

Veritas NetBackup™ Virtual Appliance Getting Started Guide

Release 3.0

VERITAS™

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Veritas Services and Operations Readiness Tools (SORT) is a website that provides information and tools to automate and simplify certain time-consuming administrative tasks. Depending on the product, SORT helps you prepare for installations and upgrades, identify risks in your datacenters, and improve operational efficiency. To see what services and tools SORT provides for your product, see the data sheet:

https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

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Product overview

This chapter includes the following topics:

- [NetBackup Virtual Appliance product description](#)
- [About the NetBackup Virtual Appliance combined master and media server role](#)
- [About the NetBackup Virtual Appliance documentation](#)

NetBackup Virtual Appliance product description

The NetBackup Virtual Appliance is a combined master and media server solution that is designed for use in a remote office or branch office. It provides a lower-cost alternative to existing NetBackup Appliance solutions for environments with smaller data protection requirements. The virtual appliance was developed for the sites that require protection of smaller data sets with minimal on-site infrastructure management expertise. Additionally, it can be beneficial in proof of concept situations as well as test environments. The NetBackup Virtual Appliance lets you leverage your existing NetBackup expertise, as it builds on existing NetBackup solutions. You can configure the NetBackup Virtual Appliance to link back to NetBackup in the data center for replication of remote office or branch office data.

The NetBackup Virtual Appliance provides a simplified solution for NetBackup configuration and the daily management of your backup environment. The goal is to provide a solution that eliminates the need to provide dedicated individuals to manage their backup environment.

The appliance software supports the following features:

- The NetBackup Virtual Appliance Shell Menu.
The shell menu is a command line interface for appliance configuration and management.
- NetBackup preinstalled.

NetBackup Enterprise Server software is already installed and configured to work with the operating system. This feature simplifies the deployment and integration into an existing NetBackup environment.

Note: The Enhanced Auditing feature that was released in NetBackup version 7.7 is not currently supported for use on NetBackup Virtual Appliance. This feature should not be configured or enabled on an appliance.

- Support for the core NetBackup software agents.
The NetBackup agents optimize the performance of critical databases and applications.
See the *NetBackup Administrator's Guide Volume I* for more information about the policy types that are supported for each software agent. For the latest appliance compatibility information, refer to the Hardware Compatibility List on the Veritas Support website:
www.netbackup.com/compatibility
- Media Server Deduplication Pool (MSDP) storage.
MSDP is an embedded deduplication technology that reduces the amount of space that is needed for backups.
- Symantec Data Center Security (SDCS) integration.
The SDCS agent is installed and configured when you initially deploy your appliance. By default, SDCS helps secure the appliance using host-based intrusion prevention and detection technology.
- AutoSupport.
The appliance can monitor key components and provide proactive monitoring and messaging. Veritas Support uses this information to resolve any issues that you might report.
- Bare Metal Restore (BMR) integration.
BMR is the server recovery option of NetBackup. BMR automates and streamlines the server recovery process.
- Backup of VMware virtual machines.
The appliance supports direct backup of VMware virtual machines. The appliance can back up virtual machines without a separate backup host.

About the NetBackup Virtual Appliance combined master and media server role

The NetBackup Virtual Appliance is a combined master and media server with its own virtual storage. You configure and use this appliance much like you would use a regular NetBackup master server with attached storage or a NetBackup 52xx Appliance that is configured as a master server. You can schedule backups or start a backup manually. Users with the appropriate privileges can perform restores.

This appliance role provides a simplified administrative interface for the local network and storage management. However, the majority of NetBackup administration such as backup management must be performed through the traditional NetBackup Administration Console.

For complete NetBackup administration information, see the *NetBackup Administrator's Guide for UNIX and Linux, Volume I and Volume II*.

About the NetBackup Virtual Appliance documentation

The NetBackup Virtual Appliance documentation helps to ensure that you can successfully install, configure, and use your appliance. The documentation includes the *NetBackup Virtual Appliance Getting Started Guide* and web topics that are available from the [NetBackup Virtual Appliance page](#) on the Veritas Support website.

Go to the [NetBackup Virtual Appliance page](#) to find additional information on:

- Appliance administration
- Commands
- Troubleshooting
- Security

All appliance documentation content is also searchable using your favorite web search engine.

Initial deployment

This chapter includes the following topics:

- [NetBackup Virtual Appliance deployment guidelines](#)
- [NetBackup Virtual Appliance initial deployment checklist](#)
- [Deploying a NetBackup Virtual Appliance](#)
- [Troubleshooting NetBackup Virtual Appliance initial deployment issues](#)

NetBackup Virtual Appliance deployment guidelines

Use the following configuration guidelines when you deploy a new NetBackup Virtual Appliance:

