Symantec NetBackup™ Appliance Release Notes

Release 2.7.1

NetBackup 52xx and 5330

Symantec™

Symantec NetBackup™ Appliance Release Notes

Documentation version: 2.7.1

Legal Notice

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- Hardware information

- Available memory, disk space, and NIC information

- Operating system

- Version and patch level

- Network topology

- Router, gateway, and IP address information

- Problem description:

  - Error messages and log files

  - Troubleshooting that was performed before contacting Technical Support

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Contents

NetBackup Appliance 2.7.1 features, enhancements, and changes

This chapter includes the following topics:

NetBackup 5330 hardware features

The NetBackup 5330 has more storage capacity, more RAM, and more speed than any previous NetBackup Appliance. It also has greater I/O capacity through additional 10 Gb Ethernet ports in comparison with the other NetBackup appliances.

The NetBackup 5330 hardware includes the appliance and a Primary Storage Shelf. The appliance does not provide any storage, but the space available from the Primary Storage Shelf and up to two Expansion Storage Shelves can be used for backups. The Primary Storage Shelf and the Expansion Storage Shelf support either 3-TB or 6-TB disk drives, but all drives within a shelf must be the same capacity. The following table shows the available, formatted storage capacity of the NetBackup 5330 Appliance system.

Table 1-1   NetBackup 5330 Appliance version 2.7.1 storage capacity options

NetBackup 5330 Appliance (software version 2.7.1)	Primary Storage Shelf	Expansion Storage Shelf	Expansion Storage Shelf	Total storage capacity
Configuration A	114TB	-	-	114TB
Configuration B	114TB	114TB	-	229TB
Configuration C	114TB	229TB	-	343TB
Configuration D	114TB	114TB	229TB	458TB
Configuration E	229TB	-	-	229TB
Configuration F	229TB	229TB	-	458TB

The 5330 appliance also offers the following improvements over the 5230 appliance:

■   Increased memory
    The NetBackup 5330 has 384 GB of RAM, in comparison with a maximum of 128 GB in the 5230 appliance.

■   Increased speed
    The 5330 has 3.0-GHz 10-core processors, an improvement over the 2.0-GHz 6-core processors in the 5220.
    The 5330 appliance also has external RAID controllers, which leads to three times the write speed and five times the read speed of the NetBackup 5230.

■   Additional hot-swappable components
    The 5330 external RAID controllers are hot-swappable so that a faulty controller can be replaced without interrupting your operations.

■   Multiple redundant data paths
    The NetBackup 5330 has redundant data paths for all critical storage. This means that it can withstand multiple component failures and still operate.

■   A more resilient storage architecture
    The redundant components of the NetBackup 5330 Appliance allow the appliance to remain productive, even when a hardware component fails. This feature minimizes the effect of a hardware failure on your operations until the faulty part can be replaced.

Table 1-2 outlines the differences between the NetBackup 5330, 5230, and 5220 Appliances.

Table 1-2   Comparison of NetBackup 5330, 5230, and 5220 Appliances

Parameter	NetBackup 5330	NetBackup 5230	NetBackup 5220
Cores	20	12	8
Cache	25 MB	15 MB	12 MB
RAID cache	24 GB	1 GB	512 MB
Speed	3.0 GHz	2.0 GHz	2.4 GHz
Turbo speed	3.6 GHz	2.5 GHz	2.66 GHz
QPI speed	8 GT/s	7.2 GT/s	5.86 GT/s
System memory (GB)	384 GB	128 GB	96 GB
Memory configuration (DIMMs)	16GB x 24	8GB x 16	8GB x 12
Typical power consumption with maximum external storage	2442 Watts (10.7 W per TB)	1500 Watts (9.5 W per TB)	1500 Watts (9.5 W per TB)
Data retention	One Li-ion battery backup unit to NVRAM per RAID controller (2 per system)	Two maintenance-free backup units (MFBU) with Flash and Supercapacitor	One Li-ion battery backup unit
PCI add-in card slots	6	6	5
On-board 10 Gb Ethernet ports	2	2	0
Additional 10 Gb Ethernet cards in PCI assembly	Up to 4 cards (8 ports)	Up to 1 card (2 ports)	Up to 1 card (2 ports)
Additional 1 Gb Ethernet cards in PCI assembly	No	No	Yes
SAS RAID card in PCI assembly	No	Yes	Yes
Dual redundant external-storage-based RAID controllers	Yes	No	No

Table 1-2   Comparison of NetBackup 5330, 5230, and 5220 Appliances
                   (continued)

Parameter	NetBackup 5330	NetBackup 5230	NetBackup 5220
External storage	One Primary Storage Shelf and up to two optional Expansion Storage Shelves	Up to 4 Symantec Storage Shelves	Up to 4 Symantec Storage Shelves

For more information about the hardware architecture of NetBackup Appliances,
see the *NetBackup Appliance and Symantec Storage Shelf Product Description*
documents.

About the NetBackup 5330 appliance storage units

The NetBackup 5330 Appliance does not contain any internal storage and relies
on the use of the following external storage units:

- Primary Storage Shelf
  This storage unit contains the RAID and is required for every 5330 appliance
  installation. The unit connects directly to the appliance with Fibre Channel (FC)
  cables. A NetBackup 5330 system supports one Primary Storage Shelf unit.

- Expansion Storage Shelf
  This storage unit is optional and is intended to increase the disk space of
  minimum configuration systems that contain only a Primary Storage Shelf. The
  unit connects directly to the Primary Storage Shelf with SAS cables. A NetBackup
  5330 system supports up to two Expansion Storage Shelf units.

Note: The Primary Storage Shelf and the Expansion Storage Shelf are not
compatible with NetBackup 52xx appliances. The Symantec Storage Shelf is not
compatible with a NetBackup 5330 or with either of its associated storage shelves.

When you begin the initial configuration of a NetBackup 5330 from the NetBackup
Appliance Web Console, a **Storage Overview** page appears. This page shows the
hardware configuration of your system and identifies the connectivity or the disk
drive issues that may exist. Symantec recommends that you correct all identified
issues before you proceed with the initial configuration.

When you perform the initial configuration from the NetBackup Appliance Shell
Menu, you can manually run the `Test hardware` command to identify the
connectivity or the disk drive issues that may exist.

For complete information, see the *NetBackup Initial Configuration Guide*.

NetBackup 52xx hardware features

This release supports the 52xx hardware architectures for the appliance. These architectures run the same software so you can configure them in any of the following modes:

- An appliance master server

- An appliance master and media server

- An appliance media server only

All appliance architectures support the following features and functionalities:

- Dual processor, Quad Core, Intel-based systems.

- Each has a number of hot swap external drives.

- Fibre Channel connectivity that supports external tape drives.

- The base configuration supports a Gigabit Ethernet network.

- High-performance hardware RAID controller.

- The Intel X520 SR2 10 Gb Ethernet card is either standard on the systems or an option.

- Each uses NetBackup as their code base.

- Linux operating system (provided by Symantec).

- Each can run the latest version of NetBackup Appliance software.

- Each supports Media Server Deduplication Pool (MSDP) storage on master and media servers. MSDP offers up to the maximum available storage capacity on a 52xx appliance.

The NetBackup 5220 Appliance contains eight internal storage disk drives with a total formatted storage capacity of 4 TB.

The NetBackup 5230 Appliance contains eight internal storage disk drives that are available in 1-TB and 3-TB storage capacities. The 1-TB disks provide a total formatted storage capacity of 4 TB. The 3-TB disks provide a total formatted storage capacity of 14 TB.

The NetBackup 5220 and 5230 can be used with attached Symantec Storage Shelves for additional storage. A storage shelf can support either 2-TB or 3-TB disk drives, but all drives within a shelf must be the same capacity.

Table 1-3 shows the available, formatted storage capacity of the NetBackup 5220 Appliance, with or without attached storage shelves.

