

Symantec NetBackup Appliance Upgrade Guide

Release 2.6.1

NetBackup 52xx and 5330



Symantec NetBackup Appliance Administrator's Guide

Documentation version 2.6.1

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North America and Latin America	supportsolutions@symantec.com

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Introduction to the guide

This chapter includes the following topics:

- About the NetBackup Appliance Upgrade Guide
- What's new in NetBackup Appliance 2.6.1 software upgrade

About the NetBackup Appliance Upgrade Guide

This guide provides the information on upgrading your Symantec NetBackup Appliances with the appliance software version 2.6.1 and 2.6.0.x. The guide provides steps to upgrade the NetBackup Appliance using the NetBackup Appliance Web Console and the NetBackup Appliance Shell Menu. It also provides information to troubleshoot the issues that are related to the overall upgrade process.

This guide helps you to complete the following tasks:

- Analyze your upgrade requirements.
- Understand and adhere to general guidelines and best practices.
- Perform steps to complete the upgrade process .
- In the event of an upgrade failure, locate the relevant information to identify the core problem by referencing to the relevant logs.
- Resolve the issues that you may encounter by implementing the best troubleshooting practices.

Why should you upgrade your NetBackup Appliance software

By keeping your software up-to-date, you are less likely to encounter compatibility issues and better equipped to deal with new issues. It is recommended to keep your software up-to-date for the following reasons:

- A software upgrade introduces improvements and new features. These improvements continually increase the efficiency and time that is required to complete your tasks, thereby improving your productivity.
- Software upgrades address and correct the bugs that were encountered in the previous versions of the software.
- A software may also contain architecturally advanced version of the software. This advanced architecture may be in the form of new features and improvements that provide real efficiencies and improved ease-of-use to save you time, effort, and expense.
- A software upgrade ensures that your system is optimized to maximize its effectiveness.
- The support staff for your backup software, who is more familiar with current features and issues, are better able to support you in a timely manner.

What's new in NetBackup Appliance 2.6.1 software upgrade

Starting with NetBackup Appliance version 2.6.1, the following changes are introduced in the software upgrade process:

- The software upgrade process creates a new MSDP catalog partition to store MSDP metadata.
- To create the new MSDP catalog partition, the upgrade process uses unallocated storage space. However, if unallocated space is not available, the upgrade mechanism attempts to use available space in the MSDP partition.
- The 2.6.1 appliance software version provides you with separate upgrade paths that let you upgrade your appliance directly from the following two software versions:
 - Upgrade from version 2.5.x to 2.6.1

Note: Upgrading the appliance software version from 2.5.x to version 2.6.1 involves upgrading the OS from SLES 10 to SLES 11.

- Upgrade from version 2.6.0.x to 2.6.1
- The provision to roll back to the previous software version is not available after you have completed upgrading the appliance software to version 2.6.1. In most of the cases, if the upgrade fails at any point during the process, the appliance is rolled back to its previous version automatically.

- Significant enhancements are introduced in the NetBackup Appliance Web Console to make the upgrade process more intuitive and to offer a better user experience.

Some prominent enhancements are:

- Client add-ons can now be installed using the NetBackup Appliance Web Console.
- A new **Version** column is added to the **Downloaded Software Updates** table and the **Online Software Updates** table. This column displays the version of the software update.
- A new **Download Progress** column is added to the **Online Software Updates** table. This column appears when you click **Download** on the **Online Software Updates** table. The column displays the progress and status of the download process. For example, *20M/232M downloading*.

See “General guidelines and best practices” on page 13.

See “Understanding software requirements” on page 16.

Planning the upgrade process

This chapter includes the following topics:

- General guidelines and best practices
- Understanding hardware requirements
- Understanding software requirements

General guidelines and best practices

To facilitate installing or upgrading the NetBackup Appliance software, it is recommended that you follow certain guidelines to perform a software upgrade.

Preparing for a software upgrade process:

- Identify a period of downtime for your appliance to upgrade the appliance software. The upgrade process provides the estimated time that is required for completing the process. You can choose to proceed or reschedule it at a different time so that you can continue your work.
- Follow the same order as traditional NetBackup upgrades, for the Appliance upgrades. Begin by updating the master server, followed by the media server appliances.
- If a traditional NetBackup master server is used with a media server appliance, that master server must have either the same or a later version of NetBackup as the media server appliance. For example, before you upgrade a media server appliance with NetBackup Appliance version 2.6.1.x or 2.6.0.x, first upgrade the master server to NetBackup version 7.6.1.x or 7.6.0.x respectively.

- Ensure that the NetBackup master server is active and running throughout the duration of the media appliance upgrade. In addition, ensure that the NetBackup processes are started on both the master server and the media server.
- Make sure that you pause all jobs before you upgrade the master server. For media server upgrades, stop all jobs that are currently running and suspend the jobs that may be started during the upgrade. You must disable jobs from attempting to start on the media server during upgrade.

Before you initiate a software upgrade process:

- If you plan to upgrade more than one media server, you must perform the upgrade procedure on each media server.
- According to the requirement of the software update, the Web service may not be available during the upgrade process. The Web service may be unavailable for a few minutes or throughout the entire upgrade process. How long the Web services are unavailable depends on the type of the software update you download. Therefore, you cannot use the NetBackup Appliance Web Console until the Web service is restored. While the Web services are unavailable and before you can open the NetBackup Appliance Web Console again, you can run the following command to view the upgrade process.

```
Main > Manage > Software > UpgradeStatus
```

Note: This command is available only for upgrades from version 2.6.0.1 and later and cannot be used for upgrades from 2.5.x.

- According to the requirement of the software update, the system may restart several times during the upgrade process. While the system restarts, the NetBackup Appliance Web Console and any SSH-based connection to the server is unavailable until the restart process completes. You can use the Symantec Remote Management interface (or IPMI) to view the system restart status. In addition, you may view the logs under `/log` or wait for the appliance to send an email about the completion of the upgrade process.

Note: The upgrade process from 2.5.x may take some more time to upgrade and it might not restart the appliance until it is complete.

- When you upgrade a NetBackup appliance, the Fibre Transport Media Server (FTMS) is restarted automatically. As a result, the Fibre Channel (FC) ports

must be rescanned to allow any SAN Client computers to reconnect to the Fibre Transport (FT) devices.

To rescan the FC ports, after the upgrade has been completed, refer to:

- See 9 on page 28. of the procedure to install software updates through the NetBackup Appliance Web Console
- See 4 on page 30. of the procedure to install software updates through the NetBackup Appliance Shell Menu
- When you perform an appliance upgrade for the 2.5.x release series, Symantec recommends that you take precautions to avoid loss of connectivity, especially up to the first reboot that marks the upgrade process completion. After the first reboot, it is safe to disconnect and this disconnection does not affect the software upgrade. Any loss of connectivity during an upgrade results in failure. The computer that you use to upgrade the appliance should be set up to avoid the following events:
 - 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

Note: If the upgrade fails, the upgrade process attempts to roll back all software to the previously installed version. The error is logged in the appliance logs, and the administrator is notified. You can consult the `/log` directory for further error information.