Table 2-1 Appliance deployment guidelines

Parameter	Description
Deployment requirements	<p>To deploy a NetBackup Virtual Appliance, you need a VMware vCenter Server user account and access to the vSphere Web Client. The appliance supports vSphere versions 5.5 and 6.0. Your vCenter Server account must have at least the minimum privileges required to deploy an OVF template.</p> <p>Refer to the VMware documentation for more information.</p>
Connectivity during deployment	<p>When you perform the appliance deployment, Veritas recommends that you take precautions to avoid loss of connectivity. Any loss of connectivity during deployment results in failure.</p> <p>The computer that you use to deploy the appliance should be set up to avoid the following events:</p> <ul style="list-style-type: none">■ Conditions that cause the computer to go to sleep■ Conditions that cause the computer to shut down or to lose power■ Conditions that cause the computer to lose its network connection

Table 2-1 Appliance deployment guidelines (*continued*)

Parameter	Description
Environment requirements	<p>The appliance uses 16 GB of RAM and 8 virtual CPUs (vCPUs).</p> <p>Make sure that both requirements are met before you deploy the appliance.</p>
Recommendations for optimal performance	<p>For optimal performance, Veritas recommends that you adhere to the following best practices:</p> <ul style="list-style-type: none"> ■ Set a CPU reservation to provide the appliance with full utilization of the configured vCPUs. ■ Do not overcommit the vCPUs on the ESX host. The number of vCPUs that are assigned to all virtual machines on the host should be equal to or less than the number of cores on that host. ■ Set a memory reservation to provide the appliance with full utilization of the available memory. ■ Do not overcommit the memory on the ESX host. The amount of memory that is assigned to all virtual machines on the host should be equal to or less than the amount of memory on that host. ■ Do not enable hyper-threading. ■ Use thick provisioning for the appliance virtual disks. ■ The NetBackup Virtual Appliance has a heavy I/O workload, so it should be isolated from shared storage as much as possible. At a minimum, make sure that the appliance uses a different datastore than other virtual machines with a heavy I/O workload.
Required names and addresses	<p>Before the initial deployment, gather the following information:</p> <ul style="list-style-type: none"> ■ Data center and storage details ■ Appliance host name and IP address ■ Netmask and Gateway IP address ■ DNS information ■ Names for AdvancedDisk and MSDP disk pools and storage units ■ New passwords for the <code>admin</code> and <code>maintenance</code> accounts <p>Note: The default password for appliance access is <code>P@ssw0rd</code>.</p> <p>See “NetBackup Virtual Appliance initial deployment checklist” on page 10.</p>
Licenses	<p>The appliance comes with a not for resale (NFR) license key that expires after a specific period of time. The appliance does not provide a warning message that this license key is about to expire. Therefore, Veritas recommends that you change this key to a permanent key after you deploy the appliance.</p> <p>Make sure that you replace the NFR key with a permanent key before it expires.</p> <p>Warning: The NetBackup Virtual Appliance has a specific license key, and if the correct key is not installed, the appliance services stop functioning after the evaluation key expires. Make sure that the permanent license key that you add is correct for NetBackup Virtual Appliance.</p>

NetBackup Virtual Appliance initial deployment checklist

This checklist is intended to help you plan for the initial configuration of your appliance. Use the checklist together with the initial deployment procedure. See [“Deploying a NetBackup Virtual Appliance”](#) on page 11.

For a new appliance, use the following tables to record the initial deployment settings for the appliance. When using a printed version of this checklist, make sure to place the completed checklist in a secure location.

Table 2-2 Data center details

Parameter	Setting
Appliance name	
Data center name	
ESX host name	
Destination datastore	

Table 2-3 Network configuration

Parameter	Setting
Appliance host name (Veritas recommends FQDN)	
DNS domain name	
Appliance IPv4 address	
(Optional) Appliance IPv6 address	
Netmask	
Gateway IPv4 address	
Primary DNS server IPv4 address	
(Optional) Additional DNS server IPv4 or IPv6 addresses	

Table 2-4 Storage configuration

Parameter	Setting
AdvancedDisk disk pool name	
AdvancedDisk storage unit name	
MSDP disk pool name	
MSDP storage unit name	

Table 2-5 Password change

Parameter	Setting
New <code>admin</code> password	
New <code>maintenance</code> password	

Deploying a NetBackup Virtual Appliance

The following procedures describe how to deploy and configure a NetBackup Virtual Appliance from the VMware vSphere Web Client, the NetBackup Virtual Appliance Shell Menu, and the NetBackup Administration Console.

Note: To ensure a successful deployment, make sure that you meet all of the deployment guidelines before you begin these procedures.

See “[NetBackup Virtual Appliance deployment guidelines](#)” on page 8.

To deploy a NetBackup Virtual Appliance

- 1 Download the NetBackup Virtual Appliance product file from the Licensing Portal on the [MyVeritas website](#) and save it to your local computer.
For more information on the Licensing Portal, see the [MyVeritas Licensing Portal Guide](#) on the Support website.
- 2 Review the initial deployment checklist to make sure that you have all of the necessary information to complete the deployment procedure. Veritas recommends that you print this file and fill it out for use as you perform the deployment. Then store it in a secure location for future reference.

See “[NetBackup Virtual Appliance initial deployment checklist](#)” on page 10.

- 3 Using the VMware vSphere Web Client, log on to the vCenter Server where you want to deploy your appliance.

Note: Your vCenter Server user account must have at least the minimum privileges required to deploy an OVF template. Refer to the VMware documentation for more information.