Table 1-3   NetBackup 5220 storage capacity options

Appliance storage drives (TB)	Appliance available storage capacity (TB)	Storage shelf drives (TB)	Storage shelf available storage capacity (TB)	Appliance and one storage shelf available storage capacity (TB)	Appliance and two storage shelves available storage capacity (TB)	Appliance and three storage shelves available storage capacity (TB)	Appliance and four storage shelves available storage capacity (TB)
1	4.55	2	24	28.55	52.55	*	*
1	4.55	3	36	40.55	76.55	112.55	148.55

* If required, 2TB storage drives can be provided.

Table 1-4 shows the available, formatted storage capacity of the NetBackup 5230 Appliance, with or without attached storage shelves.

Table 1-4   NetBackup 5230 storage capacity options

Appliance storage drives (TB)	Appliance available storage capacity (TB)	Storage shelf drives (TB)	Storage shelf available storage capacity (TB)	Appliance and one storage shelf available storage capacity (TB)	Appliance and two storage shelves available storage capacity (TB)	Appliance and three storage shelves available storage capacity (TB)	Appliance and four storage shelves available storage capacity (TB)
1	4.55	2	24	28.55	52.55	*	*
1	4.55	3	36	40.55	76.55	112.55	148.55
3	13.65	2	24	37.65	61.65	*	*
3	13.65	3	36	49.65	85.65	121.65	157.65

* If required, 2TB storage drives can be provided.

Table 1-5 shows the software version level that is required to achieve your desired storage capacity.

Table 1-5   NetBackup Appliance software dependencies for maximum
                   storage

NetBackup Appliance software version	Maximum number of attached storage shelves	Maximum storage capacity (with attached storage shelves)	Maximum MSDP storage capacity
2.5 - 2.5.4	2	76 TB	64 TB
2.6.0.1	2	86 TB (with a 14-TB 5230 appliance)	86 TB*
2.6.0.2 and later	4	158 TB	158 TB*

* For best performance, the MSDP partition should not be split between the appliance and the expansion storage. Symantec recommends that your MSDP partition reside on expansion storage to optimize performance.

For more information about the hardware architecture of NetBackup Appliances, see the *NetBackup Appliance and Symantec Storage Shelf Product Description* documents.

About NetBackup Appliance 2.7.1 new features, enhancements, and changes

In addition to a number of new features, this release offers many enhancements to the issues and improvements from previous NetBackup Appliance releases. Information about the new features, enhancements, and changes in this release of NetBackup Appliance can be found in the following sections of this chapter.

When an appliance is released, the latest version of NetBackup is used as a basis on which the appliance code is built. That ensures that all applicable features, enhancements, and fixes that were released within NetBackup are included in the latest release of the appliance.

This release incorporates fixes to several known issues that existed with the NetBackup Appliance software. Many of these issues pertain to the customer-specific issues that have been documented in the form of Salesforce.com (SFDC) cases. Many of the fixes that are incorporated into this release are available as individual engineering binaries and engineering bundles (EEBs). These EEBs were created to address specific customer issues with a previous version of the NetBackup Appliance software. The engineering binaries and bundles that are included in this release are listed in the *Release content* appendix of this document.

NetBackup 7.7.1 is the version of NetBackup software that the NetBackup Appliance 2.7.1 release installs. Information about the new features, enhancements, and fixes found in NetBackup 7.7.1 can be found in the *NetBackup 7.7.1 Release Notes* document on the Symantec Support website:

http://www.symantec.com/docs/DOC8511

NetBackup Appliance new features, enhancements, and changes

The following list describes the new features, enhancements, and changes in the NetBackup Appliance 2.7.1 release:

- Starting with NetBackup appliance software version 2.7.1, the Red Hat Enterprise Linux (RHEL) operating system replaces SUSE Linux Enterprise Server (SLES). Any existing NetBackup 5220, 5230, or 5330 appliances with software versions 2.6.1.2 and earlier that you currently use can be upgraded to version 2.7.1. In some situations, you may need to upgrade twice to get to version 2.7.1. For more details about the impact of the new operating system regarding upgrades and security, refer to the following documents:
  NetBackup Appliance Upgrade Guide Release 2.7.1 - Red Hat Enterprise Linux (RHEL) Operating System
  NetBackup 52xx and 5330 Appliance Security Guide

  Note: Due to certain hardware, firmware, and performance limitations, the NetBackup 5200 Appliance is not supported for upgrades to version 2.7.1.

- This release of NetBackup Appliance includes the following hardware enhancements for the NetBackup 5330 Appliance:

  - The NetBackup 5330 Appliance now supports a second Expansion Storage Shelf. You can add a second shelf to a new or an existing system. With the second Expansion Storage Shelf, the NetBackup 5330 Appliance now supports up to 458TB of total storage capacity.
    Refer to the *NetBackup 5330 Appliance Hardware Installation Guide* for instructions on how to install a second shelf.

  - The Primary Storage Shelf and the Expansion Storage Shelf now support 6TB disks, an enhancement over the previous 3TB disks.

    Note: Individual storage shelves contain either the 3TB disks or the 6TB disks, but not both.

See "NetBackup 5330 hardware features" on page 8.

For more information on the hardware enhancements, refer to the *NetBackup 5330 Appliance Product Description Guide*.

- Copilot

  Copilot integrates with native Oracle tools and processes to give database backup administrators more control, visibility, and the ability to recover their database backups. Backup administrators can then manage policies, move the data to different storage types, and create off-site backup copies of the database backups.

  Additionally, Copilot features NetBackup Accelerator technology to boost Oracle backup and restore performance. NetBackup Accelerator integrates with Oracle's incremental merge capabilities to eliminate the need for full backups and allow new full database images to be synthesized on backup storage post-process.

  Copilot lets you create shares on the appliance for Oracle backup and recovery and create further protection policies in NetBackup for advanced data protection features like long-term retention, replication, and NetBackup Oracle Accelerator technology. Copilot is exclusive to the appliance but requires additional configuration steps within NetBackup software.

  Copilot functionality requires the following steps to be completed:

  - Create a share on the appliance using the NetBackup Appliance Shell Menu.

  - Mount the appliance share on the Oracle server.

  - Configure a Storage Lifcycle Policy (SLP) and Oracle Intelligent Policy (OIP) using NetBackup.

  Note: If there is a firewall between the Oracle system and the NetBackup appliance, the security policy of the firewall needs to be configured to allow NFS traffic. If not, mounting an NFS share on the Oracle system does not work.

  For more information about configuring Copilot, please refer to the *NetBackup Copilot for Oracle Configuration Guide*. For additional information on how to manage shares on the appliance, refer to the *NetBackup Appliance Admnistrator's Guide*.

- Starting with NetBackup Appliance 2.7.1, you can use the fully qualified domain name (FQDN) as the appliance host name.

- Starting with NetBackup Appliance 2.7.1, with CallHome enabled, you are expected to receive less email alerts but with more value in reference.

  - If the AutoSupport interval is set to less than 24 hours (1440 seconds), during an upgrade process, system will automatically reset it to 24 hours.

- An appliance generates three kinds of email alerts to the configured email address once a hardware failure occurs.

  - An error message by email to notify you of the hardware failure once an error is detected.

  - A resolved message by email to inform you of any hardware failure once an error is resolved.

  - A 24-hour summary by email to summarize all of the currently unresolved email alerts.

- Starting with NetBackup Appliance 2.7.1, Internet Explorer 9.x is no longer a supported Web browser for NetBackup Appliance. If you are using IE 8.x or 9.x to access NetBackup Appliance Web Console or the IPMI console, you must upgrade to IE 10.0 or higher.
  See the **Web browsers supported by Appliance** section in the *NetBackup Appliance Administrator's Guide* for more details.

- The enclosure ID that is used for hardware monitoring of the NetBackup Appliance operating system (OS) and internal disks has changed in this release from 99 to 65535.

- A menu item named **InfraServices** has been added under the **Support > Processes** menu to control the infrastructure services (includes database and message queue services). The new commands can be used for starting and stopping the Database and Message Queue services and also displaying their status.

Note: The infrastructure service commands are mainly used for troubleshooting and support. These should be used under the guidance of Technical Support. Stopping the infrastructure services may lead to failure of running operations.

See the *NetBackup Appliance Commands Guide* for details about the commands.

