For example:
 c:\Programs
 c:\winnt
 c:\documents\old_memos
 To back up files that have spaces or returns in the names, use this format:
filepathlen filepath
 Where *filepath* is the path to the file you are backing up and *filepathlen* is the number of characters in the file path.
 For example:
 11 c:\Programs
 8 c:\winnt
 22 c:\documents\old memos
- filenames***
 Names one or more files to be backed up. This option can be used instead of the `-f` option, but cannot be used with the `-i` option. Any files that you specify must be listed at the end, following all other options.



EXAMPLES

EXAMPLE 1

To perform a user backup of a single file, enter:

```
bpbbackup c:\users\user1\file1
```

EXAMPLE 2

The following command starts a user backup of the files that are listed in a file named `backup_list`.

```
bpbbackup -f backup_list
```

EXAMPLE 3

The following command (all on one line) starts an immediate-manual backup of the client host named `diablo`, in the class named `cis_co`. The class type is Standard class and is in the configuration on the master server named `hoss`. The progress log is `c:\home\hrp\prog`.

```
bpbbackup -C cis_co -i -h diablo -S hoss -t 0 -L c:\home\hrp\prog
```

EXAMPLE 4

The following command (all on one line) associates the keyword phrase "Backup My Home Directory 01/01/97" to the user backup of the directory `c:\home\kwc`. The progress log is `c:\home\kwc\bkup.log`.

```
bpbbackup -k "Backup My Home Directory 01/01/97" -L  
c:\home\kwc\bkup.log c:\home\kwc
```

EXAMPLE 5

The following command (all on one line) associates the keyword phrase "Class Win NT 01/01/97" to the immediate-manual backup of the client host named `slater` in the class named `win_nt_class`. The progress log is `c:\tmp\bkup.log`.

```
bpbbackup -k "Class Win NT 01/01/97" -i -h slater -c win_nt_class -t  
13 -L c:\tmp\bkup.log
```

FILES

```
install_path\NetBackup\logs\bpbbackup\*.log
```

bplist

NAME

bplist - lists backed up and archived files on the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bplist [-A | -B] [-C client] [-S
    master_server] [-t class_type] [-k class] [-F] [-R [n]] [-b
    | -c | -u] [-l] [-r] [-Listseconds] [-T] [-unix_files]
    [-nt_files] [-s mm/dd/yy [hh:mm:ss]] [-e mm/dd/yy
    [hh:mm:ss]] [I] [PI] [-help] [-keyword "keyword_phrase" ]
    [filename]
```

DESCRIPTION

bplist shows a list of previously archived or backed up files according to the options that you specify. You can choose the file or directory and the time period that you want the listing to cover. Directories can be recursively displayed to a specified depth.

The list shows only the files that you have read access to. You also must own or have read access to all directories in the file paths. You can list files that were backed up or archived by another client only if you are validated to do so by the NetBackup administrator.

If you create directory *install_path*\NetBackup\logs\bplist\ with write access, bplist creates an activity log file in this directory that you can use for troubleshooting.

The output of bplist goes to standard output.

OPTIONS

- A | -B Specifies whether to produce the listing from archives (-A) or backups (-B). The default is -B.
- C *client* Specifies a client name to use for finding backups or archives to list. This name must be as it appears in the NetBackup configuration. The default is the current client name.
- S *master_server* Specifies the name of the NetBackup server. The default is the server designated as current on the Servers tab of the Specify NetBackup Machines dialog box. To display this dialog box, start the user interface on the client and click Specify NetBackup Machines on the Actions menu.
- t *class_type* Specifies one of the following numbers corresponding to the class type (the default is 0 on all clients except Apollos, where it is 3):
0 = Standard



4 = Oracle
6 = Informix-On-BAR
7 = Sybase
10 = NetWare
13 = MS-Windows-NT
14 = OS/2
15 = MS-SQL-Server
16 = MS-Exchange-Server
19 = NDMP

Note The following class types (Apollo-wbak, DataTools-SQL-BackTrack, Auspex-FastBackup, SAP, DB2, FlashBackup, Split-Mirror, and AFS) apply only to NetBackup DataCenter.

3 = Apollo-wbak
11 = DataTools-SQL-BackTrack
12 = Auspex-FastBackup
17 = SAP
18 = DB2
20 = FlashBackup
21 = Split-Mirror
20 = AFS

-k *class* Names the class to search to produce the list. If not specified, all classes are searched.

-F Specifies that in the list output, symbolic links (applies only to UNIX clients) will end with a trailing @ and executable files with a trailing *.

-R [*n*] Recursively lists subdirectories encountered to a depth of *n*. The default for *n* is 999.

-b | -c | -u Specifies an alternate date and time to be used for printing with the -l option:
-b displays the backup date and time of each file.
-c displays the last modification date and time for each file.
-u displays the last access date and time of each file.
The default is to display the time of last modification of each file.

-l Shows file details.

-
- Listseconds
Specifies that seconds granularity be used for the time stamp when the the `-l` option is used.
 - r
Lists disk images that were backed up. The default is to list file systems.
 - T
Lists directories in true-image backups. The default is to list non-true-image backups.
 - unix_files
Lists the files and directories in UNIX format. For example:
`/C/users/test.`
 - nt_files
Lists the files and directories in Windows NT/2000 format. For example:
`C:\users\test.`
 - s *mm/dd/yy [hh:mm:ss]*
-e *mm/dd/yy [hh:mm:ss]*
Specifies the start and end date range for the listing.
-s specifies a start date and time for the listing. The resulting list shows only files in backups or archives that occurred at or after the specified date and time. Use the following format for the start date and time:
mm/dd/yy [hh[:mm[:ss]]]
The valid range of dates are from 01/01/70 00:00:00 to 01/19/2038 03:14:07. The default is the current date minus six months.
-e specifies an end date and time for the listing. The resulting list shows only files from backups or archives that occurred at or before the specified date and time. Use the same format as explained above for start date and time. The default is the current date and time.
 - I
Specifies a case-insensitive search. This means that capitalization is not considered when comparing names (for example, Cat matches cat).
 - PI
Specifies a path-independent search, which means that NetBackup searches for a specified file or directory without regard to the path. For example, if a file named `test` exists in the three directories shown below, a search for `test` finds all three instances of the file:
`/tmp/junk/test`
`/abc/123/xxx/test`
`/abc/123/xxx/yyy/zzz/test`
 - help
Displays a synopsis of command usage when it is the only option on the command line.



`-keyword "keyword_phrase"`

Specifies a keyword phrase for NetBackup to use when searching for backups or archives from which to restore files. The phrase must match the one that was previously associated with the backup or archive by the `-k` option of the `bpbackup` or `bparchive` command.

You can use this option in place of or in combination with the other restore options in order to make it easier to restore your backups and archives. The following meta characters can be used to simplify the task of matching keywords or parts of keywords in the phrase:

* matches any string of characters.

? matches any single character.

[] matches one of the sequence of characters specified within the brackets.

[-] matches one of the range of characters separated by the "-".

The keyword phrase can be up to 128 characters in length. All printable characters are permitted including space (" ") and period ("."). The phrase must be enclosed in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

filename Names the file or directory to list. If you do not specify a path, the default is the current working directory.

Any files that you specify must be listed at the end, following all other options.

Use upper case for the drive letter. For example, `C:\NetBackup\log1`.

EXAMPLES

EXAMPLE 1

To list recursively, in long format, the files that were backed up in `D:\WS_FTP.LOG`.