The upgrade mechanism takes the following measures to ensure that the upgrade process completes successfully:

- Determines if the available update is newer than the version of software that is currently installed.
- Determines if there is enough available space on the appliance to install the release update.
- Stops the current processes being run on the appliance.
- Checks if there are any active NetBackup jobs. The upgrade process only proceeds if it is determined that no active jobs are detected.

Only after the required criteria is met, the appliance software is upgraded, and the appliance version is updated to the latest release update level.

See “Understanding software requirements” on page 16.

See “Understanding hardware requirements” on page 16.

Understanding hardware requirements

Planning your upgrade can save your time and relieve you from unnecessary hassles. In this section, we focus on the hardware requirements that might affect the software upgrade process. The hardware upgrade requirements are more disk space centric for the 2.5.x to 2.6.1 upgrade processes. Before you proceed with the software upgrade, consider the following pointers that are related to the hardware requirements:

- Depending upon the size of the software release update, ensure that you have enough space on `/inst` directory to download the upgrade package and unpack it. For example, this space can be around 3GB each, so a total of 6GB.
- The software upgrade requires a certain amount of unallocated disk space. The unallocated disk space for the upgrade from version 2.5.x to 2.6.1 depends on the following:
 - The amount required for the MSDP conversion
 - Twice the size of `/usr/openv` in addition to 35GB.The unallocated disk space for the upgrade from version 2.6.0.x to 2.6.1 depends on the following:
 - The space required for the MSDP catalog partition. This amount might be about 13% free space on the MSDP partition.
 - Master appliances require 20% free space in the Catalog volume (catvol).

See “General guidelines and best practices” on page 13.

See “Understanding software requirements” on page 16.

Understanding software requirements

This section provides information on software requirements for the upgrade process. Table 2-1 provides a list of pre-checks that the appliance conducts before it installs the software. The pre-checks ensure that your set-up meets the necessary criteria for a successful software upgrade.

To determine the requirements and to prepare your appliance for the software upgrade process, refer to the following table:

Table 2-1 Software installation pre-checks

Software upgrade pre-check item	Checks whether...	Type of appliance server- Master or Media	Software release version
System clock	The system clock is a date newer than the patch build date.	Master and Media	2.5.x/2.6
Patch version	The existing software version meets the minimum patch version for software upgrade.	Master and Media	2.5.x/2.6
Master version	The version of the master server is less than the target version.	Media	2.5.x/2.6
User account	The user accounts with UIDs matching 1007, 1111, or 0 are not in use.	Master and Media	2.5.x
Free space for NetBackup catalog partition for media	10% free space is available in the NetBackup catalog partition for media server.	Master and Media	2.5.x
Free space in the NetBackup catalog partition	20% free space is available in the NetBackup catalog partition (/cat).	Master	2.5.x/2.6
Catalog migration	Catalog needs to be migrated.	Master	2.5.x/2.6
Free space for MSDP upgrade	13% free space is available in Deduplication partition for MSDP upgrade.	Master and Media	2.5.x/2.6
MSDP upgrade time	Prompts whether to proceed with upgrade considering the estimated time for MSDP upgrade.	Master and Media	2.5.x
File system and disk groups	Storage disks can unmount for file system upgrade.	Master and Media	2.5.x
USB storage	USB storage devices are attached to the appliance during the upgrade. Note: None of the USB storage devices must be attached to the appliance during its upgrade.	Master and Media	2.5.x
Call Home service	Call Home service is shut down and not running.	Master and Media	2.5.x
Status of RAID1 OS	RAID1 OS disk is not in a degraded state.	Master and Media	2.5.x
Unallocated space for upgrade	Unallocated space for upgrade meets the required amount. For example, it might be about 40 GB to 60 GB depending on OS size.	Master and Media	2.5.x

Table 2-1 Software installation pre-checks (*continued*)

Software upgrade pre-check item	Checks whether...	Type of appliance server- Master or Media	Software release version
Requirements for partition resize	Unallocated space is sufficient for upgrade to proceed. If the space is not sufficient, the upgrade prompts to borrow this space by resizing the other storage partition.	Master and Media	2.5.x
Domain name	Domain name has been set for the appliance.	Master and Media	2.5.x
Appliance serial number	Serial number has been set the appliance.	Master and Media	2.5.x
Network interfaces bonding	All bonded network interfaces are valid.	Master and Media	2.5.x
NetBackup Appliance Web Console usage	The upgrade is run using the NetBackup Appliance Web Console. If it is run through the console, the appliance prompts you to disconnect from the console.	Master and Media	2.5.x
NetBackup status	NetBackup shuts down before upgrade process starts.	Master and Media	2.5.x
Checkpoint space allocation	Sufficient space is allocated for checkpoint creation.	Master and Media	2.6
Space checks	Sufficient free space is available. For example, 10% in /log, twice the patch size in /inst, and lastly 10% in boot drive.	Master and Media	2.6.0.1
Factory checkpoint size	Factory checkpoint size is correct for 2.6.0.1 factory appliances . If there are any issues, the upgrade process repairs them.	Master and Media	2.6.0.1 only
Active NetBackup jobs	Any NetBackup jobs are running on the appliance, which is undergoing the upgrade process.	Media	2.6

See “General guidelines and best practices” on page 13.

See “Understanding hardware requirements” on page 16.

Installing the software update

This chapter includes the following topics:

- Downloading the required software update
- Download software updates on the appliance through the NetBackup Appliance Web Console
- Download software updates directly to the NetBackup appliance
- Download software updates to the NetBackup appliance using client share
- Installing a software update using the NetBackup Appliance Web Console
- Installing a software update using the NetBackup Appliance Shell Menu
- Conducting a post-upgrade check

Downloading the required software update

You can download NetBackup appliance software and client packages using any of the following methods:

- See “Download software updates on the appliance through the NetBackup Appliance Web Console” on page 20.
- See “Download software updates directly to the NetBackup appliance” on page 21.
- See “Download software updates to the NetBackup appliance using client share” on page 22.

Download software updates on the appliance through the NetBackup Appliance Web Console

This topic describes downloading the software release updates to the NetBackup appliance using the NetBackup Appliance Web Console.