- Two new modules have been added to the **Support > Logs > VxLogView** command. The new modules are called **AuthService** and **Task Service** and enable you to view logs for Authentication module and Task Service module respectively.
  See the *NetBackup Appliance Commands Guide* for details about the commands.

- The Symantec Critical System Protection (SCSP) feature has been updated to version 6.5 and renamed as Symantec Data Center Security (SDCS). This feature is set automatically to the unmanaged mode (default). Setting this feature to the managed mode requires that you connect the appliance to the SDCS server. For complete details, refer to one of the following documents:
  NetBackup 52xx and 5330 Appliance Administrator's Guide

NetBackup 52xx and 5330 Appliance Security Guide

Note: In SDCS 6.5, you can no longer override and disable the IPS policy for more than 8 hours. This limitation is part of the SDCS software, not the appliance platform.

You must also update the appliance IPS and IDS policies on your SDCS management server. You cannot use the older policies to manage an appliance that is running software version 2.7.1 or newer. The new policies can be downloaded from the **Monitor > SDCS Events** page of the NetBackup Appliance Web Console. Also note that any custom rules or support exceptions you might have for the IPS and IDS policies are not available after an upgrade to NetBackup Appliance 2.7.1.

- Starting with NetBackup Appliance 2.7.1, the `Monitor > Hardware > CallHomeNow` command in the NetBackup Appliance Shell Menu is no longer supported.

Note: For this release, the command is still visible in the shell menu, but it does not work.

- Starting with NetBackup Appliance 2.7.1, you can generate a new or delete an existing certificate for vCenter and SCVMM clients by using the NetBackup Appliance Shell Menu or the NetBackup Appliance Web Console.

NetBackup Appliance compatibility

This chapter includes the following topics:

- About software release types
- NetBackup Appliance release compatibility
- About NetBackup Appliance software upgrades
- About NetBackup Appliance third-party legal notices

About software release types

Symantec maintains a policy by which NetBackup can deliver various levels of releases to accommodate customer needs. The following list defines the various release types and the version number schemes that are associated with each type. The NetBackup Appliance products use these release types and number schemes.

- A major release is the first in a series of releases. This type of release contains many new features and enhancements.
- A minor release is a single-dot release that follows a major release; for example, 2.6. This release type contains many of the same requirements as a major release. It contains a smaller set of new features and enhancements.
- A software release update is a double-dot release; for example, 2.6.1. This release type contains a few new features and enhancements as well as many product fixes.
- A maintenance release update is a triple-dot release; for example, 2.6.1.2. This release type is primarily comprised of a number of fixes that are developed to

address issues in major, minor, and software update releases. This release type may also include a small number of new features and enhancements.

NetBackup Appliance release compatibility

NetBackup appliances enable customers to quickly add an appliance as a media server or client in an existing NetBackup environment.

When an appliance is released, the latest version of NetBackup is used as a basis on which the appliance code is built. That ensures that all applicable features, enhancements, and fixes that were released within NetBackup are included in the latest release of the appliance.

For information about NetBackup compatibility with the NetBackup appliances, see the following tech note on the Symantec Support website:

http://www.veritas.com/docs/000008259

Symantec NetBackup has always maintained that the master server within an environment must be at a version level that is equal to or greater than the version levels of the media servers and clients within that environment. Symantec recommends that you keep your entire NetBackup environment up-to-date with the latest maintenance (triple-dot) releases. However, NetBackup offers the flexibility of an environment where the clients and the media servers are running a different triple-dot release than the master server. For example, you can upgrade a media server or client to version 2.6.1.1 (7.6.1.1) in an environment where the master server is running version 2.6.1 (7.6.1).

Since the NetBackup catalog resides on the master server, the master server is considered to be the client for a catalog backup. If your NetBackup configuration includes a media server, it must use the same NetBackup version as the master server to perform a catalog backup. See the *NetBackup Installation Guide* for information about mixed version support.

See "About software release types" on page 19.

Table 2-1 shows the various compatibility schemes that are supported with the current NetBackup Appliance 2.7.1 product line. The numbers in parentheses reflect the base NetBackup version level that is applied to that particular version of NetBackup Appliance software.

Table 2-1   NetBackup Appliance 2.7.1 release compatibility

NetBackup appliance master server version	NetBackup appliance media server version	NetBackup client version
2.7.1 (7.7.1)	**2.7.1 (7.7.1)**	7.7.1, 7.7, 7.6.1.x, 7.6.1, 7.6.0.x, 7.6, 7.5.0.x, 7.5, 7.1.0.x, 7.1
2.7.1 (7.7.1)	**2.6.1.x (7.6.1.x), 2.6.1 (7.6.1)**	7.6.1.x, 7.6.1, 7.6.0.x, 7.6, 7.5.0.x, 7.5, 7.1.0.x, 7.1
2.7.1 (7.7.1)	**2.6.0.x (7.6.0.x)**	7.6.0.x, 7.6, 7.5.0.x, 7.5, 7.1.0.x, 7.1
2.7.1 (7.7.1)	**2.5.x (7.5.0.x), 2.5 (7.5.0.2)**	7.5.0.x, 7.5, 7.1.0.x, 7.1
2.7.1 (7.7.1)	**2.0.x (7.1.0.x)**	7.1.0.x, 7.1

All NetBackup 5220, 5230, and 5330 appliances can be upgraded to NetBackup Appliance version 2.7.1.

Note: If an appliance server is currently at a version earlier than 2.6.1, you cannot upgrade directly to NetBackup Appliance 2.7.1. You must first upgrade to version 2.6.1.2, and then upgrade to the 2.7.1 product line.

About NetBackup Appliance software upgrades

When a software update release is available, Symantec recommends that you install it to make sure that you have the latest product features and fixes.

When you upgrade appliance software, the update release may install an updated version of the operating system, NetBackup, and all appliance interfaces. All services are shut down automatically when the upgrade begins, and then restarted automatically after all updates have been applied.

Note: If an appliance server is currently at a version earlier than 2.6.1, you cannot upgrade directly to version 2.7.1. You must first upgrade to version 2.6.1.2, and then upgrade to the 2.7.1 product line.

Symantec recommends that you plan your appliance upgrades in advance to help minimize system down time.

The following describes how you should plan for and perform appliance software upgrades:

- Always schedule upgrades when system activity is at its lowest. Symantec recommends that you suspend all backup and restore operations before starting the upgrade.

- Before you begin a software update, Symantec recommends that you take certain precautions to avoid loss of connectivity. The computer that you use to configure the device should be set up so that it does not go to sleep, shut down, lose power, or otherwise lose its network connection. If you lose connectivity during the installation, the operation fails.

- An appliance master server must always be at an equal or a later version than any appliance media server that is used with it. The only exception to this rule is if Symantec provides a maintenance release to any major, minor, or software update release. A maintenance release version number is identified with four digits (2.x.x.x).

- When you upgrade your appliance, you must only use the software updates that are available for the appliance. An appliance software update is a complete package that consists of updates to the appliance, NetBackup, and the operating system components. Symantec does not support appliance upgrades for any of the individual components separately.

- Appliance master servers must always be upgraded before any appliance media servers are upgraded.

- During an upgrade from NetBackup Appliance 2.5.x to this version of the appliance software, the Media Server Deduplication Pool (MSDP) requires 13% free space to complete the conversion. If you do not have the necessary amount of free space, the upgrade fails.

- An upgrade from 2.5.x to the 2.6 product line takes approximately three hours to complete but can extend beyond that timeframe, depending on the environment. During that time, the appliance can restart several times. This behavior is normal.

- Once the upgrade has started, you must let it run until it has completed.

Note: Symantec recommends that you do not attempt to cancel an upgrade. Otherwise, you may experience unexpected system behavior. For example, backups may fail immediately after a canceled upgrade while the services are restarted. Although this behavior is to be expected, other parts of the system may potentially have been affected.

About NetBackup Appliance third-party legal notices

NetBackup Appliance products may contain third-party software for which Symantec is required to provide attribution. Some of the third-party programs are available under open source or free software licenses. The license agreement accompanying the software does not alter any rights or obligations you may have under those open source or free software licenses.