- 4 Select **File > Deploy OVF Template** to start the deployment wizard.
- 5 On the **Source** page of the deployment wizard, click **Browse** to navigate to the NetBackup Virtual Appliance product file. If you split the file when you downloaded it, make sure that all of the pieces are saved in the same folder and navigate to that folder.

Verify the path and click **Next**.
- 6 Review the **OVF Template Details** page and click **Next**.
- 7 On the **End User License Agreement** page, read through the EULA and click **Accept** and then **Next**.
- 8 Enter the destination details as follows:

- **Name:** Enter a unique name for your appliance.
- **Inventory Location:** Select the folder or the data center where you want the appliance to be located. The options are autopopulated based on what is available to that vCenter Server.

Click **Next**.

- 9 Select the resource location where you want the deployed template to run.

Click **Next**.

- 10 Select the destination storage where you want to store the appliance files.

Click **Next**.

Caution: If you select a storage cluster, make sure that one of the datastores in the cluster has enough storage space for the entire appliance. If none of the individual datastores in the cluster has enough space, the deployment fails.

- 11 Select **Thick Provision Lazy Zeroed** as the provisioning format for the appliance disks. For more information on provisioning, refer to the VMware documentation.

Click **Next**.

12 On the **Properties** page, fill in the following information:

Network configuration:

- **Host name**

Enter a short host name or a fully qualified domain name (FQDN) for this appliance. As a best practice, Veritas recommends that you use FQDN.

Caution: The host name can only be set during initial deployment. After the initial deployment has completed successfully, the only way to change the host name is to redeploy the appliance.

Note: If you plan to configure Active Directory (AD) authentication on this appliance, the host name must be 15 characters or less. Otherwise, AD configuration can fail.

- **DNS domain name**

Enter a DNS domain name for this appliance.

- **IP address**

Enter the IPv4 address to be used for this appliance.

Note: IPv6 addresses are not supported during the initial deployment process. However, you can configure an IPv6 address after deployment through the NetBackup Virtual Appliance Shell Menu.

See [“To complete the initial configuration of a NetBackup Virtual Appliance”](#) on page 15.

- **Netmask**

Enter the netmask that corresponds to the IP address.

- **Gateway**

Enter the IPv4 address of the gateway (network point) that acts as an entrance to another network.

- **DNS server**

Enter the IPv4 address of the primary DNS server for this appliance.

Note: You can only add one DNS server during initial deployment. If you want to add additional servers, you can do so after deployment through the NetBackup Virtual Appliance Shell Menu.

See ["To complete the initial configuration of a NetBackup Virtual Appliance"](#) on page 15.

Storage configuration:

- **AdvancedDisk disk pool name**
Enter a name for the AdvancedDisk disk pool on the appliance.
- **AdvancedDisk storage unit name**
Enter a name for the AdvancedDisk storage unit on the appliance.
- **MSDP disk pool name**
Enter a name for the MSDP disk pool on the appliance.
- **MSDP storage unit name**
Enter a name for the MSDP storage unit on the appliance.

Caution: You cannot change the storage configuration after initial deployment. After the initial deployment has completed successfully, the only way to change the storage configuration is to redeploy the appliance.

- 13** When you have filled in all of the required information, click **Next**.
- 14** Read through and verify the deployment options that you entered. If everything is correct, click **Finish** to deploy the appliance.

The amount of time that it takes for the deployment process to complete varies depending on your network connection. After the deployment, NetBackup Virtual Appliance automatically configures the network, the role, and the storage. This configuration process can take up to 30 minutes to complete.
- 15** Once the deployment and the automatic configuration are complete, proceed to the remaining configuration steps in the following procedure.

To complete the initial configuration of a NetBackup Virtual Appliance

- 1 After you have deployed a new virtual appliance, open an SSH session to the appliance to log on to the NetBackup Virtual Appliance Shell Menu.

The logon is `admin`, and the default password is `P@ssw0rd`.

Note: You cannot log on to the NetBackup Virtual Appliance Shell Menu until the automatic configuration is complete. If you attempt to log on before then, a message appears to let you know that the configuration is still in progress. If you see this message, wait a few minutes and try again.

- 2 Use the following command to verify that the automatic configuration completed successfully:

```
Main > Appliance > Status
```

The command output should contain a message similar to the following:

```
Appliance Version is 3.0.
```

```
Appliance is configured as master appliance.
```

If the output does not show that the appliance is configured as a master appliance, you need to redeploy the appliance or perform other troubleshooting steps to fix the issue before you proceed to the next step. See [“Troubleshooting NetBackup Virtual Appliance initial deployment issues”](#) on page 17.

- 3 Use the following commands to change the `admin` and the `maintenance` account passwords from the known default password (`P@ssw0rd`):

- `Main > Settings > Password admin`

- `Main > Settings > Password maintenance`

- 4 Use the following command to set the time zone:

```
Main > Network > TimeZone Set
```

Select the appropriate time zone from the displayed list.

- 5 Use the following command to add a Network Time Protocol (NTP) server:

```
Main > Network > NTPServer Add <Server>
```

Where `<Server>` is the name of the NTPServer.

