Veritas NetBackup™ Appliance Release Notes

Release 3.0

NetBackup 52xx and 5330

VERITAS™

Veritas NetBackup™ Appliance Release Notes

Release 3.0, Revision 1

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

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

Contents

NetBackup Appliance 3.0 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 3.0 new features, enhancements, and changes

- NetBackup Appliance 3.0 new features, enhancements, and changes

NetBackup 52xx hardware features

This release supports the 52xx hardware architectures for the appliance. You can configure these architectures in any of the following modes:

- An appliance master server

- An appliance master and media server

- An appliance media server only

The 5240 is the latest of the 52xx hardware architectures. NetBackup 5240 Appliances support appliance software version 2.7.3 or higher.

For the latest NetBackup Appliance compatibility information, refer to the *NetBackup Hardware Compatibility List* posted on the following site:

http://www.veritas.com/docs/000033647

Note: Starting with appliance software version 2.7.1, references to "52xx" exclude the NetBackup 5200. That model is not supported beyond software version 2.6.1.2 and does not support the Linux RHEL operating system or any other associated appliance hardware or software functionality.

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 3.0 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 3.0 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 3.0 storage capacity options

NetBackup 5330 Appliance (software version 3.0)	Primary Storage Shelf	Expansion Storage Shelf	Expansion Storage Shelf	Available storage capacity
Storage option A	114 TB	-	-	114 TB
Storage option B	114 TB	114 TB	-	229 TB
Storage option C	114 TB	114 TB	114 TB	343 TB
Storage option D	114 TB	229 TB	-	343 TB
Storage option E	114 TB	114 TB	229 TB	458 TB
Storage option F	114 TB	229 TB	229 TB	572 TB
Storage option G	229 TB	-	-	229 TB
Storage option H	229 TB	229 TB	-	458 TB

Table 1-3   NetBackup 5330 Appliance version 3.0 storage capacity options
(continued)

NetBackup 5330 Appliance (software version 3.0)	Primary Storage Shelf	Expansion Storage Shelf	Expansion Storage Shelf	Available storage capacity
Storage option I	229 TB	229 TB	229 TB	687 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 (20 MBs per CPU)	30 MB
RAID cache	24 GB	1 GB	1 GB
CPU 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
System memory (GB)	384 GB	64 GB **Note:** When you purchase the first storage shelf, the Storage Expansion that comes with the storage shelf includes an additional 64 GBs of memory. After adding the first storage shelf and the memory, you can increase the appliance memory to 192 GBs by purchasing an additional 64 GB memory kit.	128 GB (with expansion storage)
Memory configuration (DIMMs)	16 GB x 24	8 GB x 8	8 GB x 16 (with expansion storage)

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

Parameter	NetBackup 5330	NetBackup 5240	NetBackup 5230
Data retention	1 Li-ion battery backup unit to NVRAM per RAID controller (2 per system)	One MFBU with a flash memory card for the internal RAID controller One MFBU with a flash memory card for the external RAID controller when the first storage shelf is purchased	One 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 the purchase of the first storage shelf)	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	687 TB	201 TB	157 TB

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

Parameter	NetBackup 5330	NetBackup 5240	NetBackup 5230
Typical power consumption with maximum external storage	2442 Watts (10.7 W per TB)	1140 Watts (5.6 W per TB)	1500 Watts (9.5 W per TB)

About NetBackup Appliance 3.0 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 software version 8.0 is included with the NetBackup Appliance 3.0 release. Information about the new features, enhancements, and fixes found in NetBackup 8.0 can be found in the *NetBackup 8.0 Release Notes* document on the Veritas Support website:

NetBackup Appliance 3.0 new features, enhancements, and changes

The following list describes the new features, enhancements, and changes in the NetBackup Appliance 3.0 release:

- Configuration H of the NetBackup 5240 appliance supports iSCSI connections. See the *NetBackup Appliance iSCSI Guide* for reference.

- Starting with software version 3.0, you can monitor the DIMM (dual in-line memory modules) for 52xx and 5330 appliances. You can monitor the DIMM from the NetBackup Appliance Shell Menu by running the `Monitor > Hardware ShowHealth Appliance DIMM` command. See the *NetBackup Appliance Administrator's Guide* for details.