The proprietary notices and the licenses for these third-party programs are documented in the *NetBackup Appliance Third-party Legal Notices* document, which is available at the following website:

https://www.veritas.com/about/legal/license-agreements

Operational notes

This chapter includes the following topics:

- About operational notes for NetBackup Appliance 2.7.1

- New Operational Notes for NetBackup Appliance 2.7.1

- General NetBackup Appliance notes

- NetBackup appliance user interface notes

- Installation and configuration notes

- VMware notes

- About NetBackup support utilities

- About NetBackup appliance log files

About operational notes for NetBackup Appliance 2.7.1

This chapter contains the topics that explain important aspects of NetBackup Appliance 2.7.1 operations that may not be documented elsewhere in the documentation set. This document is posted on the Symantec Support website and may be updated after the GA release of NetBackup Appliance 2.7.1. Therefore, Symantec recommends that you refer to the following link to view the latest release information:

http://www.symantec.com/docs/DOC8995

Because NetBackup Appliance 2.7.1 installs NetBackup 7.7.1 software, the operational notes that apply to NetBackup 7.7.1 also apply to NetBackup Appliance 2.7.1. For more information on the operational notes for NetBackup, refer to the *NetBackup 7.7.1 Release Notes* on the Symantec Support website:

http://www.symantec.com/docs/DOC8511

New Operational Notes for NetBackup Appliance 2.7.1

Note: If you are familiar with the Operational Notes for the previous release, review this section to see only the newly documented content for this release. You should also check the *Release content* appendix of this document to see the issues that have been resolved for this release.

Note: The notes and the known issues that are documented in this section may also apply to previous releases.

The following list contains the notes and the known issues that are newly documented for this release:

- Due to the company separation of Veritas from Symantec, some important server changes occurred that affect NetBackup Appliance environments. These changes affect SORT, the NetBackup Product Improvement Program, appliance registration, and AutoSupport. Depending on your firewall settings and your proxy settings, you may need to make updates to maintain existing functionality. For specific information on these changes, refer to the following Tech Alert on the Veritas Support website:

  https://www.veritas.com/docs/INFO2803

- The online context-sensitive help in the NetBackup Appliance Web Console is not functioning in this release. The ability to access the online help by clicking the "?" icon in the upper right corner of the console does not work.
  To access the NetBackup Appliance 2.7.1 documentation set, click the following link:

  http://www.veritas.com/docs/DOC2792

  You can also access the content online by using a search engine and performing a search for NetBackup Appliance 2.7.1 topics.

- When using the NetBackup Appliance Shell Menu, local user commands cannot be performed before the appliance role is configured. Any attempted local user commands including, but not limited to granting user permissions, fail if the appliance role is not configured. If you attempt to run commands before role configuration, those commands also fail after you complete the role configuration. To avoid this situation, do not perform any local user commands until after the appliance role has been configured.

- When expanding the screen resolution to above the size of 1280*1024, and setting the font size to larger than 11, the command line interface may not display properly. To avoid this situation, do not change the default font size of the command line interface if you have adapted a large screen resolution.

- On a NetBackup 5330 Appliance, once a cable is disconnected, the hardware monitoring status becomes invalid for reference. To avoid this situation, guarantee all cables are connected correctly during the whole cable-monitoring operations.

- During an upgrade to 2.7.1, if a canceled replication operation is restarted right after the checkpoint is created, the upgrade fails and the system rolls back automatically. After rollback, the backup cannot work because the media server is no longer active. To resolve this issue, activate the media server manually as follows:

  - Log on to the NetBackup Administration Console as administrator.

  - On the left panel, navigate to **Media and Device Management** > **Devices** > **Media Servers**.

  - On the right panel, right-click the media server you need and select **activate** from the shortcut menu.

Note: To prevent this issue, before you upgrade any servers, make sure to stop all backup jobs.

Before you upgrade a master server, pause all jobs and any Storage Lifecycle Policies (SLPs).

Before you upgrade a media server, stop all jobs that are currently running and suspend the jobs that may be scheduled to start during the upgrade. You must prevent jobs from attempting to start on the media server during an upgrade.

- Starting from version 2.7.1 of NetBackup Appliance software, the SSH sessions have a limited idle session time. This change is introduced for securing the system, but it can cause the SSH operations failure if the SSH operations take longer time than the limited value. To avoid the failure, set a proper interval or enable the function to keep the session alive for certain time in the SSH interface application you use. Refer to documentation of the in-use SSH interface application for detailed configuration instruction.

- New Copilot feature

  The following describes the limitations for the 2.7.1 release:

  - The Copilot feature is supported on NetBackup 5230 and 5330 appliances. It is not supported for use with the NetBackup 5220.

- - Copilot functionality is limited to the NetBackup Appliance Shell Menu. There is no NetBackup Appliance Web Console functionality at this time.

  - Client names can be entered using the shortname, the FQDN, or the IP format. These are translated to the FQDN format after entry.

- If you connect a Symantec Storage Shelf to a NetBackup 52xx Appliance, an AutoSupport alert with UMI code V-475-100-1004 is generated for each storage disk when the storage shelf is turned on. The following message displays: "You can either import the foreign configuration or clear the disk."
  You can safely ignore these alerts.
  If you connect the storage shelf during initial configuration, the alerts are all cleared when initial configuration is complete.
  If you connect the storage shelf after initial configuration, the alerts are cleared when you run the storage scan as part of installation. In this case, the NetBackup Appliance Web Console and the NetBackup Appliance Shell Menu may show incorrect data for the storage shelf for approximately five minutes after installation is complete.
  See the *NetBackup Appliance Hardware Installation Guides* for more information on installing a storage shelf.

- NetBackup Appliance supports Internet Explorer versions 10.0 and later, and Mozilla Firefox versions 21.0 and later.

  Note: Even though IE 9.x is not a supported browser, the NetBackup Appliance Web Console may flag IE 9.x as a supported browser. If you are using IE 8.x or 9.x to access the NetBackup Appliance Web Console, you must upgrade to IE 10.0 or higher.

- When mounting a share on an Oracle server from the appliance using the hostname as well as a private IP (VLAN IP) in a VLAN environment, the following error may be displayed:

  ```
  mount.nfs: access denied by server while mounting hostname:/shares/share
  ```

  This error occurs because entries in the /etc/hosts file are added for mapping the appliance FQDN to VLAN IP addresses. DNS settings are also added to resolve the public addresses, so the DNS settings can take precedence over the /etc/hosts entries.
  To correct this issue, delete the domain settings by running the following command: `Network > DNS Delete Domain`.

■ You may see the following error during initial configuration when you provide the host name on the **Host Configuration** page or run the `Hostname Set` command on the NetBackup Appliance Shell Menu:

"[Error] V-409-930-001: Cannot set the hostname "sample.domain.com". The hostname could not be resolved. Set the hostname again with a valid hostname." To resolve this error, ensure that both the short name and the FQDN can be resolved to an IP address. For example, if you entered **sample.domain.com** where sample is the short name, ensure that both sample and "sample.domain.com" can be resolved to an IP address.

■ For this release, if a Veritas Storage Shelf in your configuration is turned off or loses power, the hardware monitoring interfaces may not reflect the correct information. If this issue occurs, the **Monitor > Hardware** page of the NetBackup Appliance Web Console and the `Monitor > Hardware` commands in the NetBackup Appliance Shell Menu show the storage shelf as present. The status that displays is the last known status before the storage shelf was turned off or lost power.

The only hardware alerts that are sent in this case are for the partition status. If you receive a hardware alert for a partition with UMI code v-475-103-1002 or V-475-103-1003, physically check to make sure that the storage shelf has power and is turned on. Once the storage shelf is turned on again, the web console and the shell menu show the latest monitoring information.

If you need to remove a storage shelf from your configuration and from hardware monitoring, contact Veritas Support for assistance.

■ If you encounter a problem with reading a disk's partition table during an upgrade, the following prompt appears:

```
Error processing drive

pci-PCI_address

This device may need to be reinitialized.

REINITIALIZING WILL CAUSE ALL DATA TO BE LOST!

This action may also be applied to all other disks needing
reinitialization.


Ignore    Ignore all    Re-initialize    Re-initialize all
```

If this prompt appears, select `Ignore` or `Ignore all` to continue with the upgrade. This action does not reinitialize the disk and allows the upgrade to complete.

