VERITAS NetBackup 4.5 BusinesServer™

Getting Started Guide

for UNIX

VERITAS

Contents

Preface

Welcome to the NetBackup BusinesServer, one of a family of VERITAS products that provide a complete set of solutions for protecting your data. Your product is engineered for high performance, scalability, flexibility, and ease of use, making it the ideal solution for backup, archiving, and recovery of mission-critical data.

How to use *Getting Started*

Getting Started introduces you to NetBackup BusinesServer 4.5 and helps you get your system up and running right away. You will learn how to install, configure, and use NetBackup BusinesServer by conducting a basic backup and restore operation. This step will allow you to see a complete cycle of the product's functions. Thus, we recommend that you read this guide from front to back. Appendix A, contains a list the other manuals in this set. These documents contain specific information to help you with any task you wish to perform.

This guide assumes:

◆ A basic understanding of UNIX system administration.

◆ Experience with the UNIX system on which NetBackup BusinesServer is to be installed.

◆ Your SCSI devices are properly attached and configured for the operating system.

Caution If a device is not properly configured for the operating system, backups made to that device may be difficult to restore.

Checklist

The *Getting Started Guide* is designed to take you through a sequence of steps for installation and configuration of the NetBackup BusinesServer. By reading this guide from front to back, you will ensure that these steps are performed in the following order:

◆ Check the license keys included with this order to make sure that you have license keys for all the NetBackup servers, clients, options, and agents that you have ordered.

◆ Configure the storage devices for UNIX.

◆ Install NetBackup

◆ Configure the server using the Getting Started wizard

◆ Conduct a basic backup and restore operation

Other resources

Once you have completed your initial setup, more specific details on configuring NetBackup can be found in our other manuals. Appendix A in this guide will direct you to the manual you need. For a complete list of NetBackup documents, see the NetBackup Release Notes.

Accessibility

NetBackup contains features that make the user interface easier to use by people who are vision impaired and by people who have limited dexterity. Accessibility features include:

◆ Support for assistive technologies such as screen readers and voice input (Windows only)

◆ Support for keyboard (mouse-less) navigation using accelerator keys and mnemonic keys

For more information about accessibility in NetBackup, see the NetBackup system administrator's guide.

Conventions

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

Table 1. Typographical Conventions

Typeface	Usage
Bold fixed width	Input. For example, type **cd** to change directories.
Fixed width	Paths, commands, filenames, or output: The default installation directory is `/opt/VRTSxx`.
Italics	Book titles, new terms, or used for emphasis. For example: *Do not ignore* cautions.
Sans Serif (Italics)	Placeholder for text or variables. For example: Replace *filename* 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 help 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, holding down the **Ctrl** key while pressing another key. Keyboard command sequences are indicated by connecting the keys with a plus sign. 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.

Terms

The terms listed in the table below are used in the VERITAS NetBackup documentation to increase readability while maintaining technical accuracy.

Term	Definition
Windows	[1]A term that describes a line of operating systems developed by Microsoft, Inc.

[2]A term used as an adjective to describe a specific product or noun. For example: Windows servers, Windows clients, Windows platforms, Windows hosts, Windows GUI, and so on.

For more information on the Windows operating systems that NetBackup supports, refer to the VERITAS support web site at `http://www.support.veritas.com`. |
| Windows servers | A term that defines the Windows server platforms that NetBackup supports; those platforms are: Windows NT and 2000. |
| Windows clients | A term that defines the Windows client platforms that NetBackup supports; those platforms are: Windows 95, 98, ME, NT, 2000, XP (for 32- and 64-bit versions), and LE. |

