NetWorker® for IRIX™
User's Guide

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NetWorker® for IRIX™ User's Guide
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About This Guide

The *NetWorker for IRIX User's Guide* documents the Silicon Graphics® implementation of Legato NetWorker® from Legato Systems, Inc. NetWorker for IRIX is adapted from the Legato™ 4.0.2 release of NetWorker. This guide was prepared in conjunction with Release 4.0.2 of NetWorker for IRIX and IRIX Release 5.2.

The *NetWorker for IRIX User's Guide* contains instructions on using NetWorker's backup and recover software from a client workstation. It also shows you how to back up files and directories to the NetWorker server on an as-needed basis using the Backup window, and how to browse the online index to recover files using the Recover window.

Audience

Those who will benefit most from this manual are users and system administrators who use NetWorker to back up and recover data from a client workstation.

Conventions

This manual uses conventions to make information easy to access and understand. The following list describes the conventions:

- Command names are displayed in italics. For example:

  To start NetWorker, use the *networker* command.

- Examples of what you type are displayed in bold fixed-width typeface. For example:

  `atlas% /usr/etc/networker &`

- Names of buttons are displayed in italics. For example:

  Press the *Cancel* button to close the Help window.

- Important pieces of information and cautionary notes that prevent you from making a mistake are marked with the tag “Note.” For example:

  Note: Remember that if you select a server other than the server that performs your scheduled backups, you must recover your files from that server. ♦

- Tips or suggestions that you do not have to follow but are hints for using NetWorker are marked with the tag “Tip.” For example:

  Tip: Keep the Main window open during every backup or recovery to monitor the progress of the session. ♦

- Directory pathnames, machine names, and new terms are displayed in *italic* typeface. For example:

  Place the NetWorker programs in the directory */usr/etc*.

  When you use NetWorker to back up your files, you are saving them to *backup volumes* on the NetWorker server.

Other Documentation

For information on server configuration and administration, refer to the *NetWorker for IRIX Administrator’s Guide.*

To get information about a specific release of NetWorker for IRIX, see the *NetWorker for IRIX Release Notes*.

If you would like more technical information about the NetWorker commands, see the online reference pages after you have installed NetWorker.

Both the *NetWorker for IRIX User's Guide* and *NetWorker for IRIX Administrator's Guide* are available online, as InSight manuals. To view the manuals, use *insight*(1) and install the subsystems *networker4.books.NetWorker_UG* and *networker4.books.NetWorker_AG*.

Product Support

Silicon Graphics offers a comprehensive product support and maintenance program for IRIS products. For information about using support services for this product, refer to the *Release Notes* that accompany it.

Chapter 1

Introduction to NetWorker

NetWorker for IRIX is an easy-to-use network backup and recover product. Every user knows about accidental file loss and hard disk crashes. With NetWorker, you can easily protect your valuable files from loss by performing backups on an as-needed basis in addition to the automatic backups scheduled by your system administrator. And NetWorker allows straightforward recovery, which lets you find and retrieve lost files easily and quickly.

NetWorker allows fast file recovery, which means you do not have to waste time re-creating lost files. Just scroll through the window of previously backed-up files to find the files that were lost. NetWorker even shows you multiple versions of a file that were backed up over time and lets you select the ones you want to recover. NetWorker provides access to these powerful features through an intuitive graphical user interface.

Overview

The NetWorker *server* is a machine with a *backup device* that automatically backs up systems on a network. Once your system administrator installs NetWorker and configures the NetWorker server to recognize your system as a *NetWorker client*, your files will automatically be backed up to the NetWorker server. However, you can request NetWorker to back up important files at any time on an as-needed basis.

When you use NetWorker to back up your files, you are saving them to a *backup volume* on the NetWorker server. The NetWorker server keeps an online *index* of the backed-up files for you to browse when you want to recover a single file or a complete directory.

After the NetWorker client software is installed and enabled on your system, the system administrator will configure the NetWorker server so that you can use the backup and recover services.

Installing NetWorker Software on Clients

Follow the procedure in this section to install Networker client software. Because licenses for NetWorker clients are not installed on the clients, no enabling of the client software is required.

1. On the client, become root and give the *inst*(1M) command:

   ```
   % /bin/su -
   Password:
   # inst
   ```

2. Specify the location of the NetWorker software distribution and get a list of the subsystems, for example:

   ```
   Inst> from /CDROM/dist
   Inst> list
   ```

   For additional information on *inst*, see the *IRIS Software Installation Guide*.

3. Make subsystem selections in *inst*. Use Table 1-1 to guide you in selecting subsystems. Subsystems not listed in Table 1-1 should not be installed on clients. For example, to install the required software, references pages, release notes, and the InSight versions of the NetWorker manuals on an IRIX 5.2 client, give these commands:

   ```
   Inst> keep *
   Inst> install networker4.*.client_5
   Inst> install networker4.man.relnotes
   Inst> install networker4.books.*
   ```

   For additional information on these subsystems, see the *NetWorker for IRIX Release Notes*.

Table 1-1 Subsystems for NetWorker Clients

Subsystem	Description	Required/Optional
networker4.sw.client_4	NetWorker client software	Required (install on systems running IRIX 4.0.*x* only)
networker4.sw.client_5	NetWorker client software	Required (install on systems running IRIX 5.*x* only)
networker4.man.client_4	Reference pages for NetWorker client software	Optional (install on systems running IRIX 4.0.*x* only)
networker4.man.client_5	Reference pages for NetWorker client software	Optional (install on systems running IRIX 5.*x* only)
networker4.books.NetWorker_UG	The InSight version of the *NetWorker for IRIX User's Guide*, viewable with *insight*(1)	Optional on systems running IRIX 5.*x*; cannot be installed on systems running IRIX 4.0.*x*
networker4.books.NetWorker_AG	The InSight version of this guide	Optional on systems running IRIX 5.*x*; cannot be installed on systems running IRIX 4.0.*x*

4. Perform the installation and exit *inst*:

```
Inst> go
Inst> quit
```

5. Check to see if the hostname alias *nsrhost* has been set to your NetWorker server:

```
jupiter% /usr/etc/ping -c1 nsrhost
PING mars.engr.xyz.com (192.48.155.20): 56 data bytes
...
```

In the command, the **-c** is followed by a one. The first line of output should contain the name of the NetWorker server.

If the output doesn't contain the name of the NetWorker server, the *networker* command won't automatically connect you to your server; you'll have to use the "Change Server" command on the File pull-down menu to specify your server.

To set the hostname alias *nsrhost* to your NetWorker server, follow the directions in the section "Configuring Clients to Recognize the Server" in Chapter 2 of the *NetWorker for IRIX Administrator's Guide* or ask your system administrator to help you.

Getting Started

In this section you will back up and recover files using NetWorker for IRIX. This chapter assumes that NetWorker client software has been installed and enabled on your system (see the section “Installing NetWorker Software on Clients” in Chapter 1) and that your system administrator has configured the NetWorker server to recognize your system as a client (see the section “Configuring a Server’s Clients” in Chapter 5 of the *NetWorker for IRIX Administrator’s Guide*).

Starting NetWorker

To invoke NetWorker, first change to your home directory or a local filesystem:

```
% cd your_home_directory
```

Then enter the *networker* command at a shell prompt, followed by an ampersand (&) to run NetWorker in the background:

```
% /usr/etc/networker &
```

Tip: You can invoke NetWorker from any directory. The files in the directory you invoke NetWorker from are immediately available for backup. ♦

The NetWorker main window is shown in Figure 2-1.

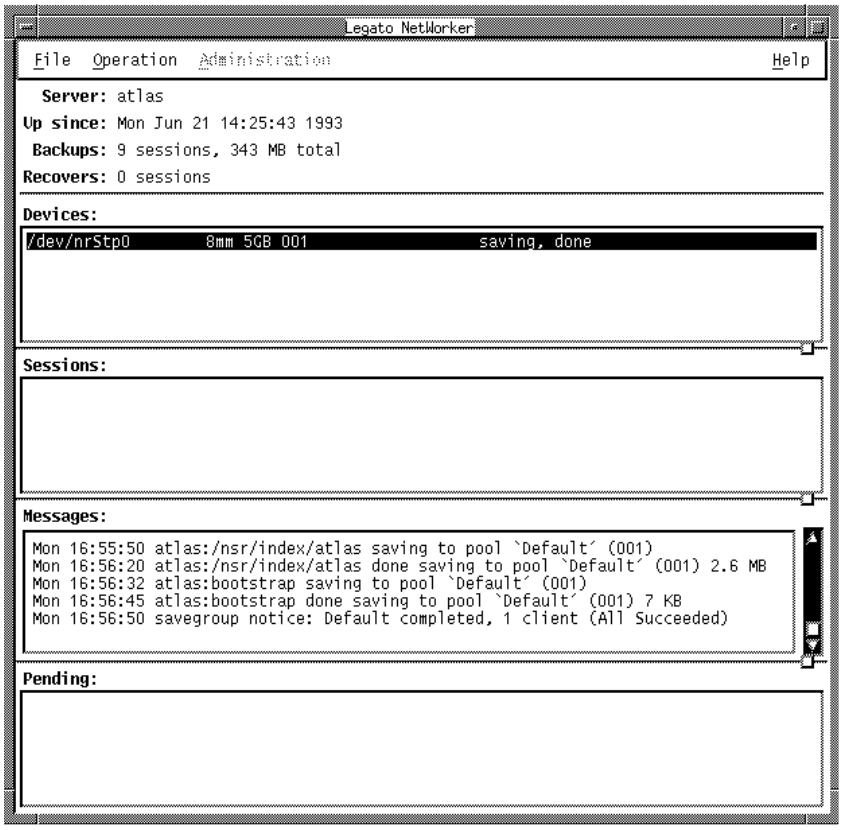

Figure 2-1 NetWorker Main Window

NetWorker uses windows, pull-down menus, and dialog boxes to guide you in backing up and recovering files.

Note: The Administration pull-down menu is active only for authorized NetWorker administrators. For information on NetWorker system administration, see the *NetWorker for IRIX Administrator's Guide* or contact your system administrator. ♦

The Operation pull-down menu contains the “Backup,” “Recover,” and “Volumes” commands. Use this menu to back up and recover your files. Use the “Volumes” command to display all the backup tapes tracked by NetWorker. The “Volumes” command is explained in more detail in Chapter 4, “Backing Up and Recovering Files.”

The Operation pull-down menu is shown in Figure 2-2.

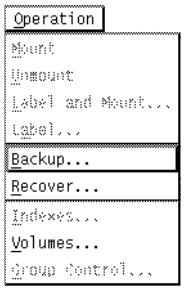

Figure 2-2 Operation Pull-Down Menu

Tip: The grayed-out commands in the Operation pull-down menu are available only to the system administrator. ♦

The File pull-down menu contains the “Change Server,” “Change Polling,” and “Exit” commands. The “Change Server” command allows you to change your NetWorker backup server. Chapter 4 describes in detail how to change your backup server in the section “Changing the NetWorker Server.” Use the “Exit” command to quit out of the NetWorker program.

The File pull-down menu is shown in Figure 2-3.

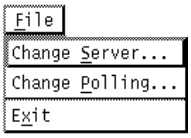

Figure 2-3 File Pull-Down Menu

The “Change Polling” command allows you to change the polling interval. Polling controls how often, in seconds, the data in the main window is updated. When the system is heavily loaded, you might want the main window updated less frequently.

To change the polling interval:

1. Select “Change Polling” from the File pull-down menu in the main window. The Change Polling dialog box appears, as shown in Figure 2-4.

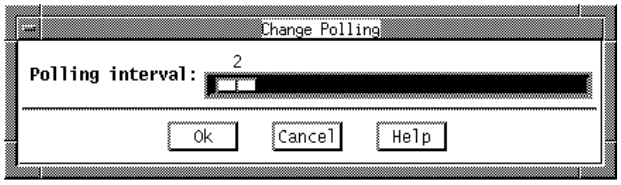

Figure 2-4 Change Polling Dialog Box

2. Use the mouse to slide the Polling interval bar to the right or left to select the desired polling interval. Notice that the number of interval seconds is displayed as you slide the bar.
3. Press *Ok* to apply the change.

Using Help

You can learn about NetWorker by using the Help windows. You can obtain online help on any menu item or window component. The Help pull-down menu, shown in Figure 2-5, provides you with help on the main window, a list of help topics to browse, directions on using help, and information on the version of NetWorker you are using.

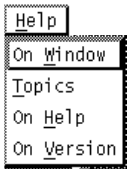

Figure 2-5 Help Pull-Down Menu

Select the Topic command from the Help pull-down menu to open the Topics Help window, shown in Figure 2-6.

Figure 2-6 Topics Help Window

To see more information about a topic, select the title from the Topics scrolling list. The help text for the selected topic appears in the top window. The Topics scrolling list remains available in the bottom window for selecting other topics.

For example, selecting the topic Backup produces the window shown in Figure 2-7.

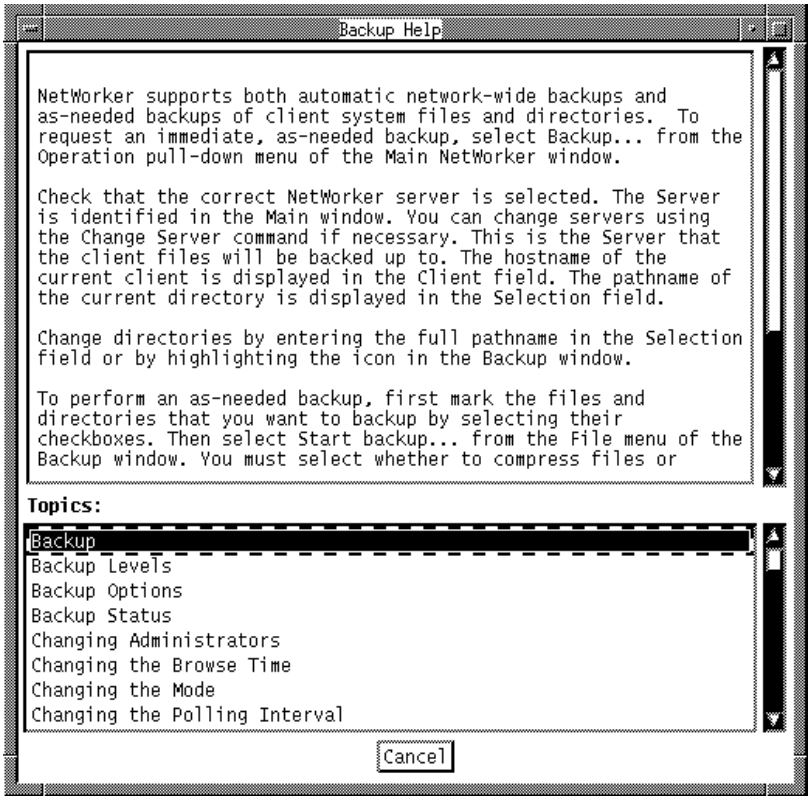

Figure 2-7 Backup Help Window

To return to the main window, press the *Cancel* button.

