

Veritas NetBackup™ Appliance Release Notes

Release 2.7.3

NetBackup 52xx and 5330

Document Revision 1

VERITAS™

Veritas NetBackup™ Appliance Release Notes

Release 2.7.3 - Document Revision 1

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

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NetBackup Appliance 2.7.3 features, enhancements, and changes

This chapter includes the following topics:

- [NetBackup 52xx hardware features](#)
- [NetBackup 5330 hardware features](#)
- [Comparison of the NetBackup 5330 and 52xx Appliances](#)
- [About NetBackup Appliance 2.7.3 new features, enhancements, and changes](#)
- [NetBackup Appliance 2.7.3 new features, enhancements, and changes](#)

NetBackup 52xx hardware features

- An appliance master server
- An appliance master and media server
- An appliance media server only

All 52xx 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.
- Each uses NetBackup as their code base.
- RHEL operating system (provided by Veritas).
- 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 and 5230 Appliances use the Intel X520 SR2 10 Gb Ethernet card either as standard on the systems or an option.

The NetBackup 5240 Appliance use the Intel X710 10Gb Ethernet card either as standard on the systems or an option.

The NetBackup 5240 Appliance contains eight internal storage disk drives with a total formatted storage capacity of 4 TB to 27 TB, depending on the configuration.

The NetBackup 5230 Appliance contains eight internal storage disk drives that provide a total formatted storage capacity of 4 TB to 14 TB.

The NetBackup 52xx Appliances can be used with attached Veritas Storage Shelves for additional storage.

[Table 1-1](#) shows the available, formatted storage capacity of the NetBackup 5240 Appliance, with or without attached storage shelves.

Table 1-1 NetBackup 5240 Appliance version 2.7.3 storage capacity options

Appliance available storage capacity	Storage shelf available storage capacity	Appliance and one storage shelf available storage capacity	Appliance and two storage shelves available storage capacity	Appliance and three storage shelves available storage capacity	Appliance and four storage shelves available storage capacity
4 TB	49 TB	53 TB	103 TB	152 TB	201 TB

[Table 1-2](#) shows the available, formatted storage capacity of the NetBackup 5230 Appliance, with or without attached storage shelves.

Table 1-2 NetBackup 5230 Appliance version 2.7.3 storage capacity options

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

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

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

NetBackup 5330 hardware features

This release supports the NetBackup 5330 Appliance. The 5330 can only be configured as a media server.

The NetBackup 5330 offers the following features:

- **Memory**
The NetBackup 5330 Appliance has an impressive 384 GB of RAM.
- **Speed**
The 5330 has 3.0-GHz 10-core processors and external RAID controllers, which lead to increased write and read speeds.
- **A 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.
- **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. These paths mean that it can withstand multiple component failures and still operate.

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 1-3 NetBackup 5330 Appliance version 2.7.3 storage capacity options

NetBackup 5330 Appliance (software version 2.7.3)	Primary Storage Shelf	Expansion Storage Shelf	Expansion Storage Shelf	Total storage capacity
Configuration A	114 TB	-	-	114 TB
Configuration B	114 TB	114 TB	-	229 TB
Configuration C	114 TB	114 TB	114 TB	343 TB
Configuration D	114 TB	229 TB	-	343 TB
Configuration E	114 TB	114 TB	229 TB	458 TB
Configuration F	229 TB	-	-	229 TB
Configuration G	229 TB	229 TB	-	458 TB

For more information about the hardware architecture of NetBackup Appliances, see the *NetBackup Appliance and Veritas 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 Veritas 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. Veritas 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 Appliance Initial Configuration Guide*.

Comparison of the NetBackup 5330 and 52xx Appliances

[Table 1-4](#) outlines the differences between the NetBackup 5330, 5240, and 5230 Appliances.