To upgrade your appliance using the NetBackup Appliance Web Console

- 1 Log on to the appliance and open the NetBackup Appliance Web Console.
- 2 Select **Manage > Software Updates**.
- 3 From the **Software Updates** page determine if there are any software updates available for installation in the **Downloaded Software Updates** table.
 - If the table contains the software update that you want to install, proceed to software installation.
 - If the table does not contain a software update that you want to install, then you must first download the software update. From the **Online Software Updates** table on the page, select a software update and click **Download**.
During the download operation, the progress and status of download is displayed in the **Download Progress** column. After the download process completes successfully, the software update is shown in the **Available Software Update** column of the **Downloaded Software Updates** table.
- 4 Clicking **Next** opens a **Confirmation Required** pop-up window. An administrator must enter a user name and password as a final step before the software installation or the upgrade begins. After you enter the user name and password, click **Confirm**. If you want to stop or exit the installation, click **Cancel**.

The **Software Updates** page refreshes and updates the information that is displayed in **Downloaded Software Updates** table. This table displays the progress (in percentage) and the status of the software installation.

Note: According to the requirement from the software update, the Web service may not be available during the upgrade process. See the section called “Before you initiate a software upgrade process:” on page 14. for more information.

Download software updates directly to the NetBackup appliance

This topic describes downloading the software release updates directly on to the NetBackup appliance.

To use this method, the appliance requires Internet access to download the files or packages from the Symantec Support website.

To download software release updates directly on to the NetBackup appliance:

- 1 Log on to the NetBackup Appliance Shell Menu as an administrator.
- 2 Enter the following command to determine if a software update is available from the Symantec Support website:

```
Main_Menu > Manage > Software > List AvailablePatch
```

- 3 Enter the appropriate command as follows to download a software update or a client package:

■ For software updates:

```
Main_Menu > Manage > Software > Download  
SYMC_NBAPP_update-<version>-<release>.x86_64.rpm
```

Where *<version>* is the version of software release and *<release>* is the software version release number.

■ For a UNIX client package:

```
Main_Menu > Manage > Software > Download  
SYMC_NBAPP_addon_nbclient_<platformname>-<version>-<release>.x86_64.rpm
```

Where *<platformname>* is the client platform or operating system name, *<version>* is the version of the client package, and *<release>* is the software version release number.

For example:

```
Main_Menu > Manage > Software > Download  
SYMC_NBAPP_addon_nbclient_Solaris-7.6.0.2-SLES11.x86_64.rpm
```

■ For a Windows client package:

```
Main_Menu > Manage > Software > Download  
SYMC_NBAPP_addon_nbwin_<platformname>-<version>-<release>.x86_64.rpm
```

Where *<platformname>* is the client platform or operating system name, *<version>* is the version of the client package, and *<release>* is the software version release number.

For example:

```
Main_Menu > Manage > Software > Download  
SYMC_NBAPP_addon_nbwin-7.6.0.2-SLES11.x86_64.rpm
```

- 4 Enter the following command to verify that the rpm is downloaded successfully.

```
Main_Menu > Manage > List Downloaded
```

See “Download software updates on the appliance through the NetBackup Appliance Web Console” on page 20.

See “General guidelines and best practices” on page 13.

Download software updates to the NetBackup appliance using client share

This topic describes downloading the software release updates or client packages to a NetBackup appliance using a client share method.

Note: If downloading the software updates directly to the NetBackup appliance fails, you may use this method to download the appliance software release update or client package on your appliance

Perform this method from a computer that is connected to the appliance and that also has Internet access. Internet access is needed to download the files or packages from the Symantec Support website to the appliance.

To download software release updates or client packages to a NetBackup appliance using a client share method:

- 1 Log on to the NetBackup Appliance Shell Menu as an administrator.
- 2 Enter the following command to open the NFS and the CIFS shares:

```
Main_Menu > Manage > Software > Share Open
```

- 3 Map or mount the appliance share directory as follows:

Windows systems

Map the following appliance CIFS share on your computer:

```
\\<appliance-name>\incoming patches
```

UNIX systems

Mount the following appliance NFS share:

- `mkdir -p /mount/<appliance-name>`
- `mount`
`<appliance-name>:/inst/patch/incoming`
`/mount/<appliance-name>`

On Windows systems, you are prompted to provide the user name (admin) and its corresponding password.

- 4 To download the release updates, enter the following URL to go to the Symantec Support site where the release update and client packages are posted:

<http://www.symantec.com/business/support/index?page=landing&key=58991>

- 5 Download and unzip or untar the release update or the client package as follows:

- For release updates

The release update .rpm file name may be split into multiple files with names. The following example demonstrates a software update file that is split into three files:

```
NB_Appliance_N_<version>-<release>.x86_64-tar-split.1of3
NB_Appliance_N_<version>-<release>.x86_64-tar-split.2of3
NB_Appliance_N_<version>-<release>.x86_64-tar-split.3of3
```

Where *<version>* is the version of software release and *<release>* is the software version release number.

To continue with release update downloading, go to step 6.

- For client packages

Client packages are not split and use the following naming convention:

```
SYMC_NBAPP_addon_nbwin_<version>.x86_64.rpm OR
SYMC_NBAPP_addon_nbclient_<platform and version>.x86_64.rpm
```

Where *<platform and version>* is the specific platform operating system and the NetBackup version of the client package. For example:

```
SYMC_NBAPP_addon_nbclient_HP-UX-IA64-7.6.0.2-SLES11.x86_64.rpm
```

To continue with client package downloading, go to step 8.

- 6 Use one of the following commands to join (and extract) the release update .rpm files:

- For Windows, use a `copy /b` command similar to the following to join three split files:

Download software updates to the NetBackup appliance using client share

```
copy /b NB_Appliance_N_<version>-<release>.x86_64-tar-split.1of3+
NB_Appliance_N_<version>-<release>.x86_64-tar-split.2of3+
NB_Appliance_N_<version>-<release>.x86_64-tar-split.3of3+
NB_Appliance_N_<version>-<release>.tar
```

Note: This command is one string. Make sure that it contains no spaces when you enter it. In addition, *<version>* is the version of software release and *<release>* is the software version release number.

Use Windows WinRAR utilities to uncompress the resulting .tar file,
NB_Appliance_N_<version>-<release>.tar.

The resulting files are:

```
SYMC_NBAPP_update-<version>-<release>.x86_64.rpm
update.rpm.md5_checksum
```

- For UNIX, use a `cat` command similar to join three split files:

```
cat NB_Appliance_N_<version>-<release>.x86_64-tar-split.1of3<space>
NB_Appliance_N_<version>-<release>.x86_64-tar-split.2of3<space>
NB_Appliance_N_<version>-<release>.x86_64-tar-split.3of3 | tar xvf -
```

Note: This command is one string. In the example, there is one space between each package that is identified with, "*<space>*". In addition, *<version>* is the version of software release and *<release>* is the software version release number.