Using NetWorker Windows

NetWorker displays your files and directories using icons and windows. NetWorker windows provide an easy-to-use X Window System™ graphical user interface**.** This section shows you how to use NetWorker windows.

Open the Backup window by selecting “Backup” from the Operation pull-down menu, as shown in Figure 2-8.

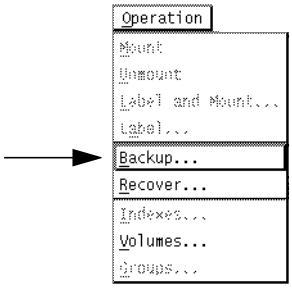

Figure 2-8 Operation Pull-Down Menu

Position the cursor on the Operation pull-down menu and press either the left or right mouse button (depending upon how your system is configured). When the pull-down menu appears, highlight "Backup" to open the Backup window. The Backup window appears, as shown in Figure 2-9.

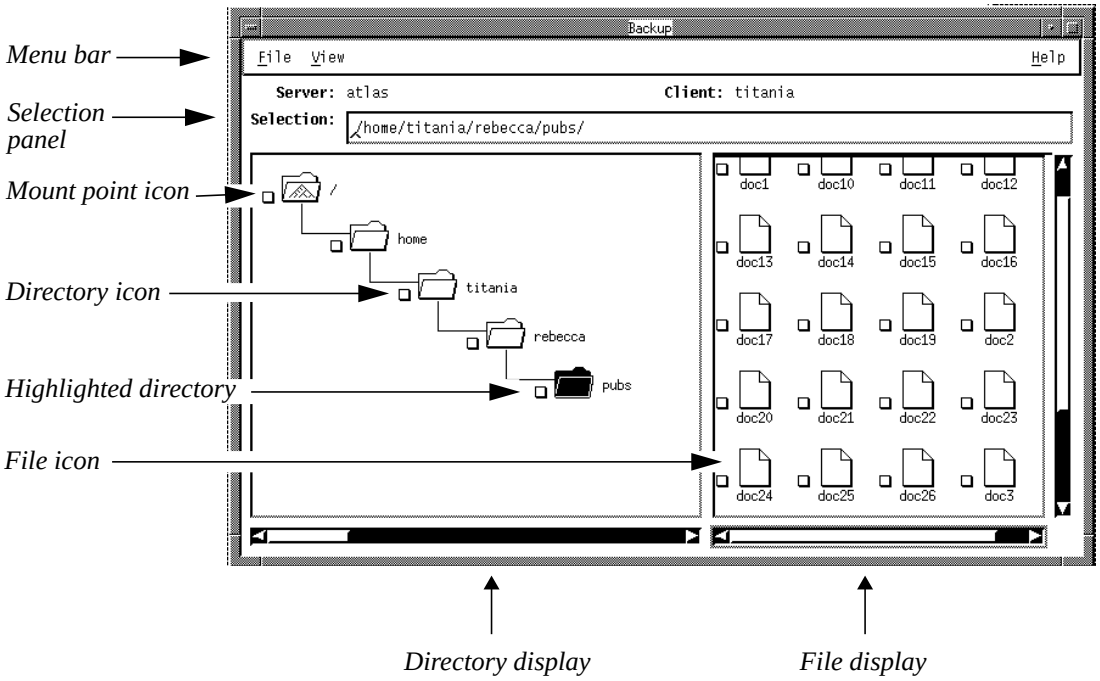

Figure 2-9 Annotated Backup Window

The following sections describe the components of the Backup window.

Menu Bar

The menu bar contains the File, View, and the Help pull-down menus.

To use the File, View, or Help pull-down menus, position the cursor over the desired menu and hold down the right (or left) mouse button to display the pull-down menus. By X Window System convention, the first command in the menu is always be chosen by default.

Tip: The left and right mouse button actions used in this manual are the X Window System defaults. If you have problems using the mouse, your mouse buttons may have been re-programmed. See your system administrator for help. ♦

Online Help

To use online help, select the Help pull-down menu of the window in question to read the online help message. You can obtain help on the current window, menu item, or dialog box.

Selection Panel

The selection panel in the Backup window indicates the current server and client. The Selection field indicates the full pathname of the current file or directory and allows you to enter text to select any pathname you choose.

Directory and File Display Areas

The window is divided into two display areas: a directory display on the left-hand side and a file display on the right-hand side. The size of the file display can be adjusted horizontally to make it easier to see your files. The entire window can be adjusted vertically. The display areas contain icons that represent the files and directories in your filesystem.

Icons

The icons you see in the window are described below. Use the checkbox next to each icon to mark and unmark files and directories for backup or recovery.

Folder icons, shown in Figure 2-10, represent directories.

Figure 2-10 Directory Icon

An open folder, shown in Figure 2-11, indicates that the tree structure of the directory, if one exists, appears in the directory display.

Figure 2-11 Directory Structure Icons

A highlighted open folder, shown in Figure 2-12, indicates that the tree structure of the directory, if one exists, appears in the directory display. It is the current selection.

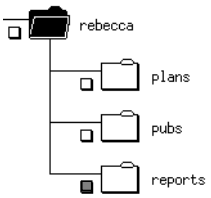

Figure 2-12 Directory Structure Icons for a Selected Directory

A gray checkbox for a directory indicates that a subdirectory has been marked for backup or recovery.

A highlighted folder, shown in Figure 2-13, indicates the current selection. The folder contents appear in the file display. A highlighted folder is selected for menu actions.

Figure 2-13 Current Selection Icon

The icon in Figure 2-14 represents mount points.

Figure 2-14 Mount Point Icon

Sheet icons, shown in Figure 2-15, represent files.

Figure 2-15 File Icon

A highlighted file, shown in Figure 2-16, is selected for menu actions.

Figure 2-16 Highlighted File Icon

The icon in Figure 2-17 represents symbolic links.

Figure 2-17 Symbolic Link Icon

The icon in Figure 2-18, represents block devices.

Figure 2-18 Block Device Icon

The icon in Figure 2-19, represents character devices.

Figure 2-19 Character Device Icon

The cursor changes to a clock, shown in Figure 2-20, when NetWorker is performing a task.

Figure 2-20 Clock Icon

Window Controls

By selecting the scroll bar or the triangular endpoints of a scroll bar or by dragging the slider, you can navigate vertically or horizontally in the directory and file displays.

Quick Tour

This “Quick Tour” shows you how to back up your current directory and how to recover a file using NetWorker. Follow the instructions in this section to become familiar with the product. Chapter 3 and Chapter 4 have more detailed information on how to use it.

Use the instructions in the section “Starting NetWorker” to display the NetWorker main window, as shown in Figure 2-21.

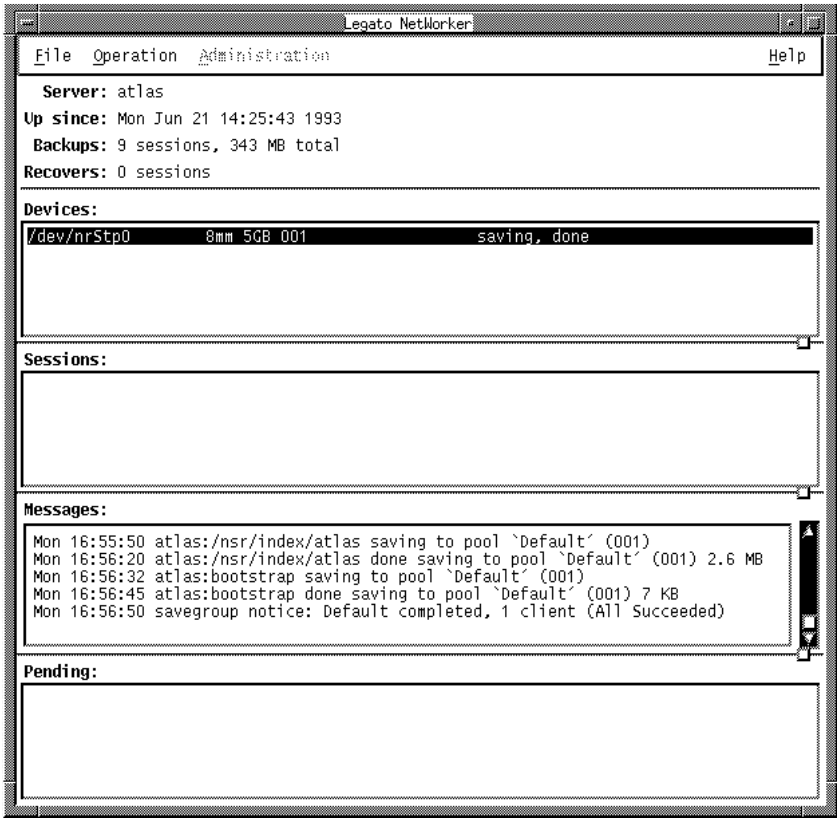

Figure 2-21 NetWorker Main Window

Backing up Your Directory

To demonstrate NetWorker functionality, you will first back up a directory to the NetWorker server. The Backup window lets you browse the filesystem to examine your directories. Then you can mark files for backup.

To learn about NetWorker, you will mark an entire directory for backup. Then you will unmark a file within that directory. Finally, you will start the backup.

Opening the Backup Window

Open the Backup window by selecting the “Backup” command from the Operation pull-down menu, as shown in Figure 2-22.

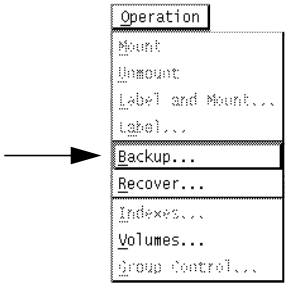

Figure 2-22 “Backup” on the Operation Pull-Down Menu

The Backup window appears, as shown in Figure 2-23.

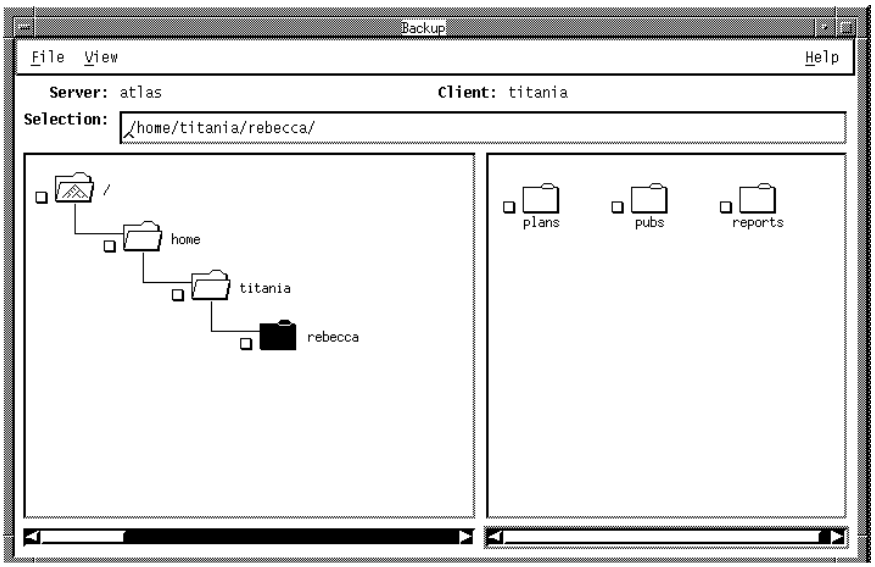

Figure 2-23 Backup Window

The Selection field displays the pathname of the directory from which you invoked NetWorker. The directory display shows you a graphical representation of the path, with the current directory highlighted. The file display shows you the contents of the current directory.

Expanding the Current Directory

First, expand the current directory one level to find a lower-level directory to mark for backup. Select “Expand One Level” from the View pull-down menu, as shown in Figure 2-24.

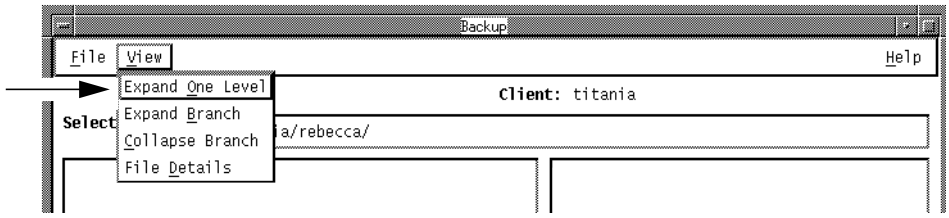

Figure 2-24 ”Expand One Level” on the View Menu of the Backup Window

The directory display shows the expanded directory, as shown in Figure 2-25.

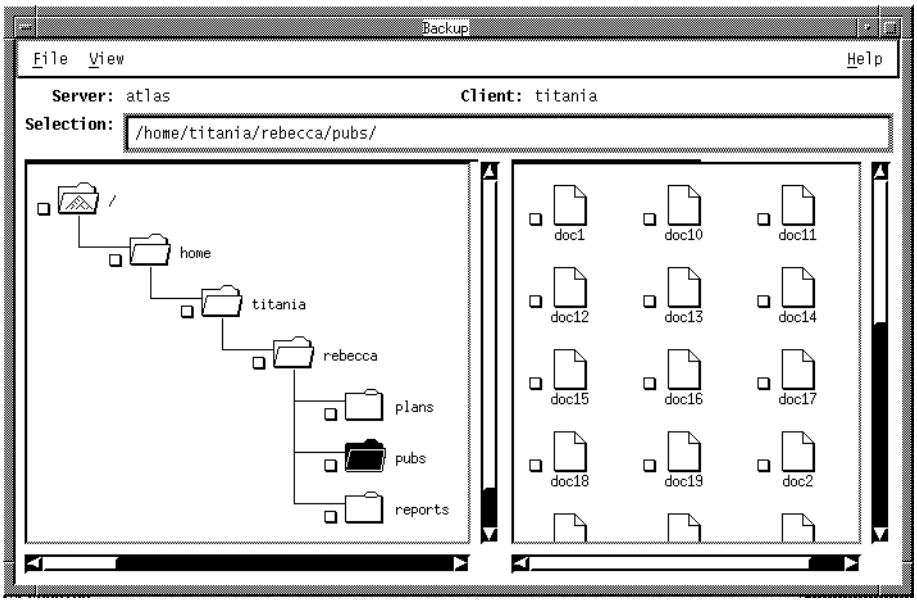

Figure 2-25 Directory Display in the Backup Window

Marking a Directory

To mark a directory for backup, use the mouse to select the checkbox next to the folder that represents the directory that you want to back up, as shown in Figure 2-26.

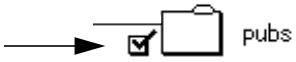

Figure 2-26 Directory Marked for Backup

Notice that a checkmark (✓) appears in the checkbox. Highlight the folder to display its files. In the file display, notice that the files contained in the marked directory are also marked, as shown in Figure 2-27.