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.support.veritas.com/
```

VERITAS Customer Support has an extensive technical support structure that enables you to contact technical support teams that are trained to answer questions to specific products. You can contact Customer Support by sending an e-mail to support@veritas.com, or by finding a product-specific phone number from the VERITAS support web site. The following steps describe how to locate the proper phone number.

1. Open `http://www.support.veritas.com/` in your web browser.

2. Click **Contact Support**. The *Contacting Support Product List* page appears.

3. Select a product line and then a product from the lists that appear. The page will refresh with a list of technical support phone numbers that are specific to the product you just selected.

Getting product news and updates

To receive NetBackup BusinesServer news and updates, you can sign up for E-mail notification as follows:

1. Go to `www.veritas.com`

2. Select **Support**

3. On the *VERITAS Support* web page, click on the **Email Notification** link. The *Email Notification Services* page appears.

4. Follow the registration process by entering the necessary information.

Learning the Basics 1

This chapter is designed to provide you with a basic understanding of the features and functions of your product. Included are definitions of a few key NetBackup terms to assist you in this process.

NetBackup BusinesServer is optimized for workgroup environments using one server and up to four remote computers. Installing NetBackup BusinesServer software on the server and NetBackup client software on each of your remote computers provides an easy-to-use, reliable solution for backing up and restoring data.

How does NetBackup BusinesServer work?

NetBackup BusinesServer has these primary functions: it backs up your data and stores it until you need to retrieve it. To see where your data goes, the backup and restore operations can be visualized in the diagrams on the next three pages.
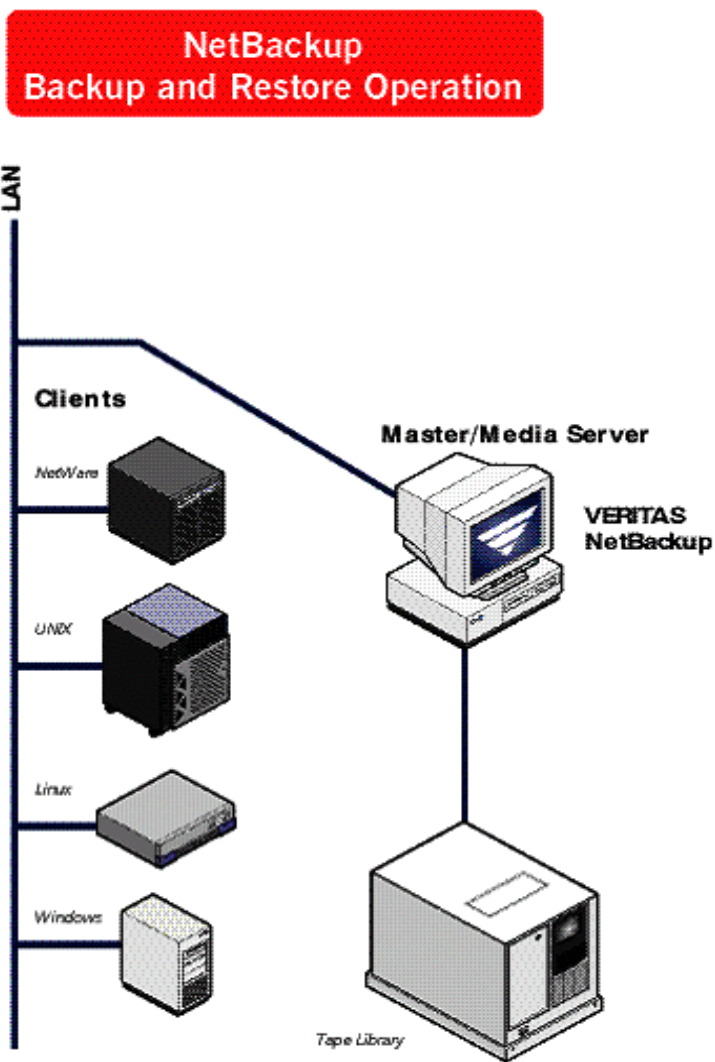
The figure above shows a basic workgroup environment-one master server and four remote computers on a local area network.
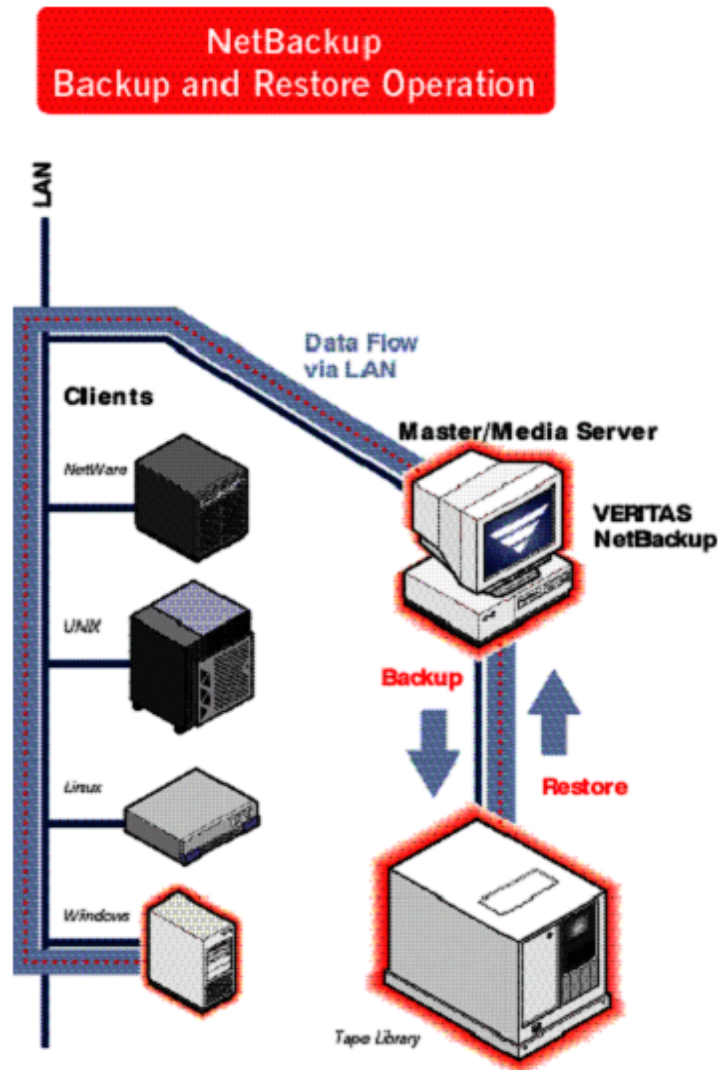
In the figure above, you see an actual data path as the master server performs a backup of one of the remote computers to the tape library, and then initiates a restore of that backed up data from the tape library to the remote computer.
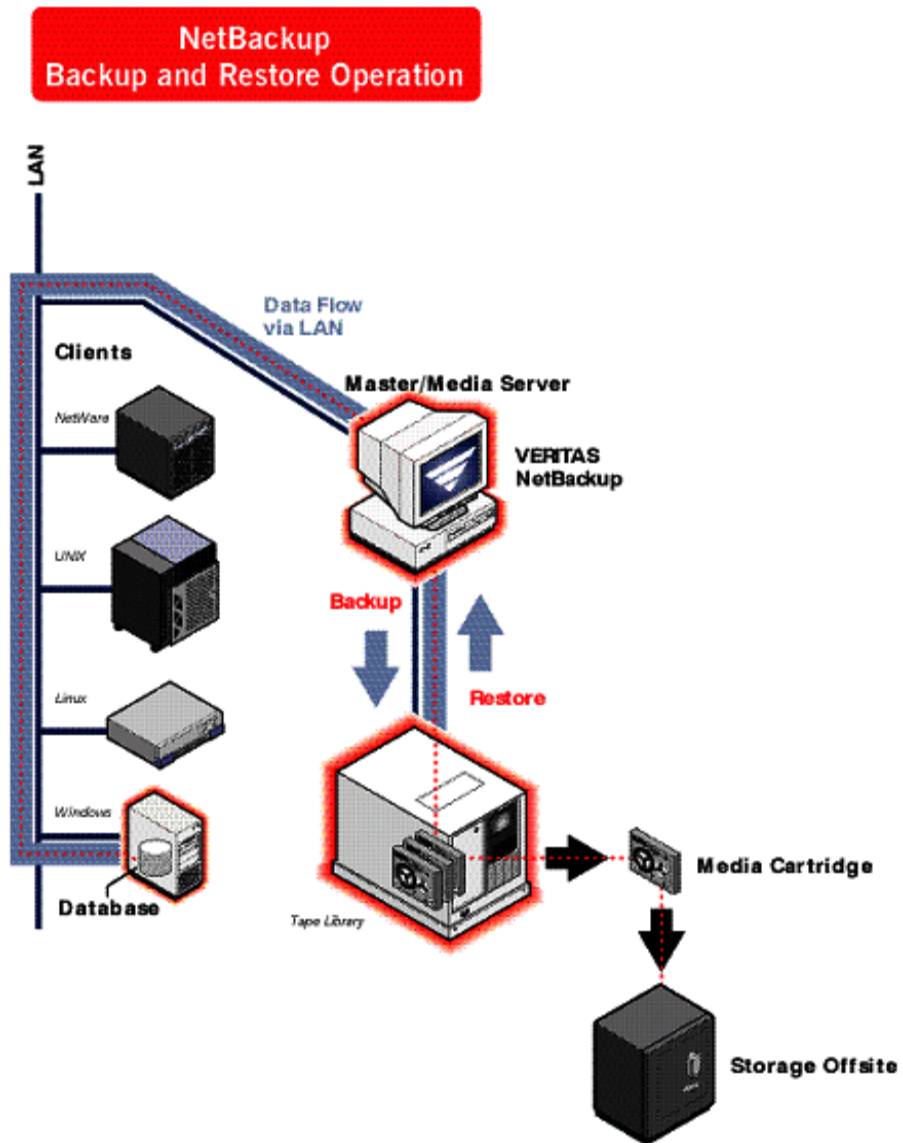
The figure above shows the addition of a database in the Windows machine that is actually being backed up and the media cartridges in the tape library that will be removed to off site storage until they are needed for a restore operation or for reuse.

What is a backup policy?

A backup policy allows you to configure how and when backups are to be performed for your group of clients, all having similar backup requirements. Your backup policy will be configured when you determine:

◆ Which computers to back up

◆ Which files and folders to back up

◆ How often and when the backup takes place

◆ How long the backup will be retained

◆ Where the backups are stored

◆ Other attributes for customizing the backup

What are catalogs and catalog backups?

NetBackup keeps vital information about your (regular) backups in a set of files called a catalog. Catalogs can be in two formats, ASCII and binary, and contain information about configuration, status, errors, and the files and folders that have been backed up. The catalog also keeps track of the location of the backed-up data.

NetBackup provides an enhanced catalog format designed to improve the scalability and performance of catalog access in NetBackup. This binary catalog format feature will improve catalog performance for browsing and searching the on disk catalogs, and in some cases reduce the catalog file size. The new binary catalog format is written by NetBackup on all platforms except for NCR and Sequent. (For more information about the new catalog format feature, see the system administrator's guide.)

A catalog backup is a backup copy of the catalog, which is necessary for NetBackup operations. For example, if a disk failure results in the loss of your catalog files, the easiest way to recover is to restore the catalog from its backup copy. This copy allows you to restore previously backed up data and resume your regularly scheduled backups. The process of backing up a catalog is the same for either catalog format.

What are the functional parts of NetBackup?

We will now describe the parts of NetBackup. The terms and features listed here are basic to your understanding of how NetBackup BusinesServer works.

Server

The *server* is the computer where NetBackup BusinesServer software is installed. NetBackup BusinesServer includes both a command line interface and a graphical user interface, which allow you to:

◆ Configure the backup operations.

◆ Schedule automatic, unattended backups (regular backups). For example, to prevent interference with normal daytime operations, you can schedule your automatic backups to occur only at night.

◆ Perform manual backups of any client.

◆ Allow client users to perform their own backups and restores.

◆ Control where backups are stored.

◆ Control how long backup data is retained.

◆ Restore data to any client.

◆ Run reports to verify, manage, and troubleshoot backups and restores. These reports show status or highlight problems with NetBackup servers and clients.

◆ Monitor the status of backup and restore jobs.

◆ Configure and manage your tapes and storage devices.

Clients

Clients are the remote computers (up to four; up to eight with Client Expansion Pack) that have NetBackup client software installed. In general, these computers can be any combination of the following:

AIX	IRIX
Solaris	Linux
Compaq Tru64	Macintosh
DG/UX	NCR SVR4MP-RAS
DYNIX/ptx	NetWare
HP-UX HP9000	OS/2
UNIX	Windows 95/98/ME/NT/2000/XP (32 and 64 bit)/LE

Disk Storage Unit

A disk storage unit is a term that describes a storage device where NetBackup or Storage Migrator stored files and data. A storage unit can be a location on a disk, a set of drives in a robot, or one or more single tape drives of the same type that connect to the same host.
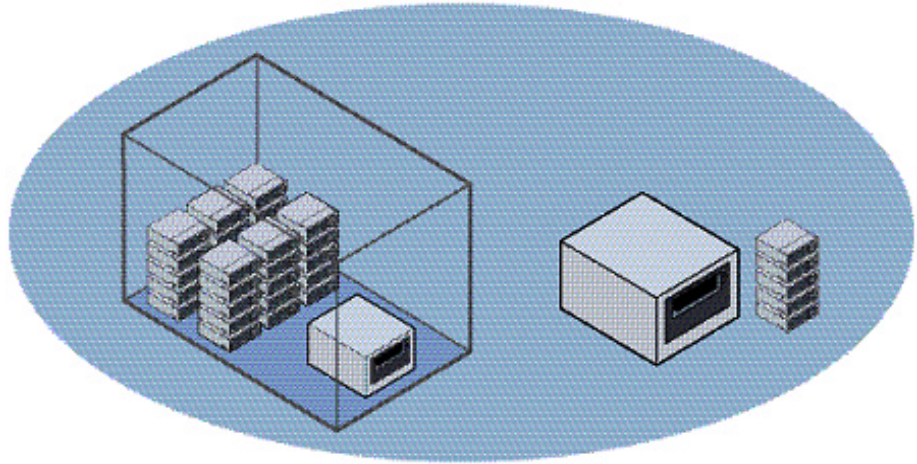
In the following diagram, you can select **Storage Units** in the left pane and the specific units will appear in the right pane.
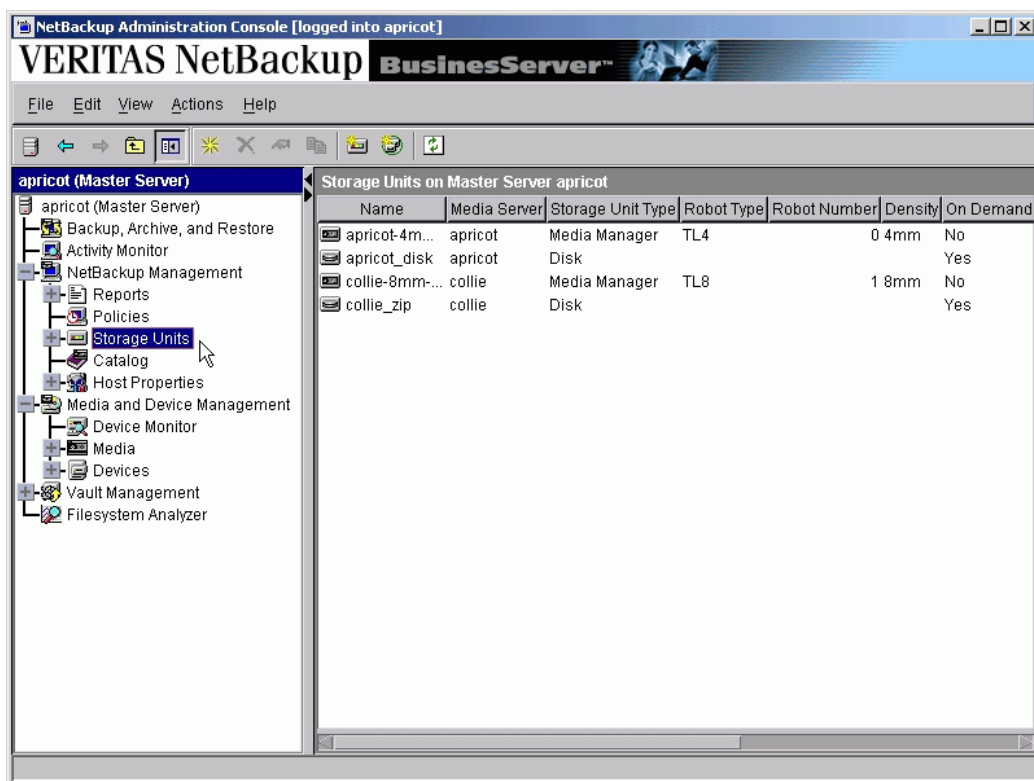
Storage units simplify administration because once they are defined the NetBackup configuration points to a storage unit rather than to the individual devices it contains. For example: if a storage unit contains two drives and one is busy, NetBackup can use the other drive without administrator intervention.

Media

Media are physical magnetic tapes or magnetic disks (also called removable media) where data can be stored. Non-removable media commonly referred to as "hard disk share" is usually a directory on a hard disk.

Media Manager

Media Manager, which is part of NetBackup, manages the robots, tape drives, and their removable media. Media Manager primarily uses four tools:

◆ The Device Configuration Wizard, which guides you through device configuration in a step-by-step manner.

◆ The Volume Configuration Wizard, which guides you through volume configuration in a step-by-step manner.

◆ The Media and Device Management graphical interface, which allows you to reconfigure storage devices and volumes separately.

◆ The Device Monitor graphical interface, which displays any pending requests for volumes and allows you to control and manage your devices.

Graphical Interfaces

NetBackup uses the following graphical interfaces:
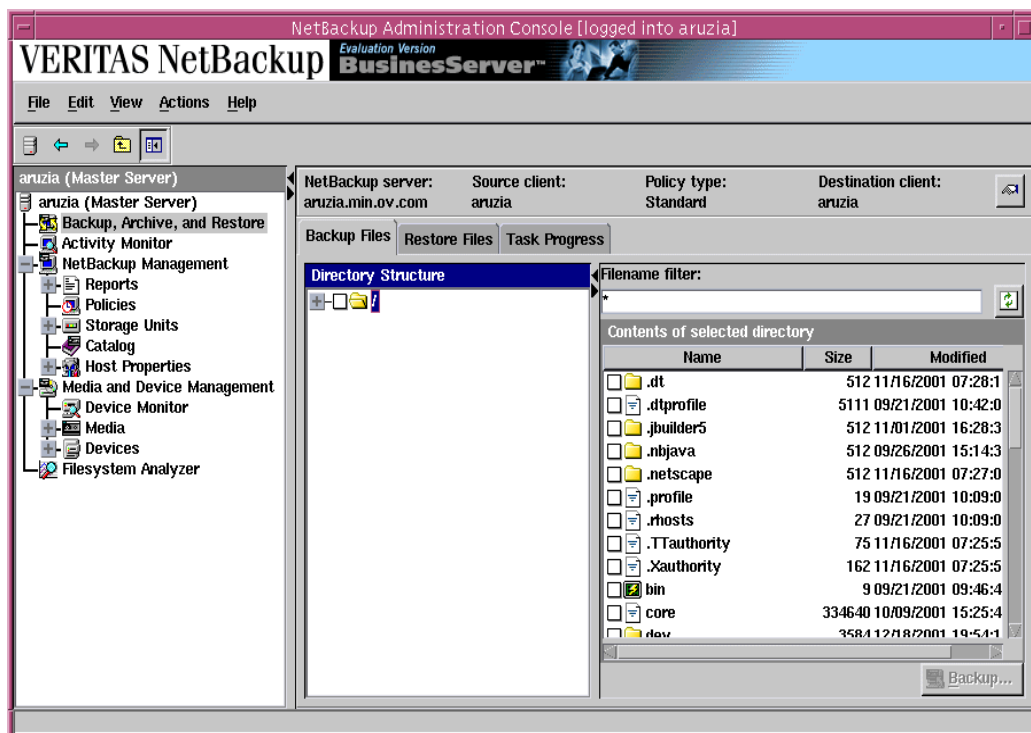
The NetBackup Administration Console is used for configuring, scheduling, monitoring, and managing NetBackup.
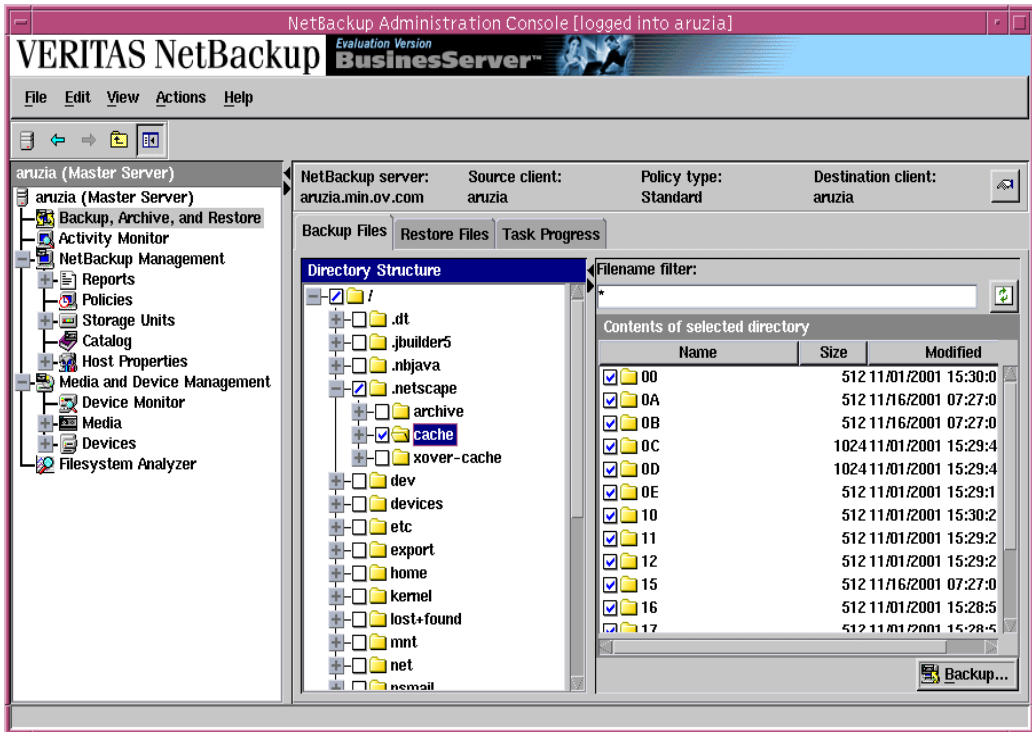
The NetBackup user interface, which is on each client, can be used for starting backups, managing archives, and initiating restores for that particular computer.

NetBackup Wizards

NetBackup BusinesServer provides the following wizards to assist you with installation and configuration. Once you have completed your initial setup with the Getting Started wizard, the individual configuration wizards allow you to reconfigure devices, volumes, catalog backups, and backup policies separately as needed.

Wizards	Description
Getting Started	Provides step-by-step help for configuring NetBackup. By responding to a series of prompts, the Getting Started wizard guides you through the following procedures for initial setup: ◆ Configure Storage Devices ◆ Configure Volumes ◆ Configure Catalog Backups ◆ Create a Backup Policy ◆ A test to verify your configuration
Configure Storage Devices	Helps you define robots and drives.
Configure Volumes	Helps you define volumes for robots and standalone drives.
Configure Catalog Backups	Helps you configure how and when the NetBackup catalog is backed up.
Create a Backup Policy	Helps you configure regular backups for a client or a set of clients.

Multiple Data Streams

NetBackup BusinesServer can be configured to use *multiple data streams*, which allow you to back up more than one file or directory on a client at the same time, using a single backup policy.

For example: assume you have a remote computer with NetBackup client software installed and this computer has two hard drives. If you want to perform a fast nightly backup of these drives, you can configure NetBackup BusinesServer to back up both drives at the same time.

Multiplexing

Multiplexing allows backups from more than one client to be sent to the same storage device at the same time. Multiplexing interleaves each block of backup data onto a storage device. The figure on the left illustrates data being backed up for one client. The figure on the right illustrates how data streams from two clients are stored by multiplexing.

Installation and Initial Configuration 2
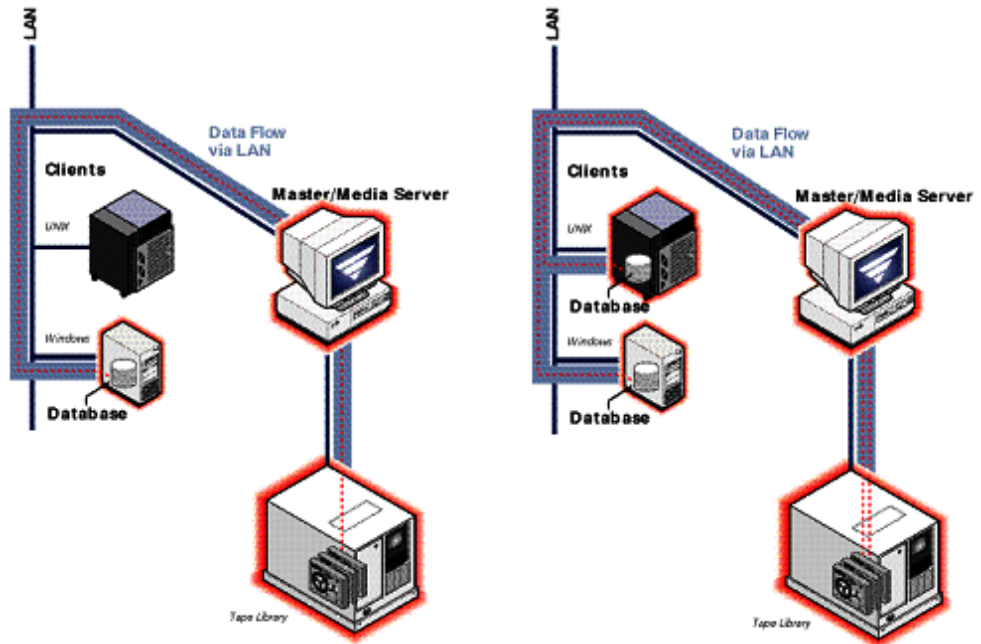
NetBackup includes wizards that make installing and configuring the software easy.

Installing and configuring NetBackup involves the following steps as explained in this chapter:

- Mounting a NetBackup CD-ROM

- Configuring Automatic Startup and Shutdown of NetBackup

- Configuring Storage Devices for the Operating System

- Configuring NetBackup Server Software

- NetBackup Client Software

- Installing Alternative Administration Interfaces

- Installing NetBackup Agents and Options (Optional)

Mounting a NetBackup CD-ROM

Proper mounting of the NetBackup CD-ROM is essential to a successful product. This section details how to mount the NetBackup CD-ROM on selected platforms. Use the directions as a guideline for mounting this CD-ROM on your system. You may need to use other flags or mounting options.

Note For additional support on how to mount a CD-ROM on your system, contact your hardware vendor.

Find the platform that matches your configuration, follow the provided steps to mount the CD-ROM, and then continue with the NetBackup installation procedure.

AIX

This example uses a device named *smitty*.

1. Login as root.

2. You can use the `smitty cdrfs` or `smitty mountfs` commands to mount the cdrom.

    a. Enter:

        smitty cdrfs

    Follow the instructions to set up the CD-ROM file system for mounting.

    b. Enter:

        smitty mountfs

    Follow the instructions to mount the CD-ROM file system.

3. You can also mount the CD-ROM manually.

    a. Create the mount point (for example, `mkdir /cdrom`).

    b. Enter:

        mount -v cdrfs -r device_path mount_point

    For example, to mount the CD-ROM manually using `/cdrom` as the mount point, you would enter:

        mount -v cdrfs -r /dev/cd0 /cdrom.

Alpha Tru64

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`)

3. Enter:

   ```
   mount -r  device_path mount_point
   ```

   For example, to mount a CD-ROM on a Alpha 4.0 system using `/cdrom` as the mount point, you would enter:

   ```
   mount -r /dev/rz8c /cdrom
   ```

   For an Alpha 5.x system using `/cdrom` as the mount point, you would enter:

   ```
   mount -r /dev/disk/cdrom0a /cdrom
   ```

DG/UX

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`)

3. Enter:

   ```
   mount -t cdrom device_path mount_point
   ```

   For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter:

   ```
   mount -v cdrfs -r /dev/cd0 /cdrom
   ```

Note When installing a DG/UX client directly from the CD-ROM, be sure to use the CD-ROM titled "SERVER : AIX / Tru64 (Alpha)".

FreeBSD

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`)

3. Enter:

    ```
    mount -r -t cd9660 device_path mount_point
    ```

    For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter:

    ```
    mount -r -t cd9660 /dev/acd0c /cdrom)
    ```

HP-UX

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`).

3. Enter:

    ```
    nohup pfs_mountd &
    ```

4. Enter:

    ```
    nohup pfsd &
    ```

5. Enter:

    ```
    pfs_mount -o xlat=unix device_path mount_point
    ```

    For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter:

    ```
    pfs_mount -o xlat=unix /dev/rdsk/c3t2d0 /cdrom
    ```

6. To find the device path, you can enter `ioscan -fn`.

After you have successfully mounted the CD-ROM you are ready to install your NetBackup product.

▼ **To unmount the CD-ROM:**

1. Enter:

    ```
    pfs_umount mount_point
    ```

    For example, to unmount the CD-ROM using `/cdrom` as the unmount point, you would enter:

    ```
    pfs_umount /cdrom
    ```

IRIX *(IRIX 5.3)*

1. Login as root.

2. You can use the `mediad` command to auto-mount the CD-ROM.

3. If `mediad` fails:

   a. Create the mount point (for example, `mkdir /cdrom`)

   b. Enter:

   ```
   mount -o ro -t iso9660 device_path mount_point
   ```

   For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter:

   ```
   mount -o ro -t iso9660 /dev/rdsk/dks0d6vol /cdrom.
   ```

   For the `device_path`, the 's0' refers to the SCSI controller and the 'd6' refers to the device_path of the CD-ROM drive (for example, `/dev/rdsk/dks0d6vol`).

4. To find the `device_path` you can run a hardware inventory with the `hinv` command and locate the cdrom `device_path`.

Pyramid/Reliant Unix

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`)

3. Enter:

   ```
   mount -F hs -o ro device_path mount_point
   ```

   For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter,:

   ```
   mount -F hs -o ro /dev/cdrom0 /cdrom.
   ```

SCO UNIXWARE

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`).

3. Enter:

   ```
   mount -r -f cd9660 device_path mount_point
   ```

   For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter:

   ```
   mount -r -f cd9660 -o ro /dev/cdrom/c1b0t0l0 /cdrom
   ```

Sequent

1. Login as root.

2. Create the mount point (for example, `mkdir /cdrom`).

3. Enter:

   ```
   mount -F cdfs -o ro device_path mount_point
   ```

   For example, to mount the CD-ROM using `/cdrom` as the mount point, you would enter:

   ```
   mount -t cdrom /dev/dsk/cd0 /cdrom
   ```

Note When installing a Sequent client directly from the CD-ROM, be sure to use the CD-ROM titled "SERVER : AIX / Tru64 (Alpha)".

Installing NetBackup

Before running the NetBackup installation script, review "What Does the Install Script Do?" and "Before Starting the Install Script."

Note If you are performing an upgrade, refer to "Performing an Upgrade Installation" on page 55.

Caution Before installing your NetBackup product, make sure you have the most current operating system patches and updates applied to your system. If you are not certain of your OS level, contact your OS vendor and request the latest patches and upgrades.

What Does the Install Script Do?

In addition to installing the NetBackup BusinesServer, the install script does the following:

◆ Places the name of the NetBackup BusinesServer in the `/usr/openv/netbackup/bp.conf` file on the server.

◆ Adds entries to the `/etc/services` file for NetBackup and Media Manager services (for example, robotic daemons). The `/etc/services` file contains UNIX system information. The script shows the default port numbers and asks if you want to change them.

◆ Checks to see if your server is running Network Information System (NIS). NIS is the UNIX directory service utility. If it is running, you are instructed to add entries to your NIS services map.

◆ Adds entries to the following server file and directory to facilitate networking:

- On Red Hat Linux 6.2: `/etc/inetd.conf` file

- On Red Hat Linux 7.x: `/etc/xinetd.d` directory

Entries are added for `bpcd`, `vnetd`, `vopied`, and `bpjava-msvc`. Then, the script sends `inetd` (or `xinetd`) a `SIGNAL`, causing it to read the updated file.

Note Before you install or use NetBackup on a Linux (RedHat/SuSE) client, verify that the inetd (or xinetd) service is started on that machine. This will insure proper communication between the NBU master and the Linux (RedHat/SuSE) client.

◆ Adds automatic startup and shutdown scripts to the `/etc/rc` and `init.d` directories appropriate for the platform type, if they do not pre-exist.

Before Starting the Install Script

Review this section before starting the installation.

Server Installation Requirements

◆ VERITAS recommends that you remove any other vendor backup software currently configured on your system before installing this product. Other vendor backup software can negatively effect how NetBackup installs and functions.

◆ Make certain that you have a server of a supported hardware type running a supported version of its operating system (with applicable patches), with adequate disk space and supported peripherals. For details on these requirements, refer to the *NetBackup Release Notes for UNIX and Windows.*

◆ For reasonable performance of the NetBackup-Java interfaces, VERITAS recommends 512 MB of RAM, of which 256 MB are available to the interface program (jnbSA or jbpSA).

◆ The NetBackup CD-ROM.

◆ The root password for the server.

◆ Approximately 20 minutes to install the server software. Additional time is required to configure the product for your environment.

◆ For some peripherals and platforms, kernel reconfiguration is required. For more details, see the *NetBackup BusinesServer Media Manager Device Configuration Guide for UNIX.*

◆ Adequate disk space to install the software (see the *NetBackup Release Notes* for binary sizes).

◆ NetBackup requires server networking on the Red Hat Linux platform.

◆ All NetBackup servers must recognize and be recognized by their client systems. In some environments, this means that each must be defined in the other's /etc/hosts file. Other environments may use the Network Information Service (NIS) or Domain Name Service (DNS).

◆ Identify the devices you plan to use in your NetBackup configuration. See "Robot Type Support By Platform" in the *NetBackup Release Notes* for a list of the robot types supported. The only drive types supported are DLT.

Note NetBackup BusinesServer works with a maximum of two drives and can use only one robotic device. It will not work with a robotic device that has more than two drives or more than 30 slots.

Installation Notes

◆ On the NetBackup server, the install location contains the software and the NetBackup catalog and can become quite large. The default location is `/usr/openv`.

If space is an issue, consider installing NetBackup on an alternate file system. The installation allows you to select an alternate install location, and creates the appropriate link to `/usr/openv`.

◆ Because the product uses file locking, VERITAS recommends that you not install NetBackup in an NFS mounted directory. File locking in NFS mounted file systems can be unreliable.

◆ For Hewlett Packard servers, install NetBackup on a file system that supports long file names.

◆ An additional note for Red Hat Linux 7.0 users:

The Red Hat conversion script `/usr/sbin/inetdconvert` does not format the `/etc/xinetd.d` files for `bpcd`, `vnetd`, `bpjava-msvc` and `vopied` correctly. The conversion script `inetdconvert` provided by Red Hat, adds a `server_args` line with the service name for the NetBackup services `bpcd`, `vnetd`, `bpjava-msvc` and `vopied`.

To correct this, edit the files `bpcd`, `vnetd`, `bpjava-msvc` and `vopied` in `/etc/xinetd.d` and take out the service name as an argument.

For example, the file for `bpjava-msvc` contains the following line:

`server_args = bpjava-msvc -transient`

Instead, it should be:

`server_args = -transient`

The `server_args` line in the files `bpcd`, `vnetd`, and `vopied` can be removed since no arguments are passed to these services.

Installing NetBackup Software

> **Note** When installing a NetBackup BusinesServer, you must enter a NetBackup base product license key. You will also enter license keys for any additional NetBackup software product options or agents used on the server or its clients.

1. Check your order to make sure that you have license keys for all the NetBackup servers, clients, options, and agents that you requested.

   For more information on administering NetBackup licenses, see *NetBackup BusinesServer System Administrator's Guide for UNIX*.

> **Note** When making and saving any license key updates (including adding and deleting license keys) in the NetBackup Java Administration Console, you must restart the NetBackup Administration Console.

2. Log in as the root user on the server.

3. Insert the CD-ROM in the drive.

4. HP systems only: Because the NetBackup CD-ROM is Rockridge formatted, it must be mounted by entering the following commands:

   ```
   nohup pfs_mountd &
   nohup pfsd &
   pfs_mount -o xlat=unix /dev/dsk/device-ID /cdrom
   ```

   Where *device_ID* is the ID of your CD-ROM drive.

5. Change your working directory to the CD-ROM directory:

   ```
   cd cd_rom_directory
   ```

   Where *cd_rom_directory* is the path to the directory where you can access the CD-ROM. On some platforms, it may be necessary to mount the directory.

6. Execute the install script:

   ```
   ./install
   ```

   When the menu appears, choose option 1 (NetBackup). This installs both Media Manager and NetBackup software on the server.

7. Follow the prompts in the installation scripts.

Note The installation script enables you to load the client software for each of the UNIX client types that NetBackup supports onto the server. You can then "push" this client software from the server to your UNIX clients. (Make sure you load the software for all the UNIX client types you intend to back up onto the server. Otherwise, you will not be able to add these client types to the NetBackup policy configuration.) The correct NetBackup client software is automatically installed on the server as well. Do not install additional client software on the server.

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8. On HP systems only: To unmount the CD-ROM, do the following:

-   Execute the `pfs_mount` command

-   Use the `kill` command to kill the following processes

    **pfs_mountd
    pfsd
    pfs_mountd.rpc
    pfsd.rpc**

Configure the Window Manager for Java Interface (NetBackup-Java Compatible Platforms)

Always set your window manager so windows become active only when you click inside the windows. Do not enable auto focus, which is when windows become active if you just move the mouse pointer over them. The NetBackup-Java interfaces do not function properly with auto focus enabled. The following are general instructions for correctly setting the focus.

CDE (Common Desktop Environment)

The following explains how to set up a CDE (Common Desktop Environment) window manager, which is the preferred window manager for NetBackup-Java applications.

1. On the front panel in the CDE window, click the **Style Manager** control icon.

The *Style Manager* toolbar appears.

2. On the Style Manager toolbar, click the **Windows** control ion.

The *Style Manager - Window* dialog box appears.

3. In the Style Manager - Window dialog box, click the **Click In Window To Make Active** button.

---

4. Click **OK**.

5. Click **OK** when asked to **Restart the Workspace Manager**.

Motif

When using the Motif window manager, set the `Mwm* keyboardFocusPolicyX` resource as follows:

```
Mwm*keyboardFocusPolicy:explicit
```

Configuring Automatic Startup and Shutdown of NetBackup

Modifying System Startup/Shutdown Scripts

You can use system startup scripts to start the Media Manager and NetBackup daemons when the system boots and shutdown scripts to terminate them at system shutdown.

Note For servers upgrading to a new release of NetBackup, it is recommended that any existing S77[7]netbackup,K77[7]netbackup startup/shutdown scripts be removed from the init.d and rc.d directories before installing NetBackup Master Server/Media Server.

If the startup and shutdown scripts do not exist in the init.d and rc.d directories appropriate for a particular platform, the installation process will copy the startup/shutdown script (located in `/usr/openv/netbackup/bin/goodies/netbackup`) to the `init.d directory` and create links to it from the appropriate `rc` directory.

If the startup scripts already exist in the appropriate place, they will not be overwritten.

The installation process will install the links to the startup/shutdown scripts on the various platforms as follows:

ALPHA

```
/sbin/rc3.d/S77netbackup ->/sbin/init.d/netbackup
```

```
/sbin/rc0.d/K77netbackup ->/sbin/init.d/netbackup
```

HP

```
/sbin/rc2.d/S777netbackup ->/sbin/init.d/netbackup
/sbin/rc0.d/K777netbackup ->/sbin/init.d/netbackup
```

LINUX

```
/etc/rc.d/rc2.d/S77netbackup ->/etc/rc.d/init.d/netbackup
/etc/rc.d/rc3.d/S77netbackup ->/etc/rc.d/init.d/netbackup
/etc/rc.d/rc5.d/S77netbackup ->/etc/rc.d/init.d/netbackup
/etc/rc.d/rc6.d/K77netbackup ->/etc/rc.d/init.d/netbackup
/etc/rc.d/rc0.d/K77netbackup ->/etc/rc.d/init.d/netbackup
```

SGI

```
/etc/rc2.d/S91netbackup ->/etc/init.d/netbackup
/etc/rc0.d/K91netbackup ->/etc/init.d/netbackup
```

AIX

```
/etc/rc.veritas.aix
```

Default (all other UNIX operating systems)