Table 1-4 Comparison of NetBackup 5330, 5240, and 5230 Appliances

Parameter	NetBackup 5330	NetBackup 5240	NetBackup 5230
Role	Media server only	Master or media server	Master or media server
Cores	20	16	12
Cache	50 MB	40 MB	30 MB
RAID cache	24 GB	1 GB	1 GB
Speed	3.0 GHz	2.4 GHz	2.0 GHz
Turbo speed	3.6 GHz	3.2 GHz	2.5 GHz
QPI speed	8 GT/s	8 GT/s	7.2 GT/s

Table 1-4 Comparison of NetBackup 5330, 5240, and 5230 Appliances
(continued)

Parameter	NetBackup 5330	NetBackup 5240	NetBackup 5230
System memory (GB)	384 GB	128 GB (with expansion storage)	128 GB (with expansion storage)
Memory configuration (DIMMs)	16GB x 24	8GB x 16 (with expansion storage)	8GB x 16 (with expansion storage)
Data retention	1 Li-ion battery backup unit to NVRAM per RAID controller (2 per system)	1 maintenance-free backup unit (MFBU) with Flash and Supercapacitor A second MFBU is added with expansion storage	1 maintenance-free backup unit (MFBU) with Flash and Supercapacitor A second MFBU is added with expansion storage
PCI add-in card slots	6	6	6
On-board 10 Gb Ethernet ports	2	2	2
Additional 10 Gb Ethernet cards in PCI assembly	Up to 4 cards (8 ports)	Up to 3 cards (6 ports)	Up to 1 card (2 ports)
Additional 1 Gb Ethernet cards in PCI assembly	No	Up to 1 card (4 ports)	No
SAS RAID card in PCI assembly	No	Yes (with expansion storage)	Yes (with expansion storage)
Dual redundant external-storage-based RAID controllers	Yes	No	No
External storage	1 Primary Storage Shelf and up to 2 optional Expansion Storage Shelves	Up to 4 NetBackup 5240 Storage Shelves	Up to 4 Veritas Storage Shelves
Maximum storage capacity with external storage	458 TB	201 TB	157 TB

About NetBackup Appliance 2.7.3 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 technical support 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 7.7.3 is the version of NetBackup software that the NetBackup Appliance 2.7.3 release installs. Information about the new features, enhancements, and fixes found in NetBackup 7.7.3 can be found in the *NetBackup 7.7.3 Release Notes* document on the Veritas Support website:

<http://www.veritas.com/docs/000106357>

NetBackup Appliance 2.7.3 new features, enhancements, and changes

The following list describes the new features, enhancements, and changes in the NetBackup Appliance 2.7.3 release:

- The new NetBackup 5240 Appliance:
The NetBackup 5240 Appliance is a hardware and software storage system that can scale to 201 TBs of available backup capacity. It consists of a NetBackup 5240 Appliance and up to four optional NetBackup 5240 Storage Shelves.

Note: The NetBackup 5240 Appliance features are only supported starting with software version 2.7.3.

- Starting from the NetBackup Appliance software version 2.7.3, you can create and remove a login banner that appears before a user logs on to the appliance from the NetBackup Appliance Web Console as well.
- Starting with software version 2.7.3, you can duplicate data between NetBackup 52xx or 5330 appliances over Fibre Channel (FC). The supported data transfer methods are Optimized Duplication and Auto Image Replication. To use this feature, both the source host and target host must use the appliance software version 2.7.3 or later.
- Starting with NetBackup Appliance 2.7.3, Mozilla Firefox 31.0 or higher versions are supported. If you are using an earlier version of Firefox to access NetBackup Appliance Web Console or the IPMI console, you must upgrade to Firefox 31.0 or higher. See the Web browsers supported by Appliance section in the *NetBackup Appliance Administrator's Guide* for more details.
- `Support > Cleanup > RemoveShelfEntries`
 A new command named `Support > Cleanup > RemoveShelfEntries` has been added in the NetBackup Appliance Shell Menu. This command applies to 52xx platforms (5220 and later).
 After the storage shelves have been decommissioned, this command must be run to clear the hardware monitoring data that is associated with the storage shelves. This command removes the storage shelf entries from the database.

Note: This command must be run under the guidance of Technical Support.

- A new column called **Rebuild Rate %** is displayed when you click **Monitor > Hardware** from the NetBackup Appliance Web Console and then click **Adapter**. The **Rebuild Rate %** is a property of the mainboard RAID Controller and indicates the rate at which any rebuild on that Controller happens. This column is also shown when you run the `Monitor > Hardware ShowHealth appliance adapter` command from the NetBackup Appliance Shell Menu.
 A new column called **Hotspare Type** is displayed when you click **Monitor > Hardware** from the NetBackup Appliance Web Console and then click **Disk**. The column shows if the hot spare for the appliance or the storage shelf is global or dedicated.
 A new column called **Name** is displayed when you click **Monitor > Hardware** from the NetBackup Appliance Web Console and then click **Fan** for the 52xx storage shelf. This column is also shown when you run the `Monitor > Hardware ShowHealth fan` command from the NetBackup Appliance Shell Menu. This column is displayed for the fans in the 52xx storage shelves.