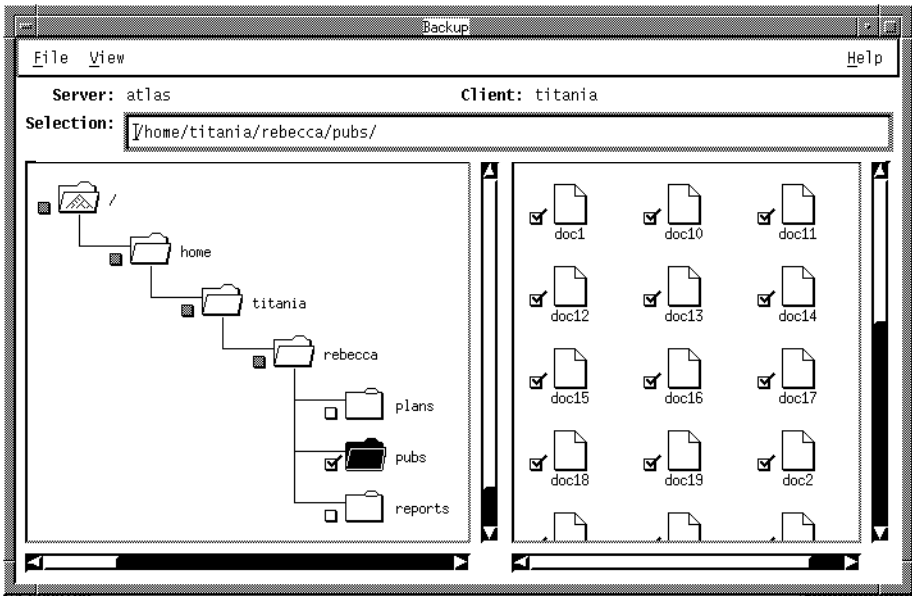

Figure 2-27 File Display in the Backup Window

When you mark a directory, its nested files and subdirectories are marked as well. The checkboxes of the parent directories turn gray to indicate that a subdirectory has been marked. Mount points within a marked directory are not marked, since you can only mark files within one filesystem at a time.

Tip: You can also mark a directory by highlighting it and selecting “Mark” from the File pull-down menu. The effect is the same as selecting the checkbox. ♦

Unmarking a File

You can exclude a file from the backup by unmarking it. In the file display, select the checkmark next to a file to unmark it. The checkmark disappears and the file is excluded from the backup. In Figure 2-28, the first eight files are excluded from the backup.

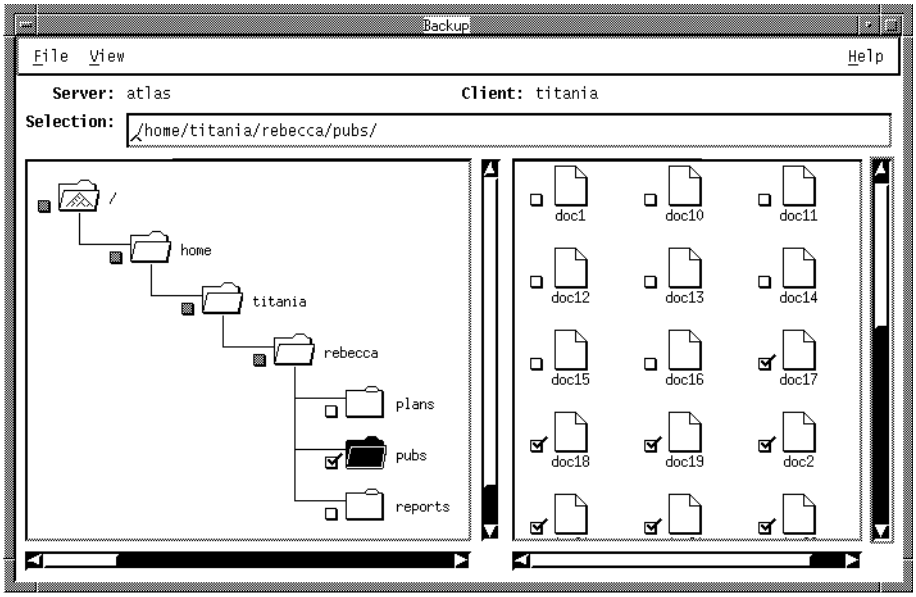

Figure 2-28 Included and Excluded Files in the File Display of the Backup Window

Tip: You can also unmark a file by highlighting it and selecting “Unmark” from the File menu. The effect is the same as selecting the checkmark. ♦

Starting the Backup

After you have finished marking files, you are ready to start the backup. Select “Start Backup” from the File menu, as shown in Figure 2-29, to start the backup.

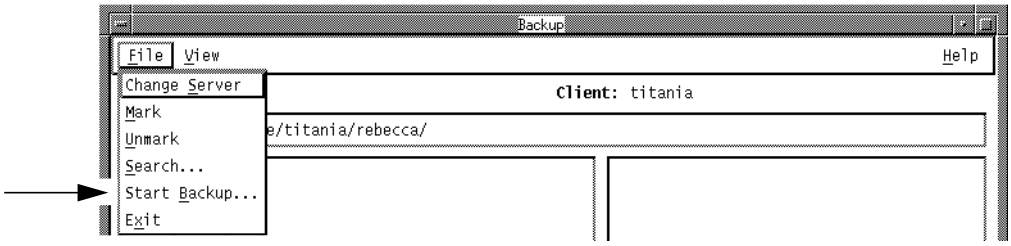

Figure 2-29 ”Start Backup” on the File Menu of the Backup Window

Before the backup starts, the Backup Options dialog box appears, as shown in Figure 2-30.

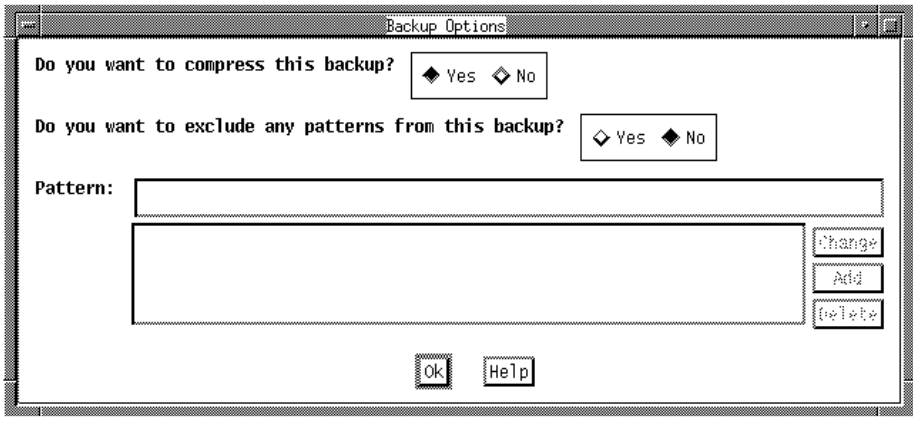

Figure 2-30 Backup Options Dialog Box

In the Backup Options dialog box, you tell NetWorker whether you want to compress your files during the backup. Compress the files for this backup.

Notice that “Yes” is highlighted after the question “Do you want to compress this backup?” This means it is the default choice, so press the *Ok* button to continue the backup with file compression.

Note: You can also exclude patterns in the Backup Options dialog box. For information on excluding patterns, see Chapter 4, “Backing Up and Recovering Files.” ♦

The Backup Status window appears, as shown in Figure 2-31, where you can monitor the progress of your backup.

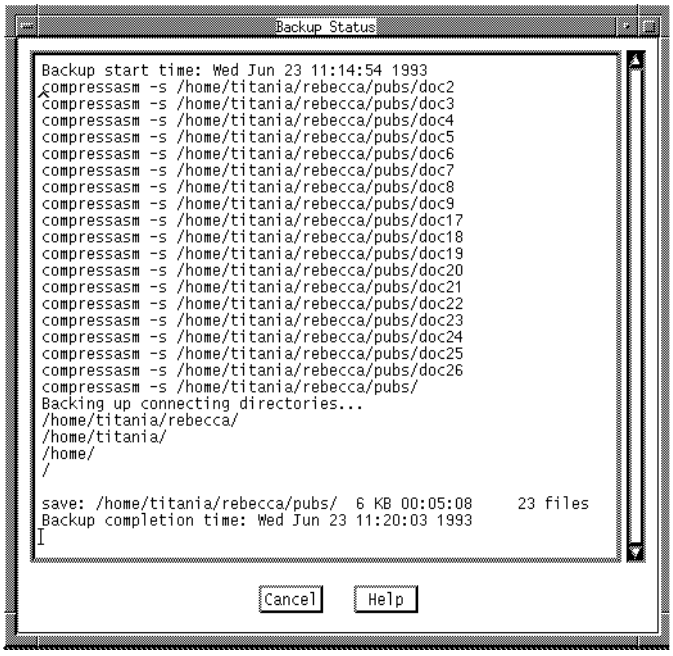

Figure 2-31 Backup Status Window

Tip: If you do not see any files scrolling in the display, or if you see an error message, contact your system administrator. The server may be busy recovering, or it may have a configuration problem. Or, the backup volume may not be mounted in the device. You can check the main window as described in the next section to see if the backup volume is mounted. ♦

When your backup is complete, you will see a message similar to this in the Backup Status window:

```
Backup Completion Time: Wed Jun 23 11:20:03 1993
```

NetWorker backed up the files you marked to the volume mounted in the server device. It also created an index on the NetWorker server for your client machine. Any file that you back up in the future will have an entry in this index, so that you can find it quickly.

Select the *Cancel* button to close the Backup Status window.

Close the Backup window by selecting “Exit” from the File menu, as shown in Figure 2-32.

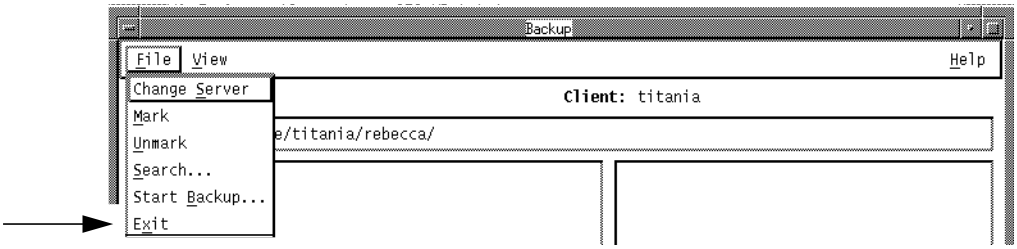

Figure 2-32 “Exit” on the File Menu of the Backup Window

Checking for Media Requests in the Main Window

If the scrolling list of your files does not appear in the Backup Status window, or if you see an error message during the backup, you can use the main window to confirm that the backup volume is mounted by checking the Pending display.

The Pending display of the main window shows media requests for backup volumes, which are required for a backup or recover to proceed.

The main window is shown in Figure 2-33.

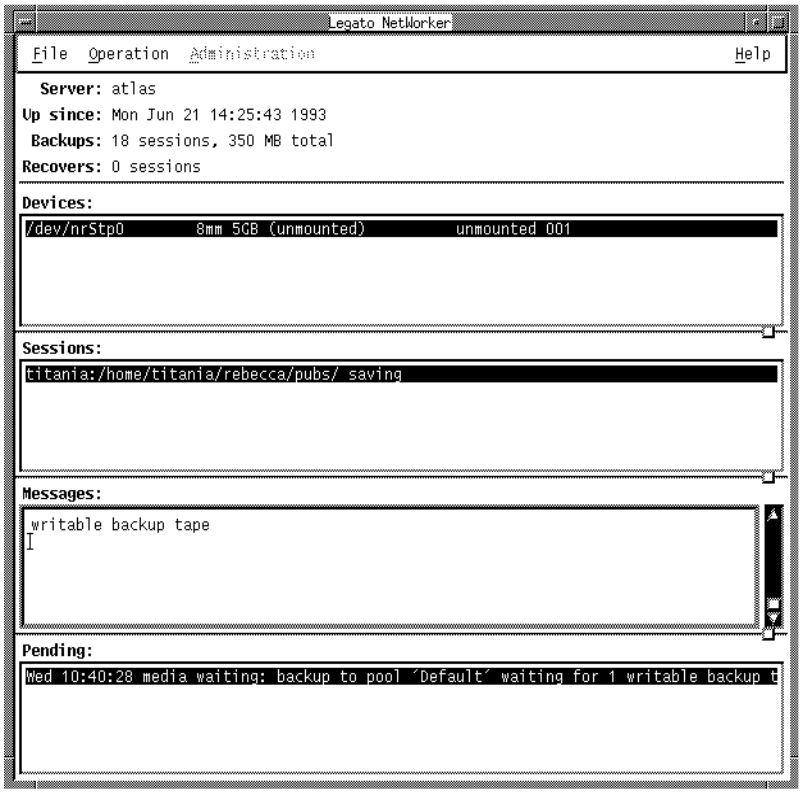

Figure 2-33 Pending Display on the NetWorker Main Window

Notice the following message in the Pending display:

```
media waiting: backup to pool `Default` waiting for 1
writable backup tape
```

This message indicates that the backup volume is unmounted. If there is no message in the Pending display, then the backup volume is mounted and you can proceed with the backup.

To avoid this media alert, it is recommended that you contact your system administrator to mount a backup volume before starting a backup.

Note: The backup volume must be mounted before a backup will complete. For information on mounting backup volumes, refer to the *NetWorker for IRIX Administrator's Guide.* ♦

Recovering a File

The index that is created on the NetWorker server when you back up files is displayed in the Recover window. The index looks similar to the filesystem that is pictured in the Backup window.

To recover a file, you browse the index for a directory and mark a file within that directory. Then you start the recovery.

Opening the Recover Window

Open the Recover window by selecting "Recover" from the Operation pull-down menu, as shown in Figure 2-34.

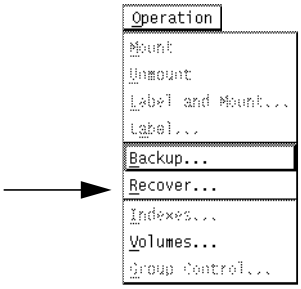

Figure 2-34 "Recover" on the Operation Pull-Down Menu

The Recover window appears, as shown in Figure 2-35.