Resulting files from the preceding command:

```
SYMC_NBAPP_update-<version>-<release>.x86_64.rpm
update.rpm.md5_checksum
```

Note: Symantec recommends that you use GNU tar version 1.16 or higher instead of tar to extract packages on UNIX systems. See the following Technote for more information about extracting images.

<http://www.symantec.com/docs/TECH154080>

7 Compute the md5 checksum value for the

SYMC_NBAPP_update-<version>-<release>.x86_64.rpm as follows:

- For Windows systems:
To compute the md5 checksum, click on the following link for details:

<http://support.microsoft.com/kb/889768>

- For UNIX systems, run the following command:

```
md5sum SYMC_NBAPP_update-<version>-<release>.x86_64.rpm
```

Verify that the checksum value matches the content of the `update.rpm.md5_checksum` file.

- 8 Copy this release update or client package `.rpm` to the mounted share.

Note: During the copy process, do not run any commands on the appliance. Doing so can cause the copy operation to fail.

- 9 After you have successfully copied the release update or client package `.rpm` into the mounted share, unmap or unmount the shared directory.
- 10 From the appliance, enter the following command to close the NFS and the CIFS shares:

```
Main_Menu > Manage > Software > Share Close
```

If you run any of the following commands before you run the `Share Close` command, the downloaded release update or client package is moved from the share directory location to its proper location. However, you must still run the `Share Close` command to ensure that the NFS and the CIFS shares are closed.

Note: The release update or the client package cannot be verified and moved unless the Symantec Critical System Protection (SCSP) scanning is complete.

- `List Version`
- `List Details All`
- `List Details Base`
- `Share Open`
- `Share Close`

- 11 To list the available release updates or client packages on the appliance, enter the following command and note the name of the downloaded files:

```
Main_Menu > Manage > Software > List Downloaded
```

Running this command validates and moves the release update or the client package from the share directory to its proper location. You are not notified that this move has occurred.

See “General guidelines and best practices” on page 13.

See “Download software updates on the appliance through the NetBackup Appliance Web Console” on page 20.

See “Installing a software update using the NetBackup Appliance Web Console” on page 26.

Installing a software update using the NetBackup Appliance Web Console

This topic explains how to upgrade an appliance from the NetBackup Appliance Web Console. Before you begin the upgrade procedure, read the guidelines that pertain to the upgrade process.

To upgrade your appliance using the NetBackup Appliance Web Console

- 1 Log on to the appliance and open the NetBackup Appliance Web Console.
- 2 Select **Manage > Software Updates**.
- 3 From the **Software Updates** page determine if there are any software updates available for installation in the **Downloaded Software Updates** table.
 - If the table contains the software update that you want to install, proceed to Step 4.
 - If the table does not contain a software update that you want to install, then you must first download the software update. From the **Online Software Updates** table on the page, select a software update and click **Download**.

During the download operation, the progress and status of download is displayed in the **Download Progress** column. After the download process completes successfully, the software update is shown in the **Available Software Update** column of the **Downloaded Software Updates** table.
- 4 Select the check box that is associated with the software update that you want to install and click **Install**.

The following events occur after you click **Install**:

- The **Software Updates** page refreshes and presents a table that displays the server (master or media) that is to be upgraded. The table also shows the name and version of the software update.

Note: If you plan to upgrade more than one media server, you must run this upgrade procedure on each media server.

- An interactive, preinstallation check window appears. You must provide answers to the preinstallation questions. Then select **Finish** to exit the preinstallation check window.
- 5 Click **Next** on the **Downloaded Software Updates** table.
 - 6 The **Confirm** pop-up window displays the server (master or media) that you are about to upgrade.

If this information is correct, click **Next**. If the information is not correct, click **Cancel**.
 - 7 Clicking **Next** opens a **Confirmation Required** pop-up window. An administrator must enter a user name and password as a final step before the software installation or the upgrade begins. After you enter the user name and password, click **Confirm**. If you want to stop or exit the installation, click **Cancel**.

The **Software Updates** page refreshes and updates the information that is displayed in **Downloaded Software Updates** table. This table displays the progress (in percentage) and the status of the software installation.

Note: According to the requirement from the software update, the Web service may not be available during the upgrade process. See the section called “Before you initiate a software upgrade process:” on page 14. for more information.

- 8 After the status of the server reaches 100%, the information in the title line of the table clarifies whether the upgrade was successful. The following status can occur depending on whether the upgrade was successful or not:
 - **The appliance version is <the target version> and not in upgrade state.**
If the target version appears it indicates that the upgrade was successful. Click **Finish** to complete the process.
 - **The appliance version is <the original version> and not in upgrade state.**
If the original version appears it indicates a failed upgrade and an automatic rollback has taken place. The rollback returns the server back to the original version.
 - **Failed to create the PRE_UPGRADE checkpoint, please resolve this issue first**
A checkpoint creation process is performed automatically before the upgrade operation begins. That checkpoint is used to enable the server to roll back to it, if the upgrade fails. If the failure message appears, it indicates that the creation of the checkpoint failed, and the upgrade

operations were not performed. You must determine what caused the issue and resolve it before you can attempt the upgrade again.

- **Self-Test failed on <nodename >, please resolve the issue first.** The self-test operation is automatically executed before the upgrade operation begins. If the self-test operation fails, the upgrade process does not continue. If this issue occurs, you must attempt to resolve it before you continue.

9 Complete this step only if your backup environment includes SAN client computers.

The Fibre Channel (FC) ports must be rescanned to allow any SAN client computers to reconnect to the Fibre Transport (FT) devices. The rescan must be done from the NetBackup CLI view on the appliance.

To rescan the FC ports:

- Enter the following command to see a list of NetBackup user accounts:

```
Manage > NetBackupCLI > List
```

- Log in to this appliance as one of the listed NetBackup users.

- Run the following command to rescan the FC ports:

```
nbftconfig -rescanallclients
```

- If any SAN clients still do not work, run the following commands on each of those clients in the order as shown:

On UNIX clients:

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

On Windows clients:

```
<install_path>\NetBackup\bin\bpdwn  
<install_path>\NetBackup\bin\bpup
```

- If any SAN clients still do not work, you must manually initiate a SCSI device refresh at the OS level. The method to accomplish the refresh action depends on the operating system that the client is running. Once the refresh has completed, attempt the `nbftconfig -rescanallclients` command again.

- If any SAN clients still do not work, restart those clients.

Note: If you have any SLES 10 or SLES 11 SAN clients that still do not work, Symantec recommends that you upgrade the QLogic driver on those clients. For the affected SLES 10 clients, upgrade to version 8.04.00.06.10.3-K. For the affected SLES 11 clients, upgrade to version 8.04.00.06.11.1.

For additional information on working with the software release updates through the NetBackup Appliance Web Console, refer to the *Symantec NetBackup Appliance Administrator's Guide*

See “Downloading the required software update” on page 19.