- 6 Add a permanent license key before the evaluation key expires with the following command:

```
Main > Manage > License > Add
```

You can locate your permanent license key from the Licensing Portal on the [MyVeritas website](#).

Warning: The NetBackup Virtual Appliance has a specific license key, and if the correct key is not installed, the appliance services stop functioning after the evaluation key expires. Make sure that the permanent license key that you add is correct for NetBackup Virtual Appliance.

- 7 (Optional)

If you want to configure an IPv6 address for the appliance, run the following command:

```
Main > Network > IPv6 <IPAddress> <Prefix> [InterfaceName]
```

Where *<IPAddress>* is the IPv6 address and *<Prefix>* is the prefix length.

[InterfaceName] is an optional parameter for a comma-separated list of interface names. If an interface name is not provided, the command searches for an interface and configures it.

- 8 (Optional)

If you want to add more than one DNS server on the appliance, run the following command:

```
Main > Network > DNS Add NameServer <IPAddress>
```

Where *<IPAddress>* is the IP address of the additional DNS server.

The address can be either IPv4 or IPv6. Only global-scope and unique-local IPv6 addresses are allowed.

- 9 Log on to the appliance from the NetBackup Administration Console and activate the NetBackup catalog backup policy.

By default, the appliance creates an inactive backup policy that uses a Storage Lifecycle Policy (SLP) to protect the NetBackup catalog. The SLP backs up the data to AdvancedDisk and then duplicates it to MSDP. You are then able to use Auto Image Replication to save your catalog backup off site. Veritas recommends that you use this replication-based strategy for disaster recovery (DR) due to the combined master and media server role of the appliance.

To activate the policy, navigate to the **NetBackup Management > Policies** tab in the Administration Console, right-click on the `nbu-catalog` policy, and select **Activate**.

After the appliance is configured and operational, you are ready to install NetBackup client software on the computers that you want to back up. See [“About installing NetBackup Administration Console and client software”](#) on page 21.

Troubleshooting NetBackup Virtual Appliance initial deployment issues

Before you can begin troubleshooting a NetBackup Virtual Appliance initial deployment failure, you need to determine when the problem occurred. A failure can occur during either of the following processes:

- The OVF deployment wizard operations in the vSphere Web Client
If an error occurs in the OVF deployment wizard, the only way to fix it is to restart the deployment. Before you do so, make sure that you verify the information that you entered in the deployment wizard. You can also reference the VMware documentation for help with specific error messages.
- The NetBackup Virtual Appliance automatic configuration
If an error occurs during the automatic configuration process, the OVF deployment wizard behaves as if the deployment was successful. However, if you log on to the NetBackup Virtual Appliance Shell Menu and run the `Main > Appliance > Status` command, the appliance appears to be in a factory state and is not configured as a master appliance.
The following are a few common reasons for the automatic configuration to fail:
 - Typos in the deployment wizard
 - Incorrect IP addresses
 - Incorrect host name or DNS information

You can check the `boot` log for additional details to help determine the exact error that occurred. Use the following steps to view the `boot` log:

- Log on to the NetBackup Virtual Appliance Shell Menu and enter the `Main > Support > Logs > Browse` command.
- At the `LOGROOT/>` prompt, enter `cd OS` and then `less boot.log`.

The most straightforward method to resolve configuration errors is to redeploy the appliance, making sure that you enter the correct information in the deployment wizard.

However, if you have encountered multiple failures or want to try to resolve the issue from the NetBackup Virtual Appliance Shell Menu, use the following procedure to manually complete the configuration process.

To manually configure the appliance networking from the NetBackup Virtual Appliance Shell Menu

- 1 Open an SSH session to the appliance to log on to the NetBackup Virtual Appliance Shell Menu.

The logon is `admin`, and the default password is `P@ssw0rd`.

If you cannot open an SSH session to the appliance, you can attempt to log on from the vSphere Web Client. Navigate to the deployed appliance and select the **Console** tab to access the shell menu.

If you still cannot log on, return to the OVF deployment wizard and redeploy the appliance.

- 2 Navigate to the `Main > Network` view and enter the following command to configure the IP address of a single network that you want your appliance to connect to:

```
Configure IPAddress Netmask GatewayIPAddress eth1
```

Where *IPAddress* is the new IP address, *Netmask* is the netmask that corresponds to the IP address, and *GatewayIPAddress* is the IP address of the default gateway for the interface.

The *IPAddress* and the *GatewayIPAddress* can be an IPv4 or IPv6 address. Only global-scope and unique-local IPv6 addresses are allowed.

Remember that you should not use both IPv4 and IPv6 address in the same command. For example, you cannot use `Configure 9ffe::9 255.255.255.0 1.1.1.1..` You should use `Configure 9ffe::46 64 9ffe::49 eth1`

- 3** From the `Main > Network` view, use the following command to set the appliance DNS domain name:

```
DNS Domain Name
```

Where *Name* is the new domain name for the appliance.