```
bplist -l D:\WS_FTP.LOG
-rwx----- bjm      bjm                64 Oct 10  1997 D:\WS_FTP.LOG
-rwx----- bjm      bjm                64 Oct 10  1997 D:\WS_FTP.LOG
-rwx----- bjm      bjm                64 Oct 10  1997 D:\WS_FTP.LOG
```

EXAMPLE 2

To list, with details, the files that were backed up and associated with all or part of the keyword phrase

"My Home Directory"

in directory `C:\home\kwc`, enter the following:

```
bplist -keyword "*My Home Directory*" -l C:\home\kwc
```



EXAMPLE 3

To list, with details, the files that were archived and associated with all or part of the keyword phrase

"My Home Directory"

in directory C:\home\kwc enter the following:

```
bplist -A -keyword "*My Home Directory*" -l C:\home\kwc
```

EXAMPLE 4

To list, recursively and with details, the files that were backed up on drive D of Windows NT client slater and associated with all or part of the keyword phrase

"Win NT"

enter the following:

```
bplist -keyword "*Win NT*" -C slater -t 13 -R -l D:\
```

FILES

```
install_path\NetBackup\logs\bplist\*.log
```



bprestore

NAME

bprestore - restores files from the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bprestore [-A | -B] [-K] [-l | -H | -Y]
[-r] [-T] [-L progress_log] [-R rename_file] [-C client] [-D
client] [-S master_server] [-t class_type] [-c class] [-s
mm/dd/yy [hh:mm:ss]] [-e mm/dd/yy [hh:mm:ss]] [-w
hh:mm:ss] [-k "keyword_phrase" ] -f listfile | filenames
```

DESCRIPTION

bprestore lets users restore a backed up or archived file or list of files. You can also name directories to restore. If you include a directory name, bprestore restores all files and subdirectories of that directory.

By default, you are returned to the system prompt after bprestore is successfully submitted. The command works in the background and does not return completion status directly to you. The -w option lets you change this behavior so bprestore works in the foreground and returns completion status after a specified time period.

The bprestore command restores the file from the most recent backups within the time period you specify, except for a true-image restore (see the -T option description)."

. bprestore overwrites any file of the same name that already exists on the local client disk, unless you include the -K option. It is also possible to restore files that were backed up or archived on another client (-C option). You must be validated by the NetBackup administrator to restore from other clients.

Use the bplist command to display information on the files and directories that were backed up or archived.

bprestore writes informative and error messages to a progress-log file if you create the file prior to the execution of the bprestore command and then specify the file with the -L *progress_log* option. If bprestore cannot restore the requested files or directories, you can use the progress log to find the reason for the failure.

For detailed troubleshooting information, create a directory named *install_path*\NetBackup\logs\bprestore with write access. bprestore then creates an activity log file in this directory.

The following restrictions apply to bprestore:

- ◆ You can restore files and directories that you own and those owned by other users if you have read access. You need write access to another user's directories and files to restore that user's files to their original location.

- ◆ The operating system restricts the number of files and directories that you can specify on a single `bprestore` command line. If this is a problem, use the `-f` option to restore the files.

OPTIONS

- A | -B Specifies whether to restore from archives (-A) or backups (-B). The default is -B.
- K Specifying this option causes `bprestore` to keep existing files rather than writing over them when restoring files with the same name. The default is to overwrite existing files.