See “Installing a software update using the NetBackup Appliance Shell Menu” on page 29.

Installing a software update using the NetBackup Appliance Shell Menu

After you have downloaded a software update to the appliance, it can be installed from the NetBackup Appliance Shell Menu using this procedure. If you perform an upgrade from the NetBackup Appliance Shell Menu, the NetBackup Appliance Web Console is still available for use during the upgrade operation.

Table 3-1 displays the command options from the `Software > List` commands that let you view, verify, and check the details of the available software release updates.

Table 3-1 Manage > Software > List command options

Command name	Description
Main_Menu > Manage > Software > List AddOns	Lists the software add-ons that are installed on the appliance.
Main_Menu > Manage > Software > List AvailablePatch	Checks the Symantec site for any software updates that are available.
Main_Menu > Manage > Software > List Details All	Lists all the software release updates that were applied to your appliance during the factory installation.
Main_Menu > Manage > Software > List Details Base	Lists all the software release updates that were applied to your appliance during the factory installation.

Table 3-1 Manage > Software > List command options (*continued*)

Command name	Description
Main_Menu > Manage > Software > List Downloaded	Lists the detailed information of a downloaded software update.
Main_Menu > Manage > Software > List EEBs	Shows a detailed listing of all of the factory-installed Emergency Engineering Binaries (EEBs).
Main_Menu > Manage > Software > List Version	Displays the software version that is currently installed on your appliance.

To install a software update that has been downloaded to the appliance using the NetBackup Appliance Shell Menu

- 1 Log on to the NetBackup Appliance Shell Menu and run the following command to install the software release update.

```
Main_Menu > Manage > Software > Install patch_name
```

Where *patch_name* is the name of the release update to install. Make sure that this patch name matches the update name that was downloaded on the appliance.

- 2 Watch the onscreen progress of the upgrade to see an estimated completion time. To see the current status of the upgrade, enter the following command:

```
Main_Menu > Manage > Software > UpgradeStatus
```

Note: This command is available only for upgrades from version 2.6.0.1 and later and cannot be used for upgrades from 2.5.x.

- 3 The upgrade may force the appliance to restart several times. After the upgrade has completed and the disk pools are back online, the appliance runs a self-diagnostic test. Refer to the following file for the test results:

```
/log/selftest_report_<appliance_serial>_<timedate>.txt
```

If SMTP is configured, an email notification that contains the self-test result is sent.

- 4 Complete this step only if your backup environment includes SAN client computers.

The Fibre Channel (FC) ports must be rescanned to allow any SAN client computers to reconnect to the Fibre Transport (FT) devices. The rescan must be done from the NetBackup CLI view on the appliance.

To rescan the FC ports:

- Enter the following command to see a list of NetBackup user accounts:

```
Manage > NetBackupCLI > List
```

- Log in to this appliance as one of the listed NetBackup users.

- Run the following command to rescan the FC ports:

```
nbftconfig -rescanallclients
```

- If any SAN clients still do not work, run the following commands on each of those clients in the order as shown:

On UNIX clients:

```
/usr/opensv/netbackup/bin/bp.kill_all
```

```
/usr/opensv/netbackup/bin/bp.start_all
```

On Windows clients:

```
<install_path>\NetBackup\bin\bpdown
```

```
<install_path>\NetBackup\bin\bpup
```

- If any SAN clients still do not work, manually initiate a SCSI device refresh at the OS level. The refresh method depends on the operating system of the client. Once the refresh has completed, attempt the `nbftconfig -rescanallclients` command again.
- If any SAN clients still do not work, restart those clients.

Note: If you have SLES 10 or SLES 11 SAN clients that still do not work, Symantec recommends upgrading the QLogic driver on those clients. For the affected SLES 10 clients, upgrade to version 8.04.00.06.10.3-K. For the affected SLES 11 clients, upgrade to version 8.04.00.06.11.1.

See “General guidelines and best practices” on page 13.

See “Installing a software update using the NetBackup Appliance Web Console” on page 26.

See “Downloading the required software update” on page 19.

Conducting a post-upgrade check

Make sure that you verify and conduct the following post-upgrade checks.

- Check and verify MSDP-related updates.
- To verify the status or the completion of the software upgrade, run the `Manage > Software > UpgradeStatus` command.

- To ensure that the upgrade process is successfully completed and to verify the version of the software update, run the `Manage > Software> Version` command.
- To check the status of your hardware and software components, run the `Support > Test Hardware` and the `Support > Test Software` command.

See “General guidelines and best practices” on page 13.

See “Downloading the required software update” on page 19.

Troubleshooting

This chapter includes the following topics:

- Troubleshooting generic upgrade related issues
- Working with log files
- Working with patch log files

Troubleshooting generic upgrade related issues

Upgrading your software is a smooth process, if you have all the requirements in place. However, at times you may encounter some issues during the upgrade process. The following table lists some generic issues that you may face during upgrade process. You can resolve these issues using the recommend actions column.

Table 4-1 Troubleshooting generic upgrade related issues

Problem description	Explanation	Recommended action
Appliance upgrade from 2.5.3 to 2.6.0.2 fails during pre-check.	This issue may occur when the appliance to be upgraded is accessed using KVM. In this scenario, the upgrade script treats the KVM devices as a USB storage device and as a result the pre-check fails.	This issue is resolved in the 2.6.1. A workaround to the problem for the 2.6.0.2 release is to install the upgrade RPM Package Manager (RPM) manually and modify the <code>patchinst</code> script to remove the check. You can now use the NetBackup Appliance Shell Menu to upgrade the appliance. For further assistance, contact Symantec Technical Support.

Table 4-1 Troubleshooting generic upgrade related issues *(continued)*

Problem description	Explanation	Recommended action
Upgrade from 2.5.4 to 2.6.0.2 failed.	This issue may occur if the file <code>/root/autoinst.xml</code> is not created or is unavailable during the upgrade.	To resolve this issue, you may want to try and modify the <code>/control.xml</code> file. For further assistance, contact Symantec Technical Support.
While you upgrade the appliance from a previous version to 2.6.0.1, the upgrade process fails at the time of NetBackup installation.	This issue may occur if your media server does not have sufficient free space in your <code>/cat</code> volume.	To correct this issue, increase <code>/cat</code> size to 2GB. . For further assistance, contact Symantec Technical Support.
When you try to upgrade your appliance from a previous version to NetBackup Appliance 2.6.0.3 version, the upgrade process fails and continues to show the previous version. However, the appliance displays the message about a successful upgrade completion.	This issue may occur if you have not configured an SMTP server for notifications on the appliance, which may trigger a rollback towards the completion of an upgrade process.	To avoid this issue, ensure that you have configured an SMTP server to receive notifications from your appliance. Alternatively, Symantec recommends that you upgrade your appliance to the latest software version. For more information, log on to SymConnect.
Upgrade to NetBackup Appliance 2.6.02 fails with the following message in the log file: not ok remote_emm: Remote EMM configuration is detected	This issue may occur if there is a case-sensitive entry between the OS and the NetBackup configuration.	Symantec recommends that you upgrade your appliance to the latest software version. For more information, log on to SymConnect.
Self-test fails for appliance during an upgrade from software version 2.6.0.1 to 2.6.0.3.	This issue may occur if you have suspended all jobs and Storage Lifecycle Policies (SLP) before you started the upgrade process using the following commands: <code>nbpemreq -suspend_scheduling</code> command.	To correct this issue, re-active the SLPs or try to reactive the appliance if it has been suspended. For more information, log on to SymConnect.