```
/etc/rc2.d/S77netbackup ->/etc/init.d/netbackup
/etc/rc0.d/K77netbackup ->/etc/init.d/netbackup
```

Configuring Storage Devices for the Operating System

Reliable use of NetBackup depends on the configuration of your storage devices. To ensure reliable backups and restores, you must configure devices for your operating system according to the instructions provided by the device and operating system vendors. This should be completed *before* you configure NetBackup itself.

Note To connect a device to the operating system (OS), you should read the chapter appropriate for your OS in the *NetBackup Media Manager Device Configuration Guide*. The Device Configuration Guide is available on your NetBackup CD-ROM in Acrobat format.

Caution An improperly configured device may lead to backup and/or restore failures.

▼ **Preparing a newly connected storage device**

1. Consult your storage device's operating manual or front panel to learn how to set the SCSI ID (target), and then set it to an available SCSI ID.

2. Physically attach your device to a compatible host bus adapter where that SCSI ID is available. "Compatible" means that both the device and host bus adapter are of the same type (such as single-ended, high voltage differential, low voltage differential, or fibre channel).

Configuring NetBackup Server Software

Once the server software and storage devices have been installed, use the Getting Started wizard on the NetBackup Administration Console to configure your product. (Refer to the *NetBackup BusinesServer System Administrator Guide for UNIX* for more detailed information on configuring NetBackup.)

You can configure your server at another time by starting the NetBackup Administration Console and selecting the **Getting Started** link.

Note Before configuring NetBackup, you must have the storage devices attached to the server and perform all configuration steps specified by the device and operating system vendor (including installation of any required device drivers).

The NetBackup Administration Console contains a group of NetBackup configuration wizards in the right window pane that enable you to do the following:

◆ Configure NetBackup for the first time using the Getting Started wizards

◆ Configure Storage Devices for NetBackup

◆ Configure Volumes

◆ Configure the Catalog Backup

◆ Create a Backup Policy

Note If you are configuring NetBackup for the first time, we recommend that you click on the **Getting Started** icon and using this set of wizards to guide you through the process. If you have already configured NetBackup and you wish to make a change to particular area, you can click on the any of the remaining options.

Starting the NetBackup Administration Console

1. Start the NetBackup Administration Console interface.

   a. Log on to the NetBackup server as **root**

      If you need to run the user interface on a computer other than the NetBackup server, log on to that computer as root for a UNIX computer, or as the Windows administrator for a Windows computer.

b. Execute the following command:

`/usr/openv/netbackup/bin/jnbSA &`

The login box appears.

c. Enter the password for root.

d. Click Login. The Login dialog closes and the NetBackup Administration Console appears.
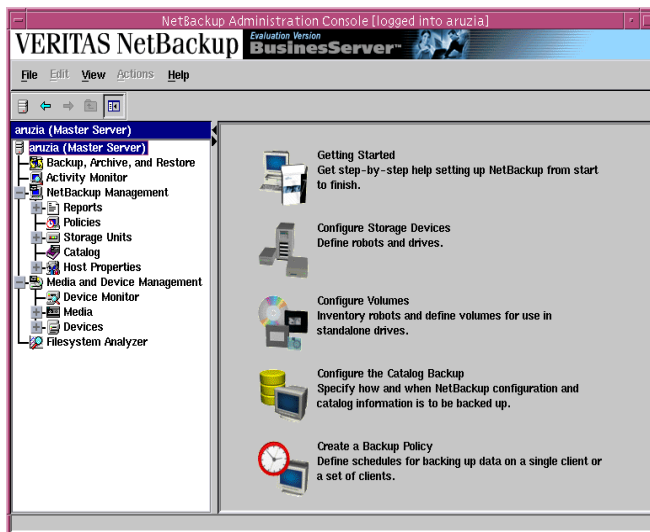
2. To begin configuring your product, click on the **Getting Started** icon in the main window of the *NetBackup Administration Console*. The *Getting Started - Welcome to NetBackup* window appears.

3. Click the **Next** button. The *Configure Storage Device* window appears, and prompts you to begin the Configure Storage Device wizard.

Configuring Storage Devices for NetBackup

Before you can run any backups, you must define your storage devices for NetBackup. The following wizard will step you through this process.

Note It is assumed that you have correctly configured your storage devices for your UNIX machine. NetBackup cannot function reliably unless devices are correctly installed and configured.

1. From the *Configure Storage Device* window, click **Next** to start the Device Configuration wizard. The *Welcome to the Device Configuration Wizard* window appears. This wizard will step you through the process of:

   - Scanning the master server for back-up devices

   - Verifying the devices that were automatically detected

   - Verifying and correcting the drive configuration

   - Updating the drive configuration

   - Configuring storage units
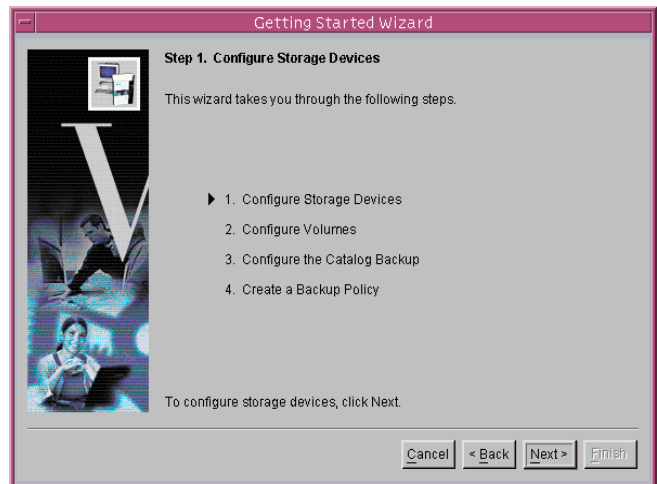
2. Click **Next** to start the device detection. The *Scanning Hosts* window appears and displays all devices that were discovered for a specific host.

3. Click **Next** to view the detected devices. The *Backup Devices* window appears.

4. From the *Backup Devices* window, confirm the list of devices displayed in this window. If the list is complete and accurate, click the **Next** button. If a known backup device does not appear in this list, do the following:

   a. Click the Cancel button and close out of this wizard.

   b. Verify that the backup device is physically attached to the host.

      c. Verify all installation procedures specified by the device and operating system vendor have been performed successfully.

      d. Return to the NetBackup Administration Console and click the **Configure Storage Devices** link. Perform Steps 1 through 6 again.

      e. Click **Next**. The *Drag and Drop Configuration* window appears.

5. Verify that all drives are in their proper location. If you need to move a drive, simply select the drive and drag it to the location.

6. Click **Next**. NetBackup begins updating the device configurations and the *Updating Device Configuration* window appears. This update may take a few minutes to complete.

7. Click **Next** after the device configuration update completes. The *Configure Storage Units* window appears. Use this window to define storage units. If your system does not have a tape device, you can store data on a disk by defining disk storage units.

When entering a path for a storage unit, the following rules apply:

- Use the correct path separators (/ and \).
- Use a colon (:) to specify a drive separation on Windows platforms.
- Use the following characters only:
    - Alphabetic characters (ASCII A-X, a-z)
    - Numeric characters (0-9)
    - Miscellaneous characters: Plus (+), minus (-), underscore (_), or period (.)

8. Click **Next**. The *Finished* window appears.

9. Click **Finish**. The *Getting Started- Volume Configuration* window appears.

Configuring Volumes

After you have configured your storage devices, the Getting Started wizard leads you into the Volume Configuration wizard. In this step, you initiate an inventory process of each configured robot. NetBackup automatically updates the volume database if it finds new robotic media during the inventory. You will also define new volumes for use in standalone drives. For more detailed information about volumes or configuring volumes for standalone drives, refer the to *Media Manager System Administrator's Guide.*

1. From the *Volume Configuration* window, click **Next**. The *Welcome to the Volume Configuration* wizard appears.

**Note** If you only have disk storage capability, NetBackup will skip this wizard.

2. Click **Next** to start the Volume Configuration wizard. The *Getting Started - Volume Configuration* window appears.

    This wizard will step you through the process of:

    -   Selecting a device for volume configuration

    -   Performing an inventory of the robot

    -   Creating new volumes

    -   Creating new volume groups
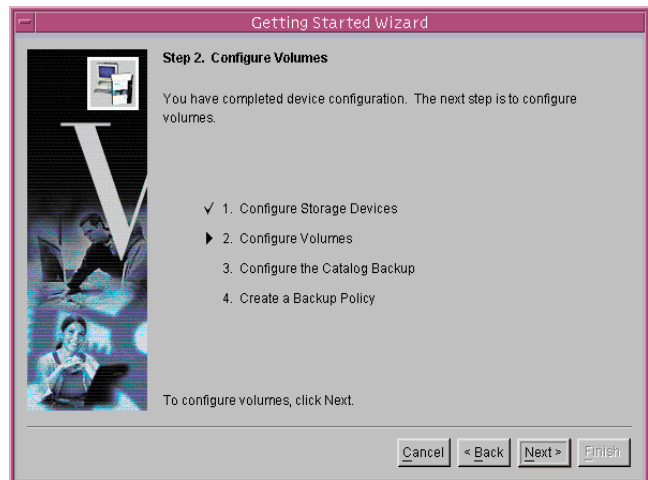
3. Click **Next**. The *Select Device* window appears.

4. Select a robot that you want to inventory, on the type of standalone drive for which you want to configure volumes. If you are configuring volumes for a robot proceed to Step 5. (Steps 4.a. through 4.d. describe the wizard if you select a standalone drive.)
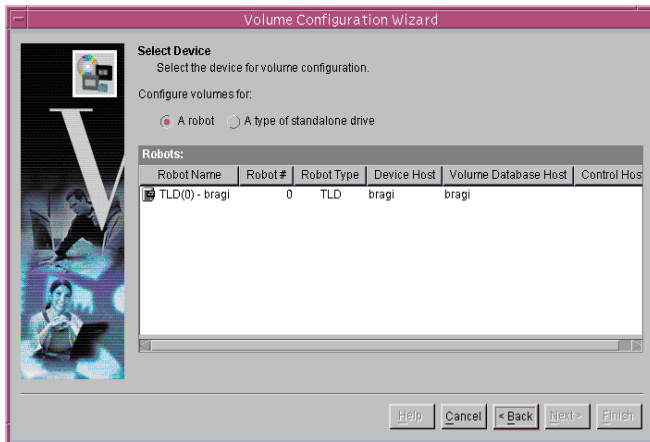
    a. If you choose a standalone drive and click **Next.** The *Standalone Media* window appears. From this window you can decide on the number of volumes for your device.

    b. Select the number of volumes from the drop-down menu.

    c. Click **Next**. This conclude the *Volume Configuration* wizard.
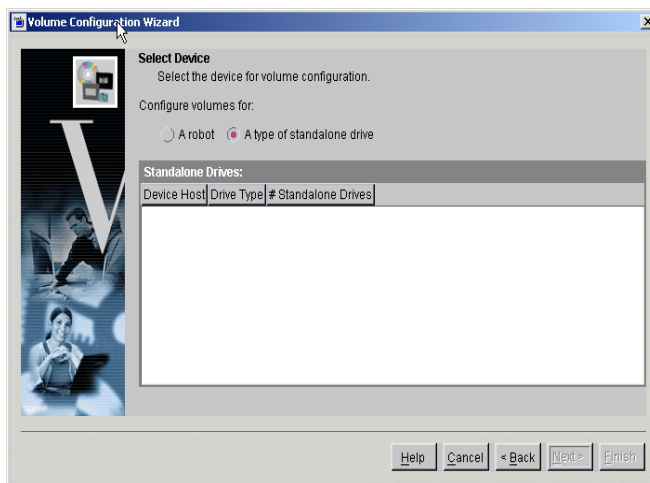
    d. Click **Finish**. The *Getting Started - Catalog Backup Wizard* window appears.

5. Click **Next**. The *Robot Inventory* window appears.

At this time, the NetBackup software is conducting an inventory of the Robot/device that you previously selected. This window enables you to view the results of this inventory once the inventory completes. You can view these results in the **Results:** field.

6. Click **Next**. The *Identify Cleaning Media* window appears.

After the inventory process of your device completes, the software prompts you to identify which slots within your device contain cleaning media.

If you have just upgraded NetBackup and have pre-existing bar-code rules, then the bar-code reader will automatically detect slots

Slot	Media ID	Barcode	Media Type	Created	Time Assigned
☑ 📼 2	CLN01	CLN01	DLT	10/03/2001 11:25:12	
☐ 📼 3	00017	00017	DLT	10/03/2001 11:25:12	
☐ 📼 4	00027	00027	DLT	10/03/2001 11:25:13	
☐ 📼 5	00026	00026	DLT	10/03/2001 11:25:14	
☐ 📼 6	00006	00006	DLT	10/03/2001 11:25:14	
☐ 📼 7	00015	00015	DLT	10/03/2001 11:25:15	
☐ 📼 8	00016	00016	DLT	10/03/2001 11:25:15	
☐ 📼 10	00005	00005	DLT	10/03/2001 11:25:16	
☐ 📼 11	00004	00004	DLT	10/03/2001 11:25:17	

Volume Configuration Wizard

Identify Cleaning Media
Mark all the slots in TLD(0) - bragi that contain cleaning media.

☑ Mark Selected   ☐ Unmark Selected   Reset to Default

To configure marked volumes as cleaning media, click Next.

Help   Cancel   < Back   Next >   Finish

designated for cleaning media. Otherwise, if you do not designate a cleaning slot(s), then NetBackup will consider all media (including cleaning media) as typical media and try to overwrite it.
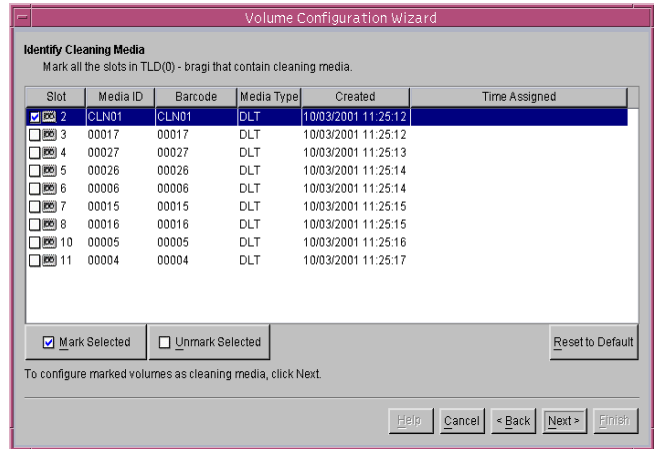
7. Click **Next**. If you identified one or more tapes as cleaning tapes on the *Identify Cleaning Media* window, then the *Robot Inventory (Cleaning Media)* window will appear.

This window displays the results of NetBackup after the software updates the media manager volume configuration.

8. Click **Next**. This concludes the Volume Configuration wizard.

Note This wizard does not enable you to configure cleaning tapes for standalone drives.

9. Click **Finish**. The *Getting Started - Catalog Backup Wizard* window appears. You are now ready to configure the catalog backups for your system.
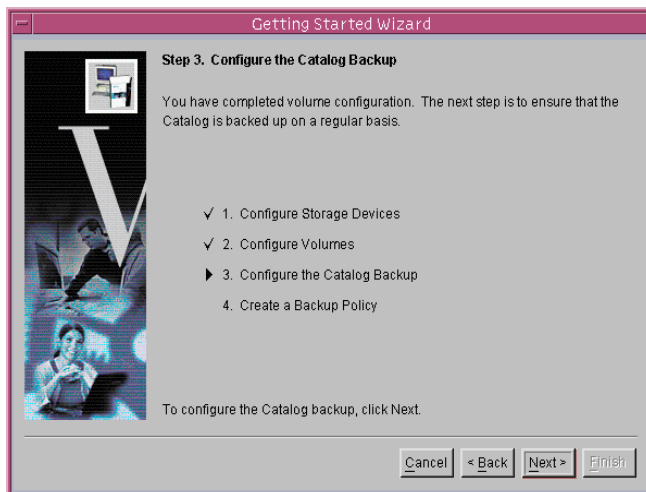
Configure the Catalog Backup

After you have configured your storage devices and volumes, the wizard leads you into configuration of the catalog backup. The NetBackup Catalog contains information about your configuration and about the files and folders that have been backed up. In case a disk fails and your catalog is lost, a backup of your catalog makes it much easier to restore your backed-up data and resume your backup schedule. Therefore, it is imperative that you configure a catalog backup before backing up any other data.

1. From the *Configure the Catalog Backup* window, click **Next**. The *Catalog Backup* wizard begins. With this wizard you will:

   - Specify one or two destinations for the catalog backups. A backup destination can be either a tape or a location on a hard drive.

   - Specify when a backup of NetBackup Catalog will occur.

2. Click **Next**. If you have configured a robot and/or a standalone drive, the *Media Type for the Destination* window appears. Specify if you want to back up the catalog to a tape (removable media) or to a hard drive.

   Note VERITAS recommends that you back up the catalog to a tape, if possible. For details, click the **More Information…** button on the page.

3. Click **Next** after you select your media type on the *Media Type for the Destination* window.

4. If you have configured a robot and/or a standalone drive and if you chose to back up the catalog to a tape, the *Destination Volume* window appears. Select the volume that you want to use for the backup on the *Destination Volume* window.

5. If you do not have any robots or standalone drives configured, or if you selected to back up the catalog to a hard drive on the *Media Type for the Destination* page, the *Pathname for the Destination* window appears. Enter the directory that you want NetBackup to use to save catalog backups in the text field on the page.

6. Click **Next**. The *Alternating Destinations* window appears. This window enables you to specify if you want to use an alternate location for the Catalog backup. If you do not want to use an alternate destination, unselect the checkbox (if selected). If you want to use an alternate destination, select the checkbox. Repeat steps 2 through 5.
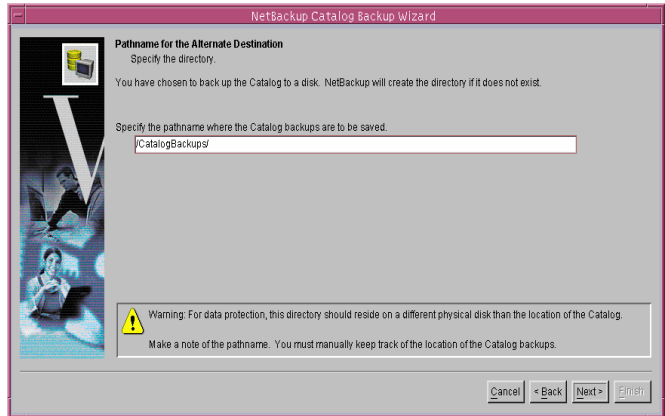
7. Click **Next**. The *When to Back Up the Catalog* window appears. From this window, select when you want to back up the NetBackup Catalog from the list of options. If you need help making a selection, click the **More Information…** button.
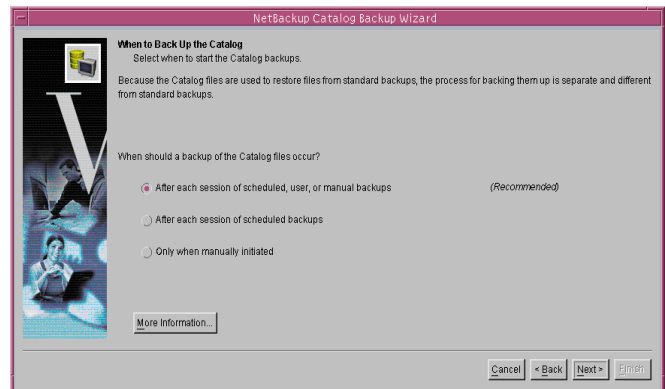
8. Click **Next**.

9. Click **Finish**. This completes the NetBackup Catalog configuration wizard and the *Policy Configuration* window appears.

Create a Backup Policy

After you have configured your catalog backup, the wizard leads you into configuration of backup policies. In this step, you define a backup policy for a group of one or more clients. This means specifying when the backups will take place, the files you want to back up, the clients you want to back up, and other general attributes that define how the backup is performed.
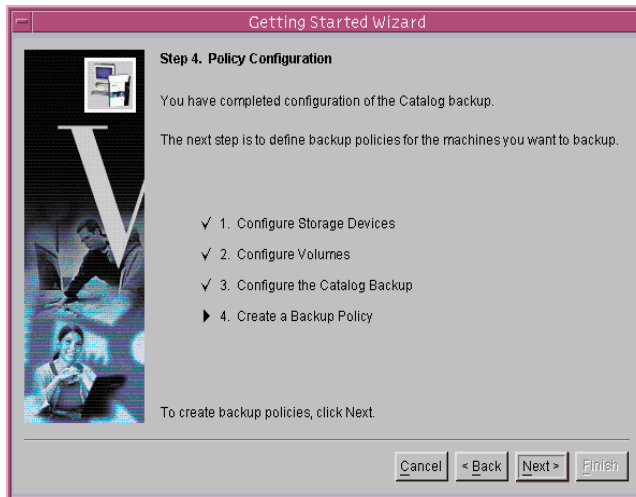
1. From the *Policy Configuration* window, click **Next**.

2. Click **Next** to start the Backup Policy Configuration wizard. The *Policy Name and Type* window appears.

   This wizard will step you through the process of specifying:

   - Policy names and types

   - Clients

   - Files and folders to back up

   - Backup rotations

   - Starting times of backups

3. From the *Policy Name and Type* window:

   a. Enter a name in the Policy Name field.

   b. Select a Policy type from the Policy Type drop-down box.

   c. Click **Next**. The *Client List* window appears.

4. Add, Change, or Delete clients to this policy. NetBackup will back up all clients added to this list. To add a client, perform the following:

   a. Click **Add**. An *Add Client* dialog appears.

   b. Enter the computer name in the text field.

   c. Select the hardware type and the appropriate operating system for the computer you are about to add from the drop-down menu.
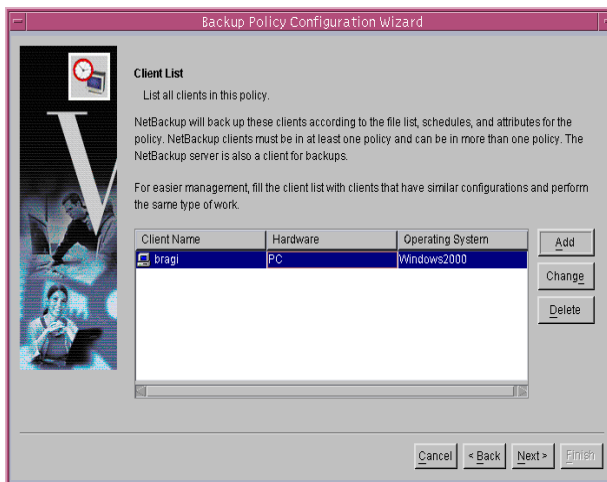
    d. Click the **Add** button to add more clients to the list or click the **OK** button to add the current computer to the list and close the dialog.

> **Note** You can change or delete computers from the Client List by selecting a computer and clicking the **Change** or **Delete** button.

    e. Click **Next**. The *Files* window appears.

5. From the *Files* window, you will identify which files and directories you want to back up. You can elect to back up all local drives by clicking the **Back up all local drives** check box. You can also administer the list of folders and files from this window by inserting new entries in the list, making changes, or deleting entries from the list.

    a. Enter the pathname or directive that you want to back up in the text field.

    b. Click **Add**.

    c. Repeat Step a to continue to add path names and directives.

    d. Click **Next**. The *Backup Type* window appears.
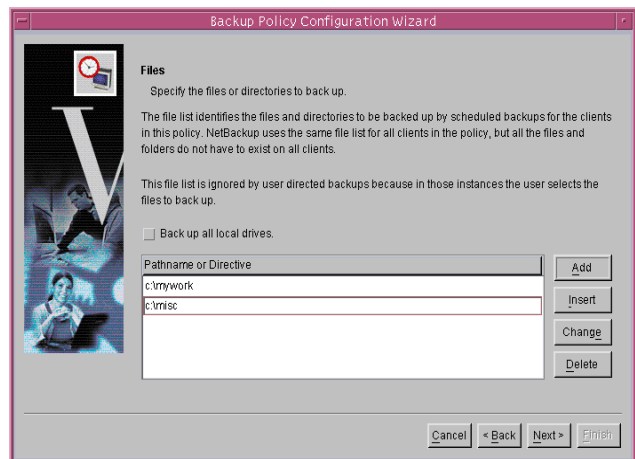
6. Select the type of backup that you want this policy to perform.

    - Full Backup. Backs up all files specified in the file list.

    - Incremental Backup. Backs up all changed files specified in the file list.

        - Differential backup

        - Cumulative backup

    - User Backup. Enables the user to initiate a backup on their own.

7. Click **Next**. The *Rotation* window appears.

8. Select how often you want this backup policy to run for a full or incremental backup. In addition, you can select the retention period for the backups.

9. Click **Next**. The *Start Window* interface appears.

10. The Start Window enables you to specify the window in which backups can start. From this window you can:

- Select a range of hours (*Off hours, Working hours, All day*) to enable a backup to start.

11. Click **Next**. This completes the creation and configuration of a policy. To make changes to this policy or create another policy, open the NetBackup Administration Console and click the **Create a Backup Policy** link.
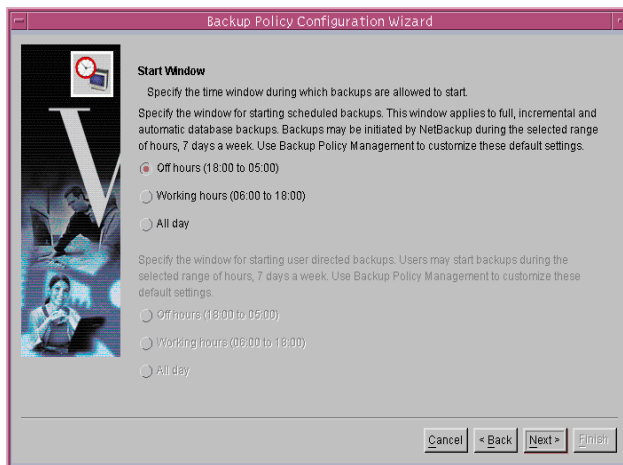
12. Click **Finish**. This concludes the configuration of NetBackup 4.5 BusinesServer. For detailed information about NetBackup installations, refer to the *NetBackup BusinesServer System Administration Guide for UNIX*.

NetBackup Client Software

By definition, your NetBackup server is also a NetBackup client. When you installed the NetBackup server software, both the NetBackup *server* and NetBackup *client* software were installed on the server.

Note Your server does not count against the BusinesServer limit of four remote clients (eight with the Client Expansion pack).

Client Installation Requirements

To install NetBackup client software on a PC workstation, you must have one of the following configurations.

Microsoft Windows Clients

◆ Microsoft Windows (95, 98, ME, NT, 2000, XP (32 and 64 bit), and LE)

- Windows NT 4.0 (service pack 6A) or Windows 2000 (service pack 2) installed.

- Windows 95 users must have the Windows Socket 2 Update for Windows 95. This download can be found at:

  `www.microsoft.com/windows95/downloads/contents`

◆ An Intel Pentium processor

◆ Internet Explorer 5.5 or greater

◆ Any TCP/IP transport that is Windows Sockets Compliant. (Use of the TCP/IP transport that comes with the server or operating system is recommended.)

◆ A network adapter supported by your TCP/IP transport.

Remote Installation Requirements

To perform remote installations, there are several additional requirements:

◆ The source PC must have Windows NT or Windows 2000 installed.

◆ The destination PC must have Windows NT or Windows 2000 installed.

◆ The person performing the remote installation must have administrator privileges on all the client PCs.

Note The rsh mechanism for defining a *trusted remote host* does not work with SuSE Linux 7.2. VERITAS recommends that you use the ftp method of pushing the NetBackup client remotely instead of the rsh *trusted host* method for this platform.

Windows Clients

Note Open Transaction Manager (OTM) is a separately-priced option. If the client server is a NetBackup BusinesServer, you must have license keys for this feature registered on the server to enable this feature.

Execute PC_Clnt\Win32\X86\Setup.exe from the CD-ROM.

NetWare Target and NonTarget

For detailed instructions on how to install Netware Target and Non Target clients, refer to the *NetBackup Installation Guide - PC Clients.*

Note Open Transaction Manager (OTM) is a separately-priced option for NetBackup BusinesServer. If the client's server is a NetBackup BusinesServer, you must have a license key registered on the server to enable this feature.