Note The `-l` | `-H` | `-y` options apply only when restoring UNIX files to a UNIX system.

- l | -H | -y
Specifying `-l` renames the targets of UNIX links by using the `-R rename_file` option in the same way as when renaming files.
Specifying `-H` renames UNIX hard links by using the `-R rename_file` option in the same way as when renaming files. Soft links are unchanged.
Specifying `-y` renames UNIX soft links by using the `-R rename_file` option in the same way as when renaming files. Hard links are unchanged.
See Example 5 in the EXAMPLES section.
- r Specifying this option restores disk images instead of file systems.
- L *progress_log*
Specifies the name of an existing file in which to write progress information.
For example: `c:\proglog`
The default is to not use a progress log.
- R *rename_file*
Specifies the name of a file with name changes for alternate-path restores.
For example: `bprestore -R /C/renamefile /C/origfile`
Where `/C/rename_file` is the file with the name change and `/C/origfile` is the file to be renamed.
Use the following form for entries in the rename file:
change *backup_filepath* to *restore_filepath*
Where:
The file paths must start with / (slash)
The first *backup_filepath* that is matched is replaced with the *restore_filepath* string. The default is to restore using the original path.



For example, the following entry renames C:\users\fred to C:\users\fred2:

```
change /C/users/fred to /C/users/fred2
```

(be sure to end the entry with a return)

When restoring to a Windows NT/2000 client, you can also use the following method for specifying entries in the rename file (do not use this method for other clients):

```
rename bulength backup_filepath reslength restore_filepath
```

Where:

bulength is the number of ASCII characters in the backup path.

reslength is the number of ASCII characters in the restore path.

The first *backup_filepath* that is matched is replaced with the *restore_filepath* string.

For example, the following entry renames C:\fred.txt to C:\fred2.txt:

```
rename 11 /C/fred.txt to 12 /C/fred2.txt
```

(be sure to end the entry with a return)

- C *client* Specifies a client name to use for finding backups or archives from which to restore files. This name must be as it appears in the NetBackup catalog. The default is the current client name.
- D *client* Specifies a destination client. This can be done by an administrator on the master server in order to direct the restored files to a machine other than the client specified with the -C option.
- S *master_server* Specifies the name of the NetBackup server. The default is the server designated as current on the Servers tab of the Specify NetBackup Machines dialog box. To display this dialog box, start the user interface on the client and click Specify NetBackup Machines on the Actions menu.
- t *class_type* Specifies one of the following numbers corresponding to the class type (the default is 0 on all clients except Apollos, where it is 3):
 - 0 = Standard
 - 4 = Oracle
 - 6 = Informix-On-BAR
 - 7 = Sybase
 - 10 = NetWare
 - 13 = MS-Windows-NT
 - 14 = OS/2

15 = MS-SQL-Server
 16 = MS-Exchange-Server
 19 = NDMP

Note The following class types (Apollo-wbak, DataTools-SQL-BackTrack, Auspex-FastBackup, SAP, DB2, FlashBackup, Split-Mirror, and AFS) apply only to NetBackup DataCenter.

3 = Apollo-wbak
 11 = DataTools-SQL-BackTrack
 12 = Auspex-FastBackup
 17 = SAP
 18 = DB2
 20 = FlashBackup
 21 = Split-Mirror
 20 = AFS

-C *class* Specifies the class for which the backups or archives were performed.

-s *mm/dd/yy [hh:mm:ss]*

-e *mm/dd/yy [hh:mm:ss]*

Specifies the start and end date range for the listing. The `bprestore` command restores only files from backups or archives that occurred within the specified start and end date range.

-s specifies a start date and time for the restore window. `bprestore` restores files only from backups or archives that occurred at or after the specified date and time. Use the following format:

mm/dd/yy [hh[:mm[:ss]]]

The valid range of dates are from 01/01/70 00:00:00 to 01/19/2038 03:14:07. The default start date is 01/01/70 00:00:00.

-e specifies an end date and time for the restore window. `bprestore` restores only files in backups or archives that occurred at or before the specified date and time. Use the same format as for the start date and time.

The end backup date and time do not need to be exact, except for a true-image restore (see the `-T` option description). The `bprestore` command restores the file that has the specified backup date and time or the file that is the most recent backup preceding the end date and time. The default is the current date and time."

If you do not specify either `-s` or `-e`, `bprestore` restores the most recently backed up version of the file.



-T Specifies a true-image restore, where only files and directories that existed in the last true-image backup are restored. This option is useful only if true-image backups were performed. If this option is not specified, all files and directories meeting the specified criteria are restored, even if they were deleted.

When the **-T** option is specified, the image requested must be uniquely identified. Unique identification is accomplished by using the **-e** option with seconds granularity. The **-s** option, if any, is ignored. The seconds granularity of an image can be retrieved by using the **bplist** command with the **-l** and **-Listseconds** options.

-w [*hh:mm:ss*]

Causes NetBackup to wait for a completion status from the server before returning you to the system prompt.

You can optionally specify a wait time in hours, minutes, and seconds. The maximum wait time you can specify is 23:59:59. If the wait time expires before the restore is complete, the command exits with a timeout status. The restore, however, still completes on the server.

Specifying 0 or not specifying a time, means wait indefinitely for the completion status.

-k "*keyword_phrase*"

Specifies a keyword phrase for NetBackup to use when searching for backups or archives from which to restore files. The phrase must match the one that was previously associated with backup or archive by the **-k** option of the **bpbbackup** or **bparchive** command.