Table 4-1 Troubleshooting generic upgrade related issues (*continued*)

Problem description	Explanation	Recommended action
<p>Upgrade to NetBackup 52x0 appliance version 2.6.0.1 fails and rolls back with the following error:</p> <p>[Error] Failed to retrieve NetBackup storage units for <i>partition_name</i> storage partition.</p>	<p>You may encounter this error if you accidentally turned-on caps lock during the initial configuration of your appliance while typing the appliance host name. When the appliance configures NetBackup it uses lower case. Hence, a mismatch is observed between the <code>/etc/HOSTNAME</code> or 'hostname' command output and the contents of the <code>bp.conf</code> file.</p>	<p>To resolve this error, identify the host name of the appliance using the <code>Network > Hostname Show</code> command. Add this <i>hostname</i> as a new <code>SERVER = hostname</code> in the <code>/usr/openv/netbackup/bp.conf</code> on the appliance. Save the file, and try to install the software update, again.</p> <p>Additionally, Symantec recommends that you upgrade your appliance to the latest software version.</p> <p>For detailed information, refer to TECH214325.</p>
<p>Upgrade to NetBackup 52x0 appliance version 2.6.0.1 fails and rolls back with the following error:</p> <p>[Error] Unable to expand the storage partition. The specified size is above the maximum supported size 4 TB of <i>Catalog</i> storage partition.</p>	<p>In previous appliance versions, the NetBackup catalog partition can be over 4TB. However, the latest versions of appliances perform pre-checks for such requirements and shrink the catalog space automatically.</p>	<p>To resolve this issue, shrink the <code>/cat</code> volume to less than 4TB before attempting the next upgrade. For example, 1TB or 2TB. To resize your partition, use the Manage > Storage > Resize page from the NetBackup Appliance Web Console or run the <code>Main_Menu > Storage > Resize Cat 1-TB</code> command from the NetBackup Appliance Shell Menu.</p> <p>For detailed information, refer to TECH214933.</p>
<p>When you try to upgrade your appliance from a previous version to 2.6.0.2 version, the installation fails with following self-test result.</p> <p>-[Error] An upgrade process is already running on this appliance.</p> <p>[Info] The software upgrade has been aborted!</p>	<p>This issue may occur if the upgrade process is interrupted before the creation of a pre-upgrade checkpoint.</p>	<p>To resolve this issue, remove the <code>/inst/patch/appliance/upgrading/state.info</code> and the <code>/inst/patch/appliance/upgrading/patchinst.lock</code> and restart the upgrade process.</p> <p>Additionally, Symantec recommends that you upgrade your appliance to the latest software version.</p> <p>For detailed information, refer to TECH218031.</p>

Table 4-1 Troubleshooting generic upgrade related issues (*continued*)

Problem description	Explanation	Recommended action
Upgrade process fails to proceed with installation while there are USB Mass Storage devices attached to the appliance.	No USB devices must be attached to the appliance while you upgrade the appliance.	<p>You must unplug any USB devices or KVM that are attached to the appliance.</p> <p>For detailed information, refer to TECH217135.</p>
Upgrade to NetBackup Appliance version 2.6.0.1 fails if REQUIRED_INTERFACE is set to an IP address.	This issue may occur if the install script overrides the <i>hostname</i> entry with the REQUIRED_INTERFACE definition. You must not use this <i>hostname</i> entry because the PREFERRED_NETWORK option has replaced it.	<p>To resolve the issue, remove the entry from the <code>bp.conf</code> file and restart the upgrade process.</p> <p>For detailed information, refer to TECH215030.</p>
DataCollect file is too large after the appliance is upgraded to the 2.6.0.x version.	The large file size is attributed to the addition logs that are now gathered to include patch install logs.	<p>Use the Appliance Diagnostics Center from the NetBackup Appliance Web Console to gather logs.</p> <p>Refer to TECH217665 for steps on using the Appliance Diagnostics Center.</p>
Upgrade fails after the self-test when it finds active jobs although there are no jobs running.	If an upgrade fails after the self-test because it finds active jobs even though there are no jobs running, there might be a large number of expired images to be deleted.	<p>Log in to the appliance or the master server as a NetBackupCLI user and run the <code>nbdelete -list</code> command. If the command returns a large number of images, run the <code>nbdelete</code> command to delete the images. Then try the upgrade again.</p> <p>Note: If a storage server is inaccessible, the <code>nbdelete</code> command may be unable to delete the images. If the images are not deleted, check the connectivity to the storage server and try again.</p>

For more information on the troubleshooting generic appliance issues, refer to the *Symantec NetBackup Appliance Troubleshooting Guide*.

See “Working with patch log files” on page 47.

Working with log files

This section provides you with information on accessing and reading log files. Log files help you to identify and resolve any issues that you may encounter while working with NetBackup Appliances.

About working with log files

As you define and troubleshoot a problem, always try to capture potentially valuable information. NetBackup Appliance has the ability to capture hardware-, software-, system-, and performance-related data. These log files capture information such as how the appliance has been running, whether there are any issues such as unconfigured volumes or arrays, temperature issues, batteries not being found, etc. These log files are stored in specific directories and can be accessed using the following methods:

Table 4-2 lists the methods you can use to access the various appliance logs.