- 4** From the `Main > Network` view, use the following command to add the DNS name server to your appliance configuration:

```
DNS Add NameServer IPAddress
```

Where *IPAddress* is the IP address of the DNS server.

The address can be either IPv4 or IPv6. Only global-scope and unique-local IPv6 addresses are allowed.

- 5** From the `Main > Network` view, use the following command to set the host name for your appliance:

```
Hostname Set Name
```

Where *Name* is a short host name or a fully qualified domain name (FQDN) for the appliance. As a best practice, Veritas recommends that you use FQDN.

Caution: The host name can only be set during initial deployment. After the initial deployment has completed successfully, the only way to change the host name is to redeploy the appliance.

Note: If you plan to configure Active Directory (AD) authentication on this appliance, the host name must be 15 characters or less. Otherwise, AD configuration can fail.

- 6** Use the following command to set the role of the appliance:

```
Main > Appliance > Master
```

- 7 Use the following command to verify that the networking and the role configuration were successful:

```
Main > Appliance > Status
```

The command output should contain a message similar to the following:

```
Appliance Version is 3.0.
```

```
Appliance is configured as master appliance.
```

- 8 If everything completed successfully, return to the initial deployment procedure and complete the remaining steps for the appliance configuration. See [“To complete the initial configuration of a NetBackup Virtual Appliance”](#) on page 15.

If none of these steps resolved your issue, you can find additional troubleshooting information for specific appliance issues from the [NetBackup Virtual Appliance page](#) on the Veritas Support website. Use the search bar at the top of the page to look for articles relating to specific issues.

If you still need assistance, contact Veritas Support.

Post deployment procedures

This chapter includes the following topics:

- [About installing NetBackup Administration Console and client software](#)

About installing NetBackup Administration Console and client software

You can use two different methods to install the NetBackup client software on the clients that you want to backup. You can install NetBackup client software on clients as follows:

- Use CIFS and NFS shares and run scripts to install the software silently. Depending on the operating system, you run the `quickinstall.exe` script or the `unix-client-install` script. This is a silent install. The scripts do not prompt you for any user-related questions. They automatically update the NetBackup configuration on the client with the appliance server name as the Master server.
- Select a link on the appliance welcome page to download the packages and install the software.

On the appliance welcome page, you can click on the **Software** link to download a package that contains the NetBackup Administration Console and the NetBackup client software.

You can also elect to download and install the NetBackup Administration Console. To download and install the client software, you perform the following functions:

- Choose the client type that you want to install.

- Select the software package to download.
- Unzip or untar the package.
- Run the install (UNIX) or setup.exe (Windows) script.
- Update the NetBackup configuration on client with the Master Server information (for example, `bp.conf` on UNIX systems).

See [“Installing NetBackup client software through CIFS and NFS shares”](#) on page 22.

See [“Downloading NetBackup client packages to a client from a NetBackup Virtual Appliance”](#) on page 24.

See [“Downloading the NetBackup Administration Console to a Windows computer from a NetBackup Virtual Appliance”](#) on page 26.

Installing NetBackup client software through CIFS and NFS shares

After all appliance configuration has been completed, you can use the following procedures to install NetBackup client software on the Windows and UNIX clients that are used with your NetBackup Virtual Appliance. These procedures describe how to install the client software through a CIFS or an NFS share.

Note: If you have existing NetBackup clients and add-ons that you want to use with the appliance master server, they must be version 6.0 or later. For these clients, you only need to add the appliance master server name to the client.

NetBackup Windows client software installation through a CIFS share

To install NetBackup client software on a Windows client through a CIFS share

- 1 On the appliance where the client software resides, log on to the NetBackup Virtual Appliance Shell Menu with your administrator credentials.
- 2 Open the CIFS share using the following command:

```
Main > Settings > Share ClientInstall Open
```

- 3 On the Windows client computer where you want to install the NetBackup client software, log on as the administrator.
- 4 Open a map or a directory to the following CIFS shared folder on the appliance:

```
\\<appliance_name>\install
```

- 5 Click on the Windows executable, **quickinstall.exe**.

This action installs the NetBackup client software and adds the appliance master server name on the client.

- 6 On the appliance, close the shared directory using the following command:

```
Main > Settings > Share ClientInstall Close
```

NetBackup UNIX client software installation through an NFS share

To install NetBackup client software on a UNIX client through an NFS share

- 1 On the appliance where the client software resides, log on to the NetBackup Virtual Appliance Shell Menu with your administrator credentials.

- 2 Open the NFS share using the following command:

```
Main > Settings > Share ClientInstall Open
```

- 3 On the UNIX client computer where you want to install the NetBackup client software, log on as root.

- 4 Mount the following NFS share:

```
<appliance_name>:/inst/client
```

- 5 Browse the files within the NFS share directory. Files that are similar to the following appear:

```
.packages          clientconfig       quickinstall.exe
PC_ClnT            docs              unix-client-install
```

- 6 Run the `unix-client-install` script.

This action installs the NetBackup client software.

- 7 Add the appliance master server name to the `bp.conf` file on the client as follows:

- On the client, navigate to the following location:

```
cd /usr/opensv/netbackup
```

- Enter `ls` to see the contents of the directory.