- In this release, a failure can occur when you try to set the Alerting and Call Home settings in one of the following scenarios:

  - During role configuration in the NetBackup Appliance Web Console

  - Through the NetBackup Appliance Shell Menu after you update the NTP server or the system date and time

  If you encounter this issue, wait a couple of minutes and try again to update the settings. If the error occurs again, log on to the NetBackup Appliance Shell Menu and restart the Appliance Directory Service with the following commands:

  - Use the `Support > Processes > InfraServices Database Stop` command to stop the service. The following message appears:

    ```
    WARNING: Stopping these services may result in failure of some
    operations.
    Do you want to continue? (yes/no):
    ```

    Type `yes` and press **Enter**.

  - Then use the `Support > Processes > InfraServices Database Start` command to restart the service.

  After you restart the Appliance Directory Service, try again to set the Alerting and Call Home settings.

- An issue can occur with the IPMI system that causes the same hardware monitoring alert for the Processor, System Fan, Power Supply, or Temperature to be sent every 15 minutes. If you receive multiple alerts for these components, make sure that the appliance firmware is up to date. Check the BIOS, BMC, and SDR. If an update is required, restart the appliance when the firmware update cycle is complete.

  You can also reset the IPMI module with the `Support > IPMI Reset` command in the NetBackup Appliance Shell Menu.

- The `Monitor > Hardware > CallHomeNow` command in the NetBackup Appliance Shell Menu is not supported in this release. The command is visible in the shell menu, but it does not work.

- The NetBackup 5330 Appliance has four Fibre Channel connections between the compute node and the Primary Storage Shelf. If these storage connections are not in a supported configuration, the appliance hardware monitoring sends an alert with UMI code V-475-105-1000 and the following message:

  "One or more of the Fibre Channel (FC) cable connections is not installed correctly or is not functional."

  If you receive this alert and verify that the cables are all connected and functional, make sure that they are installed in a supported configuration. See the *NetBackup*

5330 Appliance Hardware Installation Guide for the supported cable
configurations.

Note: : In the NetBackup Appliance 2.6.x line of releases, the hardware
monitoring functionality did not check all instances of unsupported configurations.
Because of this limitation, an appliance that was set up in an unsupported
configuration could still show the FC status as **Optimal**. If you upgrade an
appliance in this scenario to the 2.7.1 release, the FC status changes from
Optimal to **Error**, and the alert is sent. This change does not mean that the
cables stopped working. The connections are functional, but not in a supported
configuration. When you reconfigure the cables according to the supported
configurations, the errors are resolved.

Upgrade and rollback notes

The following describes the notes and the known issues with regard to upgrades
and rollbacks.

- Before you upgrade to version 2.7.1 from 2.6.x, the existing SUSE Linux
  Enterprise Server (SLES) third-party plug-ins must be replaced with the
  appropriate Red Hat Enterprise Linux (RHEL) versions. Otherwise, the pre-flight
  upgrade script does not allow the upgrade to start. For complete details, refer
  to the *NetBackup Appliance Upgrade Guide - Release 2.7.1 Red Hat Enterprise
  Linux (RHEL) Operating System*.

- Self-test failure during an upgrade
  To verify that the upgrade is successful, the upgrade process performs an
  automatic self-test of a backup and a restore to and from the `/tmp` directory. If
  the `/tmp` directory for the appliance you are upgrading is on the NetBackup
  exclude list, you must remove it from that list before you run the self-test
  command. Log on to the NetBackup Administration Console to remove the
  directory from the NetBackup exclude list.

Note: If you run the `Support > Test Software` command manually from the
NetBackup Appliance Shell Menu, the same failure can happen. Before you run
the command, you must remove the `/tmp` directory from the NetBackup exclude
list on the appliance that you are upgrading.

- Stop all jobs and run a software self-test before upgrading.
  Before you upgrade to appliance version 2.7.1, make sure that you stop all
  backup jobs and run a software self-test to verify that no jobs are in progress.
  Although the upgrade pre-flight check verifies whether there are any active jobs,

it is a best practice to stop all jobs manually before any upgrade. After all jobs have been stopped, run a software self-test. The self-test must report a **Pass** condition before an upgrade can proceed.

For complete details, refer to the *NetBackup Appliance Upgrade Guide - Release 2.7.1 Red Hat Enterprise Linux (RHEL) Operating System*. See the section "Pre-upgrade tasks for NetBackup appliance version 2.7.1 upgrades".

- When you upgrade to version 2.7.1 and then re-image to 2.7.1 without resetting the storage, the following message may appear:

  ```
  [Error] Cannot create NetBackup objects for 'AdvancedDisk' storage
  pool. One of the disk volumes is not configured. Restart the
  Appliance and retry. Contact Symantec Technical Support if the
  issue persists.
  ```

  To resolve this issue, contact Symantec Technical Support and ask the representative to reference TechNote 000095808.

- If the upgrade process cannot create a pre-upgrade checkpoint, the upgrade cannot proceed. To resolve this issue, contact Symantec Technical Support and ask the representative to reference TechNote 000095753.

General NetBackup Appliance notes

The following list contains the notes and the known issues that relate to the general workings of the NetBackup Appliance:

- The appliance login banner is not retained after you upgrade the appliance software version. To work around this issue, run the `LoginBanner Show` command before the upgrade and copy the login banner text. After the upgrade, run the `LoginBanner Set` command and use the copied text to set the same login banner.

- 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:`.

- To avoid the potential for data loss, do not attempt to perform a factory reset from both the NetBackup Appliance Web Console and the NetBackup Appliance Shell Menu at the same time. This action can cause the factory reset to fail and can potentially cause storage data loss.

- If the appliance is configured as a master server or media server and you log in to the NetBackup Appliance Web Console to change the **Enable Fibre Transport for duplication and backups on a Deduplication Appliance** feature, changes cannot be saved by clicking **Save**. For this appliance release, you must change this feature setting by logging into the NetBackup Appliance Shell Menu and use the `Settings > FibreTransport` view commands.

- If you configure the `LifeCycle` parameter `MAX_TIME_TIL_FORCE_SMALL_DUPLICATION_JOB` for an invalid setting, the appliance responds with a **changed successfully** message. When you run the `LifeCycle > Show` command to view the new setting, the previous setting still appears. For this release, ignore the message and run the `Show` command whenever you change this parameter to verify the configuration. The default setting is 10 and it can only be changed to a higher value.

- If the eth0 port is not configured on your appliance, checkpoint operations do not work from the NetBackup Appliance Web Console. The eth0 port is set as part of the appliance installation, so this issue only applies if you have un-configured it.
  If you encounter this issue, configure the eth0 port or use the NetBackup Appliance Shell Menu to create a checkpoint or roll back to a checkpoint.

- Symantec recommends that you do not use the Symantec Remote Management interface to create or delete IPMI users. Instead, use the `Support > IPMI User Add` and `Support > IPMI User Delete` commands in the NetBackup Appliance Shell Menu.

- 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.

- On a NetBackup 5330 Appliance, a preferred path failure can occur when the LUN ownership fails over from one controller to another controller. In some cases, one controller can reset the other controller, which then causes a preferred path failure. When this failure happens, the **Storage Status** for appliance hardware monitoring displays as Not Optimal. This failure can persist for weeks at a time until cleared.
  If the failure is not cleared, all paths fail, and the affected controller is taken offline, resulting in loss of redundancy and performance degradation. If you encounter this issue, contact Symantec Support and have your representative reference TECH225558.

- 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.

- If you set the SCSP audit log retention and later restart the appliance, the audit log retention setting is not retained. You need to reset the audit log retention after an appliance restart.

- During an appliance restart, the operating system can hang at the final stages of the shutdown process. The following is the last message to display on the appliance console, which you can see through the IPMI sub-system:

  ```
  Please standby while rebooting the system.....
  ```

  If this issue occurs, it is safe to power off the system and turn it back on to complete the restart.