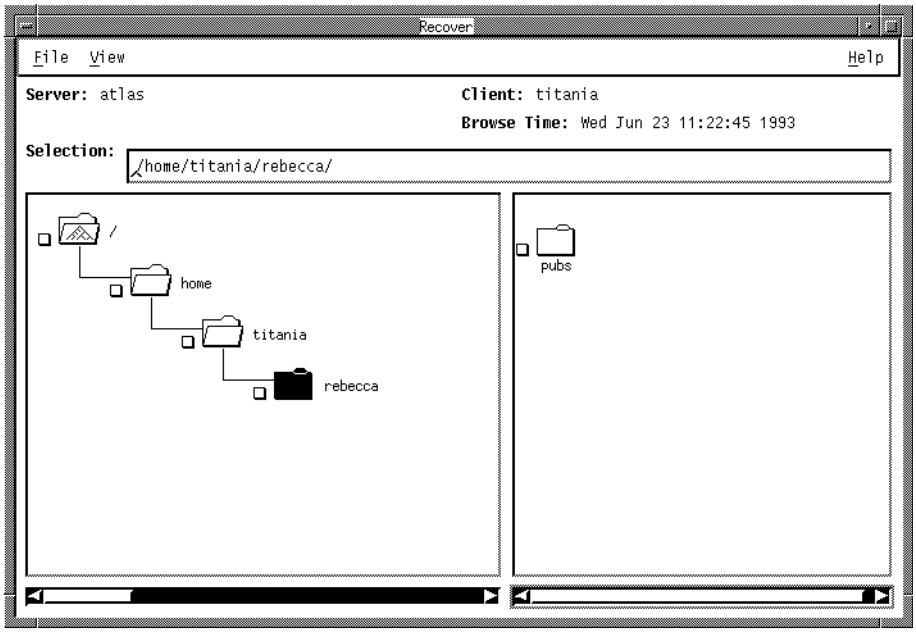

Figure 2-35 Recover Window

Tip: Remember that in the Recover window you are looking at the index for your files on the NetWorker server, not the filesystem on your system that is in the Backup window. The Recover window shows the entries for those files that have been backed up and are available for recovery. The entries are organized exactly like the actual filesystem, so it is easy for you to navigate around the directories. ♦

Browsing the Index

You can browse the index to locate a file that you want to recover.

1. Notice that the current directory is highlighted.
2. Select “Expand One Level” from the View pull-down menu. The subdirectories are displayed in a tree structure in the directory display, as shown in Figure 2-36.

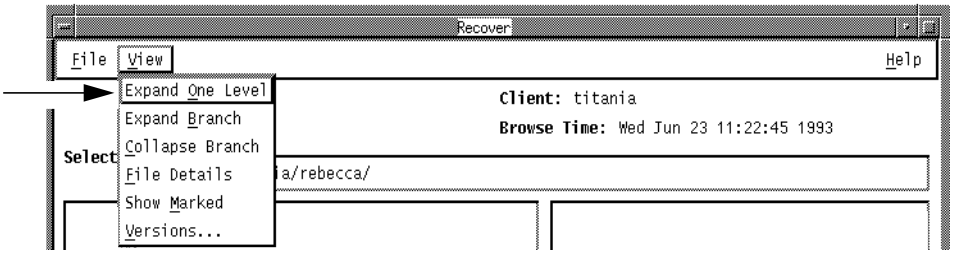

Figure 2-36 "Expand One Level" on the View Pull-Down Menu of the Recover Window

Tip: Selecting a closed directory folder twice also expands it one level, as shown in Figure 2-37. ♦

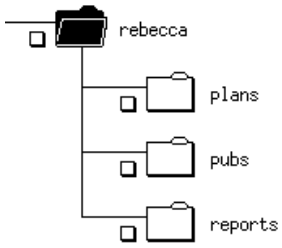

Figure 2-37 Expanding a Directory One Level

3. Highlight the directory folder that contains the desired file by selecting it. The file display shows the most recently backed-up version of the files contained in the directory.
4. Mark the files you wish to recover by selecting their checkboxes in the file display, as shown in Figure 2-38.

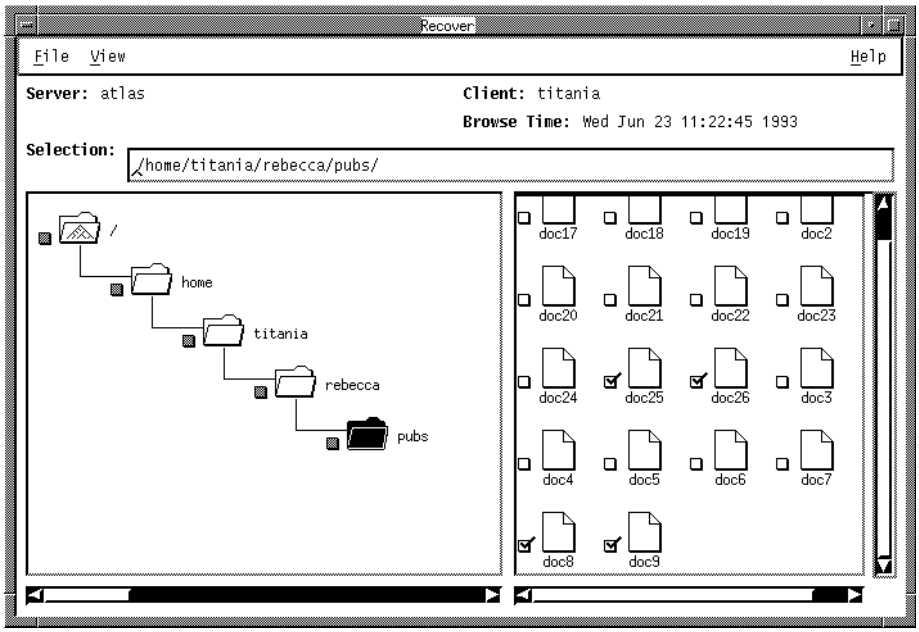

Figure 2-38 Marking Files to Recover in the Recover Window

Starting the Recovery

So far you have browsed the index and marked files for recovery. You are now ready to start the recovery.

1. Select “Start Recover” from the File menu. The Conflict Resolution dialog box appears, as shown in Figure 2-39, before the recovery starts.

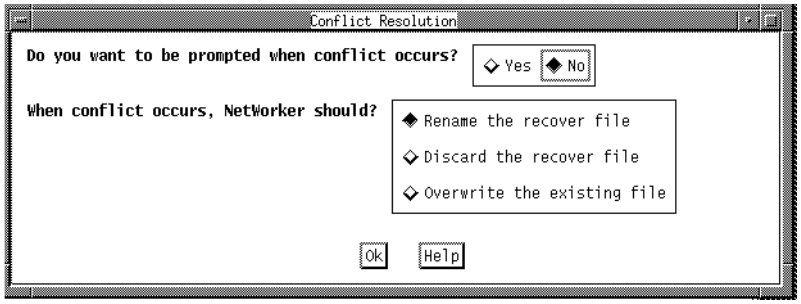

Figure 2-39 Conflict Resolution Dialog Box

   With the Conflict Resolution dialog box, you tell NetWorker what to do if a naming conflict is encountered during recovery. A naming conflict occurs when the file you are recovering has the same name as a file in the current directory.

2. Select “No” so that NetWorker does not prompt you for each naming conflict.
3. “Rename the recover file” is now highlighted as the default selection. It places a **.R** extension after the name of the recovered file when a naming conflict occurs with an existing file.
4. Press *Ok* to close the Conflict Resolution dialog box and continue the recovery.

   The Recover Status window appears, as shown in Figure 2-40. You can monitor the progress of the recovery in the Recover Status window.

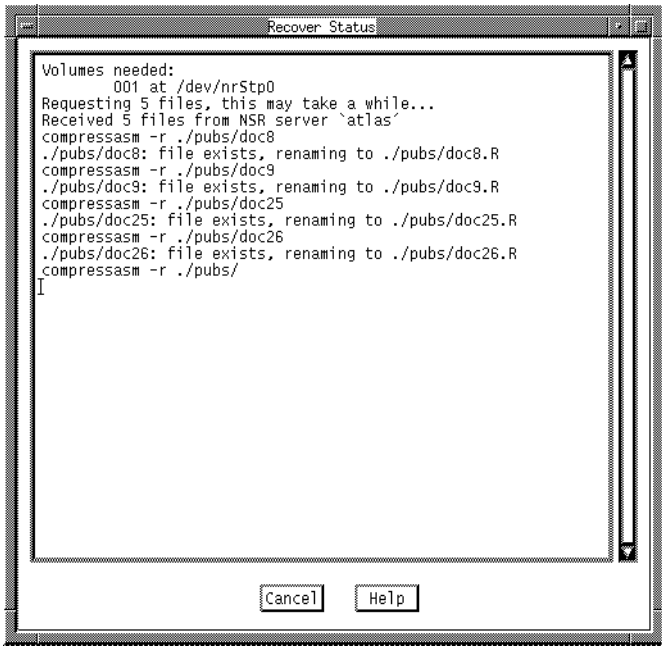

Figure 2-40 Recover Status Window

The Recover Status window provides information about your recovery, including the name(s) of the backup volumes (`Volumes needed:`) that are needed and their location, the directory that the files are being recovered into, and the number of files being recovered.

You may cancel the recovery by pressing the *Cancel* button in the Recover Status window.

The following message appears when the recovery is complete:

```
Received 5 files from NSR server `atlas`
```

To confirm its recovery, you can look for your file in the filesystem by listing the contents of the directory in an IRIX shell. The recovered file has a **`.R`** file extension because you told NetWorker to rename the file in the Conflict Resolution dialog box.

Quick Tour Review

During the quick tour of NetWorker, you learned how to:

- Use the NetWorker graphical user interface
- Use the Backup window to back up your directory to the NetWorker server
- Monitor the status of your backup
- Use the Recover window to browse the index for your backed-up files
- Mark a file for a recovery in the Recover window
- Recover a file
- Resolve a naming conflict during recovery
- Monitor the status of the recovery

The quick tour is meant to familiarize you with the NetWorker Backup and Recover windows. Chapter 3 and Chapter 4 provide detailed information on performing backups and recovers.

Browsing Filesystems

The NetWorker graphical user interface allows you to browse your filesystems, including directories, subdirectories, and nested files. Since the filesystem is represented by icons on the screen, it is easy to select files and directories for backup. When recovering files, the index of saved files is displayed graphically like the filesystem, making it convenient to select files for recovery.

NetWorker browsing features allow you to view directories, mark and unmark files, search for files, view file details, and change the current directory. The following instructions for browsing filesystems apply to both the Backup and Recover windows.

Viewing Your Directories

Use the View menu to select the level at which you wish to browse the directories in the filesystem in the Backup window or browse the index of directories in the Recover window.

Note: This section describes the features common to both windows that are used for viewing directories. The features specific to a window are described in Chapter 4, “Backing Up and Recovering Files.” ♦

You can expand a directory to one level to view its subdirectories or you can view all levels of a directory by expanding a branch. This makes it easy to find files that are deeply embedded in your filesystem.

Expanding to One Level

Choosing the “Expand One Level” command, as shown in Figure 3-1, opens a directory to display the subdirectories one level below. The subdirectories are graphically displayed as a tree structure in the directory display. You can scroll in the directory display to find the subdirectory that contains the desired file.

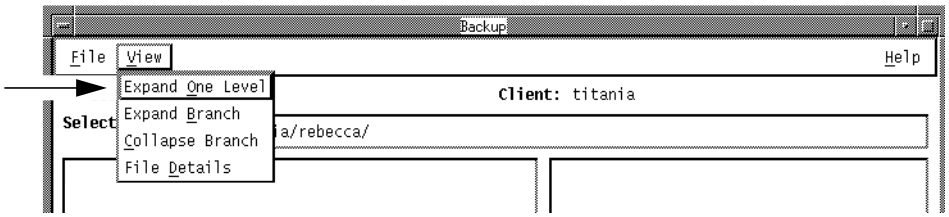

Figure 3-1 “Expand One Level” in the View Menu of the Backup Window

To expand a directory to one level:

1. Highlight a directory folder in the directory display.
2. Select “Expand One Level” from the View pull-down menu. The highlighted directory folder expands, as shown in Figure 3-2.

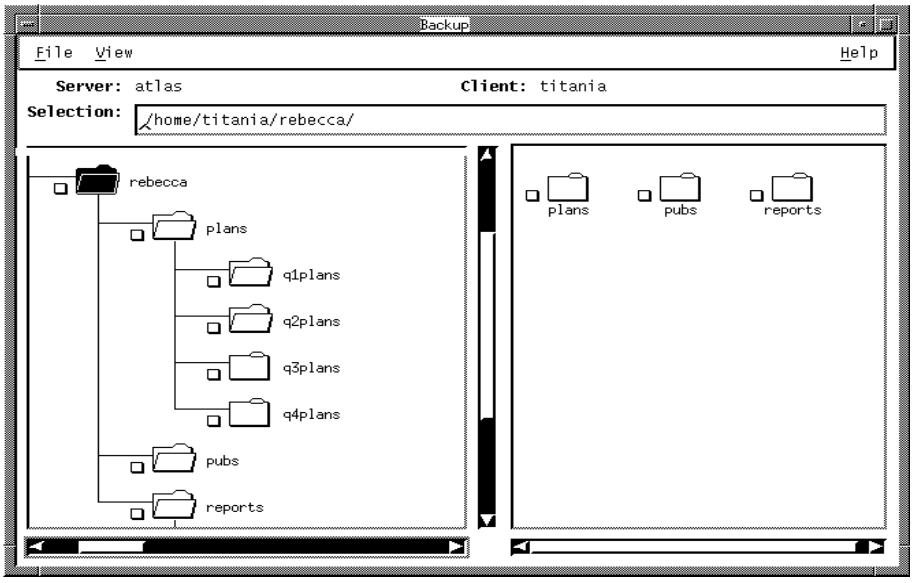

Figure 3-2 Backup Window with an Expanded Directory

Expanding a Branch

The “Expand Branch” command, shown in Figure 3-3, lets you view all the levels of subdirectories in a directory. Large directories may take a few minutes to expand.

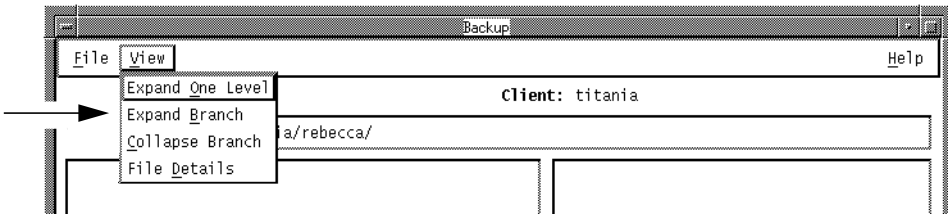

Figure 3-3 Expand One Branch on the View Menu of the Backup Window

To expand a directory to view the branch:

1. Highlight a directory in the directory display.
2. Select “Expand Branch” from the View pull-down menu. The highlighted directory expands, as shown in Figure 3-4.