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

Veritas 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 Veritas Support website:

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

Veritas 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. Veritas 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 14.

[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 2.7.3 release compatibility

NetBackup appliance master server version	NetBackup appliance media server version	NetBackup client version
2.7.3 (7.7.3)	2.7.3 (7.7.3), 2.7.2 (7.7.2), 2.7.1 (7.7.1)	7.7.3, 7.7.2, 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
2.7.2 (7.7.2)	2.7.2 (7.7.2), 2.7.1 (7.7.1)	7.7.2, 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)	2.7.1 (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.x (7.7.x)	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.x (7.7.x)	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.x (7.7.x)	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.x (7.7.x)	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 2.7.3.

Note: If an appliance server is currently at a version earlier than 2.6.1, you cannot upgrade directly to NetBackup Appliance 2.7.3. You must first upgrade to version 2.6.1.2, and then upgrade to the 2.7.x product line.

About NetBackup Appliance software upgrades

When a software update release is available, Veritas 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 2.7.3. You must first upgrade to version 2.6.1.2, and then upgrade to the 2.7.1 product line.

Veritas 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. Veritas recommends that you suspend all backup and restore operations before starting the upgrade.
- Before you begin a software update, Veritas recommends that you take certain precautions to avoid loss of connectivity. The computer that you use to upgrade the appliance 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 may fail.
- 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 Veritas 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. Veritas 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: Veritas 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

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

Operational notes

This chapter includes the following topics:

- [About operational notes for NetBackup Appliance 2.7.3](#)
- [New Operational Notes for NetBackup Appliance 2.7.3](#)
- [General NetBackup Appliance notes](#)
- [NetBackup appliance user interface notes](#)
- [Installation and configuration notes](#)
- [Upgrade and rollback notes](#)
- [VMware notes](#)
- [About NetBackup support utilities](#)
- [About NetBackup Appliance log files](#)

About operational notes for NetBackup Appliance 2.7.3

This chapter contains the topics that explain important aspects of NetBackup Appliance 2.7.3 operations that may not be documented elsewhere in the documentation set. This document is posted on the Veritas Support website and may be updated after the GA release of NetBackup Appliance 2.7.3. Therefore, Veritas recommends that you refer to the following link to view the latest release information:

<http://www.veritas.com/docs/000107785>

Because NetBackup Appliance 2.7.3 installs NetBackup 7.7.3 software, the operational notes that apply to NetBackup 7.7.3 also apply to NetBackup Appliance

2.7.3. For more information on the operational notes for NetBackup, refer to the *NetBackup 7.7.3 Release Notes* on the Veritas Support website:

<http://www.veritas.com/docs/000106357>

New Operational Notes for NetBackup Appliance 2.7.3

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:

- The NetBackup Appliance Web Console may show different values of Enclosure ID in the **Monitor > Hardware** tab for a storage shelf when a 52xx appliance restarts or when the mainboard RAID Controller is reset. Similarly, the NetBackup Appliance Shell Menu may also show different values of Enclosure ID when you run the `Monitor > Hardware ShowHealth StorageShelf` command after a 52xx appliance restarts or when the mainboard RAID Controller is reset. In this case, you may see multiple Enclosure ID's for the same enclosure (storage shelf).

If you are on version 2.7.1 or 2.7.2 and want to fix this issue, contact Technical Support for assistance.

If you are on version 2.7.3 and want to fix this issue, log on to the NetBackup Appliance Shell Menu and run the following command:`Main > Support > Cleanup > RemoveShelfEntries.`

See the `Support > Cleanup > RemoveShelfEntries` section in the *NetBackup Appliance Commands Reference Guide* for more information about the command.

- The order in which the 52xx storage shelves are displayed on the NetBackup Appliance Web Console or the NetBackup Appliance Shell Menu may be different than the actual order and layout in your environment. The storage shelf order is displayed in the **Monitor > Hardware** tab on the left pane where the storage shelves are displayed as **NetBackup StorageShelf 1**, **NetBackup StorageShelf2**, etc. Similarly the order of the storage shelves is displayed on

the NetBackup Appliance Shell Menu when you run the `Monitor > Hardware > ShowHealth` command.