- For this release of NetBackup Appliance, Replication Director (RD) restores do not support dynamic multi-pathing (DMP) when the appliance is used as a backup or a recovery host.

- During a factory reset, if you select `no` to the questions of `RESET STORAGE CONFIGURATION` and `BACKUP DATA [Optional]`, it indicates that you keep the storage related configurations. After the factory reset, when you do the initial role configuration, make sure that the size of the Advanced Disk and MSDP are not sepcified to `0`, otherwise the role configuration fails.

Note: If the size of Advanced Disk and MSDP is already specified to `0` before the factory reset, then in the initial role configuration after the factory reset, it is OK to set them to `0`.


NetBackup appliance user interface notes

The following list contains the notes and the known issues that relate to the NetBackup Appliance Web Console and the NetBackup Appliance Shell Menu:

- When you perform the NIS/Kerberos configuration from the NetBackup Appliance Shell Menu, the display automatically scrolls to the bottom and the screen appears blank. Scroll back up to view the configuration results.

- If you see a hardware error on the home page of the NetBackup Appliance Web Console, but the **Monitor > Hardware** page does not show the error, check the NetBackup Appliance Shell Menu to see the current status. The **Monitor > Hardware** page may not have some information that is available in the shell menu.

- During the initial configuration of the appliance from the NetBackup Appliance Web Console, the storage configuration accepts a value of 4 GB or more for the AdvancedDisk partition. However, a 4-GB partition is not an accepted

configuration. If you select 4 GB, the appliance setup fails. Set the AdvancedDisk partition size to at least 5 GB for a successful configuration.

■ When you resize a storage partition from the NetBackup Appliance Web Console, you can use the up and down arrows or the horizontal slide bar to select the new size, as shown in the following image:
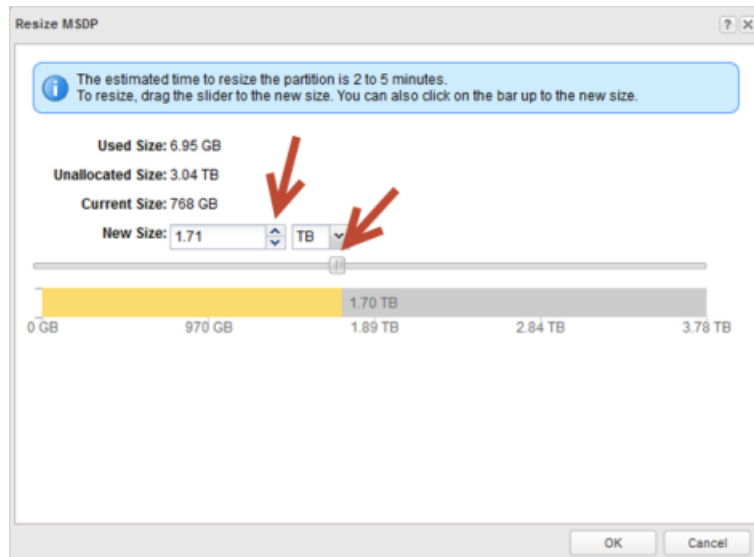
However, the size value may differ between the two methods. For the greatest accuracy, use the up and down arrows to select the new partition size.

■ When you install a NetBackup client add-on package on the appliance, the **Version after upgrade** that displays on the NetBackup Appliance Web Console is incorrect. A client package installation does not affect the appliance software version. However, the web console displays the NetBackup version for the **Version after upgrade**.

■ The **Monitor > SCSP Events** page on the NetBackup Appliance Web Console does not correctly record user sessions. The logins for the user sessions are logged on the page, but the logout information is not.

■ The NetBackup Appliance Web Console cannot be accessed from an IPv6 address.

■ During the rollback process after an unsuccessful software update, the NetBackup Appliance Web Console may temporarily display the following status: "The appliance is 2.7.1 and not in upgrade state." In addition, the progress bar shows 100% completion. Please note that this behavior does not mean that the upgrade completed successfully.

The appliance restarts shortly after, but no status update or prompt displays on the web console. Wait for the restart to complete, and you can reconnect to the appliance. More information is available if you run the `UpgradeStatus` command in the NetBackup Appliance Shell Menu during the upgrade.

- The functionality of OpenLDAP and Active Directory (AD) user names is inconsistent, as described in the following scenarios:

  - NetBackup Appliance Web Console and NetBackup Appliance Shell Menu
    These interfaces do not recognize OpenLDAP and Active Directory (AD) user names as case sensitive.

  - NetBackup Java Console
    This interface does recognize OpenLDAP and 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 Appliance Shell Menu does not allow any certificate path names that contain dashes. Path names with dashes are allowed in the NetBackup Appliance Web Console.

- Multiple email addresses cannot be added for a point of contact from the **Settings > Notification > Registration** page of the NetBackup Appliance Web Console. However, you can add multiple email addresses for the point of contact from the NetBackup Appliance Shell Menu. To add multiple email addresses from the shell menu, run the `Settings > Alerts > CallHome Registration Email` command and enter multiple email addresses separated using a semicolon.

- For this release, the `Main > Monitor > NetBackup Jobs Failed` command in the NetBackup Appliance Shell Menu does not display information on some failed jobs. You can use the `Main > Monitor > NetBackup Jobs All` command to check for failed jobs by looking at the status column for each job.

- If your appliance is not provisioned, the following notification should appear on the NetBackup Appliance Web Console landing page:
  "Call Home service is not functional. Please contact Symantec support to verify if the system has been provisioned on Call Home server."
  However, in certain cases, the notification does not appear. If the appliance date and time is not set per Network Time Protocol (NTP), the landing page only shows a notification to update the date and time. If you set the date and time per NTP, the Call Home notification appears.

Installation and configuration notes

The following list contains the notes and the known issues that relate to the installation and configuration of the appliance:

■ If your NetBackup 5330 Appliance includes a Primary Storage Shelf and an Expansion Storage Shelf, and the expansion shelf has configured RAID volumes on it, it should not be removed from the appliance setup. If the expansion shelf is removed, the primary shelf behaves as if the expansion shelf has lost power, and it produces errors. If you need to remove the expansion shelf, you need to run the `Support > RAID Clear` command before you can remove the expansion shelf from the setup.

> **Warning:** The `Support > RAID Clear` command deletes all of the data from both storage shelves. Make sure that you have saved the data elsewhere before you run the command.

■ When you upgrade a NetBackup 5230 Appliance to NetBackup Appliance 2.6.1, the following error message appears during the self test:
"The installed version of the BIOS version is not correct. Contact your administrator to update the BIOS firmware."
You can safely disregard this message. Appliance operations are not affected.

■ If you install a new version of NetBackup Appliance on a previously used appliance, you may receive the following error message during the appliance configuration:

```
Cannot recover the existing MSDP partition because the NetBackup
disk pool and storage unit could not be determined. …
- [Error] Could not configure the appliance.
```

This error occurs when a preexisting Media Server Deduplication Pool (MSDP) disk pool has a **+** in the disk pool name. If you encounter this issue, you need to change the disk pool name so that it does not include a **+** and manually configure the MSDP partition. Use the `Manage > Storage > Resize` command to configure the partition.

■ A client-side deduplication operation may fail with a status error 83.
When you configure your appliance, if DNS is used, you must make sure that the network names of all appliances and the master server are DNS-resolvable (fully qualified host name (FQHN) and short name). If DNS is not used, you must make sure that you enter the proper host entries for the appliance that you configure.

If you configure your appliance without DNS set and the `/etc/hosts` file does not contain an IP address that resolves to the FQHN mappings, you may receive a status error 83. If the value configured in the required_interface variable for the appliance media server is a short name and not a fully qualified host name, the client may not resolve correctly

To work around this issue, ensure that the DNS and the `/etc/hosts` file exist, and both have the host names that are resolvable.

For more information about this error condition, see the following tech note on the Symantec Support website:

http://www.veritas.com/docs/000016036

- When you attempt to copy a software update to the share directory, do not initiate any other commands until the copy finishes. If you run a command during the copy process, you may see that the software update is listed and available. However, if you install that software update, it can fail.