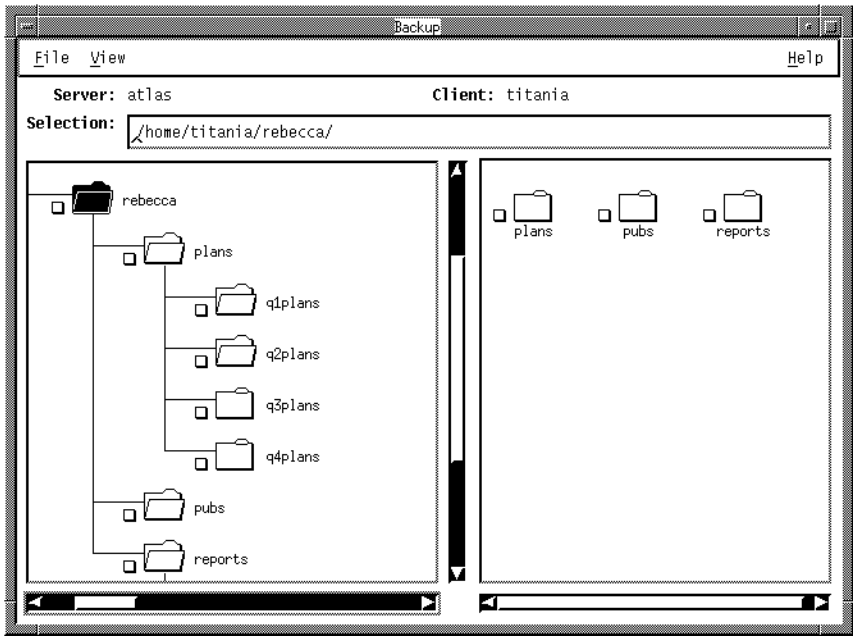

Figure 3-4 Backup Window with an Expanded Branch

Collapsing a Branch

The “Collapse Branch” command, shown in Figure 3-5, closes all subdirectories and returns you to the level of the highlighted directory.

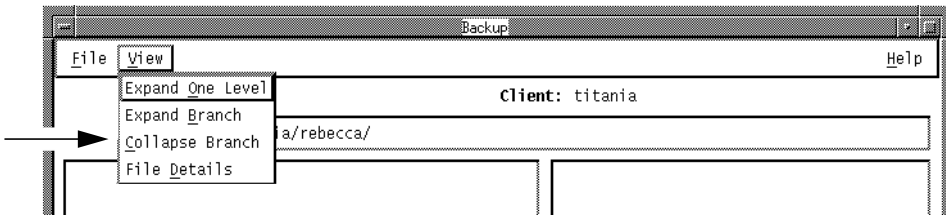

Figure 3-5 ”Collapse Branch” on the View Menu of the Backup Window

To collapse a branch:

1. Highlight an expanded directory in the directory display.
2. Select “Collapse Branch” from the View pull-down menu, as shown in Figure 3-6.

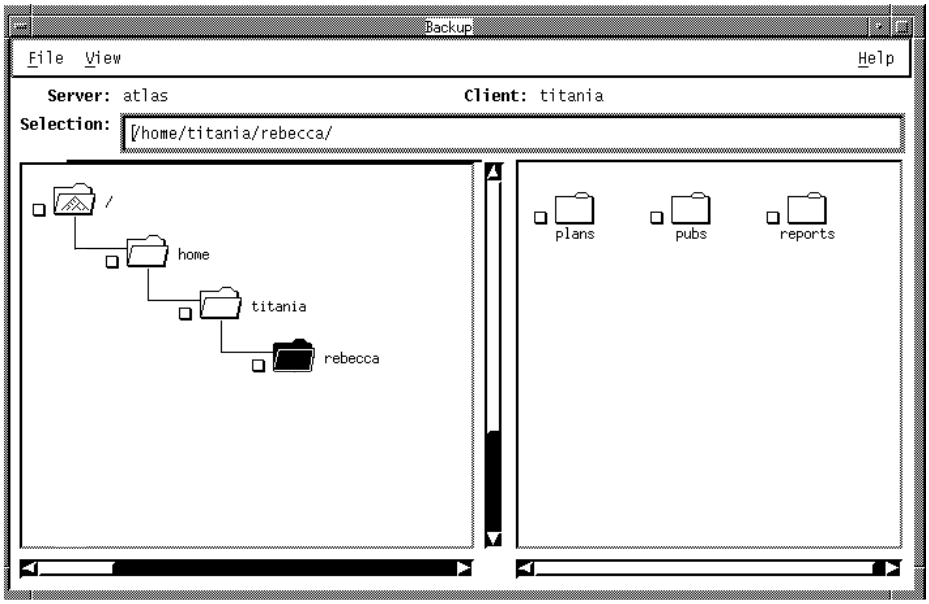

Figure 3-6 Backup Window After Using “Collapse Branch”

Marking and Unmarking Files

You choose files and directories for backup and recovery by marking them. The icons have a checkbox beside them that displays a checkmark when the file is marked. You can mark or unmark files and directories by using either the File pull-down menu or the checkbox.

To mark a file or directory using the File menu:

1. Highlight a file or directory icon by selecting it with the mouse.
2. Select “Mark” from the File pull-down menu, as shown in Figure 3-7.

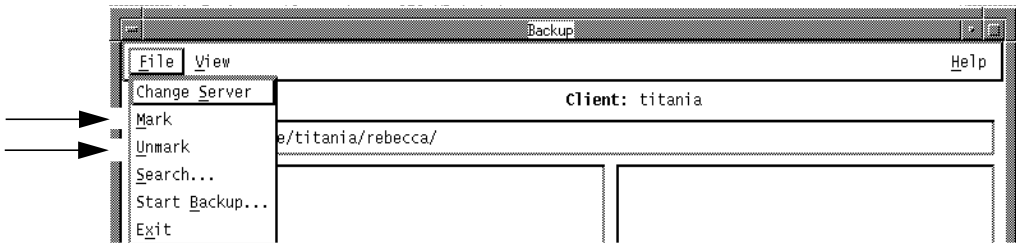

Figure 3-7 “Mark” and “Unmark” on the File Menu of the Backup Window

   This places a checkmark in the checkbox beside the highlighted icon to mark it for backup or recovery.

3. If you decide that a file should not be included in the backup or recovery, highlight the icon and select “Unmark” from the File pull-down menu to remove the checkmark.

To mark a file using the checkbox:

1. Use the mouse to select the checkbox next to the file. This places a checkmark in the checkbox.
2. Select the checkmark to unmark the file, as shown in Figure 3-8.

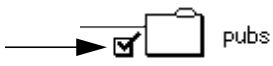

Figure 3-8 Unmarking a File

Tip: When you mark a directory, all its subdirectories and nested files are also marked. The checkboxes of the parent directories turn gray to indicate that some or all of the directory contents are marked for backup or recovery. ♦

Viewing File Details

NetWorker lets you choose to view the file details or only the file names in the file display. “File Names” is the default selection. “File Names” lists the files in alphabetical order with only the filenames displayed. “File Details” displays the filename, number of blocks, permissions, number of links and where they point (only applies to symbolic links), owner, group, size, and date last modified for each file.

Backup File Details and Recover File Details are identical except for one difference. Recover File Details provides the backup time for each file to identify different backup versions of the same file.

Use the View pull-down menu to select either the “File Names” or “File Details” in the file display. This is a toggle selection. When you are in File Names mode, the menu selection changes to “File Details.” When you are in File Details mode, the menu selection changes to “File Names.”

To display the file details:

1. Select “File Details” from the View pull-down menu, as shown in Figure 3-9.

Figure 3-9 “File Details” on the View Menu of the Recover Window

2. Adjust the size of the window to display the full File Details.

The Recover File Details display is pictured in Figure 3-10. Notice the backup time listed beside each icon.

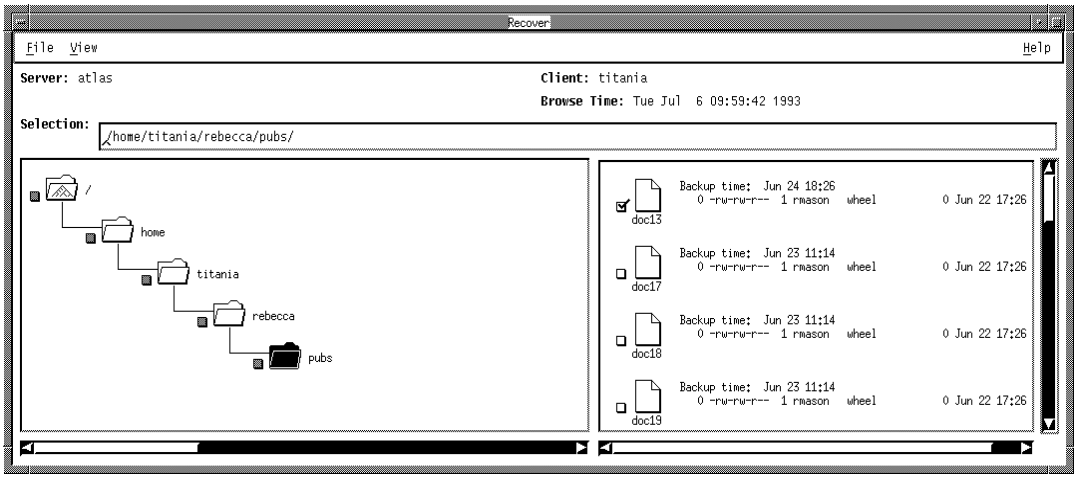

Figure 3-10 File Details Display on the Recover Window

Searching for Files

If you know the name or partial name of a file or directory, you can use the Search window to locate it in the filesystem or index. To search for files, you specify the filename or partial filename you are looking for and the directory name where you wish to begin the search. NetWorker begins searching in that directory and then searches through its subdirectories and nested files.

To search for files or directories by name:

1. Use the File menu to open the Search dialog box.
2. Enter the name of the file or directory in the Search for field, as shown in Figure 3-11. You can use standard IRIX shell pattern characters when specifying partial filenames.

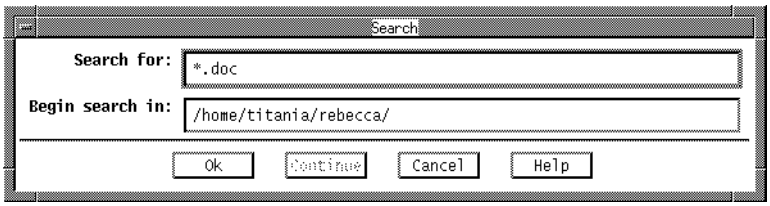

Figure 3-11 Search Dialog Box

3. In the “Begin search in” field, enter a valid pathname of the directory where you wish to begin the search. NetWorker searches through that directory and all nested subdirectories.
4. Press the *Ok* button. The pathname of the first match appears in the Selection field and is also highlighted in the file display.
5. Press the *Continue* button to highlight the next match. You can continue the search until the last match is found.

Changing a Selection

The NetWorker windows display the full pathname of the current directory in the Selection field. If you know the path of a directory or file, you can go directly to it by entering the full pathname in the Selection field, as shown in Figure 3-12.

Figure 3-12 Selection Field of NetWorker Windows

To change the current selection:

1. Enter the full pathname in the Selection field.
2. Press the **<Enter>** key.

Both the directory and file displays change to show the new selection.

Exiting from a Window

The “Exit” command is in the File menu of every window. “Exit” closes the current window without backing up or recovering files and returns you to the main window.

Select “Exit” from the File menu, as shown in Figure 3-13, to close the window.

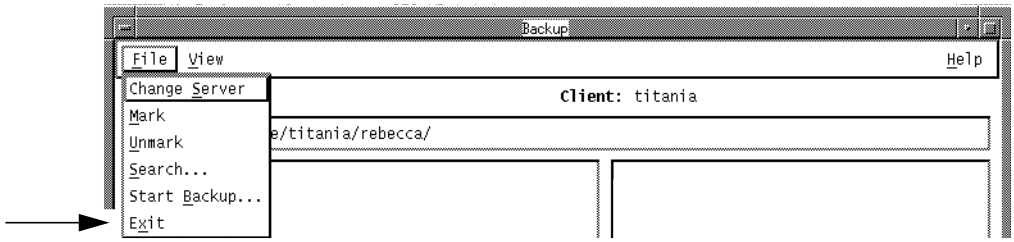

Figure 3-13 “Exit” on the File Menu

Chapter 4

Backing Up and Recovering Files

This chapter describes the NetWorker main, Backup, and Recover windows. It includes the backup and recover functions that are unique to each of the windows. For information on using the functions that are common to the windows, such as viewing and marking files, see Chapter 3, “Browsing Filesystems.” For a quick tour of the NetWorker Backup and Recover windows, see Chapter 2, “Getting Started.”

Monitoring Your Backup and Recovery

The NetWorker main window monitors your backups and recovers. (It also provides pull-down menus for selecting the Backup and Recover windows.) The main window provides valuable online information about server status, backup device status, client sessions, and pending requests.

The main window appears when you invoke NetWorker.

Tip: Keep the main window open during every backup or recover to monitor the progress of the session. ♦

The NetWorker main window is shown in Figure 4-1.

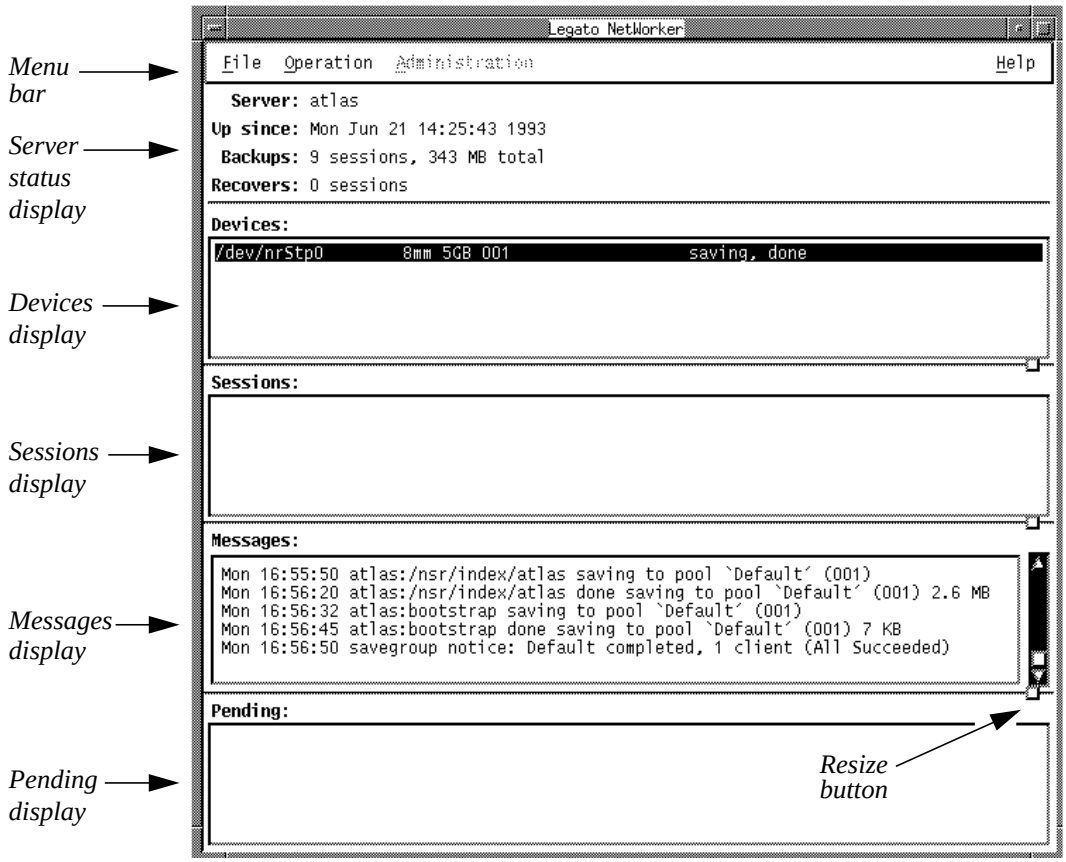

Figure 4-1 NetWorker Main Window

The main window has a menu bar and five displays:

- Menu bar – contains the File, Operation, Administration, and Help pull-down menus.
- Server status display – tells you how long the current server has been online, the number of backups and recovers the server has completed since it has been online, and the amount of data contained in the backups and recovers.
- Devices display – shows you the backup devices known to the server and which volume, if any, is mounted in the device.