- If the mainboard RAID controller is removed from a 52xx appliance, the NetBackup Appliance Web Console or the NetBackup Appliance Shell Menu may still display stale data when you click on the **Monitor > Hardware > Adapter** tab or run the `Monitor> Hardware ShowHealth Appliance Adapter` command.
- If you want to continue to use Fibre Transport Deduplication after a re-image operation, the NetBackup Appliance Web Console or the NetBackup Appliance Shell Menu may still display stale data from the database. You must first restore the factory default port configuration or disable the feature. Then you can go on with other settings.
- Starting with appliance version 2.7.1, if the appliance host name contains more than 15 characters, ActiveDirectory (AD) configuration fails. The appliance log identifies this problem with the following message:

```
netbios name can be at most 15 chars long.
```

If you have experienced this issue or if you plan to configure AD, contact Technical Support for assistance and ask the representative to reference document 000108170.
- Starting with version 2.6.1, if you perform a factory reset and select to keep the network and the storage configuration settings, the error message “Cannot rollback volume” may appear. This message indicates that during the factory reset process, the appliance network configuration could not be saved. Although the factory reset has completed successfully, you must now reconfigure the network parameters.
For more information, see the following tech note on the Veritas Support website: www.veritas.com/docs/000108199
- The **Monitor > Hardware** page on the NetBackup Appliance Web Console may not display any data for around 30 minutes. You may see a similar behavior when you run the `Monitor > Hardware` commands from the NetBackup Appliance Shell Menu. The data is displayed after 30 minutes or so.
- If the disks on the RAID 1 volume of the 5240 appliance are missing and you run the `Monitor > Hardware ShowHealth Appliance RAID` command, the location of the missing disks is displayed incorrectly as slot 0.
The same behavior is observed in the NetBackup Appliance Web Console when you navigate to **Monitor > Hardware > RAID** for the 5240 appliance. This issue applies to 5240 appliances and is observed when the disks on the RAID 1 volume of the appliance are missing.

General NetBackup Appliance notes

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

- 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>

- 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 connect a Veritas 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.

- 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.
- New Copilot feature
The following describes the limitations for the 2.7.3 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.
- 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`.

- 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:.`
- 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.

- 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 Veritas 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.
- 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 specified 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 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.
- 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.
- 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 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.
- 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 Veritas 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.
- Alert configuration is not supported from the Veritas Remote Manager. Alert configuration is supported from either the **Settings > Notification > Alert Configuration** menu in the NetBackup Appliance Web Console or the `Settings > Alerts` command view in the NetBackup Appliance Shell Menu. For details, see the **Settings > Notifications > Alert Configuration** section in the *NetBackup Appliance Administrator's Guide* or the **Main > Settings > Alerts** view commands section in the *NetBackup Appliance Commands Reference Guide*.

Installation and configuration notes

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

- 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.

- 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.

- 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.

- 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.

- The Enhanced Auditing feature that was released in NetBackup version 7.7 is not currently supported for use on NetBackup appliances. This feature should not be configured or enabled on a NetBackup appliance.

Upgrade and rollback notes

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

- Before you upgrade to version 2.7.3 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 2.7.3 Red Hat Enterprise Linux (RHEL) Operating System*.
- During an upgrade to 2.7.3, 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).