- Optimized shares work with all database sizes, but are enhanced to protect larger databases by leveraging additional storage capacity and a disk layout that supports larger database workloads. If you have the required storage available, create an optimized share for each Oracle database you want to back up. If you do not meet the storage requirements, consider adding an Expansion Storage Shelf to your 5330 appliance configuration.

- Starting with software version 3.0, the **Certificate Generation and Deployment** (CGD) function is enabled on the appliance. NetBackup Appliance generates and deploys new security certificates for NetBackup hosts during the appliance role configuration. For more information, see the NetBackup Security and Encryption Guide.

- Starting with software version 3.0, you can specify a directory type when you configure the LDAP server. Select a directory type using one of the following methods:

  - From the `Settings > Authentication > LDAP Server Configuration` page in the NetBackup Appliance Web Console.

  - With the `Main > Settings > Security > Authentication > LDAP > ConfigParam` command in the NetBackup Appliance Shell Menu.

- The Log Forwarding feature lets you send appliance logs to an external log management server. Use this feature to help increase security and to help achieve general compliance initiatives such as HIPPA, SOX, and PCI. Appliance version 3.0 supports forwarding syslogs, which are OS system logs that contain user and system level activities in the form of events. For complete information, refer to the following documents:
  NetBackup Appliance Administrator's Guide
  NetBackup Appliance Security Guide
  NetBackup Appliance Commands Reference Guide

- Starting with software version 3.0, NetBackup software uses the same Java Runtime Environment (JRE) as the appliance.

- The NetBackup 5230 Appliance now supports the new Veritas 2U12 49TB Storage Shelf. See the *NetBackup™ 5230 Appliance and Storage Shelf Product Description - Release 3.0* for more information.

- The NetBackup 5240 Appliance now supports the following:

  - Up to 192 GBs of memory.

  - Four additional PCIe-based I/O configuration options (configurations H, J, K, and L). See the *NetBackup™ 5240 Appliance and Storage Shelf Product Description - Release 3.0* for more information.

- The NetBackup 5330 Appliance now supports up to 687TBs of available storage. See the *NetBackup™ 5330 Appliance and Storage Shelf Product Description - Release 3.0* for more information.

- Starting with software version 3.0, you can flash a beacon for disks on a 5330 compute node from the NetBackup Appliance Web Console. See the section **Flashing a Beacon** in the *NetBackup Appliance Administrator's Guide* for more detail.

- A new column named **Processor** appears in the **CPU** table when you click **Monitor > Hardware > CPU** in the web console. The **Processor** column also appears in the **CPU information** table when you run the `Monitor > Hardware ShowHealth Appliance CPU` command from the shell menu. The **Processor** column provides details about the processor like manufacturer, model, speed etc.

- Starting with software version 3.0, appliance registration is centralized to MyAppliance portal. The portal provides a comprehensive access to the appliance's health status, performance and other information. You need to access the portal to register your appliance and edit registration details.

- Starting with software version 3.0, the Appliance Diagnostics Center of the NetBackup Appliance Web Console only provides functionality to collect log files through the Collect Log Wizard. For more details regarding the Appliance Diagnostics Center, see chapter *Troubleshooting and tuning appliance from the Appliance Diagnostics Center* on the *Veritas NetBackup™ Appliance Troubleshooting Guide*.

NetBackup Appliance compatibility

This chapter includes the following topics:

- About software release types

- 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.

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 versions 2.7.x or 3.0. You must first upgrade to version 2.6.1.x. For these upgrade scenarios, Veritas highly recommends that you upgrade to version 2.6.1.2, then proceed with the upgrade to versions 2.7.x or 3.0.

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.

- The NetBackup Appliance version 3.0 upgrade requires at least 100 GB on the configuration volume. Before you start the upgrade, resize the partition. Refer to the *NetBackup Appliance Upgrade Guide* for more information.

- 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

NetBackup Appliance products may contain third-party software for which Veritas 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 3.0

- New Operational Notes for NetBackup Appliance 3.0

- 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 3.0

This chapter contains the topics that explain important aspects of NetBackup Appliance 3.0 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 3.0. Therefore, Veritas recommends that you refer to the following link to view the latest release information:

Because NetBackup Appliance 3.0 installs NetBackup 8.0 software, the operational notes that apply to NetBackup 8.0 also apply to NetBackup Appliance 3.0. For more information on the operational notes for NetBackup, refer to the *NetBackup 8.0 Release Notes* on the Veritas Support website:

New Operational Notes for NetBackup Appliance 3.0

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 `Monitor > SDCS > Audit View EventType <`*`code`*`>` command does not accept the following event type codes, so you cannot audit the related SDCS logs from the NetBackup Appliance Shell Menu. However, you can use the **Monitor > SDCS Events** page from the NetBackup Appliance Web Console to audit those logs.