- Sessions display – provides current information on which clients are backing up, browsing, or recovering files.
- Messages display – provides a history of the NetWorker server activity.
- Pending display – shows messages that may require operator attention.

A scroll bar appears to the right of the display area when there is more information to see. Use the resize buttons for resizing the display areas.

Backing Up Files

This section assumes you have already marked your files for backup. If you need to know how to view directories, mark files, search for files, or view file details, see Chapter 3, “Browsing Filesystems.”

Changing the NetWorker Server

NetWorker clients are included in a scheduled backup determined by your system administrator.

Generally only one NetWorker server is required to back up all the systems on a network. If you have more than one NetWorker server on the network, you may have a choice of servers.

However, you must be listed as a client on the NetWorker server you choose for your backups. Check with your system administrator if you wish to back up to a server other than the server chosen for your scheduled backups.

You may need to back up a file to a different server due to network difficulties or because your backup server is down.

To change NetWorker servers, follow these steps:

1. Select “Change Server” from the File pull-down menu, as shown in Figure 4-2.

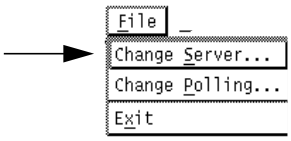

Figure 4-2 “Change Server” on the File Menu

The Change Server dialog box appears, as shown in Figure 4-3.

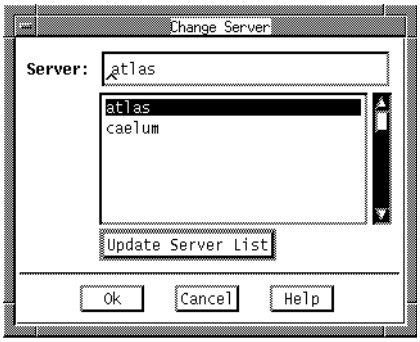

Figure 4-3 Change Server Dialog Box

2. Press the *Update Server List* button to update the list of NetWorker servers on the network.
3. Highlight the hostname of a server, or enter a valid hostname in the Server field.
4. Press *Ok* to choose the new server.

Starting a Backup

Before starting a backup, complete the following steps:

- Mark the files that need to be backed up.
- Choose the NetWorker server (if necessary).

When these steps are complete, you may start the backup.

Select “Start Backup” from the File menu, as shown in Figure 4-4, to start the backup.

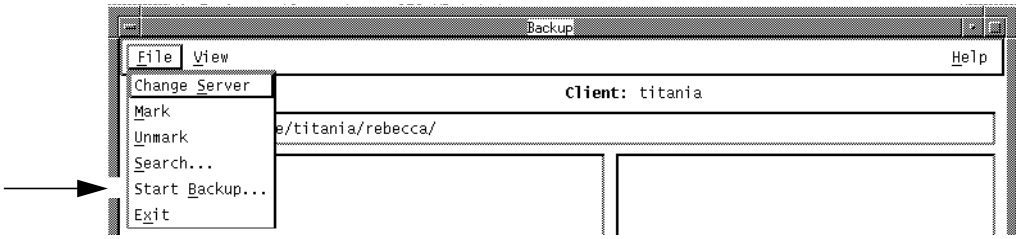

Figure 4-4 “Start Backup” on the File Menu of the Backup Window

Choosing the Backup Options

NetWorker displays the Backup Options dialog box before starting the backup. Backup Options gives you the option to compress files and exclude patterns before the backup starts.

Compressing Files

To choose whether or not to compress the files you back up, answer the question “Do you want to compress this backup?” in the Backup Options dialog box, as shown in Figure 4-5. Notice that “Yes” is already highlighted as the default selection. NetWorker requires that you choose whether or not you want to compress your files in the Backup Options dialog box, before you can back them up.

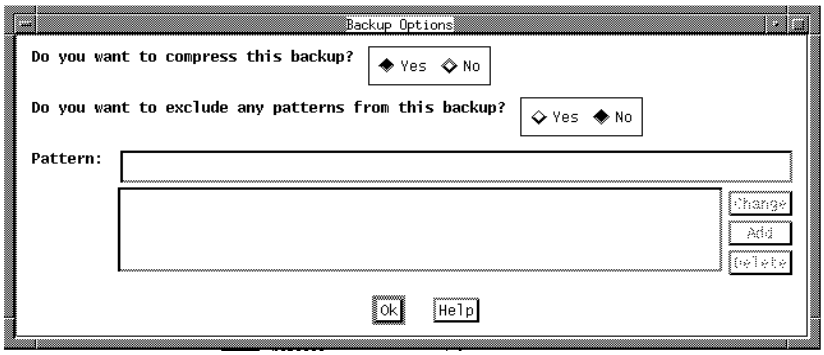

Figure 4-5 Backup Options Dialog Box

To continue the backup with file compression, select “Yes” (the default selection). To continue the backup without file compression, select “No.”

Tip: It is a good idea to compress all your backups to save space on the backup volumes and to reduce network traffic. However, backups may be slower due to compression. ♦

If you do not need to exclude patterns from your backup, press *Ok* to continue the backup with your file compression choice.

Excluding Patterns

Before starting a backup, you can exclude patterns in the Backup Options dialog box. To exclude patterns, you specify alphanumeric patterns that occur in the names of the files that you want to exclude from the backup. Any number of patterns may be specified using IRIX shell pattern characters.

Excluding patterns is an optional shortcut for eliminating similar files from the backup.

Notice that “No” is highlighted as the default answer to the question “Do you want to exclude any patterns from this backup?” If you do not wish to exclude any patterns of filenames from the backup, select *Ok* to continue the backup with only your file compression choice.

To exclude patterns from the backup:

1. Select “Yes” to answer the question “Do you want to exclude any patterns from this backup?” This activates the exclude patterns portion of the Backup Options dialog box.
2. Enter the first pattern to be excluded in the Pattern field.
3. Press *Add* to add the pattern to the pattern list, as shown in Figure 4-6.

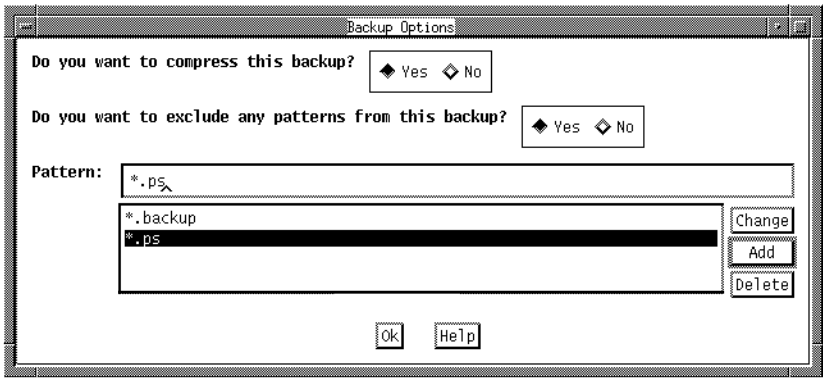

Figure 4-6 Backup Options Dialog Box

4. You may enter any number of patterns and add them to the pattern list.

   If you wish to change a pattern, select it in the pattern list. The selected pattern appears in the Pattern field. Enter the new pattern and press *Change*. The new pattern replaces the old pattern in the pattern list.
5. To delete a pattern, select it in the pattern list and press *Delete*.
6. Press *Ok* to continue the backup with the excluded patterns.

Monitoring the Backup Status

After you press *Ok* to complete the Backup Options dialog box, the Backup Status window appears, as shown in Figure 4-7. Use the Backup Status window to monitor the progress of the backup.

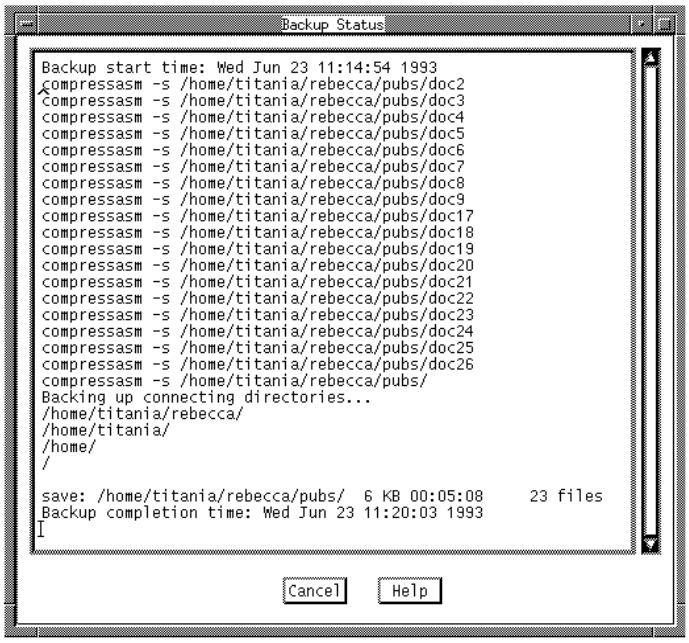

Figure 4-7 Backup Status Window

The Backup Status window provides the Backup start time and the Backup completion time. The names of the files and directories scroll across the Backup Status window as the backup proceeds. The save message at the bottom of the window gives you information about the backup including the full pathname of the directory and the number of kilobytes and files being saved.

You can cancel the backup by pressing the *Cancel* button.

The following message appears in the Backup Status window when the backup is complete:

```
Backup completion time: Wed Jun 23 11:20:03 1993
```

Using the Volume Management Window

You can verify that NetWorker has successfully backed up your files in the Volume Management window by selecting the “Volumes” command in the Operation pull-down menu. You can determine exactly to which volumes your files have been backed up. All of the volumes known to the NetWorker server are listed in the Volumes scrolling list, and the contents are listed in the Save Sets scrolling list, as shown in Figure 4-8.

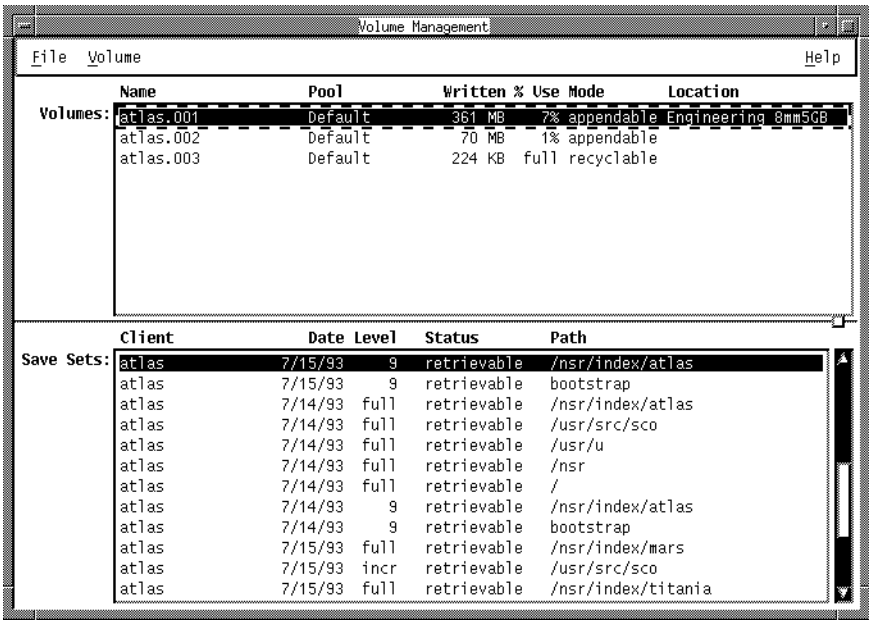

Figure 4-8 Volume Management Window

When you select the name of a volume in the Volumes list, the Save Sets list displays the contents of that volume. In the example above, the directory */usr/src/sco* has been backed up on the volume atlas.001.

Note: The information listed in the Volume Management window is useful to the system administrator for managing NetWorker backup volumes. ♦

Recovering Files

This section assumes you have already marked your files for recovery in the Recover window. If you need to know how to view directories, mark files, search for files, or view file details, see Chapter 3, “Browsing Filesystems.”

The files listed in the Recover window are entries for the files that were backed up by NetWorker. When NetWorker backs up a file, it creates an entry for the file in the online index. You may then select a file that is listed in the index for recovery. Powerful NetWorker recover functions allow you to browse the index for previous backups, select various versions of the file to recover, view your marked files, relocate files upon recovery, and recover files from another authorized system. An “authorized system” is a client from which you have permission to recover data.

Choosing the Recover Server

Normally you recover files from the NetWorker backup server chosen for you by your system administrator. If you have backed up files to a different server, you must also recover those files from that server. If you changed servers in the Backup window, select the same server in the Recover window.

The Change Server dialog box lists all the NetWorker servers on the network. You can only recover files from a server that lists your system as a client.

To choose a recover server:

1. If it is not already open, select “Recover” from the Operation pull-down menu to display the Recover window.
2. Select the File pull-down menu and then choose the “Change Server” command. The Change Server dialog box appears, as shown in Figure 4-9.

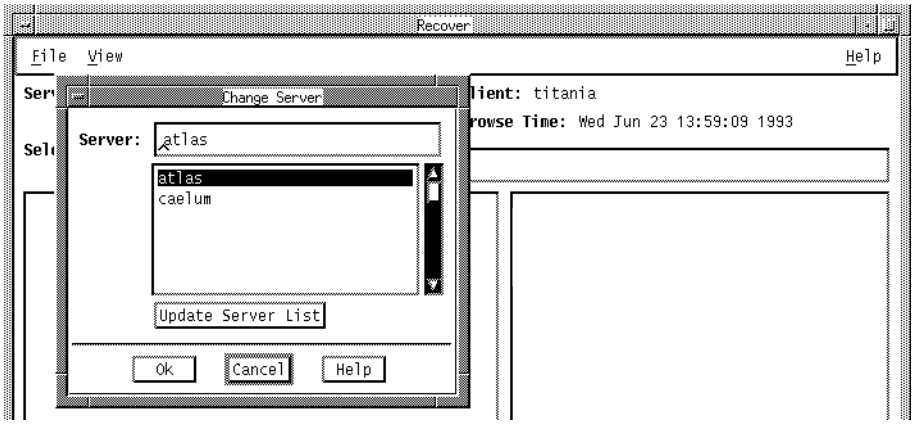

Figure 4-9 Change Server Dialog Box

Press the *Update Server List* button to update the list of NetWorker servers on the network. Choose the server that has the files you need to recover. The Server field changes to reflect the current selection. The directory and file displays are refreshed to show the index for the current server.