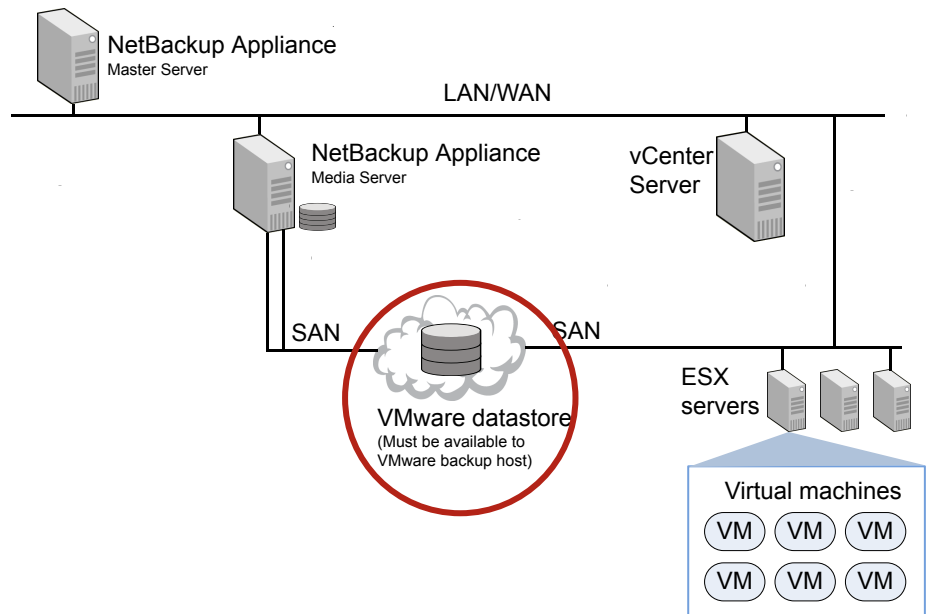
Before you upgrade a media server, stop all jobs that are currently running and suspend the jobs that may be scheduled to start during the upgrade. You must prevent jobs from attempting to start on the media server during an upgrade.

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-Veritas 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:



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 Appliance to perform the following tasks:

- Identify the NetBackup domain configuration to resolve network-related issues

- Identify the NetBackup performance issues
- Ensure the behavior with regards to the host name lookup is functional
- Ensure that the connectivity between NetBackup hosts and the appliance is established and functional based on their role within the NetBackup domain
- Generate the reports that are meant for Veritas 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 Support Utility (NBSU) is a Veritas utility used to gather diagnostic information about the system on which the utility is run. By default, NBSU gathers appropriate diagnostic information based on the operating system and NetBackup environment.

You can use the `support > NBSU` command to create or remove the NetBackup configuration support files that the NBSU utility uses.

For more information, see the *NetBackup Appliance Commands Reference Guide*.

About other support resources

If you need additional assistance with your NetBackup Appliance, contact Veritas 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 on the [NetBackup Appliance Support page](#).

About NetBackup Appliance log files

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

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.	<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 > SDCS Audit View screen from the NetBackup Appliance Web Console to retrieve the audit logs of an appliance.	Appliance audit logs

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

From...	Using...	Log details
NetBackup Appliance Shell Menu	You can use the <code>Main > Support > Logs > Browse</code> commands to open the <code>LOGROOT/></code> 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.	<ul style="list-style-type: none"> ■ Appliance configuration log ■ Appliance command log ■ Appliance debug log ■ NetBackup logs, Volume Manager logs, and the NetBackup logs that are contained in the <code>openv</code> directory ■ Appliance operating system (OS) installation log ■ NetBackup administrative web user interface log and the NetBackup web server log ■ NetBackup 52xx appliance device logs
NetBackup Appliance Shell Menu	You can use the <code>Main > Support > Logs > VxLogView Module <i>ModuleName</i></code> commands to access the appliance VxUL (unified) logs. You can also use the <code>Main > Support > Share Open</code> commands and use the desktop to map, share, and copy the VxUL logs.	<p>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 ■ FTMS ■ FTDedup ■ TaskService ■ AuthService

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

From...	Using...	Log details
NetBackup Appliance Shell Menu	You can use the <code>Main > Support > DataCollect</code> 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 2.7.3 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 2.7.3 release also contains all of the fixes that are included in NetBackup 7.7.3. For a complete listing of the NetBackup 7.7.3 fixes, refer to the *NetBackup 7.7.3 Release Notes* on the Veritas Support website:

<http://www.veritas.com/docs/000106357>

This NetBackup Appliance 2.7.3 release is an upgrade to the NetBackup Appliance 2.7.2 release. Refer to the release notes documents on the [NetBackup Appliance Documentation page](#) to see all of the fixes and enhancements in previous releases.