Macintosh

For Macintosh installation instructions, refer to the *NetBackup Installation Guide - PC Clients.*

Note You can install Macintosh clients from the NetBackup 4.5 CD-ROM.

UNIX

To install a UNIX client, the software for that type of UNIX computer must first be loaded onto your UNIX server. If you did not choose to do this during the installation of your UNIX server, do so now by following the instructions provided in "Adding a UNIX Client Type After Initial Server Installation" on page 46.

UNIX clients can be installed using one of two methods: locally at the client computer, or remotely, from your UNIX NetBackup server.

◆ Locally: You must install the client software locally if remote installation is not possible. Remote installation is not possible if your NetBackup server is a Windows NT or Windows 2000 computer or if there is a firewall that prevents remote installation.

◆ Remotely: You can "push" the client software from your UNIX NetBackup server to your UNIX client computers.

Note – If you are running NetBackup on a Windows NT or Windows 2000 computer, or if there is a firewall that prevents remote installation, UNIX clients *must* be installed locally.

– If your server is not NetBackup-Java capable, you must install the client software locally to install NetBackup Java Console on NetBackup-Java capable clients. NetBackup Java is only installed and distributed to NetBackup Java-capable clients from a NetBackup Java-capable master server.

To initiate a backup or a restore from the UNIX client computer, the following graphical interfaces are available on the UNIX client:

- For NetBackup-Java compatible clients: the NetBackup Java interface (`jbpSA`). Refer to the *NetBackup 4.5 Release Notes - Chapter 3* for a list of NetBackup-Java capable hosts.

- For clients that are not NetBackup-Java compatible (except the Mac OS X Server): the `xbp` interface. Refer to the *NetBackup 4.5 Release Notes - Chapter 3* for a list of clients with `xbp` installed on them. In addition, for instructions on the use of `xbp`, see the *NetBackup BusinesServer User's Guide for UNIX*.

Note Mac OS X Server is available through the bp interface or from a Solaris, HP/UX NetBackup, or Linux client console via `jbpSA`.

Install Client Software Locally

1. Insert the NetBackup CD-ROM into the drive on the client computer.

   HP systems only: Because the NetBackup CD-ROM is Rockridge formatted, it must be mounted by entering the following commands:

   ```
   nohup pfs_mountd &
   nohup pfsd &
   pfs_mount -o xlat=unix /dev/dsk/device-ID /cdrom
   ```

   Where *device_ID* is the ID of your CD-ROM drive.

2. Change your working directory to the CD-ROM directory:

   ```
   cd cd_rom_directory
   ```

   Where *cd_rom_directory* is the path to the directory where you can access the CD-ROM. On some platforms, it may be necessary to mount the directory.

3. Start the install program.

   ```
   ./install
   ```

4. Choose option 2, **NetBackup Client Software**.

Note The choices provided for OS level represent the OS Level on which the binaries were compiled. Often the binaries will function perfectly on newer versions of the operating system. For example, Solaris 2.6 binaries are also used on Solaris 7 and Solaris 8 levels of the operating system. Therefore, if you wish to install on a Solaris 8 system, choose the Solaris 2.6 binaries.

---

5. Follow the prompts to complete the installation.

6. On HP systems only—to unmount the CD-ROM:

   - Execute the `pfs_umount` command

   - Use the `kill` command to kill the following processes:

   ```
   pfs_mountd
   pfsd
   pfs_mountd.rpc
   pfsd.rpc
   ```

Remote Client Installations

The following sections describe how to "push" the client software from your UNIX NetBackup BusinesServer to your UNIX NetBackup clients. You can push the client software to:

◆ A trusting client

◆ A secure client

Installing NetBackup on Trusting UNIX Clients

A *trusting* UNIX client is one that has an entry for the server in its `/.rhosts` file. The `/.rhosts` entries enable software installation, but are not necessary for correct operation of NetBackup software.

Note Add the trusting clients to a backup policy, if this has not already been done.

▼ **To install NetBackup on a trusting UNIX client**

1. Start the NetBackup Administration Console.

   In the Login dialog box, type the name of the NetBackup server that has the policy configuration with the clients.

   You can install the client software only from the NetBackup server that you specify in the Login dialog box when starting the interface. The clients must be defined in a policy on this NetBackup server.

2. In the NetBackup Administration Console window, click on the **NetBackup Management** icon to show the available options.

3. Click the **Policies** icon in the left window pane. The **All Policies** window pane populates with a list of available policies.
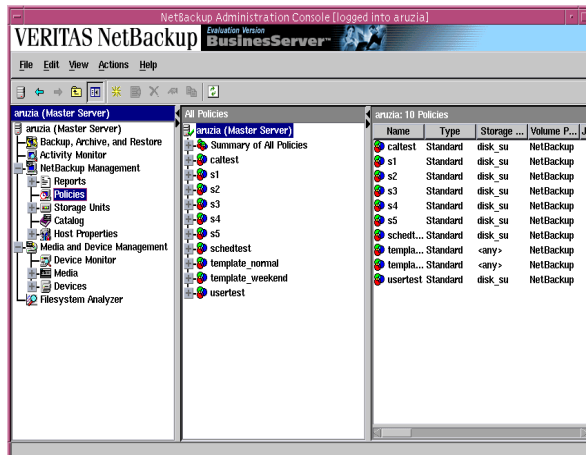
4. Select the master server in the **All Policies** window pane.

5. Choose **Install UNIX Client Software** on the **Actions** menu.

The *Install UNIX Client Software* dialog window appears.

6. In the **Don't install these clients** window, select the clients you want to install and click the **Add** >> button.

The clients are moved to the **Install these clients** window.

7. Click the **Install Client Software** button to start the installation.

Client software installation can take a minute or more per client. NetBackup writes messages in the **Progress** box as the installation proceeds. If the installation fails on a client, NetBackup notifies you but keeps the client in the policy. You cannot stop the installation once it has started.

During installation, NetBackup does the following:

- Copies the client software from the `/usr/openv/netbackup/client` directory on the server to the `/usr/openv` directory on the client.

- Adds the required entries to the client's `/etc/services` and `inetd.conf` files.

The only way to install client software to a different location on the client is to create the directory where you want the software to reside and then create `/usr/openv/` as a link to that directory prior to installing software.

8. When the install is complete, click **Close**.
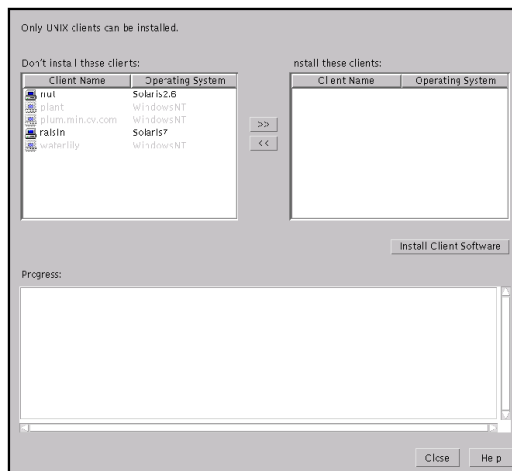
Installing NetBackup Software on Secure UNIX Clients

As defined here, a *secure* UNIX client is one that does not have an entry for the NetBackup server in its `/.rhosts` file.

Note Add the secure clients to a backup policy, if this has not already been done.

▼ **To install NetBackup on a secure UNIX client**

1. Move software from the server to temporary space in the `/tmp` directory on the client by executing the `install_client_files` script from the NetBackup server. To execute this script, you must have a login ID and password that you can use to access the clients through ftp.

    To move software to only one client at a time, execute:

    `/usr/openv/netbackup/bin/install_client_files ftp` *client user*

    To move software to all clients at once, execute:

    `/usr/openv/netbackup/bin/install_client_files ftp ALL` *user*

    Where the options are defined as follows:

    -   *client* is the hostname of the client.
    -   *user* is the login id required by ftp on the client.
    -   `ALL` specifies that you want to install all clients which are configured in any backup policy on the server.

    The `install_client_files` script prompts you for a password for each client if you do not have a `.netrc` file set up.

2. After the `install_client_files` script is done, the root user on each of the clients must execute the `client_config` script to complete the installation:

    `sh /tmp/bp/bin/client_config`

    The `client_config` script installs the binaries and updates the `/etc/services` and `inetd.conf` files on the client.

Adding a UNIX Client Type After Initial Server Installation

If you add a new UNIX client type to your backup environment, or forgot to select a UNIX client platform during your NetBackup installation, you must first load the NetBackup client software onto the NetBackup server as described below.

▼ **To add a UNIX client type after initial server installation**

1. Insert the NetBackup CD-ROM into the drive on the server.

    HP systems only: Because the NetBackup CD-ROM is Rockridge formatted, it must be mounted by entering the following commands:

    ```
    nohup pfs_mountd &
    nohup pfsd &
    pfs_mount -o xlat=unix /dev/dsk/device-ID /cdrom
    ```

    Where *device_ID* is the ID of your CD-ROM drive.

2. Change your working directory to the CD-ROM directory:

    ```
    cd cd_rom_directory
    ```

    Where *cd_rom_directory* is the path to the directory where you can access the CD-ROM. On some platforms, it may be necessary to mount the directory.

3. Use the install program to load the client software onto the NetBackup server.

    ```
    ./install
    ```

4. Choose option 2, **NetBackup Client Software**.

5. Follow the prompts, selecting the additional client platforms you want.

6. Follow the prompts to complete the installation.

7. On HP systems only—to unmount the CD-ROM:

    -   Execute the `pfs_umount` command

    -   Use the `kill` command to kill the following processes:

        ```
        pfs_mountd
        pfsd
        pfs_mountd.rpc
        pfsd.rpc
        ```

8. You must now install the NetBackup client software on these additional client computers, as described earlier in this chapter, see *Install Client Software Remotely*.

Installing Alternative Administration Interfaces

You can install a NetBackup user interface on a different computer. (This will be necessary if your server computer has no graphics display capabilities.)

System	Install this user interface
Windows	NetBackup Remote Administration Console
UNIX	UNIX (NetBackup-Java capable) client

NetBackup Remote Administration Console for Windows

You can skip this section if you do not want to remotely administer a NetBackup server from a Windows NetBackup client.

The NetBackup Remote Administration Console for Windows servers is a version of NetBackup for Windows that can be used to remotely administer one or more UNIX or Windows NetBackup servers. It provides all of the standard NetBackup Server for Windows interfaces and can be used to create backup policies, manage volumes, view status, monitor tape drives, etc., on a remote NetBackup server. It cannot be used as a NetBackup master or media server itself—only for the remote administration of other 4.5 NetBackup UNIX or Windows servers.

Note The Windows NetBackup servers that support the NetBackup Remote Administration Console are Windows NT and Windows 2000. For information about the supported platforms for the NetBackup 4.5 release, refer to the Supported Platforms and Peripherals chapter in *NetBackup Release Notes for UNIX and Windows.*

Although the NetBackup Remote Administration Console cannot be used as a master or media server, in order for it to remotely administer a NetBackup server, it must be added to the server list on that server in the same way that other NetBackup servers are added to the server list to give them access to that server.

The NetBackup manuals and on-line help do not, in most cases, specifically refer to the NetBackup Remote Administration Console since, for all practical purposes, using the NetBackup Server for Windows interfaces on the NetBackup Remote Administration Console is identical to using them locally on the server that is being administered. Of course, the master server or device host shown in the interface will be the server name that is being administered instead of the local server name.

▼ **The following steps describe how to install the remote server:**

1. Go to the computer on which you want to install the NetBackup Remote Administration Console and insert the CD-ROM that contains the NetBackup server software.

   - On Windows systems with AutoPlay enabled for CD-ROM drives, the VERITAS NetBackup installation browser starts automatically.

   - On Windows systems that have AutoPlay disabled, run the `Launch.exe` program in the `AutoRun` directory on the CD-ROM.

2. On the NetBackup - Install screen, click the **Install** option beneath NetBackup Server.

3. Click **Next**.

4. Select **NetBackup Remote Administration Console**.

5. Follow the prompts to complete the installation.

Note On the *NetBackup System Names* screen, the name of the NetBackup Remote Administration Console should be in the first entry field. You must enter the name of the remote NetBackup BusinesServer computer in the Master Server field.

When the software is installed, a set of NetBackup documents are also installed in the following directory:

install_path\Help

By default, *install_path* is `C:\Program Files\VERITAS`.

By default, the NetBackup Administration Console will automatically begin as soon as you click Finish in the installation program. (If you did not choose that default, go to the Windows **Start** menu on the Administration Console computer and select **Start** > **Programs** > **VERITAS NetBackup** > **NetBackup Administration** > **Console**.)

▼ **The following steps will add the NetBackup Remote Administration Console host to the server list of the remote BusinesServer server.**

Note On a UNIX system, there are two procedures that you can use to add the host to the server list; you can use the NetBackup-Java GUI (if your system is NetBackup-Java Console compatible) or you can edit the `bp.conf` file. Step 1 describes this process using the NetBackup-Java GUI and Step 2 describes how to edit the `bp.conf` file.

---

1. Use the NetBackup-Java GUI to specify and add the remote UNIX BusinesServer to the server list. (If you perform this step you can proceed to step 3.)

    a. In the left pane of the NetBackup-Java GUI, select **Host Properties** > **Master Servers**. The host server appears in the main window.

    b. Right click on the name of the host server in the *Master servers* **window in the right pane.**

    c. Select **Properties**. The *Master Server Properties* window appears.

    d. In the *Master Server Properties* window, select the **Servers** icon from the tree in the left window pane.

    e. In the *Servers* window, click the **New** button.

    f. Type the name of the host that is to run the NetBackup Remote Administration Console.

    g. Then click the **OK** button. The name of the host appears in the *Additional Servers* list.

    h. Click **OK**.

2. Edit the bp.conf file to add the remote UNIX BusinesServer to the server list.

    a. Go to the remote NetBackup UNIX server.
        In the `/usr/openv/netbackup/bp.conf` file, at the end of the SERVER = lines, add the following line:

        ```
        SERVER = name-of-Administration-Console-machine
        ```

        Where *name-of-Administration-Console-machine* is the name of the machine where the Administration Console will be installed.

3. If you have an existing NetBackup Remote Administration Console installed and you want to add a remote master server, perform the following steps.

    a. Go to the remote NetBackup Windows Server and start the NetBackup Remote Administration Console.

Note If this is a clean installation, you can add the masters that you want to administer as additional servers during the install.

    b. In the left pane of the NetBackup Remote Administration Console, select **Host Properties** > **Master Server**. The host server appears in the main window.

    c. Right click on the name of the host server in the *Configuration for servers of (host server name)* **window.**

    d. Select **Properties (Read/Write)**. The **Master Server Properties** window appears.

    e. In the Master Server Properties window, click the **Servers** tab.

    f. In the **Global Operations** box, in the field labeled **Add to all lists**, type the name of the host that is to run the NetBackup Remote Administration Console. Then click the "+" button. (The name of the host appears in the Additional Servers list.)

    g. Click **OK**.

NetBackup Remote Administration Console for UNIX

You can skip this section if you do not want to remotely administer a NetBackup server from a UNIX NetBackup client.

The NetBackup Remote Administration Console for UNIX can be used to remotely administer one or more UNIX or Windows NetBackup servers. It provides all of the standard NetBackup Server for Windows interfaces and can be used to create backup policies, manage volumes, view status, monitor tape drives, etc., on a remote NetBackup server. It cannot be used as a NetBackup server—only for the remote administration of other 4.5 NetBackup UNIX or Windows servers.

Note Remote administration of Windows servers using the NetBackup Remote Administration Console for UNIX is done via the "change server" functionality in the console. You cannot specify the Windows server host in the console login dialog to administer it directly. The UNIX server host specified in the login dialog must be in the server list of all NetBackup servers that you want to administer via the "change server" capability in the console. For more detail, refer to the *NetBackup BusinesServer System Administrator's Guide for UNIX*.

To use the NetBackup Remote Administration Console to remotely administer a NetBackup server, it must be added to the server list on that server in the same way that other NetBackup servers are added to the server list to give them access to that server.

▼ **The following steps describe how to install a remote server:**

1. Go to the computer on which you want to install the Administration Console.

2. Insert the NetBackup CD-ROM into the drive on the client computer and following the procedure for locally installing software. Refer to "Install Client Software Locally" on page 42.

▼ **The following steps will add the NetBackup Remote Administration Console host to the server list of the remote BusinesServer server.**

Note On a UNIX system, there are two procedures that you can use to add the host to the server list; you can use the NetBackup-Java GUI (if your system is NetBackup-Java Console compatible) or you can edit the `bp.conf` file. Step 1 describes this process using the NetBackup-Java GUI and Step 2 describes how to edit the `bp.conf` file.

1. Use the NetBackup-Java GUI to specify and add the remote UNIX BusinesServer to the server list. (If you perform this step you can proceed to step 3.)

   a. In the left pane of the NetBackup-Java GUI, select **Host Properties** > **Master Servers**. The host server appears in the main window.

   b. Right click on the name of the host server in the *Master servers* **window in the right pane.**

   c. Select **Properties**. The *Master Server Properties* window appears.

   d. In the *Master Server Properties* window, select the **Servers** icon from the tree in the left window pane.

   e. In the *Servers* window, click the **New** button.

   f. Type the name of the host that is to run the NetBackup Remote Administration Console.

   g. Then click the **OK** button. The name of the host appears in the *Additional Servers* list.

   h. Click **OK**.

2. Edit the `bp.conf` file to add the remote UNIX BusinesServer to the server list.

    a. Go to the remote NetBackup UNIX server.
        In the `/usr/openv/netbackup/bp.conf` file, at the end of the SERVER = lines, add the following line:

```
SERVER = name-of-Administration-Console-machine
```

        Where *name-of-Administration-Console-machine* is the name of the machine where the NetBackup Remote Administration Console will be installed.

3. If you have an existing NetBackup Remote Administration Console installed and you want to add a remote master server, perform the following steps.

    a. Go to the Remote NetBackup Windows server and open the NetBackup Remote Administration Console.

Note If this is a clean installation, you can add the masters that you want to administer as additional servers during the install.

    b. In the left pane of the NetBackup Remote Administration Console, select **Host Properties** > **Master Server**. The host server appears in the main window.

    c. Right click on the name of the host server in the **Configuration for servers of (host server name)** field.

    d. Select **Properties (Read/Write)**. The *Master Server Properties* window appears.

    e. In the *Master Server Properties* window, click the **Servers** tab.

    f. In the **Global Operations** box, in the field labeled **Add to all lists**, type the name of the host that is to run the NetBackup Remote Administration Console. Then click the "+" button.

        The name of the host appears in the Additional Servers list.

    g. Click **OK**.

Installing NetBackup Agents and Options

After your initial installation is complete, you can install any other NetBackup agents and options (such as NetBackup for Oracle) by following the instructions in the NetBackup guide that comes with that product.

Performing an Upgrade Installation 3

This section explains how to upgrade your UNIX server to NetBackup 4.5.

Requirements

As a general rule, ensure that the NetBackup release level on each server is at least equal to that on the clients. Older versions of server software can encounter problems with newer clients. Upgrade all servers first so they are at the same level.

Caution	Back up your NetBackup databases before upgrading NetBackup software on the master server.

You can upgrade to 4.5 only if you currently have NetBackup 3.4, 3.4.1, or 4.0V software installed.

Note	There are specific installation instructions for the NetBackup ServerFree Agent product (4.0V). For more information on how to upgrade from 4.0V to 4.5 refer to the Installation Chapter of the *NetBackup ServerFree Agent* manual.

Allowing for the Reinstallation of NetBackup 4.5

If you ever intend to reinstall a previous version of NetBackup after you have performed an upgrade, you must perform the following steps before you do any upgrade. The following steps remind you to back up all databases, patches, etc. Then, if you need to reinstall a previous version, you will have saved the most current data.

▼ **To allow for installing previous versions of NetBackup**

1. Back up all databases (media, volume, configuration, device) on the server.

2. Back up all NetBackup patches, scripts, and bp.conf entries that are specific to the earlier version of NetBackup.

3. You do not have to upgrade your clients at this time, only the server.

Install Software on UNIX Servers and Clients

Prior to installing software on servers and clients, you will need to prepare for the installation first.

Preparing for Installation

1. Stop the NetBackup/Media Manager daemons:

    ```
    /usr/openv/netbackup/bin/goodies/bp.kill_all
    ```

2. On Solaris and HP, stop all instances of the NetBackup Java interface applications. You can find the process IDs for the NetBackup Java applications by piping the output of `ps` into `grep`.

    On Solaris, for example:

    ```
    ps -ef | grep jre | grep openv
    ```

    Then, use the `kill` command to terminate the processes.

3. On Solaris only, if you are upgrading to NetBackup 4.5 or reinstalling it, remove the current SUN packages.

    Caution This will remove all/any NetBackup scripts you may have modified.

    a. If you are upgrading from any version prior to NetBackup 4.5 to NetBackup 4.5 enter the following command and skip Step b:

    ```
    pkgrm SUNWnetbp SUNWmmgr
    ```

    b. If you are reinstalling NetBackup 4.5 enter the following command.

    ```
    pkgrm VRTSnetbp
    ```

    c. When asked:

    ```
    Are you doing this pkgrm as a step in an upgrade process?
    ```

    Answer `y` for yes and continue with the installation.

4. Delete any existing NetBackup startup or shutdown scripts (S77netbackup and K77netbackup) out of `init.d` and `rc[N].d` directories.

5. On AIX, uninstall the `ovpass` driver:

`/usr/openv/volmgr/bin/driver/remove_ovpass`

Caution	This will delete any robotic control paths, that will need to be created again. For more information about the robotic control paths, see the *NetBackup Media Manager Device Configuration Guide for UNIX* manual.

Installing the Software

As the root user, install the NetBackup server software on the server.

Note	When installing a NetBackup BusinesServer, you must enter a NetBackup base product license key. You will also enter license keys for any additional NetBackup software product options or agents used on the server or its clients.

1. Check your order to make sure that you have license keys for all the NetBackup servers, clients, options, and agents that you requested.

For more information on administering NetBackup licenses, see *NetBackup BusinesServer System Administrator's Guide for UNIX.*

Note	When making and saving any license key updates (including adding and deleting license keys) in the NetBackup Java Administration Console, you must restart the NetBackup Administration Console.

2. Log in as the root user on the server.

3. Insert the CD-ROM in the drive.

4. HP systems only: Because the NetBackup CD-ROM is Rockridge formatted, it must be mounted by entering the following commands:

```
nohup pfs_mountd &
nohup pfsd &
pfs_mount -o xlat=unix /dev/dsk/device-ID /cdrom
```

Where *device_ID* is the ID of your CD-ROM drive.

5. Change your working directory to the CD-ROM directory:

```
cd cd_rom_directory
```

Where *cd_rom_directory* is the path to the directory where you can access the CD-ROM. On some platforms, it may be necessary to mount the directory.

6. Execute the install script:

    `./install`

7. When the menu appears, choose option 1 (NetBackup). This installs both Media Manager and NetBackup software on the server.

    Option 2 (NetBackup Client Software) is for local installation on UNIX clients (see "Install Client Software Locally" on page 42) or for reinstalling client software without disturbing the NetBackup and Media Manager installation.

8. Follow the prompts in the installation script.

    If you did not upgrade all clients at the time of installation, see "Upgrading Clients After the Installation" on page 56.

Note The installation script can push client software to up to four clients (eight with the Client Expansion Pack) simultaneously.

9.

Upgrading Clients After the Installation

1. As a root user on the NetBackup master server, check whether `bprd` is running by executing:

    `/usr/openv/netbackup/bin/bpps`

2. If only one `bprd` shows up in the `bpps` output, there are no active backups or restores. You can terminate the `bprd` daemon by executing:

    `/usr/openv/netbackup/bin/admincmd/bprdreq -terminate`

3. Update UNIX client software by executing the `update_clients` script with the following command:

    `/usr/openv/netbackup/bin/update_clients`

4. After all the servers and clients have been updated, start the NetBackup daemon as the root user on the master server by entering the commands:

    `/usr/openv/volmgr/bin/ltid`
    `/usr/openv/netbackup/bin/initbprd`

    This completes the UNIX server and UNIX client updates.

Upgrading from NetBackup BusinesServer to NetBackup DataCenter 4.5

> **Note** When installing a NetBackup BusinesServer, you must enter a NetBackup base product license key. You will also enter license keys for any additional NetBackup software product options or agents used on the server or its clients.

1. Check your order to make sure that you have license keys for all the NetBackup servers, clients, options, and agents that you requested.

    For more information on administering NetBackup licenses, see *NetBackup BusinesServer System Administrator's Guide for UNIX.*

> **Note** When making and saving any license key updates (including adding and deleting license keys) in the NetBackup Java Administration Console, you must restart the NetBackup Administration Console.

2. Reinstall NetBackup, using the instructions from the previous section, "Install Software on UNIX Servers and Clients" on page 54

3. When prompted, enter the DataCenter license key.

    This will perform DataCenter-specific configuration and install the correct man pages.

4. Once you have upgraded the NetBackup software, read through the following additional steps. Perform those that apply to your system.

▼ **To complete your system update after the upgrade**

1. Upgrade any separately-priced options (such as NetBackup for Oracle) on clients that have been upgraded. Separately-priced options should be at the same level as the NetBackup client.

2. If you made changes to NetBackup scripts prior to the upgrade, apply those changes to the new, upgraded versions of the scripts.

    During installation, NetBackup overwrites the following files. Before overwriting the files, it appends the version to the name and copies the renamed files to a file or directory.

    ◆ All files in the `/usr/openv/netbackup/bin/goodies` directory and the `/usr/openv/netbackup/help` directory.

    ◆ Some files and directories in `/usr/openv/volmgr`.

◆ The following scripts from the `/usr/openv/netbackup/bin` directory:

```
backup_notify
backup_exit_notify
bpend_notify (present only if used)
bpend_notify_busy (present only if used)
bpps
bpstart_notify (present only if used)
dbbackup_notify
diskfull_notify
initbpdbm
initbprd
restore_notify
session_notify
session_start_notify
userreq_notify
```

For example, an upgrade from 3.4 to 4.5 would result in changing:

```
/usr/openv/netbackup/bin/goodies
```

to

```
/usr/openv/netbackup/bin/goodies.3.4GA
```

and changing

```
/usr/openv/netbackup/bin/initbprd
```

to

```
/usr/openv/netbackup/bin/initbprd.3.4GA
```

3. If this is a master server upgrade installation and the site had previously allowed nonroot users to administer NetBackup, the default permissions and group on the newly installed files allow only a root user to perform NetBackup administration.

To determine how to restore nonroot administrator capability, refer to the *NetBackup BusinesServer System Administrator's Guide for UNIX.*

If you are going to use the NetBackup Java interfaces, see the *NetBackup Release Notes* for configuration information. The online help provides operating instructions.

Uninstalling NetBackup Servers and Clients　　4

This chapter gives instructions for uninstalling NetBackup 4.5 BusinesServer software from your current system. In addition, all add-on products (including Storage Migrator) and associated databases will be destroyed unless you back up the appropriate catalogs and files.

Uninstalling NetBackup BusinesServer

Caution　The following procedure will uninstall any NetBackup Add-on products installed on this machine. For example, this procedure will de-install your VERITAS Storage Migrator product including any associated database information. VERITAS recommends that you save the data that you require and uninstall any add-on product before you uninstall NetBackup.

▼　**To uninstall NetBackup on a Linux server**

1. Log in as the root user on the server.

2. Perform a catalog backup.

3. For Solaris servers only:

    a. Stop the NetBackup/Media Manager daemons:

        `/usr/openv/netbackup/bin/goodies/bp.kill_all`

    b. Execute the appropriate uninstall script.

        ◆　For versions prior to NetBackup 4.5 enter:

            `pkgrm SUNWnetbp SUNWmmgr`

        ◆　For NetBackup 4.5, enter:

            `pkgrm VRTSnetbp`

    c. Answer **no** to the "Is this an upgrade?" prompt.

d. Answer **yes** to the prompt, `Remove references to NetBackup/Media Manager from services and inetd config files?`.

e. Answer **yes** to remove non-empty directories.

f. Remove the following files:

```
rm -f /etc/rc2.d/S77netbackup

rm -f /etc/rc0.d/K77netbackup
```

g. Execute the following command to remove the NetBackup-Java application state data for the root account:

```
/bin/rm -rf /.nbjava
```

h. NetBackup-Java users can remove their `$HOME/.nbjava` directory.

The `$HOME/.nbjava` directory contains application state information (for example, table column order and size) that is saved when the user exits NetBackup-Java applications. The uninstall process removes this directory for the root user only.

4. For other UNIX servers:

a. Stop the NetBackup/Media Manager daemons:

```
/usr/openv/netbackup/bin/goodies/bp.kill_all
```

b. To remove references to NetBackup/Media Manager from **/etc/services** and the **[x]inetd** configuration files, run the **edit_services** script located in the `/usr/openv/netbackup/bin/goodies` directory.

c. Remove the `/usr/openv` directory:

◆ If `/usr/openv` is a physical directory, execute:

```
rm -rf /usr/openv
```

◆ If `/usr/openv` is a link, execute:

```
cd /usr/openv
rm -rf *
cd /
rm -f /usr/openv
```

d. For Linux systems only. If you modified the startup and shutdown scripts as described in "Configuring Automatic Startup and Shutdown of NetBackup" on page 24, execute:

```
/sbin/chkconfig --del netbackup
```

e. Remove the following links:

System	Additional Files
AIX (RS6000)	`/etc/rc.veritas.aix`
Alpha	`/sbin/rc3.d/S77netbackup` `/sbin/rc0.d/K77netbackup`
HP	`/sbin/rc2.d/S777netbackup` (note three 7s) `/sbin/rc0.d/K777netbackup`

Linux	`/etc/rc.d/rc2.d/S77netbackup`
	`/etc/rc.d/rc3.d/S77netbackup`
	`/etc/rc.d/rc5.d/S77netbackup`
	`/etc/rc.d/rc6.d/K77netbackup`
	`/etc/rc.d/rc0.d/K77netbackup`

Other servers	`/etc/rc2.d/S77netbackup` `/etc/rc0.d/K77netbackup`

f. Remove any NetBackup entries from the following files:

System	File	NetBackup Entry
AIX	`/etc/inittab`	`/etc/rc.veritas.aix`

g. Execute the following command to remove the NetBackup-Java application state data for the root account:

```
/bin/rm -rf /.nbjava
```

h. Inform NetBackup-Java users that they can remove their `$HOME/.nbjava` directory.

The `$HOME/.nbjava` directory contains application state information (for example, table column order and size) that is saved when the user exits NetBackup-Java applications.

Uninstalling NetBackup Clients

> **Note** If you are uninstalling NetBackup from a machine on which you have installed the NetBackup-Java Display Console, the Console will be also be removed when uninstalling NetBackup. You will need to reinstall the Console in order to continue using it on the machine.

For instructions on uninstalling NetBackup client software for the following platforms, refer to the *NetBackup Installation Guide for PC Clients.*

◆ Windows 95, 98, ME, NT, 2000, XP (32 nd 64 bit), and LE

◆ Macintosh

◆ Novell NetWare

▼ **To uninstall UNIX NetBackup client software**

1. Log on to the client system as the root user.

2. Remove the `/usr/openv` directory.

    If `/usr/openv` is a physical directory, execute:

    ```
    rm -rf /usr/openv
    ```

    If `/usr/openv` is a link, execute:

    ```
    cd /usr/openv
    rm -rf *
    cd /
    rm -f /usr/openv
    ```

3. Remove NetBackup entries in the `/etc/services` file, as follows.

    a. Edit the client's `/etc/services` file.

    b. Locate the lines marked by the following and remove them:

    ```
    # NetBackup services#

    .....

    # End NetBackup services #

    # Media Manager services #

    ....

    # End Media Manager services #
    ```

4. Remove the NetBackup entries in the `/etc/inetd.conf` file. For NCR this file is called `inetd.local`.

   a. Edit the client's `/etc/inetd.conf` file.

   b. Delete the lines for `bpcd`, `vnetd`, `vopied`, and `bpjava-msvc`.

5. Execute the following two shell commands to cause `inetd` to read the updated `inetd.conf` (or `inetd.local`) file.

   a. Enter the following.

      For most UNIX clients:

      ```
      ps -ea | grep inetd
      ```

      For MacOS X 10.0, 10.1, and FreeBSD:

      ```
      ps -ax | grep inetd
      ```

   b. Run the `kill` command as follows. The process ID is the first number displayed in the output from the `ps` command.

      ```
      kill -1 process ID
      ```

      The `ps` command options may vary from one client platform to another.

6. For NetBackup-Java capable clients running the NetBackup-Java Administration Console, remove the NetBackup-Java state data by executing the following:

   ```
   /bin/rm -rf /.nbjava
   ```

7. Inform users of this machine that they can remove their `$HOME/.nbjava` directory.

   The `$HOME/.nbjava` directory contains application state information (for example, table column order and size) that is saved when the user exits NetBackup-Java applications.

Conducting a Test Backup and Restore   **5**

Once you have completed the test of your NetBackup Configuration settings, you are ready to conduct a test backup and restore operation. When you installed NetBackup BusinesServer software on your severs, client software was automatically installed on your server also. This means your server can be a master server and a client. For this reason, you may conduct a test backup and restore on the server without having to install your client software for this test.

Conducting a Test Backup

The following procedure guides you through the steps to initiate a simple backup process.

1. From the NetBackup Administration Console interface, select **Backup, Archive, and Restore**. The *Backup, Archive, and Restore* window appears.

2. Click the **Backup Files** tab. The *Backup Files* tabbed window refreshes.

3. Click the **Refresh** button. The **Contents of Selected Directory** window refreshes showing the contents of a selected directory.
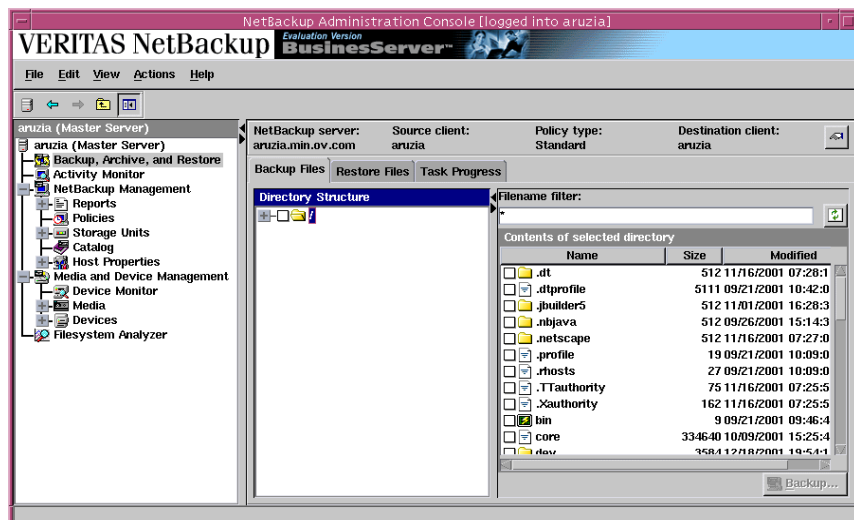
4. From the **Directory Structure** and the **Contents of Selected Directory** windows, select all of the folders and files that you want to back up.

- Click in an empty box to select a folder and the folders within it.

- Clicking on the name of the folder will display the complete contents of that folder in the **Contents of Selected Directory** window.

5. Click on the **Backup** button that is located on the lower, right side of the interface window. The *Specify Backup Options* window appears.
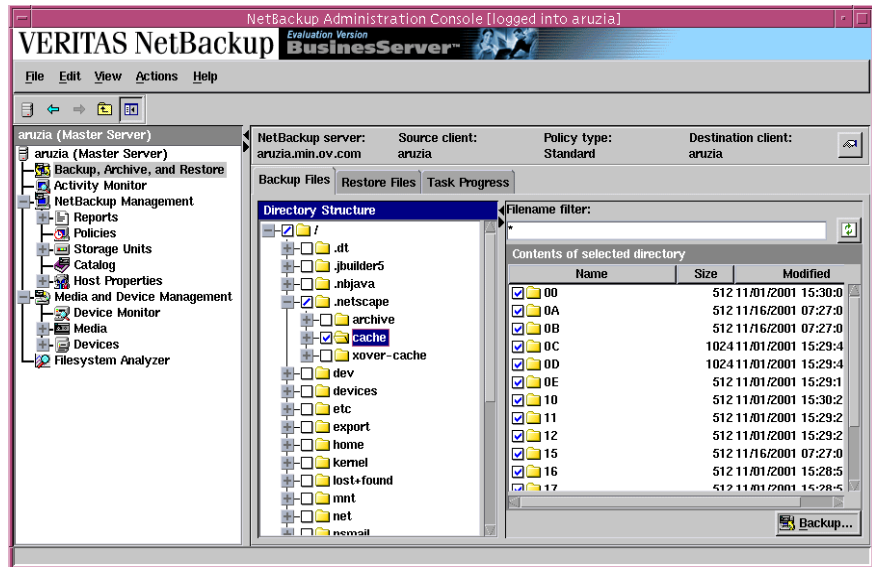
6. From the *Backup Files* window, confirm the following:

- The server name is correct

- The files and folders marked for backup are correct

From this window you can also select a different configured server from the **NetBackup server** drop-down menu, if applicable.
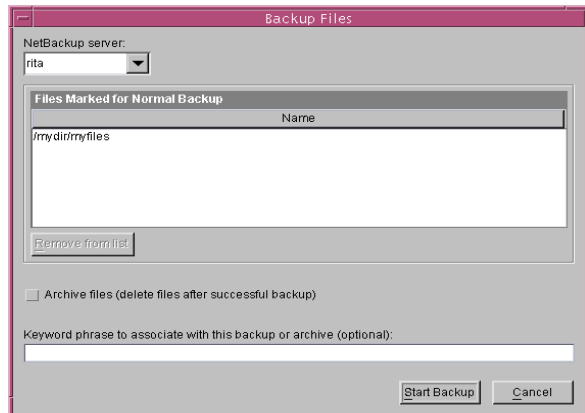
7. Check the **Archive files** check box if you want to delete the files after a successful backup operation.

8. Click **Start Backup**. A dialog box appears that states whether the backup was successfully initiated. You may elect to view the progress of your backup by clicking the **Yes** button.

9. The test backup will take a few minutes depending on the amount of data you have selected to save.

10. Once the backup is complete you can initiate a data restore. The following procedure describes a basic restore process.

Conducting a Restore

The following procedure describes how to initiate a basic restore of data from a normal backup.

1. From the *NetBackup Administration Console* interface, select **Backup, Archive, and Restore**. The *Backup, Archive, and Restore* window appears.

2. Click on the **Restore Files** tab. The *Restore Files* tabbed window refreshes

.
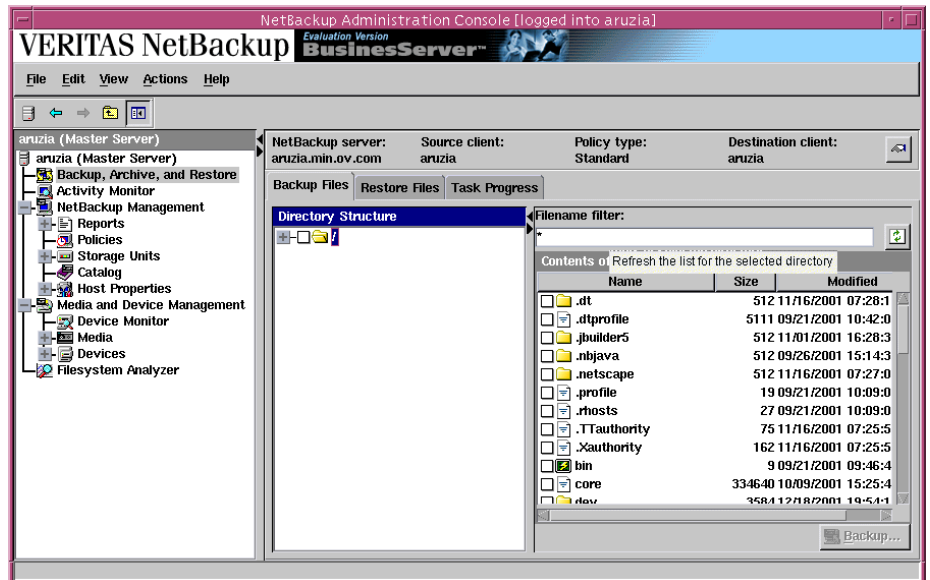
3. Click the **Refresh** button. The **Contents of Selected Directory** window refreshes showing all of the files and directories located in the directory displayed in the **Browse Directory** field.

4. Select the files and/or directories from the **Directory Structure** and **Contents of selected directory** windows to restore. You can also use the Browse Directory field to locate files to restore.

5. Click the **Restore** button, located on the lower, right side of the interface. The *Restore Files* window appears.
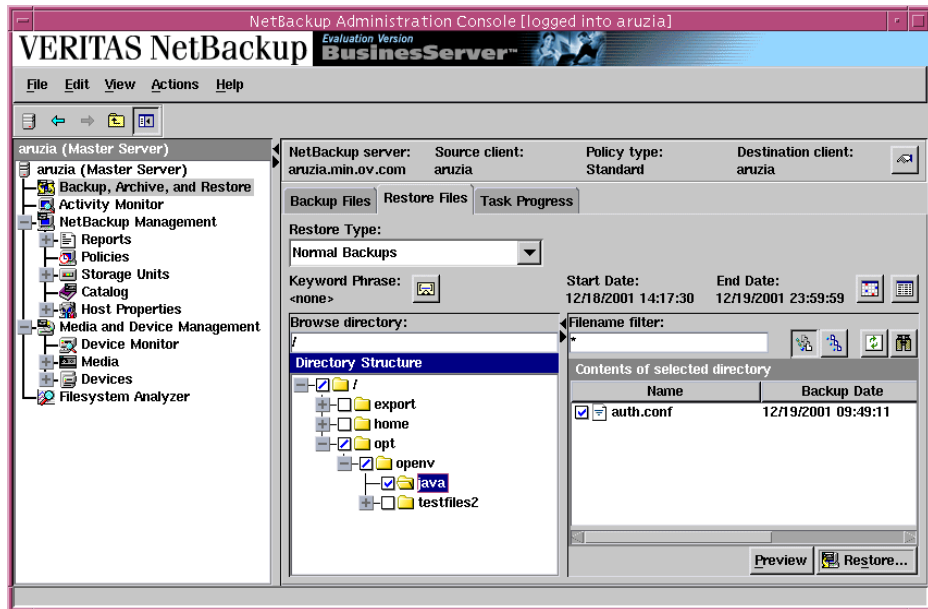
6. From the *Restore Files* window perform the following steps:

   a. Select the Restore Destination by choosing to:

      - Restore files to their original location

      - Restore files to a different location that you define. (These files will maintain the original structure.)

      - Restore individual folders or files to various locations that you determine.

b. Select a restore option. The selection you made in the previous step will help determine which restore option you select if the destination file already exists. You have the option to:

- Overwrite the existing file

- Restore directories without crossing mount points

- Rename hard links

- Rename soft links
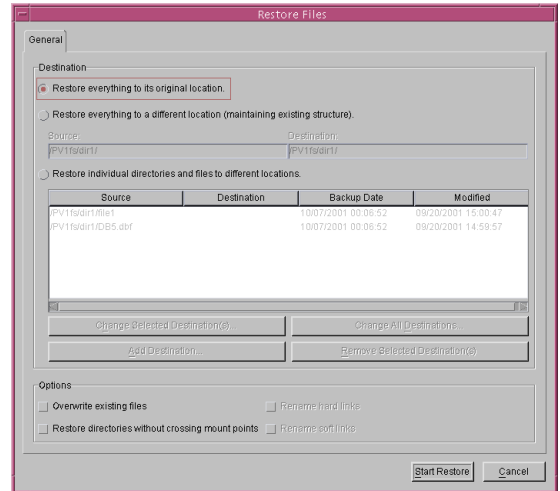
7. Click the **Start Restore** button. A dialog box will appear acknowledging if your restore was successful. This dialog box also asks if you would like to see the progress of your backup. (You may click **Yes** or **No**.)

8. The time it takes a restore to finish depends on the amount of data being restored. You may request to look at the status at any time by clicking on the **View Status** link on the tool bar.

This concludes a simple test restore. For additional information about conducting a restore and additional options available to you, refer to the *NetBackup BusinesServer System Administrator's Guide for UNIX*.

Related Documents $\qquad$ A

This appendix lists and describes the technical manuals that pertain to NetBackup.

The CD-ROM for each NetBackup product has a copy of the related manuals in Adobe Portable Document Format (PDF). The PDF files are either in the root directory or the `Docs` directory on the CD-ROM.

To view the PDF copies of the manuals, you need an Adobe Acrobat reader, which you can download from the Adobe web site at `www.adobe.com`. VERITAS assumes no responsibility for the correct installation or use of the reader.

Release Notes

NetBackup Release Notes for UNIX and Windows

Provides important information about NetBackup DataCenter and BusinesServer products on UNIX- and Windows-based servers, such as the platforms and operating systems that are supported and operating notes that may not be in the NetBackup manuals or the online help.

Getting Started Guides

NetBackup BusinesServer Getting Started Guide for UNIX

Explains how to get NetBackup BusinesServer software installed and running on UNIX-based platforms.

Installation Guides

◆ *NetBackup Installation Guide for PC Clients*

Explains how to install NetBackup PC client software. The supported PC clients are Microsoft Windows, Macintosh, and Novell NetWare.

◆ *NetBackup DataCenter Installation Guide for UNIX*

Explains how to install NetBackup DataCenter software on UNIX-based platforms.

System Administrator's Guides - Basic Product

◆ *NetBackup BusinesServer System Administrator's Guide for UNIX*

Explains how to configure and manage NetBackup BusinesServer on a UNIX server.

◆ *NetBackup DataCenter Media Manager System Administrator's Guide - UNIX*

Explains how to configure and manage the storage devices and media on UNIX servers running NetBackup DataCenter. Media Manager is part of NetBackup DataCenter.

◆ *NetBackup BusinesServer Media Manager System Administrator's Guide for UNIX*

Explains how to configure and manage the storage devices and media on UNIX servers running NetBackup BusinesServer. Media Manager is part of NetBackup BusinesServer.

System Administrator's Guides - Agents and Options

◆ *NetBackup Database Archiver System Administrator's Guide*

Explains how to install, configure, and use NetBackup for Database Archiver for Oracle on UNIX.

◆ *NetBackup for DB2 on UNIX System Administrator's Guide*

Explains how to install, configure, and use NetBackup for DB2 on UNIX.

For IBM DB2 version 5.2, you may also need the following manuals from IBM:

IBM DB2 Universal Database for UNIX Quick Beginnings Version 5.2

IBM DB2 Universal Database for UNIX Extended Enterprise Edition Quick Beginnings Version 5.2

Cmd Ref IBM DB2 Universal Database Command Reference

For IBM DB2 version 6.1, you may also need the following manuals from IBM:

IBM DB2 Universal Database for UNIX Quick Beginnings Version 6

IBM DB2 Universal Database for UNIX Extended Enterprise Edition Quick Beginnings Version 6

Administration Guide:Design and Implementation Version 6

Administrative API Reference Version 6

Command Reference Version 6

Troubleshooting Guide Version 6

Quick Beginnings: Enterprise Extended Edition for UNIX Version 6

Quick Beginnings for UNIX Version 6

◆ *NetBackup Encryption System Administrator's Guide*

Explains how to install, configure, and use NetBackup encryption software to provide file-level encryption of backups and archives.

◆ *NetBackup for Informix System Administrator's Guide*

Explains how to install, configure, and use NetBackup for Informix to back up and restore Informix databases that are on a UNIX NetBackup client.

For this product, you may also need the following manual from Informix Software Incorporated:

Informix-Online Dynamic Server Backup and Restore Guide

Informix-Online Dynamic Server Administration Guide

◆ *NetBackup for Lotus Notes System Administrator's Guide for UNIX*

Explains how to install, configure, and use NetBackup for Lotus Notes to back up and restore Lotus Notes databases and transaction logs.

◆ *NetBackup for NDMP System Administrator's Guide*

Explains how to install, configure, and use NetBackup for NDMP to control backups on an NDMP host.

◆ *NetBackup for Oracle on UNIX System Administrator's Guide*

Explains how to install, configure, and use NetBackup for Oracle to back up and restore Oracle databases that are on a UNIX NetBackup client.

For this product, you may also need the following manuals from Oracle Corporation:

Oracle Enterprise Manager Administrator's Guide

Oracle7 Enterprise Backup Utility Administrator's Guide

Oracle Server Backup and Recovery Guide

Oracle7 Enterprise Backup Utility Installation and Configuration Guide

◆ *NetBackup for Oracle Advanced BLI Agent System Administrator's Guide - Solaris and HP-UX*

Explains how to install, configure, and use NetBackup for Oracle Advanced BLI Agent to back up and restore Oracle databases that are on a UNIX NetBackup client.

For this product, you may also need the following manuals from Oracle Corporation:

Oracle Enterprise Manager Administrator's Guide

Oracle8 Server Backup and Recovery Guide

For this product, also refer to the following VERITAS manuals:

Database Edition for Oracle Database Administrator's Guide

Storage Edition for Oracle Database Administrator's Guide

NetBackup for Oracle Advanced BLI Agent System Administrator's Guide for Backups Without RMAN

◆ *NetBackup for Oracle Advanced ServerFree Agent System Administrator's Guide - Solaris and HP*

Explains how to install, configure, and use NetBackup for Oracle Advanced ServerFree Agent to back up and restore Oracle databases that are on a UNIX NetBackup client.

For this product, you may also need the following manuals from Oracle Corporation:

Oracle Enterprise Manager Administrator's Guide

Oracle8i Backup and Recovery Guide

Oracle8i Server Administrator's Guide

Oracle8i Recovery Manager User's Guide and Reference

◆ *NetBackup for Oracle Advanced BLI Agent System Administrator's Guide for Backups without RMAN - Solaris and HP-UX*

Explains how to verify NetBackup for Oracle Advanced BLI Agent for Backups Without RMAN.

For this product, you may also need the following manuals from Oracle Corporation:

Oracle Enterprise Manager Administrator's Guide

Oracle8 Server Backup and Recovery Guide

For this product, also refer to the following VERITAS manuals:

NetBackup for Oracle Advanced BLI Agent System Administrator's Guide

Database Edition for Oracle Database Administrator's Guide

Storage Edition for Oracle Database Administrator's Guide

◆ *NetBackup for SAP on UNIX System Administrator's Guide*

Explains how to install, configure, and use NetBackup for SAP on UNIX.

For this product, you may also need the following manuals from Oracle Corporation:

Oracle Enterprise Backup Utility Installation and Configuration Guide

BC SAP Database Administration : Oracle

You may also need the following manual from SAP AG:

BC-BRI BACKINT Interface R/3 System, Release 3.x and 4.x

◆ *NetBackup for SYBASE on UNIX System Administrator's Guide*

Explains how to install, configure, and use NetBackup for SYBASE to back up and restore Sybase databases that are on a UNIX NetBackup client.

For this product, you may also need the following manuals from SYBASE Incorporated:

SYBASE SQL Server Installation and Configuration Guide

SYBASE SQL Server System Administration Guide

SYBASE SQL Server Utility Programs for Unix

SQL Server Configuration Guide

◆ *NetBackup Global Data Manager System Administrator's Guide for UNIX and Windows*

Explains how to install, configure, and use Global Data Manager (GDM) for NetBackup DataCenter and BusinesServer products on UNIX and Windows-based operating systems.

◆ *NetBackup Vault System Administrator's Guide for UNIX and Windows*

Describes how to configure and use logical vaults and profiles to duplicate backups, perform catalog backups, eject media, and generate reports.

◆ NetBackup Advanced Reporter System Administrator's Guide

NetBackup Advanced Reporter (NBAR) is a backup and storage management monitoring tool designed to simplify the task of monitoring and reporting on an organization's VERITAS NetBackup activities.

◆ *NetBackup SAN Shared Storage Option System Administrator's Guide for UNIX and Windows*

Provides information on installing and configuring the NetBackup Shared Storage Option (SSO) on UNIX and Windows-based servers. SSO is an extension to tape drive allocation and configuration for NetBackup DataCenter Media Manager.

User's Guides

◆ *NetBackup User's Guide for Mac OS*

Explains how to use NetBackup on a Macintosh client to perform backups, archives, and restores. This guide also contains some configuration instructions for the NetBackup client software.

◆ *NetBackup User's Guide for UNIX*

Explains how to use NetBackup on a UNIX client to perform backups, archives, and restores.

◆ *NetBackup Vault 4.5 Operator's Guide for UNIX and Windows*

Describes procedures for sending tapes offsite, receiving tapes on site, and running reports on offsite media and vault jobs.

Device Configuration Guide - Media Manager

◆ *NetBackup Media Manager Device Configuration Guide for UNIX*

Explains how to add device drivers and perform other system-level configurations for storage devices that are supported by NetBackup DataCenter and NetBackup BusinesServer Media Manager on UNIX hosts.

Troubleshooting Guides

◆ *NetBackup Troubleshooting Guide for UNIX*

Provides troubleshooting information for UNIX-based NetBackup DataCenter and BusinesServer products, including Media Manager.

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