  PBOP IPS Overflow

  PCRE IPS Create

  PDES IPS Destroy

  PFIL IPS File

  PMNT IPS Mount

  PNET IPS Network

  POSC IPS System Call

  PPST IPS PSET

  PREG IPS Registry

- iSCSI supports IPv4 addresses only. iSCSI connections over IPv6 are not supported. In addition, the initiator and the target must be on the same Layer 2 network (L2).

- Only a QLogic Small Form-Factor Pluggable (SFP+) module is supported in the 10Gb Ethernet/iSCSI card. This applies to configuration H of the NetBackup 5240 appliance.

- A VLAN can be configured on either the network interface or the iSCSI interface. If VLAN is configured on both the network and iSCSI interface, the VLAN for the network interface is effective on both the interfaces. Note that when VLAN is configured on both the network and iSCSI interface on different subnets, the configuration is not supported.

Network Interface		iSCSI Interface		Description
IP	VLAN	IP	VLAN	
Subnet X	None	Subnet X	None	Supported
Subnet X	None	Subnet Y	VLAN A	Supported
Subnet X	VLAN B	Subnet X	VLAN B	Supported
Subnet X	VLAN B	Subnet Y	VLAN B	Not Supported

- If you run the `iSCSI> Target Discover Portal` or `iSCSI> Target Discover iSNS` command again after the targets are connected, it overrides the existing connection settings like target credentials. If the target requires authentication, you need to enter the target credentials again when the existing sessions are reconnected. The existing sessions need to be reconnected if the appliance restarts or when you change the IQN for the appliance or when the iSCSI processes are restarted etc.

- When targets are discovered by using iSNS on two iSCSI interfaces like first run the `iSCSI> Target Discover iSNS` command for *iscsi1* and then *iscsi2*, only the recent record is displayed by the `iSCSI> Target Show All` command. For example the **Interfaces** column in the `Target Show All` command may not show both the interfaces (*iscsi1*, *iscsi2*) for some targets. It shows the interface from the most recent command (*iscsi2* in this case) for some targets.

- The `iSCSI> Target Disconnect` command takes more time to complete if workloads are running on the iSCSI interface.
  You may see the following messages appear on the NetBackup Appliance Shell Menu:

```
Message from syslogd@host at Sep 12 10:09:14 ...
iscsid:
Message from syslogd@host at Sep 12 10:13:27 ...
```

```
iscsid:
Message from syslogd@host at Sep 12 10:17:53 ...
iscsid:
```

These messages may appear at different times on the NetBackup Appliance Shell Menu. They may appear when you are running an iSCSI command, in the middle of a command output, or even when the console is idle. These messages are harmless and should be ignored.

- When CHAP authentication is enabled on a target device and targets are discovered by using iSNS, the `iSCSI > Target Discover` command may not prompt for target credentials.

- The Intel hardware process that monitors appliance components may fail when attempting to collect inventory. Inventory is collected every 24 hours. If an inventory failure occurs, the DIMM type component information that appears in the NetBackup Appliance Shell Menuis incorrect. For example, the `Monitor > Hardware ShowHealth Appliance` or `Monitor > Hardware ShowHealth Appliance DIMM` commands would show the following DIMM component status:

This condition exists until the next inventory collection occurs 24 hours later. Each inventory failure generates a core file in `/log/crash/` with a file name format of `core.intelHw.<PID>`, where `PID` is the process identifier of the failed process.

Any SNMP alerts that are generated when this issue occurs are missed until the next inventory. This issue does not affect Email alerts.

This issue is intermittent and may not occur at all in some cases.

To work around this issue, you can initiate an inventory collection manually by restarting the `as-collector` service from the `Support` menu. To restart this service, enter the following command:

`Support > Service Restart as-collector`

When the inventory collection has completed, the shell menu should show the correct DIMM status. The inventory collection typically takes about one to five minutes to complete, although some system configurations may take up to an hour.