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 7.7.3 is the version of NetBackup software that the NetBackup Appliance 2.7.3 release installs. Information about the new features, enhancements, and fixes found in NetBackup 7.7.3 can be found in the *NetBackup 7.7.3 Release Notes* document on the Veritas Support website:

<http://www.veritas.com/docs/000106357>

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

www.netbackup.com/compatibility

NetBackup Appliance 2.7.3 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, Veritas 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:

- The cloud service functionality was prevented if you didn't update the host name of the cloud configuration file. To enable the cloud storage service you had to manually change the configuration file using the NetBackup Appliance Shell Menu.
- When you input an invalid parameter for the `LifeCycle` command in the NetBackup Appliance Shell Menu, the appliance responded with a **Changed successfully** message. It didn't remind you to input a valid parameter.
- When you performed the NIS/Kerberos configuration from the NetBackup Appliance Shell Menu, the display automatically scrolled to the bottom and the screen appeared blank

NetBackup Appliance 2.7.3 security release content

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

- To enhance security, the key algorithm for the Secure Socket Layer (SSL) protocol has been changed from SHA-1 with RSA to SHA-256 with RSA.
- The `libxml2` rpm package has been updated to version 2.7.6-20.el6_7.1 to address the following vulnerabilities:

- CVE-2015-5312
- CVE-2015-7497
- CVE-2015-7498
- CVE-2015-7499
- CVE-2015-7500
- CVE-2015-7941
- CVE-2015-7942
- CVE-2015-8241
- CVE-2015-8242
- CVE-2015-8317
- CVE-2015-8710
- The `libpng` package has been updated to version 1.2.49-2.el6_7 to address the following vulnerabilities:
 - CVE-2015-7981
 - CVE-2015-8126
 - CVE-2015-8472
- The `glibc` package has been updated to address security vulnerability CVE-2015-7547.
See the following items for the performance impacts of this update:
 - AdvancedDisk: Both backup and restore performance remain the same.
 - MSDP: Backup performance remains the same. However, some restores, such as those with four or more concurrent restore streams, may take longer to complete.
 - Tape: Both backup and restore performance remain the same.For information about the impact of the CVE-2015-7547 "glibc getaddrinfo" vulnerability on the previous versions, see the following tech note on the Veritas Support website:
<http://www.veritas.com/docs/000107725>
- The `samba` package has been updated to version 3.6.23-30.el6_7.x86_64 to address security vulnerability CVE-2016-2118.
For more information, refer to the following tech note on the Veritas Support website:
www.veritas.com/docs/000108263

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 [NetBackup Appliance Documentation page](#).

Table B-1 NetBackup Appliance documentation

Guide	Description
<i>NetBackup™ Appliance Hardware Installation Guide</i>	This guide provides the following information: <ul style="list-style-type: none">■ 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.
<i>NetBackup™ Appliance Initial Configuration Guide</i>	This document guides you through the configuration process from the NetBackup Appliance Web Console or from the NetBackup Appliance Shell Menu.
<i>NetBackup Appliance Upgrade Guide</i>	This document guides you through the required steps to upgrade a NetBackup appliance.

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

Guide	Description
<i>NetBackup™ Appliance Administrator's Guide</i>	The <i>NetBackup™ Appliance Administrator's Guide</i> contains the following types of information: <ul style="list-style-type: none"> ■ Deployment information ■ Administering your appliance ■ Monitoring information
<i>NetBackup™ Appliance Command Reference Guide</i>	The <i>NetBackup™ Appliance Command Reference Guide</i> provides a complete list of the commands that are available for you to use through the NetBackup Appliance Shell Menu.
<i>NetBackup Appliance Release Notes</i>	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.
<i>NetBackup Appliance Troubleshooting Guide</i>	This document contains the latest troubleshooting information for the NetBackup appliances.
<i>NetBackup Appliance Capacity Planning and Performance Tuning Guide</i>	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.
<i>NetBackup Appliance Security Guide</i>	This document describes the security features in NetBackup Appliance and how to use those features to ensure that your appliance environment is secure.
<i>NetBackup Appliance Fibre Channel Guide</i>	This document describes the supported Fibre Channel (FC) capabilities and configurations for NetBackup appliances.
<i>NetBackup Appliance Decommissioning and Reconfiguration Guide</i>	This document describes how to decommission and reconfigure a NetBackup appliance.
<i>NetBackup Appliance SNMP Trap Reference Guide</i>	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.
<i>NetBackup Copilot for Oracle Configuration Guide</i>	This document outlines how to configure Copilot using NetBackup and the NetBackup Appliance.

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

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

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 5240 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*