You can use this option in place of or in combination with the other restore options in order to make it easier to restore your backups and archives. The following meta characters can simplify the task of matching keywords or parts of keywords in the phrase:

* matches any string of characters.

? matches any single character.

[] matches one of the sequence of characters specified within the brackets.

[-] matches one of the range of characters separated by the "-".

The keyword phrase can be up to 128 characters in length. All printable characters are permitted including space (" ") and period ("."). The phrase must be enclosed in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

-f *listfile*

Specifies a file (*listfile*) containing a list of files to be restored and can be used instead of the *filenames* option. In *listfile*, list each file path on a separate line.

The format required for the file list depends on whether the files have spaces or newlines in the names.

To restore files that do not have spaces or newlines in the names, use this format:

filepath

Where *filepath* is the path to the file that you are restoring. For example:

Note Use upper case for the drive letter. For example, C:\NetBackup\Log1.

C:\programs

C:\winnt

C:\documents\old_memos

To restore files that have spaces or newlines in the names, use one of the following formats:

filepathlen filepath

filepathlen filepath start_date_time end_date_time

filepathlen filepath -s datetime -e datetime

Where:

filepath is the path to the file you are restoring.

filepathlen is the total number of characters in the file path.

start_date_time and *end_date_time* are the decimal number of seconds since 01/01/70 00:00:00.

datetime is the same as the command line (*mm/dd/yy [hh[:mm[:ss]]]*).

The start and end date and time specified on the command line is used unless a line in *listfile* overrides it. The dates may change from line to line.

The following is an example that uses *filepathlen filepath*:

11 C:\programs

8 C:\winnt

22 C:\documents\old memos

filenames Names one or more files to be restored and can be used instead of the *-f* option.

Any files that you specify must be listed at the end, following all other options. You must also specify absolute file paths.

Use upper case for the drive letter. For example, C:\NetBackup\log1.



EXAMPLES

EXAMPLE 1

To restore a file from backups of `C:\user1\file1` that were performed between `04/01/93 06:00:00` and `04/10/93 18:00:00`, enter the following (all on one line):

```
bprestore -s 04/01/93 06:00:00 -e 04/10/93 18:00:00 C:\user1\file1
```

EXAMPLE 2

To restore files listed in a file named `restore_list` by using the most recent backups, enter the following:

```
bprestore -f c:\restore_list
```

EXAMPLE 3

To restore the directory `C:\kwc` from the backups that are associated with a keyword phrase that contains "My Home Directory" and use a progress log named `d:\kwc\bkup.log`, enter the following (all on one line):

```
bprestore -k "*My Home Directory*" -L d:\kwc\bkup.log C:\kwc
```

EXAMPLE 4

To restore the D drive on the Windows NT client `slater` from the backups that are associated with a keyword phrase that contains "My Home Dir" and use a progress log named `c:\kwc\bkup.log`, enter the following (all on one line):

```
bprestore -k "*My Home Dir*" -C slater -D slater -t 13 -L  
c:\kwc\bkup.log D:\
```

EXAMPLE 5

Assume you have a rename file named `/home/kwc/rename` on a UNIX client and it contains the following:

```
change /home/kwc/linkback to /home/kwc/linkback_alt
```

To restore the hard link named `/home/kwc/linkback` to alternate path `/home/kwc/linkback_alt` on that client, execute:

```
bprestore -H -R /home/kwc/rename /home/kwc/linkback
```

FILES

install_path\NetBackup\logs\bprestore*.log



Glossary

access control list (ACL)

Security information associated with files on some file systems.

ACS

Automated Cartridge System. This robot type is supported only by NetBackup DataCenter servers.

active job

A job for which NetBackup is currently processing backup or restore data.

activity logs

Logs that can be optionally enabled for specific NetBackup programs and processes and then used to investigate problems.

activity monitor

A NetBackup administration utility that displays information about NetBackup jobs and provides limited control over them.

administrator

A user that is granted special privileges to install, configure, and manage the operation of a system, network, or application

administration client

A Windows NT/2000 NetBackup client that has the administration interface software installed and can be used to administer NetBackup servers.

AIT

Sony Advanced Intelligent Tape, a type of tape drive or media type.



alternate-client restore

Restoring files to your client when they were originally backed up from a different client. The administrator using the interface on the master server can direct a restore to any client (this variation is called a server directed restore).

alternate-target restore

On a Novell NetWare server platform running the NetBackup target version of client software, this operation restores files to a different target than the one from which they were backed up.

alternate path restore

Restores files to a different directory than the one from which they were backed up.

archive

A special kind of backup where NetBackup backs up the selected files, and if the backup is successful, deletes the files from the local disk. In this manual, references to backups also apply to the backup portion of archive operations except where otherwise noted.

archive bit

A file-status bit that the Microsoft based operating system sets when it writes a file, thereby indicating that the file has changed.

attributes for a class

Configuration parameters that control the behavior of NetBackup during operations involving this class.

automatic backup

A scheduled backup by the master server.

back up

The act of copying and saving files and folders to storage media.

backup

Refers to the process of copying and saving files and directories to storage media. For example, *the backup is complete*. This term can also refer to the collection of data that NetBackup saves for a client during a backup or archive. For example, *duplicate the backup*.