3. Press the *Ok* button after you have selected a server.

Choosing the Recover Client

If you need to recover files from a client other than the system you are currently using (for example because the client's disk was damaged and they are being restored onto a different system), use the "Change Client" command in the File pull-down menu. The "Change Client" command opens a dialog box that lists all of the NetWorker clients. Check with your system administrator if you wish to recover files other than your own. You may not be authorized to recover files for other client systems.

To choose a recover client:

1. Choose the “Change Client” command from the File pull-down menu in the Recover window. The Change Client dialog box appears, as shown in Figure 4-10.

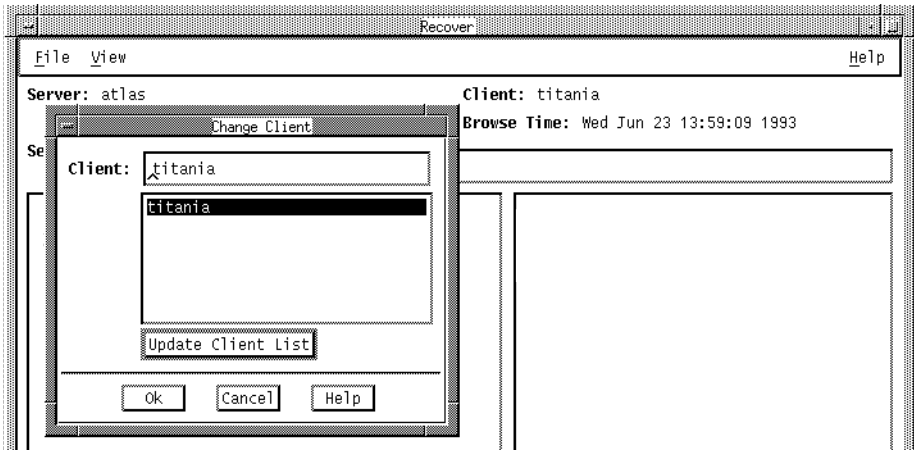

Figure 4-10 Change Client Dialog Box

2. You can update the list of NetWorker clients by pressing the *Update Client List* button.
3. Choose a client from which you are authorized to recover files. The Client field changes to reflect the current selection.

   When you recover this client’s files, they will be restored on the system you are currently using.

Selecting File Versions

The Versions window lists all the versions of a file or directory that have been backed up by the backup server. It also lists the locations of the versions. Use “Versions” to view the backup history of a file and to mark a version for recovery.

Versions of a directory may be listed in the Versions window, but directories cannot be marked for recovery in this window. Only versions of files may be marked for recovery in the Versions window.

The Versions window provides the following information about each version: number of blocks, mode, permissions, number of links, owner, group, size in bytes, last modified time, and filename.

It also provides the backup time and location of the version. The backup time is used to identify different versions of a file.

The location includes the name of the backup volume; the device where the volume is mounted, if any; or the location of the backup volume (for example, an off-site storage place). If no device is listed, it means that the backup volume must be mounted before recovery of the file is possible.

The information in the Versions window is retrieved from the index that is created by NetWorker when you perform a backup.

To view the backup history of a file or directory:

1. Open the Recover window and highlight a file or directory in the file display.
2. Select “Versions” from the View pull-down menu, as shown in Figure 4-11.

Figure 4-11 “Versions” on the View Menu of the Recover Window

NetWorker retrieves the most recent ten versions of the highlighted file or directory from the index and lists them by backup time, beginning with the most recent, as shown in Figure 4-12. Use the scroll bar to view the backup history.

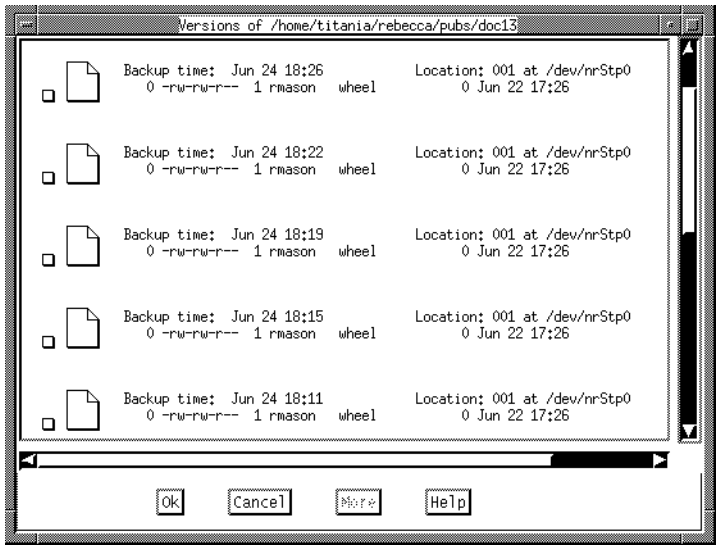

Figure 4-12 Backup History in the Versions Window

3. Press *More* to retrieve ten more versions from the index. The *More* button turns to gray when all versions have been retrieved.

   Note: Remember, you cannot mark directories for recovery in the Versions window. Use the "Change browse time" command in the File pull-down menu to mark a past version of a directory for recovery.

To select a version of a file for recovery:

1. Select the checkbox of the version that you want to recover.
2. Select *Ok* to place the checkmarked versions in the file display.

   Tip: When you mark a past version of a file in the Versions window, this version appears in the Recover window file display with the same name as the recent version. You will then have more than one version of a file in the file display. If you are confused as to which version to mark, use "File Details" to display the backup times. ♦

Changing the Browse Time

The Browse Time field displays the current date unless you change it to a date in the past. The currently selected browse time is indicated in the Browse Time field in the Recover window, as shown in Figure 4-13.

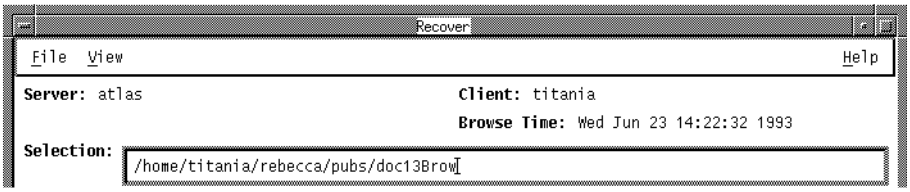

Figure 4-13 Browse Time in the Recover Window

In the Recover window you are viewing the index entries for previously backed-up files. Changing the browse time displays the index entries for files backed up at that time.

Tip: If files were not backed up at the time entered in the Browse Time field, NetWorker displays files that were backed up closest to the selected browse time. ♦

Changing the browse time lets you view your files as of some time in the past. This is useful if you do not remember the name or location of the files you want to recover, but you remember they existed at some time in the past. “Change browse time” also helps you find files that have been deleted and thus do not appear in the Versions window. You can recover deleted files by changing the browse time to locate past versions of the files in the index.

Tip: You can mark directories for recovery in the Recover window by using the “Change browse time” command rather than the “Versions” command. ♦

To change the browse time to recover a past version of a file:

1. Open the Recover window and select “Change browse time” from the File menu, as shown in Figure 4-14.

Figure 4-14 ”Change browse time” on the File Menu of the Recover Window

2. The Change Browse Time dialog box appears, as shown in Figure 4-15. The *Prev*, *Today*, and *Next* buttons control the month shown in the calendar. When the desired month is displayed, select the browse time by selecting a day in the calendar.

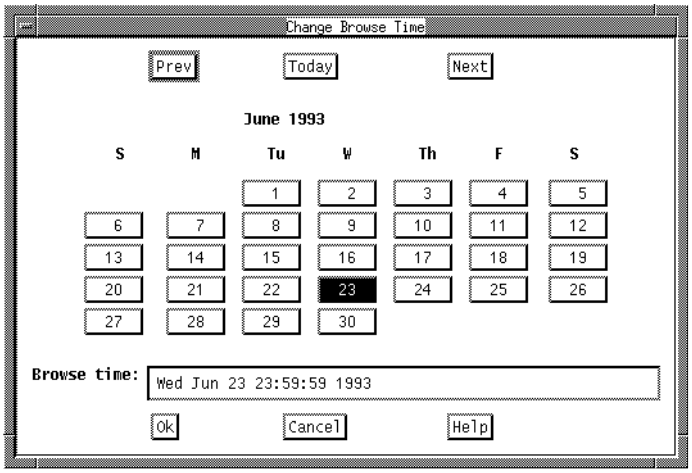

Figure 4-15 Change Browse Time Dialog Box

3. You can also enter the date and time in the Browse time field and press **<Enter>** to change the browse time.
4. Press *Ok* to display the files that were backed up at the new browse time. The Browse time field in the Recover window changes to reflect the new browse time. Both the file display and the directory display of the Recover window show the files that were backed up at that time. You may now mark past versions of files for recovery.

Note: Any files or directories that you have marked for recovery prior to changing the browse time remain marked. ♦

Showing Marked Files

You can list the files you have marked for recovery by selecting "Show Marked." Use "Show Marked" to check which files you have marked for recovery before performing the actual recover. The Files Marked for Recovery window lists the pathnames and backup time of files that you have marked for recovery.

To show the files that you have marked for recovery:

1. Select "Show Marked" from the View menu of the Recover window, as shown in Figure 4-16.

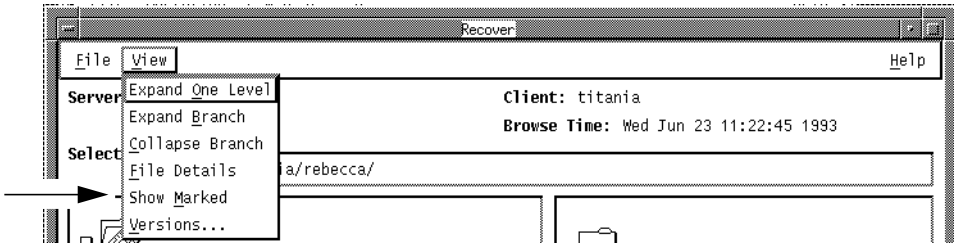

Figure 4-16 "Show Marked" on the View Menu of the Recover Window

The Files Marked for Recovery window appears, as shown in Figure 4-17, listing the pathnames and backup time of all marked files.

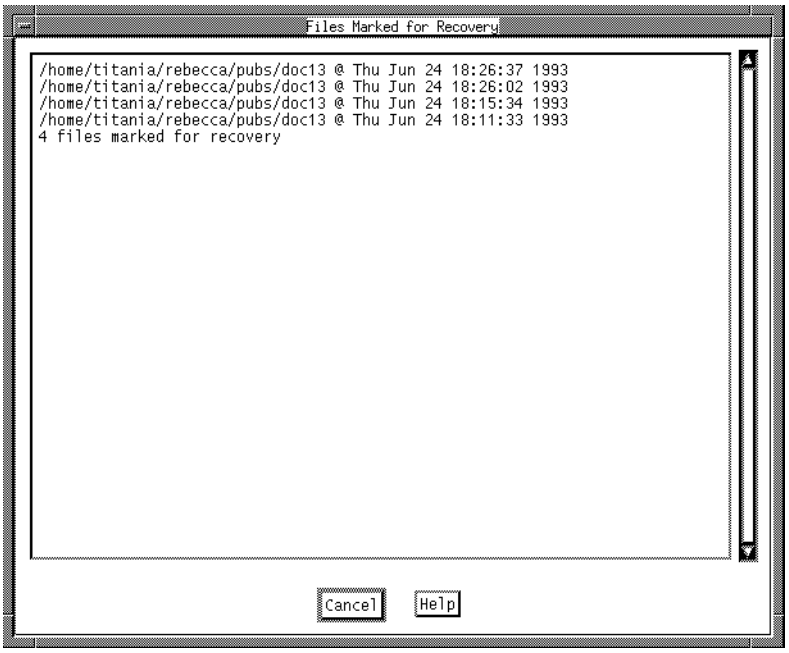

Figure 4-17 Files Marked for Recovery Window

2. Press *Cancel* to close the window.

Relocating Files

Use the optional “Relocate” command to place your files in a directory other than the original one before you start a recovery. “Relocate” first creates the directory, if it does not already exist, and then stores the recovered files in the new directory. You may also relocate files to an existing directory by entering the complete pathname.

To relocate recovered files into a new or existing directory:

1. Open the Recover window and select “Relocate” from the File menu, as shown in Figure 4-18.

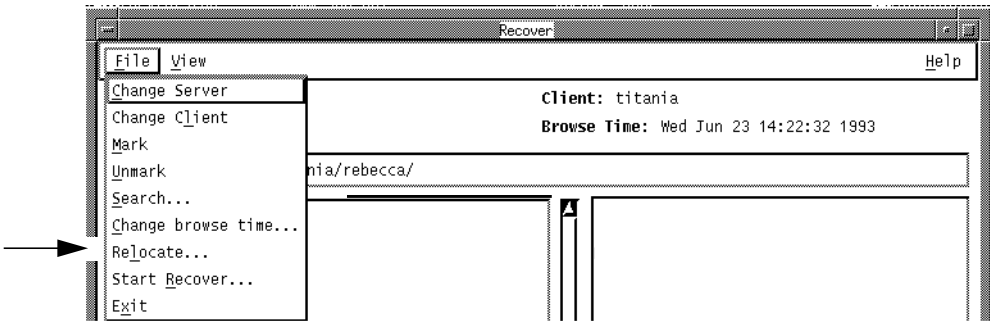

Figure 4-18 “Relocate” on the File Menu of the Recover Window

2. Enter the name of the directory where the recovered files will be stored in the “Relocate to” field, as shown in Figure 4-19. You can relocate files to a new directory or to an existing directory. Be sure to include the complete pathname.

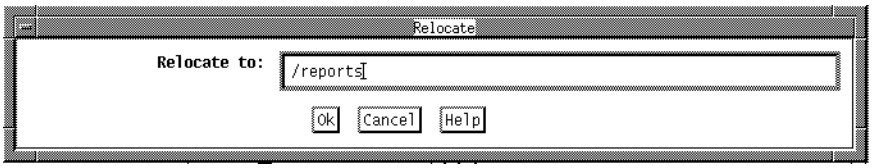

Figure 4-19 Relocate Window

3. Press *Ok* to relocate files into the new directory.

Starting a Recovery

Before starting a recovery, complete the following steps:

- Choose a server and an authorized client, if necessary.
- Mark files and directories for recovery.
- Select a past version of a file by name and location, if desired.
- Select a past version of a file by browse time, if desired.
- Show your marked files, if desired.
- Relocate recovered files to a new directory, if desired.

Usually, you can complete a recovery in two steps: mark the files and start the recovery.

To start a recovery, select “Start Recover” from the File pull-down menu in the Recover window, as shown in Figure 4-20.