- Open the `bp.conf` file in a text editor.

- Enter the fully qualified host name of the appliance master server.

- Save your changes and close the file.
- 8** On the appliance, close the shared directory using the following command:
- ```
Main > Settings > Share ClientInstall Close
```
- See [“Downloading NetBackup client packages to a client from a NetBackup Virtual Appliance”](#) on page 24.
- See [“Downloading the NetBackup Administration Console to a Windows computer from a NetBackup Virtual Appliance”](#) on page 26.

## Downloading NetBackup client packages to a client from a NetBackup Virtual Appliance

You can download NetBackup client software from a NetBackup Virtual Appliance to any client that you want to back up. The appliance welcome page provides a **Download Packages** section to download the client packages.

The packages are listed by operating system type in a drop-down box as follows:

- All
- Windows
- Linux
- Solaris
- AIX
- HP
- BSD
- Mac OS
- VMware vCenter Plug-in

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**Note:** If you download Linux, UNIX, Solaris, AIX, or BSD packages, Veritas recommends GNU tar version 1.16 or higher to extract the .tar packages.

For more information, see the following Technote on the Veritas Support website:

<https://www.veritas.com/docs/TECH154080>

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In addition to the downloading instructions, this procedure also includes the steps to extract and install the downloaded files on to the client.



### To download NetBackup client packages from a NetBackup Virtual Appliance to a client

- 1 Log in to the client that you want to back up.
- 2 Open a browser window and enter the following:  
**https://<host.domain>**, where *<host.domain>* is the fully qualified domain name (FQDN) of the appliance and can also be an IP address.
- 3 In the middle of the landing page, in the section **Download Packages**, click on the drop-down box to see the list of packages.
- 4 Right-click the selected package and specify the location to download it onto the client.  
Example locations are as follows:
  - On Windows platforms, download the package to `C:\temp` or to the desktop. To determine the type of hardware on your Windows system, right-click **My Computer** and select **Properties**.
  - On Linux or UNIX platforms, download the package to `/tmp`.
- 5 Unzip or untar the package.
- 6 Install the client software as follows:
  - Windows systems  
Click the **setup.exe** file.
  - UNIX systems  
Run the `.install` script.
- 7 After you have successfully installed the client software, add the appliance master server name to the client as follows:

### Windows systems

- After NetBackup has been installed on the client, open the Backup, Archive, and Restore interface.
  - Start > All Programs > Veritas NetBackup > Backup, Archive, and Restore**
- From the Backup, Archive, and Restore interface, select **File > Specify NetBackup Machines and Policy Type...**
- From the **Specify NetBackup Machines and Policy Type** dialog, enter the server name in the field **Server to use for backups and restores**. Then click **Edit Server List** and click **OK**.
- In the dialog box that appears, enter the fully qualified host name of the appliance master server and click **OK**.
- Close the Backup, Archive, and Restore interface.
- Restart the NetBackup Client Services by opening a Windows Command prompt. Then, enter `services.msc` and press **Enter**.

### UNIX systems

- On the client, navigate to the following location:
  - `cd /usr/opensv/netbackup`
- Enter `ls` to see the contents of the directory.
- Open the `bp.conf` file in a text editor.
- Enter the fully qualified host name of the appliance master server.
- Save the changes and close the file.

See [“Installing NetBackup client software through CIFS and NFS shares”](#) on page 22.

See [“Downloading the NetBackup Administration Console to a Windows computer from a NetBackup Virtual Appliance”](#) on page 26.

## Downloading the NetBackup Administration Console to a Windows computer from a NetBackup Virtual Appliance

You can download the NetBackup Administration Console software from a NetBackup Virtual Appliance to a Windows computer that you want to use to access the appliance. The Windows computer does not require NetBackup installation to use the administration console. The appliance welcome page provides a **Download Packages** section to download the NetBackup Administration Console package.

In addition to the downloading instructions, this procedure also includes the steps to extract and install the downloaded files on to the client.

### To download the NetBackup Administration Console package from a NetBackup Virtual Appliance appliance to a Windows computer

- 1 Log into the Windows computer that you want to use for appliance access.
- 2 Open a browser window and enter the following:  
**https://<host.domain>**, where *<host.domain>* is the fully qualified domain name (FQDN) of the appliance and can also be an IP address.
- 3 In the middle of the landing page, in the section **Download Packages**, click on the drop-down box and select **Windows**.
- 4 When the package file name appears under the drop-down box, right-click on it and select either **Download Linked File** or **Download Linked File As**, then specify the location to download the package onto the Windows computer.  
For example, download the package to `C:\temp` or to the desktop.
- 5 Unzip the package.
- 6 Install the administration console software as follows:
  - On the client, navigate to the `Addons/JavaInstallFiles` directory.
  - Click on the **setup.exe** file.

See [“Downloading NetBackup client packages to a client from a NetBackup Virtual Appliance”](#) on page 24.

See [“Installing NetBackup client software through CIFS and NFS shares”](#) on page 22.