Backup is two words when used as a verb. For example, *back up the file*.



backup, archive, and restore interface

The name of the NetBackup Microsoft Windows and Java based user interfaces for clients. On servers, these interfaces can be started through the NetBackup Administration interface.

backup window

The period of time during which backups can begin.

block size

The number of bytes in each block of data written on the media during a backup.

bp

A backup, archive, and restore utility for users on NetBackup UNIX clients. It has a character-based, menu interface that can be run from terminals that do not have X Windows capabilities.

bpadm

An administrator utility that runs on NetBackup UNIX servers. It has a character-based, menu interface that can be run from terminals that do not have X Windows capabilities.

bp.conf file

A NetBackup configuration file on UNIX servers and also on UNIX, Macintosh, and OS/2 clients.

bp.ini file

NetBackup initialization file for Novell NetWare target clients.

bpccd

NetBackup Client service on Windows NT/2000 and the NetBackup Client daemon on UNIX.

bprd

NetBackup Request Manager service on Windows NT/2000 and NetBackup Request daemon on UNIX.

catalogs

Internal NetBackup and Media Manager databases. These catalogs contain information about configuration, media, devices, status, errors, and the files and directories in the stored backup images.



CDF

Context-dependent file, which is a type of directory structure on a Hewlett-Packard system.

class

Defines the backup policy for a group of one or more clients that have similar backup requirements.

client

The system with the files to back up, archive, or restore.

client-user interface

The program used to perform user backups, archives, and restores.

cluster

See master and media server cluster.

command lines

Commands that users can execute either from the system prompt or in scripts.

compression

The process of compacting data to enable more efficient transmission and storage.

configuration

The parameters that govern the behavior of an application. This term can also refer to the manner in which a network or system is laid out or connected (for example, a network configuration).

cpio

A UNIX command for formatting data on a tape.

ctime

The time that a UNIX inode was changed.

cumulative-incremental backup

A backup that is scheduled by the administrator on the master server and backs up files that have changed since the last successful full backup. All files are backed up if no prior backup has been done. Also see “differential-incremental backup.”



daemon

A program on a UNIX system that runs in the background and performs some task (for example, starting other programs when they are needed). Daemons are generally referred to as services or processes on Windows NT/2000 systems.

database-agent clients

Clients with additional NetBackup software that is designed to back up relational databases.

database-extension clients

See “database-agent clients.”

debug logs

See “activity logs.”

device delays

Delays caused by the device that are beyond the control of the storage application. An example is the time required to position tape under the read and write heads.

device host

A Media Manager host where a drive or robotic control is attached or is defined.

device monitor

A Media Manager administration utility that provides monitoring and manual control of Media Manager storage devices. For example, an administrator or computer room operator can use this utility to manually reset devices or set them to the UP or DOWN state.

DHCP

Dynamic host configuration protocol. This TCP/IP protocol automatically assigns temporary IP addresses to hosts when they connect to the network.

differential-incremental backup

Scheduled by the administrator on the master server and backs up files that have changed since the last successful incremental or full backup. All files are backed up if no prior backup has been done. Also see “cumulative-incremental backup.”

directory depth

The number of levels below the current directory level that the NetBackup interfaces show in their directory and file list displays.



directory tree

The hierarchical structure in which files are organized on a disk. Each directory lists the files and directories that are directly below it in the tree. On UNIX, the topmost directory is called the root directory.

disaster recovery

Recovering data from backups after a disk crash or other catastrophe.

disk

Magnetic or optical disk storage media.

disk-image backup

A bit-by-bit rather than a file system backup of a disk drive on Windows NT/2000.

DLT

Digital-linear tape or tape drive type.

Domain Name Service (DNS)

A program that handles name translation for network communications.

drive cleaning

The use of a special cleaning tape to clean the heads on a drive.

duplicate image

A copy of a backup image.

encryption

Provides additional security by encrypting backup data on the client. This capability is available only with the NetBackup Encryption option.

entry and exit ports

A slot or other opening in a robot where you can insert or remove a tape without having to access the interior of the robot. After inserting a tape, you move it to a slot by using an inject command. Prior to removing a tape, you move it to the port by using an eject command. The inject and eject commands are supported through the add and move screens in the Media Manager administration interface. Entry and exit ports are sometimes called mailslots, or inports and outports.



exclude list

A list that designates files or directories to exclude from automatic backups.

expiration (image)

The date and time when NetBackup stops tracking a backup image.

expiration (volume)

The date and time when the physical media (tape) is considered to be no longer usable.

EVSN

External volume serial number. This is an identifier written on a media cartridge or canister so the operator can identify the volume before inserting it into a drive or robot. For labeled media, the EVSN must be the same as the RVSN (identifier recorded on the media). For all media, the EVSN is the same as the media ID.

FastBackup

A special type of raw-partition backup that can be performed only on an Auspex client (this option is available only for NetBackup DataCenter).

FlashBackup

A special type of raw-partition backup that requires the NetBackup FlashBackup separately-priced option (this option is available only for NetBackup DataCenter).

flush level

Controls how often Netbackup clears its log files on a Novell NetWare or Microsoft Windows client platform.

fragment

A part of a backup or archive image. NetBackup can be configured to divide images into fragments when they exceed a certain size or span tapes.

frequency (backup)

How often NetBackup performs scheduled backups. For example, if the frequency is seven days then backups occur once a week.

FROZEN media state

If a volume is FROZEN, NetBackup keeps it indefinitely and can restore from it but not use it for further backups or archives.



full backup

A backup that copies, to a storage unit, all files and directories that are beneath a specified directory.