  To avoid this situation, do not run any other commands until the copy process completes.

- If you receive an email stating "No license exists" during the initial configuration of a media server, you can safely disregard the email. The email is sent during host name configuration. The license key file is renamed when it is modified with the new host name, and the alert mechanism cannot locate the license temporarily. When the configuration completes, the license is set correctly. You can check the license key on the **Manage > License** page of the NetBackup Appliance Web Console or with the `Main > Manage > License > List` command in the NetBackup Appliance Shell Menu.

- When you assign the appliance host name during the initial configuration, the `nbcssc` service file (NetBackup Cloud Storage Service Container) is not updated and retains the default **nb-appliance** host name. This problem prevents cloud service functionality and the ability to configure cloud storage. To correct this problem, you must change the appliance host name in the `nbcssc` service file. For appliances that are configured as media servers, you must first create a security certificate before you change the appliance host name in the `nbcssc` service file. The following describes how to make these changes to enable cloud service functionality:

  - Log on to the master server appliance as a NetBackup CLI Administrator.

  - On the master server appliance, run the following command to check whether any `nbcssc` processes are running in the background:

    ```
    ps -eaf | grep nbcssc
    ```

    If any `nbcssc` processes are running in the background, stop every instance by entering the following command:

    ```
    kill -9 <nbcssc pid>
    ```

■ On the master server appliance, run the following command to enter the host
name:

```
nbcssc -s -a NetBackup -f -m master_name
```

■ For the appliances that are configured as a media server, perform the
following commands from the same master server appliance in the order as
shown:

```
bpnbaz -provisioncert media_server_name
nbcssc -s -a NetBackup -f -m master_name
```

VMware notes

The following list contains the notes and the known issues that relate to VMware:

■ If you have a NetBackup 5330 Appliance with an attached VMware datastore
that is a non-Symantec external NetApp E-series storage device, make sure
that the access LUN of the external storage is not exposed to the 5330 appliance.
If the access LUN is exposed to the 5330 appliance, some functionality like
appliance hardware monitoring and scanning for storage devices does not work
properly.
The following diagram shows the type of environment that this issue affects:
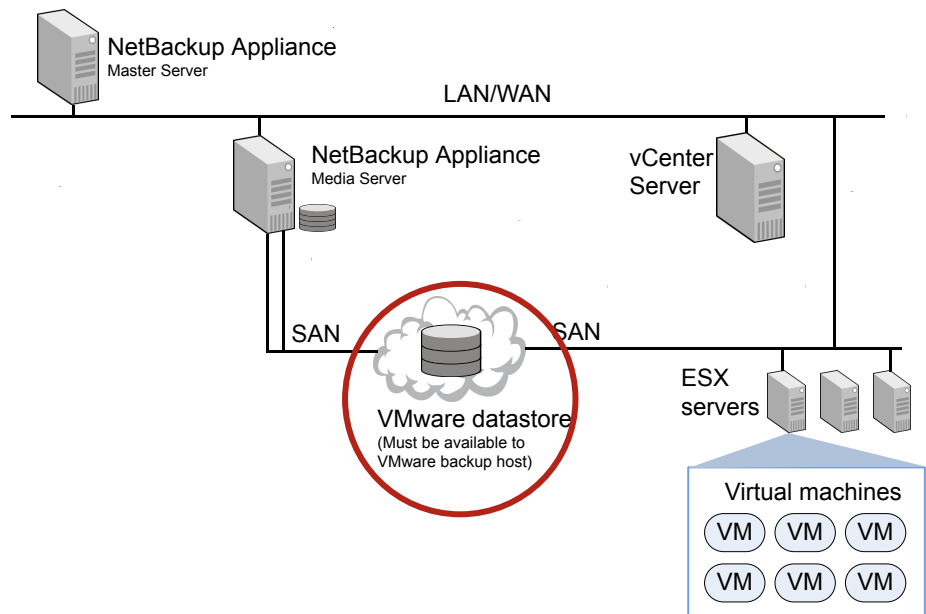
■ Concurrent VM restores may fail if you use the appliance as the restore host on a SAN. If you use the SAN transport mode to restore multiple VMs at the same time, the job status log may contain messages similar to the following:

```
4/19/2012 1:16:14 PM - Error bptm(pid=30649) cannot write
data to socket, Connection reset by peer
4/19/2012 1:16:14 PM - Info bptm(pid=30648) EXITING with status 24
```

Symantec has opened a VMware support request on this issue: 12172237605.

■ Try the following:
On the **Virtual Machines Options** dialog, for the format of the restored virtual disks, select **Thin Provisioning** and retry the restore.

■ If that fails, select **NBD** as the transport mode on the **Recovery Options** dialog and try the restore again.

About NetBackup support utilities

The NetBackup Appliance provides the following support utilities to help diagnose NetBackup problems:

■ NetBackup Domain Network Analyzer (NBDNA)

■ NetBackup Support Utility (nbsu)

NetBackup Domain Network Analyzer (NBDNA)

You can run the NBDNA utility on a NetBackup primary or secondary appliance to perform the following tasks:

■ Identifying the NetBackup domain configuration to resolve network-related issues

■ Identifying the NetBackup performance issues

■ Ensuring the behavior with regards to the host name lookup is functional

■ Ensuring that the connectivity between NetBackup hosts and the appliance is established and functional based on their role within the NetBackup domain

■ Generating the reports that are meant for Symantec Technical Support.

The NBDNA utility provides the following types of information in its output:

```
 Running audit as Media Server.

 Collection Version: x.x
    Collection Time: Tuesday, October 7, 2010 at 19:17:11 PM
        NBU Release: NetBackup-RedHat2.6.18 7.7.1
```

```
      NBU Version: 7.7.1
 NBU Major Version: 7
 NBU Minor Version: 7
 NBU Release Update: 1
    NBU Patch Type: Release Update
   NBU GlobDB Host: "host name"
    Is GlobDB HOST? No
             UNAME:
          Hostname: sample.name.symantec.com
  Host's  Platform: Linux
 Perl Architecture: Linux


 Initialization completed in 14.040101 seconds.



 Brief Description of What It Does (for type 1):
 ---------------------------------------------------
 1) Perform basic self checks.
 2) Check connectivity to Master (and EMM) server.
 3) If SSO configured, get list of media servers sharing devices.
 4) Get list of all clients which could send data here for backup.
 5) Test NBU ports for basic connectivity between media servers
    sharing devices.
 6) Test NBU ports for basic connectivity between media server and
    clients it backs up.
 7) Perform service level tests for phase 2
 8) Capture data for reports; save reports.
 9) Save data to report files.
 ---------------------------------------------------


 Discovering and mapping the NetBackup domain network for analysis
 by extracting data from current system's configuration.
  (To see more details, consider using '-verbose' switch.)


 Probing Completed in 2.867581 seconds.


 Initiating tests...


 COMPLETED.  Thank you for your patience.



 /log/dna/sample.name.symantec.com.NBDNA.20100907.191711.zip
 Archive created successfully!
```

```
Return /log/dna/sample.name.symantec.com.NBDNA.20100907.191711.zip
to Symantec Support upon request.
```

NetBackup Support Utility (nbsu)

You can use the nbsu utility to gather appropriate diagnostic information about NetBackup and the operating system. The *NetBackup Troubleshooting Guide* describes when you would use this utility, as well as how to run it.

About other support resources

If you need additional assistance with your NetBackup Appliance, contact Symantec Technical Support. Customers with a current support agreement may access Technical Support information at the following URL:

www.veritas.com/support/

Information specific to NetBackup Appliance can be found at:

go.symantec.com/nba

About NetBackup appliance log files

Log files help you to identify and resolve any issues that you may encounter with your appliance.

A NetBackup appliance has the ability to capture hardware-, software-, system-, and performance-related data. Log files capture information such as appliance operation, issues such as unconfigured volumes or arrays, temperature or battery issues, and other details.

Table 3-1 describes the methods you can use to access the appliance log files.