- During system startup, some VCS-related error messages may occur and store in the `LOGROOT/>OS>messages` log file. You can use the `Main > Support >`

Logs > Browse command to check the log file. Any messages that begin with VCS ERROR are irrelevant to the appliance software version 3.0 and you can safely ignore them. The following is an example message that may appear in the log file:

VCS ERROR V-16-1-11032 Registration failed.

- An incorrect value is displayed in the percentage used column for shares when you run the Manage > Storage > Show command.

- When you install the 3.0 upgrade, the Create Share operation may fail on a 5330 appliance. The appropriate file for shelf to disks mappings is not created during the upgrade. Run the Manage > Storage > Scan command before creating the **Optimized Share Reserve** and **Optimized Shares** to prevent this error.

- The Copyright symbol on the **About** page of the NetBackup Appliance Web Console may appear as unreadable characters. The statement on this page should appear as the following:
Copyright © 2016 Veritas Technologies LLC. All rights reserved.

- If you resize an AdvancedDisk partition on the appliance, a scenario can occur in which the new space is not added to the NetBackup disk pool. A warning similar to the following appears:

Use of uninitialized value $newMountPoints[0] in join or string at /opt/NBUAppliance/scripts/nbapp_nbstorage.pm line 1752

In this scenario, the Main > Manage > Storage > Show command displays the new partition size, but the disk pool in NetBackup does not. If you encounter this issue, run the resize operation again with the same set of parameters to ensure that NetBackup receives the correct information.

General NetBackup Appliance notes

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

- 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.

- 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 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.

- 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.

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

- 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 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, when the following message appear:

`RESET STORAGE CONFIGURATION and BACKUP DATA [Optional]`

If you select `no`, it indicates that you keep the storage related configurations. After the factory reset, when you perform the initial configuration, make sure that the size of the Advanced Disk and MSDP are not set to `0`, otherwise the role configuration fails.

Note: If the size of AdvancedDisk and MSDP partitions were set to `0` before the factory reset, they can remain at `0` when you perform the initial configuration.

■ 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

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 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 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 Active Directory (AD) user names as case sensitive.

  - NetBackup Java Console
    This interface does recognize Active Directory (AD) user names as case sensitive. When you enter these user names with all lowercase letters, access to the NetBackup Administrator's Console is granted. If you enter these user names with any or all uppercase letters, access to the NetBackup Backup, Archive, and Restore interface is granted.

- The command `Main > Settings > Security > Authentication > LDAP > Certificate set` *path name* in the NetBackup Appliance Shell Menu does not allow path names with dashes. Path names with dashes are allowed in the NetBackup Appliance Web Console.

- 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 Technical 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 are 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.

- 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.

Upgrade and rollback notes

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

- During an upgrade to 3.0, 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.

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:
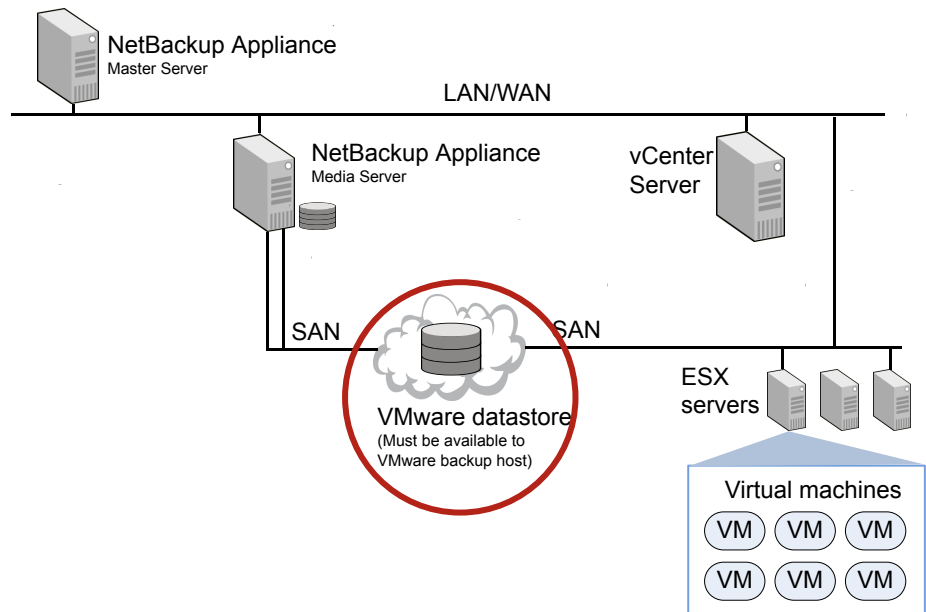
About NetBackup support utilities

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 NetBackup performance issues
- Ensure the behavior of 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.veritas.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.veritas.com.NBDNA.20100907.191711.zip
Archive created successfully!
Return /log/dna/sample.name.veritas.com.NBDNA.20100907.191711.zip
to Veritas 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
the appropriate diagnostic information based on the operating system and the
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.