FULL media state

If this appears in a report or listing, it indicates the volume is FULL and cannot hold more data or be used for further backups.

global attributes

NetBackup configuration attributes that affect all classes.

Global Data Manager

A separately-priced option (for UNIX servers) that provides an interface with a tree view where the administrator can view and administer multiple master servers. The server where the option is installed is called a Master of Masters.

GNU tar

A public domain version of the UNIX tar program.

goodies directory

A directory containing programs, scripts, and other files that are not formally supported.

gravity stacker

A robot that relies on gravity to advance to the next required tape.

GUI

Graphical user interface.

hard link

On UNIX, a hard link is a pointer to the inode for the data. On Windows NT/2000 a hard link is a directory entry for a file. Every file can be considered to have at least one hard link. On NTFS volumes each file can have multiple hard links, and a single file can appear in many directories (or even in the same directory with different names).

heap level

A parameter for memory-heap debugging on a Novell NetWare or Windows NetBackup client.



hierarchical storage management

The process of automatically migrating selected files from a managed file system to specified migration levels on secondary storage, while maintaining transparent access to those files.

host

A computer that executes application programs.

host name

Name by which a host computer is identified by programs and other computers in the network.

HSM

See storage migrator.

image

The collection of data that NetBackup saves for an individual client during each backup or archive. The image contains all the files, directories, and catalog information associated with the backup or archive.

import

The process of recreating NetBackup records of images so the images can be restored.

include list

A list that designates files or directories to add back in from the exclude list.

incremental backup

See “cumulative-incremental backup” and “differential-incremental backup.”

inport

See “entry and exit ports.”

inode

A UNIX data structure that defines the existence of a single file.

install_path

Directory where NetBackup and Media Manager software is installed. The default on Windows NT/2000 is `C:\Program Files\VERITAS` and on UNIX it is `/usr/opensv`.



jbpSA

The Java-based NetBackup interface for performing user backups, archives, and restores.

jnbSA

The Java-based NetBackup interface for administrators.

job

A parcel of work submitted to a computer. NetBackup jobs are backups, archives, or restores.

kernel

The nucleus of an operating system.

keyword phrase

A textual description of a backup.

kill a job

Terminating a job and removing it from the job queue.

label

Identifier of a tape or optical disk volume. A recorded label includes a media ID.

A barcode label allows a barcode scanner to be used for media tracking.

library

Refers to a robot and its accompanying software. A library includes a collection of tapes or optical platters used for data storage and retrieval. For example, a Tape Library DLT (TLD) refers to a robot that has TLD robotic control.

link

See “hard link” or “symbolic link.”

LMF - Library Management Facility

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

This robot type is supported only by NetBackup DataCenter servers.



load

(noun) Amount of work that is being performed by a system or the level of traffic on a network. For example, network load affects performance.

(verb) Copy data to internal memory. For example, load the installation program.

logs

Files where a computer or application records information about its activities.

mailslot

See “entry and exit ports.”

man pages

Online documentation provided with UNIX computer systems and applications.

Master and media server cluster

A NetBackup master server and the remote media servers that it is using for additional storage. It is possible to configure clusters only with NetBackup DataCenter servers. NetBackup BusinessServer supports only a single server, the master.

Master of Masters

A NetBackup host where Global Data Manager software is installed. When logging into this host, the interface has a tree view where the administrator can view and administer multiple master servers.

master server

The NetBackup server that provides administration and control for backups and restores for all clients and servers in a master and media server cluster. NetBackup BusinessServer supports only a single server and it is the master.

media

Physical magnetic tapes, optical disks, or magnetic disks where data are stored.

media host

NetBackup server to which the job (client) is sending the data.

media ID

An identifier that is written on a volume as part of the recorded label.



Media Manager

Software that is part of NetBackup and manages the storage devices and removable media.

Media Manager Host

A host where Media Manager software is installed.

media server

A NetBackup server that provides storage within a master and media server cluster. The master can also be a media server. A media server that is not the master is called a remote media server (or slave server). NetBackup BusinessServer does not support remote media servers.

menu interface

A character-based interface for use on terminals that do not have graphical capabilities.

MHD

See “multihosted drives.”

mount

Make a volume available for reading or writing.

mount point

The point where a file system on a disk logically connects to a system’s directory structure so the file system is available to users and applications.

MPX

See “multiplexing.”

mtime

The point in time when a UNIX or NTFS file is modified.

multihosted drives

A separately priced VERITAS option (Shared Storage Option or SSO) that allows tape drives (standalone or in a robotic library) to be dynamically shared among multiple NetBackup and Storage Migrator servers.

This option is supported only on NetBackup DataCenter servers.



multiplexing

The process of sending concurrent-multiple backups from one or more clients to a single storage device and interleaving those images onto the media.

multiplexed group

A set of backups that were multiplexed together in a single multiplexing session.

NDMP

Network data management protocol. NetBackup requires the NetBackup for NDMP separately-priced option to support NDMP.

NetBackup Client service

NetBackup Windows NT/2000 service that runs on clients and servers and listens for connections from NetBackup servers and clients in the network. When a connection is made, this service starts the necessary programs.

NetBackup configuration options

On UNIX servers and on UNIX and Macintosh, clients, these settings are made in the `bp.conf` file. On NetWare target and OS/2 clients, they are in the `bp.ini` file. On Windows NT/2000 servers and Microsoft Windows clients, these settings are called properties and are made through the Backup, Archive, and Restore interface or the Configure - NetBackup window in the administration interface.

NetBackup databases

See catalogs.