Table 3-1   Viewing log files

From...	Using...	Log details
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.	■ Logs created by the NetBackup Copy Logs tool (`nbcplogs`) ■ 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 > SDCS Audit View** screen from the NetBackup Appliance Web Console to retrieve the audit logs of an appliance.	Appliance audit logs
NetBackup Appliance Shell Menu	You can use the `Main > Support > Logs > Browse` commands to open the `LOGROOT/>` prompt. You can use commands like `ls` and `cd` to work with the appliance log directories and obtain the various logs.	■ Appliance configuration log ■ NetBackup logs, Volume Manager logs, and the NetBackup logs that are contained in the `openv` directory ■ Appliance operating system (OS) installation log ■ NetBackup administrative web user interface log and the NetBackup web server log ■ NetBackup 52xx appliance device logs

Table 3-1   Viewing log files *(continued)*

From...	Using...	Log details
NetBackup Appliance Shell Menu	You can use the `Main > Support > Logs > VxLogView Module ModuleName` commands to access the 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.	Appliance unified logs: ■ `All` ■ `CallHome` ■ `Checkpoint` ■ `Commands` ■ `Common` ■ `Config` ■ `CrossHost` ■ `Database` ■ `Hardware` ■ `HWMonitor` ■ `Network` ■ `RAID` ■ `Seeding` ■ `SelfTest` ■ `Storage` ■ `SWUpdate` ■ `Trace` ■ FTMS ■ TaskService ■ AuthService
NetBackup Appliance Shell Menu	You can use the `Main > Support > DataCollect` commands to collect storage device logs.	Appliance 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.	Logs relating to the NetBackup-Java applications

Release content

This appendix includes the following topics:

- About the current release content

- NetBackup Appliance 2.7.1 release content

About the current release content

This release incorporates fixes to several known issues that existed with the NetBackup Appliance software. This section documents the known issues that have been fixed in this release of NetBackup Appliance.

Note: This chapter contains only the fixes that are exclusive to NetBackup Appliance. The NetBackup Appliance 2.7.1 release also contains all of the fixes that are included in NetBackup 7.7.1. For a complete listing of the NetBackup 7.7.1 fixes, refer to the *NetBackup 7.7.1 Release Notes* on the Symantec Support website:

http://www.symantec.com/docs/DOC8511

This NetBackup Appliance 2.7.1 release is an upgrade to the NetBackup Appliance 2.6.1 release and its associated maintenance releases. Refer to the release notes documents on the Symantec Support website to see all of the fixes and enhancements in previous releases:

http://www.veritas.com/docs/DOC2792

When an appliance is released, the latest version of NetBackup is used as a basis on which the appliance code is built. That ensures that all applicable features, enhancements, and fixes that were released within NetBackup are included in the latest release of the appliance.

NetBackup 7.7.1 is the version of NetBackup software that the NetBackup Appliance 2.7.1 release installs. Information about the new features, enhancements, and fixes

found in NetBackup 7.7.1 can be found in the *NetBackup 7.7.1 Release Notes* document on the Symantec Support website:

http://www.symantec.com/docs/DOC8511

For the latest NetBackup Appliance compatibility information, refer to the *NetBackup Enterprise Server and Server 7.x Hardware Compatibility List* on the Symantec Support website:

www.netbackup.com/compatibility

NetBackup Appliance 2.7.1 release content

This release incorporates fixes to several known issues that existed with the NetBackup Appliance software.

Some of these issues were identified, fixed, and available to customers in the form of an EEB. Those issues include an Etrack number for identification in the following list. Additional EEBs may have been released since this document was posted. For more information on any of the fixed issues in this section, Symantec recommends that you use Veritas Services and Operations Readiness Tools (SORT). To access SORT, go to the following website:

https://sort.veritas.com/netbackup

The following list contains the known issues that were fixed and that are now included in this release of NetBackup Appliance:

- In past releases, if you received an alert for a hardware component, the alert did not provide specific information on the error that occurred. Because of this limitation, it was sometimes difficult to determine the cause of the issue. In NetBackup Appliance 2.7.1, the hardware alerts have been enhanced to provide more precise information to help you verify the specific cause of hardware errors.

- During a RAID-controller-adapter learn cycle, the expected behavior was to receive two email alerts: one alert when the RAID policy changed from `WriteBack` mode to `WriteThrough` mode, and one alert when the RAID policy changed from `WriteThrough` mode back to `WriteBack` mode. However, if the BBU was in a failed state, only one email was sent. In NetBackup Appliance 2.7.1, this issue has been resolved as part of the hardware email alert enhancements that are included in this release.

- On a NetBackup 5330 appliance, the **Monitor > Hardware > Storage Connections** page in the NetBackup Appliance Web Console sometimes showed incorrect information for Fibre Channel connections between the 5330 compute node and the Primary Storage Shelf. Even when the devices were connected correctly, the page incorrectly showed that the two devices were not connected.

Appendix B

Related documents

This appendix includes the following topics:

■ About the NetBackup Appliance documentation

About the NetBackup Appliance documentation

The following documents help to ensure that you can successfully install, configure, and use your appliance. All these documents are posted on the Support website at the following URL:

https://www.veritas.com/docs/DOC2792

Table B-1   NetBackup Appliance documentation

Guide	Description
NetBackup™ Appliance Hardware Installation Guide	This guide provides the following information: ■ An introduction to the physical layout of the appliance hardware. ■ Install preparation steps, such as unpacking procedures, environmental conditions, and safety precautions. ■ Hardware configuration steps This section guides you through the required steps to install your appliance in a rack and connect your appliance cables.
NetBackup™ Appliance Initial Configuration Guide	This document guides you through the configuration process from the NetBackup Appliance Web Console or from the NetBackup Appliance Shell Menu.
NetBackup Appliance Upgrade Guide	This document guides you through the required steps to upgrade a NetBackup appliance.

Table B-1   NetBackup Appliance documentation *(continued)*

Guide	Description
NetBackup™ Appliance Administrator's Guide	The *NetBackup™ Appliance Administrator's Guide* contains the following types of information: ■ Deployment information ■ Administering your appliance ■ Monitoring information
NetBackup™ Appliance Command Reference Guide	The *NetBackup™ Appliance Command Reference Guide* provides a complete list of the commands that are available for you to use through the NetBackup Appliance Shell Menu.
NetBackup Appliance Release Notes	This document contains information about this version of NetBackup Appliance. It contains brief descriptions of new features within the release, operational notes that apply to the release update, and any known issues.
NetBackup Appliance Troubleshooting Guide	This document contains the latest troubleshooting information for the NetBackup appliances.
NetBackup Appliance Capacity Planning and Performance Tuning Guide	This document contains information on how to optimize your backup environment and your NetBackup appliance. It helps you to analyze your backup requirements and design a system that best fits your needs.
NetBackup Appliance Security Guide	This document describes the security features in NetBackup Appliance and how to use those features to ensure that your appliance environment is secure.
NetBackup Appliance Fibre Channel Guide	This document describes the supported Fibre Channel (FC) capabilities and configurations for NetBackup appliances.
NetBackup Appliance Decommissioning and Reconfiguration Guide	This document describes how to decommission and reconfigure a NetBackup appliance.
NetBackup Appliance SNMP Trap Reference Guide	This document provides a complete list of the NetBackup Appliance SNMP traps. It describes what each trap means and the recommended actions for when an error occurs.
NetBackup Copilot for Oracle Configuration Guide	This document outlines how to configure Copilot using NetBackup and the NetBackup Appliance.

Table B-1   NetBackup Appliance documentation *(continued)*

Guide	Description
NetBackup Appliance Third-party Legal Notices	The *NetBackup Appliance Third-party Legal Notices* document lists the third-party software that is included in this product, and it contains attributions for the third-party software. This document is available from the following website: https://www.veritas.com/about/legal/license-agreements

For additional information about the appliance hardware, refer to the following documents:

- *NetBackup 5220 Appliance and Storage Shelf Product Description*

- *NetBackup 5230 Appliance and Storage Shelf Product Description*

- *NetBackup 5330 Appliance and Storage Shelf Product Description*

- *NetBackup 52xx and 5330 Appliance and Storage Shelf Safety and Maintenance Guide*