Table 4-2 Viewing log files

From...	Using...	Logs collected..
NetBackup Appliance Web Console	You can use the Collect Log files wizard from the NetBackup Appliance Web Console to collect log files from an appliance. See “About using the Collect Log files wizard” on page 39.	<ul style="list-style-type: none"> ■ Logs created by the NetBackup Copy Logs tool (<code>nbcplogs</code>) ■ Appliance logs including high availability, hardware, and event logs ■ Operating system logs ■ All logs related to Media Server Deduplication Pool (MSDP) ■ All logs related to the NetBackup Appliance Web Console ■ Diagnostic information about NetBackup and the operating system ■ Hardware and storage device logs
NetBackup Appliance Web Console	You can use the Monitor > SCSP Audit View screen from the NetBackup Appliance Web Console to retrieve the audit logs of an appliance.	NetBackup appliance's audit logs

Table 4-2 Viewing log files (*continued*)

From...	Using...	Logs collected..
<p>NetBackup Appliance Shell Menu</p>	<p>You can use the Main > Support > Logs > Browse commands to open the LOGROOT/> prompt. You can use commands like <code>ls</code> and <code>cd</code> to work with the appliance log directories and obtain the various logs.</p> <p>See “Viewing log files using the Support command” on page 39.</p>	<ul style="list-style-type: none"> ■ NetBackup appliance configuration log ■ NetBackup logs, Volume Manager logs, and the NetBackup logs that are contained in the <code>openv</code> directory ■ NetBackup appliance operating system (OS) installation log ■ NetBackup administrative web user interface log and the NetBackup web server log ■ NetBackup 52xx appliance device logs
<p>NetBackup Appliance Shell Menu</p>	<p>You can use the Main > Support > Logs > VxLogView Module <i>ModuleName</i> commands to access the NetBackup Appliance VxUL (unified) logs. You can also use the Main > Support > Share Open commands and use the desktop to map, share, and copy the VxUL logs.</p>	<p>NetBackup Appliance unified logs:</p> <ul style="list-style-type: none"> ■ All ■ CallHome ■ Checkpoint ■ Commands ■ Common ■ Config ■ CrossHost ■ Database ■ Hardware ■ HWMonitor ■ Network ■ RAID ■ Seeding ■ SelfTest ■ Storage ■ SWUpdate ■ Trace

Table 4-2 Viewing log files (continued)

From...	Using...	Logs collected..
NetBackup Appliance Shell Menu	You can use the <code>Main > Support > DataCollect</code> commands to collect storage device logs. See “Gathering device logs with the <code>DataCollect</code> command” on page 42.	NetBackup 5xxx storage device logs
NetBackup-Java applications	If you encounter problems with the NetBackup-Java applications, you can use the scripts in this section to gather the required information for contacting support. See “Gathering information for NetBackup-Java applications” on page 45.	Logs relating to the NetBackup-Java applications

About using the Collect Log files wizard

You can use the **Collect Log files** wizard from the NetBackup Appliance Web Console to collect log files from an Appliance. The wizard lets you collect different types of log files like NetBackup, Appliance, operating system, PureDisk, GUI, NBSU (NetBackup Support Utility), DataCollect and so on.

You can collect log files from a 52x0 Appliance.

After you have generated the log files you can email them to recipients, download them to your computer, or upload them to Symantec Support. For information about the Appliance Diagnostics Center,

See “About working with log files” on page 37.

Viewing log files using the Support command

You can use the following section to view the log file information.

To view logs using the `Support > Logs > Browse` command:

- 1 Enter browse mode using the `Main_Menu > Support > Logs` followed by the `Browse` command in the NetBackup Appliance Shell Menu. The `LOGROOT/>` prompt appears.
- 2 To display the available log directories on your appliance, type `ls` at `LOGROOT/>` prompt.

- 3 To see the available log files in any of the log directories, use the `cd` command to change directories to the log directory of your choice. The prompt changes to show the directory that you are in. For example, if you changed directories to the GUI directory, the prompt appears as `LOGROOT/GUI/>`. From that prompt you can use the `ls` command to display the available log files in the GUI log directory.
- 4 To view the files, use the `less <FILE>` or `tail <FILE>` command. Files are marked with `<FILE>` and directories with `<DIR>`.

See “Locating NetBackup Appliance log files using the Browse command” on page 41.

To view NetBackup Appliance unified (VxUL) logs using the `Support > Logs` command:

- 1 You can view the NetBackup Appliance unified (VxUL) logs with the `Support > Logs > VXLogView` command. Enter the command into the shell menu and use one of the following options:
 - `Logs VXLogView JobID job_id`
Use to display debug information for a specific job ID.
 - `Logs VXLogView Minutes minutes_ago`
Use to display debug information for a specific timeframe.
 - `Logs VXLogView Module module_name`
Use to display debug information for a specific module. The available module names are: All, CallHome, Checkpoint, Common, Config, Database, Hardware, HWMonitor, Network, RAID, Seeding, SelfTest, Storage, SWUpdate, Commands, CrossHost, and Trace.
Use to display debug information for a specific module. The available module names are: All, CallHome, Checkpoint, Common, Config, Database, FTMS, Hardware, HWMonitor, Network, RAID, Seeding, SelfTest, Storage, SWUpdate, Commands, CrossHost, and Trace.
- 2 If you want, you can copy the unified logs with the `Main > Support > Share Open` command. Use the desktop to map, share, and copy the logs.

Note: The NetBackup Appliance unified logs are not the same as the NetBackup unified logs, such as `nbpem` or `nbjm`. NetBackup Appliance has its own set of unified logs. To collect the NetBackup unified logs, use the Collect Logs Wizard and select **NetBackup**.

You can also use the `Main_Menu > Support > Logs` commands to do the following:

- Upload the log files to Symantec Technical Support.
- Set log levels.
- Export or remove CIFS and NFS shares.

Note: The NetBackup Appliance VxUL logs are no longer archived by a cron job, or a scheduled task. In addition, log recycling has been enabled, and the default number of log files has been set to 50.

Refer to the *NetBackup Appliance Command Reference Guide* for more information on the above commands.

See “About working with log files” on page 37.

Locating NetBackup Appliance log files using the Browse command

Table 4-3 provides the location of the logs and the log directories that are accessible with the `Support > Logs > Browse` command.

Table 4-3 NetBackup Appliance log file locations

NetBackup appliance logs	Log file location
NetBackup appliance configuration log	<DIR> APPLIANCE config_nb_factory.log
NetBackup appliance selftest report	<DIR> APPLIANCE selftest_report
NetBackup appliance host change log	<DIR> APPLIANCE hostchange.log
NetBackup logs, Volume Manager logs, and the NetBackup logs that are contained in the <code>openv</code> directory	<DIR> NBU <ul style="list-style-type: none"> ■ <DIR> netbackup ■ <DIR> openv ■ <DIR> volmgr
NetBackup appliance operating system (OS) installation log	<DIR> OS boot.log boot.msg boot.omsg messages

Table 4-3 NetBackup Appliance log file locations (continued)

NetBackup appliance logs	Log file location
NetBackup deduplication (PDDE) configuration script log	<DIR> PD pdde-config.log
NetBackup Administrative web user interface log and the NetBackup web server log	<DIR> WEBGUI ■ <DIR> gui ■ <DIR> webserver
NetBackup appliance device logs	/tmp/DataCollect.zip You can copy the DataCollect.zip to your local folders using the Main > Support > Logs > Share Open command.