NetBackup Database Manager service

NetBackup Windows NT/2000 service that runs on the master server and manages the NetBackup internal databases (called catalogs). This service must be running on the master server during all NetBackup administrative operations.

NetBackup Device Manager service

The NetBackup Windows NT/2000 service that runs on a NetBackup server and starts the robotic control processes and controls the reservation and assignment of volumes. This service runs only if the server has devices under Media Manager control. The process is `ltid`.

NetBackup properties

Same as NetBackup configuration options but are called NetBackup properties on Microsoft Windows platforms.



NetBackup Request Manager service

The NetBackup Windows NT/2000 service that runs on the master server and starts the scheduler and receives requests from clients.

NetBackup Volume Manager service

A NetBackup Windows NT/2000 service that runs on a NetBackup server, allows remote administration of Media Manager, and manages volume information. The process is `vmd`.

NIS

Network information service.

NLM

NetWare loadable module.

NFS

Network file system.

nonrobotic

See “standalone.”

ODL

Optical disk library. This robot type is supported only by NetBackup DataCenter servers.

OSF and Motif

A set of specifications for user-interface design.

outport

See “entry and exit ports.”

partitions

The logical partitions into which a magnetic disk is divided.

patch

A program that corrects a problem or adds a feature to an existing release of software.

path length

Number of characters in a pathname.



pathname

The list of directories in the path to a destination directory or file.

PC clients

NetBackup clients that have Microsoft Windows (NT/2000, 98, 95), Macintosh, or IBM OS/2 operating systems.

peername

The name by which a computer identifies itself when establishing connections to other systems.

port

A location used for transferring data in or out of a computer.

primary copy

The copy of an image that NetBackup uses to satisfy restores. When NetBackup duplicates an image, the original is designated as the primary copy.

privileges

The tasks or functions that a user, system, or application is authorized to perform.

progress report

Log where NetBackup records events that occur during user operations.

proxy restore

A proxy restore allows the user to restore files, that he has write access to, on a machine other than his desktop. The files must be in a backup of the machine to which they are being restored.

QIC

Quarter-inch-cartridge tape.

queued job

A job that has been added to the list of jobs to be performed.

raw-partition backup

Bit-by-bit backup of a partition of a disk drive on UNIX. On Windows NT/2000, this is called a disk-image backup.



rbak

The program that Apollo clients use to read data from tape during a restore.

registry

A Microsoft Windows 2000, NT, 98, and 95 database that has configuration information about hardware and user accounts.

remote media server

A media server that is not the master. Note that only NetBackup DataCenter supports remote media servers. NetBackup BusinessServer supports only a single server, the master.

residence

In Media Manager, information about the location of each volume is stored in a volume database. This residence entry contains information, such as robot number, robot host, robot type, and media type.

resource

A Novell NetWare term that refers to a data set on the target. For example, in DOS, resources are drives, directories, and files. Also see “target service.”

restore

(verb) The act of restoring selected files and directories from a previous backup or archive and returning them to their original directory locations (or to an alternate directory).

(noun) The process of restoring selected files and directories from a previous backup and returning them to their original directory locations (or to an alternate directory).

retention level

An index number that corresponds to a user-defined retention period. There are 10 levels from which to choose (0 through 9) and the retention period associated with each is configurable. Also see “retention period.”

retention period

The length of time that NetBackup keeps backup and archive images. The retention period is specified on the schedule.

root

The highest level directory in a hierarchical directory structure. In MS-DOS, the root directory on a drive is designated by a backslash (for example, the root on drive C is C:\). On UNIX, the root directory is designated by a slash (/).



Also, a UNIX user name having administration capability.

RS-232

An industry-standard interface for serial communications and sometimes used for communicating with storage peripherals.

RSM Interface

Application in Windows 2000 used to manage Removable Storage Manager (RSM) devices.

RSM - Removable Storage Manager

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

Also, a component of the Windows 2000 operating system that manages storage devices.

RVSN

Recorded volume serial number. This is an identifier recorded as part of the label on a volume and used by Media Manager to ensure that the correct volume is mounted. The RVSN is the same as the media ID.

schedules

Controls when backups can occur in addition to other aspects of the backup, such as: the type of backup (full, incremental) and how long NetBackup retains the image.

SCSI

Small computer system interface. This is a type of parallel interface that is frequently used for communicating with storage peripherals.

slave server

See Remote media server.

server directed restore

Using the client interface on the master server to restore files to any client. Only the administrator can perform this operation.

server independent restore

Restoring files by using a NetBackup server other than the one that was used to write the backup. This feature is available only with NetBackup DataCenter.



server list

The list of servers that a NetBackup client or server refers to when establishing or verifying connections to NetBackup servers. On a Windows NT/2000 server and Microsoft Windows clients, you update the list through a dialog box in the interface. On a UNIX server and UNIX and Macintosh clients, the list is in the `bp.conf` file. On NetWare target and OS/2 clients, the list is in the `bp.ini` file.

service

A program on a Windows NT/2000 system that runs in the background and performs some task (for example, starting other programs when they are needed). Services are generally referred to as daemons on UNIX systems.

session

An instance of NetBackup checking its schedules for backups that are due, adding them to its worklist, and attempting to complete all jobs in the worklist. For user backups and archives, a session usually consists of a single backup or archive.

Shared Storage Option (SSO)

See “multihosted drives.”

SMDR

Storage management data requestor, a Novell NetWare program that provides its services transparently to all SMS modules and lets remote and local modules communicate with one another.