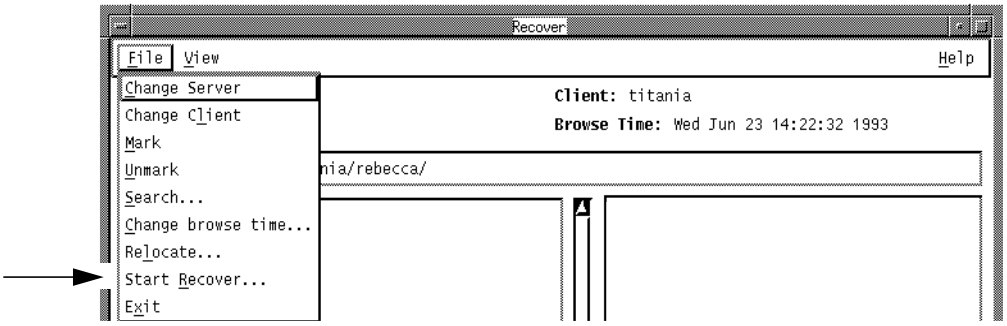

Figure 4-20 “Start Recover” on the File Menu of the Recover Window

Before actually starting the recover process, NetWorker prompts you for instructions on how to resolve naming conflicts by displaying the Conflict Resolution dialog box.

Renaming or Overwriting Recovered Files

With the Conflict Resolution dialog box, you tell NetWorker whether to rename recovered files or overwrite existing files when a naming conflict occurs. A conflict occurs when a file you are recovering already exists or has the same name as one in the current directory. The Conflict Resolution dialog box has two questions for you to answer concerning conflicts between recover files and existing files.

1. To resolve the conflict, first answer the question, “Do you want to be prompted when conflict occurs?” Selecting “No” specifies a global resolution for renaming or overwriting files, as shown in Figure 4-21.

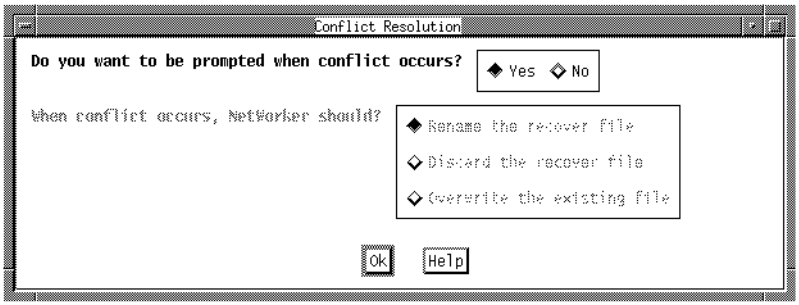

Figure 4-21 Conflict Resolution Dialog Box

2. If you select “Yes” (the default selection) NetWorker prompts you for instructions in the Filename Conflict dialog box every time it encounters a conflict between a recovered file and an existing file. For each instance, you tell NetWorker whether to rename the recovered file, discard the recovered file, or overwrite the existing file. This allows you to resolve conflicts on a file-by-file basis.

   The Filename Conflict dialog box is shown in Figure 4-22.

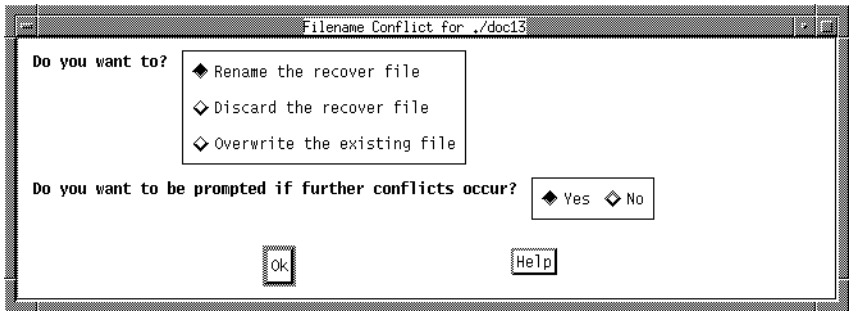

Figure 4-22 Filename Conflict Dialog Box

3. If you select "No," then you must answer the question "When conflict occurs, NetWorker should?" shown in Figure 4-23. Answering this question allows you to resolve conflicts on a global basis per recover session without being prompted for each individual file.

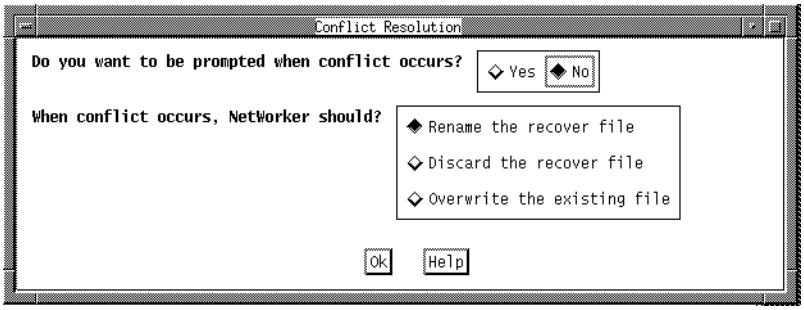

Figure 4-23 Conflict Resolution Dialog Box

Select one of the following to resolve conflicts:

- Rename the recover file – When a conflict occurs, NetWorker renames the recover file with a **.R** extension. If the **.R** file exists, NetWorker adds another **.R**.
- Discard the recover file – NetWorker discards the recover file. The existing file remains current.
- Overwrite the existing file – NetWorker replaces the existing file with the recovered file. The existing file is lost and the recovered file becomes current.

4. After completing the Conflict Resolution dialog box, select *Ok* to continue the recovery.

Monitoring the Recover Status

After the Conflict Resolution dialog box closes, the Recover Status window, shown in Figure 4-24, reappears as the recovery continues.

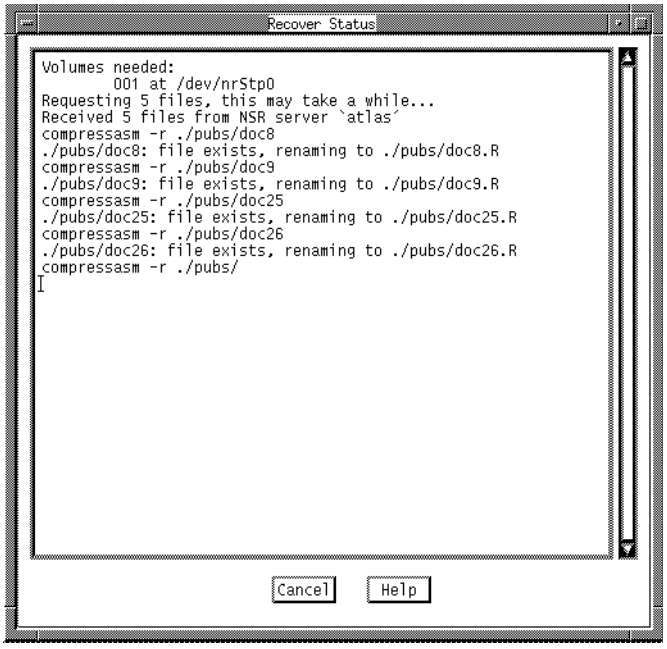

Figure 4-24 Recover Status Window

The Recover Status window provides you with the following information about your recover session:

- The name of the required backup volume and its location.

  ```
  Volumes needed:
  .001 at /dev/nrStp0
  ```

- The pathnames of the files being recovered and the pathname of the directory where they will be stored.

```
/home/titania/Rebecca/pubs/ is being recovered into its
original location
```

If you specified a directory in the Relocate dialog box, it appears after "`...is being recovered into...`"

If you chose to rename the recover files, the new filenames are listed.

- The number of files it is recovering.

  `Requesting X files, this may take a while...`

  As the recovery proceeds, the pathnames of the files scroll across the Recover Status window.

- When the recovery is complete, the following message appears:

  `Received X files from...`

  Press *Cancel* to cancel the recovery.

  Press *Cancel* to close the Recover Status window.

Chapter 4 has given you a thorough overview about how to back up and recover your NetWorker files. You have learned how to:

- Back up files
- Monitor the backup status
- Use the Volume Management window
- Recover files
- Monitor the recover status

For more information about configuring the NetWorker server, refer to the *NetWorker for IRIX Administrator's Guide* or ask your system administrator.

Error Messages

NetWorker provides user-friendly error messages that have easy-to-understand explanations. This appendix provides you with further information and solutions to assist you with your backups and recovers.

Error Messages for Backup

NetWorker displays an error message if a backup cannot be successfully completed. NetWorker backup error messages are shown below:

`Nothing marked for backup`

Problem: Starting backup without marking any files.

Solution: Mark at least one file before starting the backup.

`Unable to start backup`

Problem: Error starting the backup (could not execute the `Save` command).

Solution: Contact the system administrator. There is a problem either with the NetWorker software or with the configuration (for example, an incorrect path name).

`Your system is not a registered client.`

Problem: The server you have chosen to do your backups does not have your system configured as a NetWorker client.

Solution: Contact the system administrator. Your system needs to be added to the server‘s list of recognized clients.

Error Messages for Recover

An error message is displayed when NetWorker is unable to recover a file. NetWorker recover error messages are shown below:

```
There are files marked for recovery.
Continue to ignore the marked files,
Cancel to stay with this client.
```

Problem: Changing clients when files are marked.

Solution: You have the option to continue changing clients. In this case, the marked files will not be recovered. Or you can cancel to stay with the current client and retain your marked files.

`Only 10 KBytes available in` *directory*`. The estimated recover size of 10 KBytes will not fit on this filesystem. Proceed with recover command at this time? [n]`

`No disk space available in` *directory*`. The estimated recover size of 10 KBytes will not fit on this filesystem. Proceed with recover command at this time? [n]`

Problem: There is not enough free space in the filesystem to recover the requested files.

Solution: Reduce the number of kilobytes in the recovery by reducing the number of marked files. Relocate the recovery into another directory with more space. If you are recovering over existing directories, you may be able to proceed with the recovery since files will be overwritten.

`Invalid time format`

Problem: The time specified in the change browse time field was invalid.

Solution: Enter the browse time using a valid format. See the *getdate*(3) reference page for information about valid formats.

`Nothing in index at this time`

Problem: There are no entries in the index for the browse time that was specified. No backups were performed at that time.

Solution: Enter another browse time close to this one until you find the index entries you are looking for.

`Unable to relocate to /usr/tmp/root`

Problem: NetWorker was unable to relocate to the specified path.

Solution: Enter a valid pathname in the Relocate dialog box and start the recovery again. You must have write permission for the directory you wish to use.

Error Messages for Both Backup and Recover

Some of NetWorker's error messages are the same for both a backup or recover that is unsuccessful. The error messages used for both backups and recovers are shown below:

`You cannot mark files from different filesystems.` *directory* `is on a different filesystem from files you have already marked. You must either Backup or Recover the files you have marked or unmark them before you can mark this file.`

Problem: NetWorker does not allow you to mark files across filesystems.

Solution: Complete the backup or recovery for one filesystem at a time.

```
There are files marked for backup or recovery.
Continue to ignore the marked files or
Cancel to stay with server.
```

Problem: You cannot change servers after you have marked files.

Solution: You have the option to continue changing servers. If you change servers, the marked files will not be backed up or recovered. You can cancel to stay with the current server and retain your marked files.

`Bad start path`

Problem: Specifying an invalid starting path for a search.

Solution: Enter a valid pathname as a starting point in the search dialog box.

`No match`

Problem: Nothing matched on this search command.

Solution: Enter a different pattern or a different starting path.

`Bad search pattern`

Problem: The search pattern specified is not valid.

Solution: You may use the IRIX shell pattern characters to specify a search pattern.

`Unable to expand path`

Problem: The path specified in the selection field does not correspond to anything in the index or filesystem.

Solution: Enter a valid pathname in the selection field.

Appendix B

Commands for Backup and Recovery

In addition to a graphical user interface, NetWorker has backup and recover commands similar to IRIX commands. These commands are entered from an IRIX shell. To use the NetWorker commands from an IRIX shell, the NetWorker software must be installed on the NetWorker server, and your system must be configured as a NetWorker client by the system administrator.

Table of Backup and Recover Commands

Use the *save* command to back up data. The *recover* commands are listed below. You can use these after entering *recover* at the system prompt.

Table B-1 *recover* Commands

Command	Description
?	Display list of *recover* program commands.
`add` *filename*	Add *filename* to the recover list.
`cd` *dir*	Change directory to *dir*.
`changetime`	Change the browse time of online index.
`delete` *filename*	Delete *filename* from the recover list.
`dest`	Verify destination directory for recovered files.
`force`	Overwrite existing files.
`help`	Display list of *recover* program commands.

Table B-1 (continued) *recover* Commands

Command	Description
`list`	List the files in the recover list.
`ls -F` *filename*	List *filename* with file type information.
`ls -l` *filename*	List *filename* using long format.
`ls` *filename*	List *filename*.
`noforce`	Do not overwrite existing files.
`nsrwatch`	Monitor NetWorker server activity.
`pwd`	Display name of current directory.
`quit`	Exit the *recover* program.
`recover`	Start the *recover* program when entered at the system prompt; start the recovery when entered at the `recover>` prompt.
`recover -c` *client_name*	Browse the index and recover files for the specified client.
`relocate` *dir*	Specify new directory location for recovered files.
`save` *pathname*	Starts a backup of the current directory, or enter pathname.
`verbose`	Toggle verbose or quiet mode for *recover* status messages.
`versions` *filename*	Display backup history of file *filename*. *filename* can be either a file or a directory.
`volumes` *filename*	List volumes needed to recover marked files. *filename* can be either a file or a directory.

Requirements for NetWorker Clients

For Silicon Graphics NetWorker clients to use the NetWorker server to back up and recover files, clients must

- be running IRIX 4.0.*x* or IRIX 5.*x*
- have NetWorker client software installed (see the section “Installing NetWorker Software on Clients” in Chapter 1)
- be running the *nsrexecd*(1M) daemon (it is started automatically by *inst* at installation time)
- recognize the NetWorker server (see the section “Installing NetWorker Software on Clients” in Chapter 1)
- be recognized by the NetWorker server (the Clients window of the *networker*(1M) command running on the server must list the client)

Individual licenses for NetWorker clients are not installed on the clients; only the NetWorker server requires licenses.

Glossary

back up (v.)

To store the directories and files on your workstation onto tape or another storage medium.

backup (n.)

A copy of the directories and files on your workstation on a tape or another storage medium.

backup volume

Any type of storage media that your server can back up to: magnetic tape, floppy disk, or optical disk.

collapse

Changing the view to display only the top level of a highlighted directory in a window.

index

A database on the NetWorker server that contains an entry for every file backed up.

expand

Changing the view to display all the levels of a directory in a window.

media device

The device that is attached to the NetWorker server for transferring and recovering data that has been saved.

NetWorker client

All the systems on a network that back up and recover their data using NetWorker.

NetWorker server

The system that backs up all the other systems on a network according to a schedule and maintains an online index of everything it backs up.

recover

To replace a lost file with a copy of it from the NetWorker server.

selection

The name of the volume, directory, or file highlighted in any window.

tree structure

A view that displays the contents in a window in a hierarchical form.

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