See “About working with log files” on page 37.

Gathering device logs with the DataCollect command

You can use the `DataCollect` command from the `Main > Support` shell menu to gather device logs. You can share these device logs with the Symantec Support team to resolve device-related issues.

Along with the operating system, IPMI, and storage logs, the `DataCollect` command now collects the following logs as well:

- Patch logs
- Veritas File System logs
- Test hardware logs
- CPU information
- Disk performance logs
- Memory information
- Hardware information

To gather device logs with the DataCollect command

- 1 Log on to the administrative NetBackup Appliance Shell Menu.
- 2 Open the Support menu. To open the support menu, use the following command:

```
Main > Support
```

The appliance displays all the sub-tasks in the support menu.

3 Enter the `DataCollect` command to gather storage device logs.

The appliance initiates the following procedure:

```
appliance123.Support > DataCollect
Gathering release information
Gathering dmidecode logs
Gathering ipmitool sel list logs
Gathering fwtermlog logs
Gathering AdpEventLog logs
Gathering smartctl logs
Gathering disk performance logs
Gathering ipmiutil command output
Gathering cpu information
Gathering memory information
Gathering sdr logs
Gathering adpallinfo logs
Gathering encinfo logs
Gathering cfgdsply logs
Gathering ldpdinfo logs
Gathering pdlist logs
Gathering fru logs
Gathering adpbucmd logs
Gathering os logs
Gathering adpalilog logs
Gathering dfinfo logs
Gathering vxprint logs
Gathering Test Hardware logs
Gathering patch logs
```

```
All logs have been collected in /tmp/DataCollect.zip
Log file can be collected from the appliance shared folder
- \\appliance123\logs\APPLIANCE
Share can be opened using Main->Support->Logs->Share Open
```

```
=====  
=====-End of DataCollect=====
```

All logs have been collected in `/tmp/DataCollect.zip`

The appliance generates the device log in the `/tmp/DataCollect.zip` file.

- 4 Copy the `DataCollect.zip` to your local folders using the `Main > Support > Logs > Share Open` command.
- 5 You can send the `DataCollect.zip` file to the Symantec Support team to resolve your issues.

See “About working with log files” on page 37.

Gathering information for NetBackup-Java applications

If you encounter problems with the NetBackup-Java applications, use the following methods to gather data for support.

The following scripts are available for gathering information:

`jnbSA`

(NetBackup-Java administration application startup script)

Logs the data in a log file in

`/usr/opensv/netbackup/logs/user_ops/nbjlogs`.

At startup, the script tells you which file in this directory it logs to. Normally, this file does not become very large (usually less than 2 KB). Consult the file

`/usr/opensv/java/Debug.properties` for the options that can affect the contents of this log file.

NetBackup-Java administration application on Windows

Logs the data in a log file if NetBackup is installed on the computer where the application was started. It logs on

`install_path\NetBackup\logs\user_ops\nbjlogs`.

If NetBackup was not installed on this computer, then no log file is created. To produce a log file, modify the last “java.exe” line in the following to redirect output to a file: `install_path\java\nbjava.bat`.

`/usr/opensv/java/get_trace`

Provides a Java Virtual Machine stack trace for support to analyze. This stack trace is written to the log file that is associated with the instance of execution.

`/usr/opensv/netbackup/bin/goodies/support`

Creates a file containing data necessary for customer support to debug any problems you encounter. For more details, consult the usage information of the script by using `support -h`.

The following example describes how you can gather troubleshooting data for Symantec Technical Support to analyze.

An application does not respond.	Wait for several minutes before you assume that the operation is hung. Some operations can take quite a while to complete, especially operations in the Activity Monitor and Reports applications.
Still no response after several minutes.	Run <code>/usr/opensv/java/get_trace</code> under the account where you started the Java application. This script causes a stack trace to write to the log file. For example, if you started <code>jnbSA</code> from the root account, start <code>/usr/opensv/java/get_trace</code> as root. Or else, the command runs without error, but fails to add the stack trace to the debug log. This failure occurs because root is the only account that has permission to run the command that dumps the stack trace.
Get data about your configuration.	Run <code>/usr/opensv/netbackup/bin/goodies/support</code> . Run this script after you complete the NetBackup installation and every time you change the NetBackup configuration.
Contact Symantec Technical Support	Provide the log file and the output of the <code>support</code> script for analysis.

See “About working with log files” on page 37.

Enabling and disabling VxMS logging

The following procedures explain how to enable or disable VxMS logging from the NetBackup Appliance Shell Menu.

Note: Due to the size of the VxMS logs, Symantec recommends that you only enable VxMS logging when it is necessary to troubleshoot an issue. Disable VxMS logging again when the issue is resolved.

Use the `Support > Logs > GetLevel` command to check your current VxMS log setting.

To enable VxMS logging

- 1 From the `Support > Logs` view of the NetBackup Appliance Shell Menu, run the following command:

```
SetLevel VxMS 1
```

- 2 Verify that VxMS logging has been enabled with the `GetLevel` command. If the VxMS logs are enabled, the `GetLevel` command output displays the following:

```
VxMS debug level is TRC_TOP|PARAM_IN|PARAM_OUT|DEBUG|PARAM_FULL
```

To disable VxMS logging

- 1 From the `Support > Logs` view of the NetBackup Appliance Shell Menu, run the following command:

```
SetLevel VxMS 0
```

- 2 Verify that VxMS logging has been disabled with the `GetLevel` command. If the VxMS logs are disabled, the `GetLevel` command output displays the following:

```
VxMS debug level is disabled
```

See “About working with log files” on page 37.

Working with patch log files

Patch log files are log files that contain information for software upgrade or roll back process. You may refer to these log files should you face any issue during the upgrade or the rollback process. The patch logs are the `/log/patch<time_stamp>`, where the *time_stamp* variable defines the date and time at which the log file was generated.

The method to view the patch logs might be slightly different depending on the software release line:

- For 2.5.x upgrade process:
Use the NFS logs share method to view the patch logs for the 2.5.x release line.
- For 2.6.x.x upgrades:
The `/log/patch<time_stamp>` are the main source of troubleshooting. Additionally, you may also use the `Vxlogview` with `[SWUpdate]` as a keyword. For the 2.6.x.x, use any of the following options to access the patch log files:
 - NFS log share method

- DataCollect logs - You may access the DataCollect logs through the NetBackup Appliance Shell Menu and the NetBackup Appliance Web Console. Run the `Main_Menu > Support > DataCollect` command from the shell menu or I run the **Appliance Diagnostics Center** wizard from the NetBackup Appliance Web Console.

For more information on working with patch log files, contact Symantec Technical Support.

See “Troubleshooting generic upgrade related issues” on page 33.

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