SMS

Novell NetWare storage management services.

standalone

A qualifier used with drives and media to indicate they are not associated with a robot. For example, a standalone tape drive is one where you must manually find and insert tapes before using them. A standalone volume is one that is located in a standalone drive or is stored outside of a drive and designated as standalone in the volume configuration.

status code

A numerical code, usually accompanied by a message, that indicates the outcome of an operation.



storage migrator

Refers to the VERITAS Storage Migrator line of hierarchical storage management products for UNIX and Windows NT/2000. These products make extra room on a disk by transparently moving data to other storage and then transparently retrieving the data when it is needed by a user or application.

Storage Migrator is available only for NetBackup DataCenter servers.

storage unit

Refers to a storage device where NetBackup or Storage Migrator stores files. It can be a set of drives in a robot or consist of one or more single tape drives that connect to the same host.

SUSPENDED media state

If a volume is SUSPENDED, NetBackup can restore from it but cannot use it for backups. NetBackup retains a record of the Media ID until the last backup image on the volume expires.

symbolic link

On a UNIX system, this is a pointer to the name of the file that has the source data.

tape format

The format that an application uses to write data on a tape.

tape marks

A mark that is recorded between backup images on a tape.

tape overhead

The space required for data that is not part of the backup images. For example, tape marks and catalogs of what are on the tape are considered overhead.

tape spanning

Using more than one tape to store a single backup image.

tar

Tape ARchive program that NetBackup uses to extract backup images during a restore.

target

See “target service.”



target service

A Novell NetWare service that needs storage management. The SMS views all services (for example, print services, communication services, workstations) as targets.

Target Service Agent

A Target-service agent is a Novell NetWare agent that prepares the target's data for SMS during a backup and for the target during a restore.

TLD - Tape Library DLT

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

TLH - Tape Library Half-inch

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

This robot type is supported only by NetBackup DataCenter servers.

TLM - Tape Library Multimedia

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

This robot type is supported only by NetBackup DataCenter servers.

TL4 - Tape Library 4MM

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

TL8 - Tape Library 8MM

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

timeout period

The period of time that an application has allotted for an event to occur.

TIR

See “true image restore.”

tpconfig

A Media Manager administration utility for configuring devices and is started from the command line. On UNIX, it has a character-based, menu interface that can be run from terminals that do not have X Windows capabilities.

transfer rate

The rate at which computer information is transferred between a source and a destination.

true image restore

Restores the contents of a directory to what it was at the time of any scheduled full or incremental backup. Previously deleted files are ignored.

TS8 - Tape Stacker 8MM

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

TSA

“Target Service Agent.”

TSH - Tape Stacker Half-inch

A Media Manager designation for a category of robot. For the specific vendor types and models in this category, see the VERITAS support web page at www.support.veritas.com. Choose NetBackup BusinessServer or NetBackup DataCenter in the VERITAS Support Product List and look under support options.

This robot type is supported only by NetBackup DataCenter servers.

user operation

A backup, archive, or restore that is started by a person on a client system.

verbose flag

Configuration file entry that causes a higher level of detail to be written in the logs.



verify

An operation that compares the list of files that are actually on a volume with what NetBackup has recorded as being on it. The data that is on the media is not verified.

vmadm

A Media Manager administrator utility for managing volumes. It runs on UNIX and has a character-based, menu interface that can be run from terminals that do not have X Windows capabilities.

vm.conf

A Media Manager configuration file with entries that include the servers that can manage local devices and default media ID prefixes for media that do not contain barcodes.

volume

Media Manager volumes are logical units of data storage or cleaning capability on media that have been assigned media IDs and other attributes, which are recorded in the Media Manager volume database.

volume configuration

Refers to configuration information that is stored in the Media Manager volume database.

volume database

An internal database where Media Manager keeps information about volumes. All Media Manager hosts have a volume database. However, the database is empty unless the host is designated as a volume database host.

volume database host

The Media Manager host that contains information about the volumes that Media Manager uses in a device. Because NetBackup BusinessServer supports only a single server, the volume database host is always the Media Manager host.

volume group

A set of volumes that are configured within Media Manager to reside at the same physical location (for example, in a specific robot).

volume pool

A set of volumes that are configured within Media Manager to be used by a single application and are protected from access by other applications and users.



wakeup interval

The time interval at which NetBackup checks for backups that are due.

wbak

The program that Apollo clients use to write data on tape.

wildcard characters

A character that can be used to represent other characters in searches.

WORM media

Write-once, read-many media for optical disks. NetBackup BusinessServer does not support WORM media.

Windows Display Console

A NetBackup-Java interface program that runs on Windows 2000, NT, 98, and 95 computers. Users and administrators can start this interface on their local system, connect to a UNIX system that has the NetBackup-Java software installed, and then perform any user and administrator operations that their permissions allow.

xbp

The X Windows-based backup, archive, and restore program for users on NetBackup UNIX clients.

xbpadm

The X Windows-based NetBackup administration interface on UNIX. This interface is available only with NetBackup DataCenter.

xbpmon

The X Windows-based NetBackup utility for monitoring jobs on UNIX. This utility is available only with NetBackup DataCenter.

xdevadm

The X Windows-based Media Manager utility for managing devices on UNIX. This interface is available only with NetBackup DataCenter.

xvmadm

The X Windows-based Media Manager utility for managing media on UNIX. This interface is available only with NetBackup DataCenter.





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