# Introduction to the NetBackup Virtual Appliance Shell Menu

This chapter includes the following topics:

- [Using the NetBackup Virtual Appliance Shell Menu](#)
- [About the NetBackup Virtual Appliance Shell Menu command views](#)

## Using the NetBackup Virtual Appliance Shell Menu

This section details the use, options, and organization of the NetBackup Virtual Appliance Shell Menu.

The initial view outlines the various categories of tasks you can perform from the command-line interface.

All the commands are auto-completed. You can press **Tab** or **Enter** to complete a command.

The following is a list of helpful tips on how to use the NetBackup Virtual Appliance Shell Menu:

- When you press the `?` key, more information about the commands or sub-views that are available under that view. If you press `?` after you enter a command, the format and usage of the parameters for that command appear.
- When you press the space bar key, the next parameter that needs to be entered is displayed.

- When you press the Enter key, the next "mandatory" parameter that needs to be entered is displayed. A "mandatory" parameter is one that does not have default values.

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**Note:** In the documentation, command variables that are *italicised* or in angular brackets (<>) are mandatory variables; whereas command parameters that are in square brackets ([]) are optional. For example, in the `Main > Manage > MountPoints > Unmount MountPoint [Force]` command, where *MountPoint* is a mandatory variable and [*Force*] is an optional parameter.

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- The Secure Shell(SSH) sessions have a limited idle time due to security limits on the Red Hat Enterprise Linux (RHEL) Operating System. You may experience the following issues:
  - The user is logged out automatically if the SSH session remains idle up to the current session time limit.
  - Commands fail to complete if they require more time than the current session time limit. One example where you may experience this issue is when you add a large number of LDAP or AD users and user groups.

To help avoid these issues, keep the session alive for a longer duration by increasing the session time limit in the SSH client. For detailed configuration instructions, refer to your SSH client documentation.

## About the NetBackup Virtual Appliance Shell Menu command views

When you enter the NetBackup Virtual Appliance Shell Menu, you enter on the `Main_Menu` view. This view is the starting point from which you can configure, manage, monitor, and support your appliance using the command line. The following table describes the views and commands that are available for you to use.

**Table 4-1** NetBackup Virtual Appliance commands and views from the `Main_Menu` view

| Command                | Explanation                                                                       |
|------------------------|-----------------------------------------------------------------------------------|
| <code>Appliance</code> | Enter the <code>Appliance</code> view to manage your master and media appliances. |
| <code>Exit</code>      | Exit the current shell and log out.                                               |
| <code>Manage</code>    | Enter the <code>Manage</code> view to manage your appliance.                      |

**Table 4-1** NetBackup Virtual Appliance commands and views from the `Main_Menu` view (*continued*)

| Command  | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monitor  | Enter the <code>Monitor</code> view to monitor appliance activities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Network  | Enter the <code>Network</code> view to be able to administer your network.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Reports  | Enter the <code>Reports</code> view to examine the running and historical state of the host.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Settings | Enter the <code>Settings</code> view to change the appliance settings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Shell    | <p>This command appears on all of the other command views.</p> <p>Use the following commands to do the following: command line history information, and to return to the main menu.</p> <ul style="list-style-type: none"> <li>■ <code>Shell Help</code><br/>Display the help for using the shell menu.</li> <li>■ <code>Shell History [Limit]</code><br/>Displays the command-line history of the current session. You can set a limit with this command that defines the size of the history list. A limit of zero means the list has no boundaries.</li> <li>■ <code>Shell Main</code><br/>Returns you to the main menu.</li> </ul> |
| Support  | Enter the <code>Support</code> view to enable and administer support capabilities on your appliance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Return   | This command is not present on the <code>Main_Menu</code> view, however, it appears on all other views. Use this command to return you to the previous menu.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

See [“Using the NetBackup Virtual Appliance Shell Menu”](#) on page 28.

# Limitations and Operational Notes

This appendix includes the following topics:

- [Known limitations of the NetBackup Virtual Appliance 3.0 release](#)
- [Operational Notes for the NetBackup Virtual Appliance 3.0 release](#)

## Known limitations of the NetBackup Virtual Appliance 3.0 release

The NetBackup Virtual Appliance contains similar software as the NetBackup 52xx Appliances. However, some of the features that are supported on the physical appliances are not currently supported on the virtual appliance.

The following list describes the known limitations for the NetBackup Virtual Appliance 3.0 release:

- The appliance software is currently available in English only.
- The NetBackup Virtual Appliance Web Console and the Veritas Remote Management interface (IPMI) are not supported. Use the NetBackup Virtual Appliance Shell Menu or the NetBackup Administration Console to log on and manage the appliance.
- Recovery operations such as user checkpoints and factory reset are not available, so you cannot return your appliance to an earlier state. If you encounter any severe issues, contact Veritas Support for assistance. You may need to redeploy the appliance if the issue cannot be resolved.
- You cannot add additional media servers to the appliance.

- You cannot add additional storage to the appliance beyond the licensed capacity. The configured backend storage cannot be expanded beyond 2 TB.
- The following storage features are not supported:
  - Resizing the partitions
  - Tape devices and libraries
  - NetBackup Cloud Storage
  - The NetBackup OpenStorage option (OST)
- The following network features are not available:
  - Fibre Channel
  - Fibre Transport
  - SAN Client
  - VLAN
  - Link Aggregation (bonds)
  - IPsec
  - iSCSI
- The Copilot feature is not available.
- The Log Forwarding feature is not available.
- The self-test feature is limited to the NetBackup Virtual Appliance software.
- You cannot register your appliance or access the MyAppliance portal for this release. The Call Home and AutoSupport features are still supported and are enabled by default. Appliance monitoring is limited to the following:
  - Partition information
  - MSDP statistics
  - NetBackup Virtual Appliance software version
  - NetBackup version
  - Appliance model
  - Appliance configuration

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**Note:** The `Settings > Alerts > CallHome Registration Show` command is available in the NetBackup Virtual Appliance Shell Menu. However, it directs users to the MyAppliance portal, which does not allow registration for the virtual appliance.

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- The Symantec Data Center Security (SDCS) managed mode is not currently available. SDCS operates in unmanaged mode on the appliance.
- You cannot configure IPv6 addresses during deployment. IPv6 can be configured after deployment from the NetBackup Virtual Appliance Shell Menu.

## Operational Notes for the NetBackup Virtual Appliance 3.0 release

This chapter contains the topics that explain important aspects of NetBackup Virtual Appliance 3.0 operations that may not be documented elsewhere in the documentation.

Because NetBackup Virtual Appliance 3.0 installs NetBackup 8.0 software, the operational notes that apply to NetBackup 8.0 also apply to NetBackup Virtual Appliance 3.0. For more information on the operational notes for NetBackup, refer to the *NetBackup 8.0 Release Notes*. The *NetBackup Release Notes* are available from the [NetBackup Documentation page](#) on the Veritas Support website.

The following list contains the notes and the known issues that apply for this release:

- WAN Optimization may not be enabled after you deploy NetBackup Virtual Appliance 3.0. The `WANOptimization> Status` command output shows that the feature is enabled; however, this output may not be correct. For help determining if WAN Optimization is enabled, contact your Technical Support Representative and ask them to reference article number 000116840.
- If you use NetBackup OpsCenter, the information that displays for the NetBackup Virtual Appliance on the **Appliance Hardware** page does not apply. The collected hardware information displays as question marks or as error messages similar to the following:  
 No <part(s)> detected  
 All of this information can be disregarded.
- The `Settings > Alerts > CallHome Registration Show` command is available in the NetBackup Virtual Appliance Shell Menu. However, the NetBackup Virtual Appliance is not currently supported for registration. Visit the [MyAppliance portal](#) to see the latest information about supported appliance models.
- The `Monitor > SDCS > Audit View EventType <code>` command does not accept the following event type codes, so you cannot audit the related SDCS logs from the NetBackup Virtual Appliance Shell Menu:

PBOP IPS Overflow

PCRE IPS Create  
 PDES IPS Destroy  
 PFIL IPS File  
 PMNT IPS Mount  
 PNET IPS Network  
 POSC IPS System Call  
 PPST IPS PSET  
 PREG IPS Registry

- During system startup, some VCS-related error messages may occur and store in the `LOGROOT/>OS>messages` log file. You can use the `Main > Support > Logs > Browse` command to check the log file. Any messages that begin with `VCS ERROR` are irrelevant to the appliance software version 3.0 and you can safely ignore them. The following is an example message that may appear in the log file:  

```
VCS ERROR V-16-1-11032 Registration failed.
```
- An appliance self-test fails if the login banner heading or a single line in the login banner message contains only the following text: `ERROR:.`
- If you attempt to create appliance users from multiple sessions simultaneously, the user creation may fail. If this issue occurs, retry the user creation for any users that failed.
- Windows 7/8.1 clients cannot automatically access the appliance CIFS shares. To work around this issue, run the following command from a Windows command prompt on the client:  

```
net use /user:admin \\appliance-name *, where appliance-name is the fully qualified domain name (FQDN) of the appliance.
```

 Enter your appliance administrator password at the prompt.  
 Once you have run this command, the client is able to access the CIFS shares.
- If you use a network protocol analyzer like ManageEngine or Wireshark and have SNMP configured on the appliance, the `TimeTicks` field on the appliance SNMP traps is incorrect.
- For this release of NetBackup Virtual Appliance, Replication Director (RD) restores do not support dynamic multi-pathing (DMP) when the appliance is used as a backup or a recovery host.

- The functionality of Active Directory (AD) user names is inconsistent, as described in the following scenarios:
  - NetBackup Virtual Appliance Shell Menu  
 This interface does not recognize Active Directory (AD) user names as case sensitive.
  - NetBackup Java Console  
 This interface does recognize Active Directory (AD) user names as case sensitive. When you enter these user names with all lowercase letters, access to the NetBackup Administrator's Console is granted. If you enter these user names with any or all uppercase letters, access to the NetBackup Backup, Archive, and Restore interface is granted.
- The `Main > Settings > Security > Authentication > LDAP > Certificate set path name` command in the NetBackup Virtual Appliance Shell Menu does not allow any certificate path names that contain dashes.