The 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	Access methods	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

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

From	Access methods	Log details
NetBackup Appliance Shell Menu	You can use the `Main > Support > Logs > Browse` command to open the `LOGROOT/>` prompt. You can use the `ls` and `cd` commands to traverse the appliance log directories.	■ Appliance configuration log ■ Appliance command log ■ Appliance debug 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
NetBackup Appliance Shell Menu	You can use the `Main > Support > Logs > VxLogView Module` *ModuleName* command to access the appliance VxUL (unified) logs. You can also use the `Main > Support > Share Open` command 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` ■ `FTDedup` ■ `TaskService` ■ `AuthService`

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

From	Access methods	Log details
NetBackup Appliance Shell Menu	You can use the `Main > Support > DataCollect` command to collect the 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 3.0 general release content

- NetBackup Appliance 3.0 security 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 3.0 release also contains all of the fixes that are included in NetBackup 8.0. For a complete listing of the NetBackup 8.0 fixes, refer to the *NetBackup 8.0 Release Notes* on the Veritas Support website:

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 software version 8.0 is included with the NetBackup Appliance 3.0 release. Information about the new features, enhancements, and fixes found in NetBackup 8.0 can be found in the *NetBackup 8.0 Release Notes* document on the Veritas Support website:

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 3.0 general 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:

- Starting with software version 2.7.3, appliance logs are uploaded to the Veritas support server using SFTP.

- Starting with software version 3.0, you can do the following:

  - Log on with the user name format **Domain/Username** from the NetBackup Appliance Shell Menu and NetBackup Appliance Web Console.

  - Add one or more spaces in the AD group name when you create a new AD group.

- Starting with software version 3.0, the Active Directory (AD) configuration is supported on appliances that have a host name with more than 15 characters.

NetBackup Appliance 3.0 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:

- After you remove a user from the AD user group, the appliance requires up to 30 minutes to synchronize group members with the AD server. During this period, the deleted user still can access the appliance. This behaviour is caused by a dependency limitation of the 3rd Party software Samba 3.5.

- The appliance software is updated to the RHEL 6.8 Kernel to address the following security vulnerabilities:

  - CVE-2015-5157

  - CVE-2015-8767

- CVE-2010-5313
- CVE-2013-4312
- CVE-2014-7842
- CVE-2014-8134
- CVE-2015-5156
- CVE-2015-7509
- CVE-2015-8215
- CVE-2015-8324
- CVE-2015-8543
- CVE-2016-4565

- The `libtiff-3.9.4-18.el6_8` package has been updated to address the following security vulnerabilities:
  - CVE-2014-9655
  - CVE-2015-1547
  - CVE-2015-8784
  - CVE-2015-8683
  - CVE-2015-8665
  - CVE-2015-8781
  - CVE-2015-8782
  - CVE-2015-8783
  - CVE-2016-3990
  - CVE-2016-5320
  - CVE-2014-8127
  - CVE-2014-8129
  - CVE-2014-8130
  - CVE-2014-9330
  - CVE-2015-7554
  - CVE-2015-8668
  - CVE-2016-3632
  - CVE-2016-3945

- CVE-2016-3991

- The `libxml2-2.7.6-21.el6_8.1` and `libxml2-python-2.7.6-21.el6_8.1` packages have been updated to address the security vulnerability RHSA-2016:1292.

- The JRE version has been updated to 1.8.0_92 to address the security vulnerabilities:

  - CVE-2016-3458

  - CVE-2016-3485

  - CVE-2016-3498

  - CVE-2016-3500

  - CVE-2016-3503

  - CVE-2016-3508

  - CVE-2016-3511

  - CVE-2016-3550

  - CVE-2016-3552

  - CVE-2016-3587

  - CVE-2016-3598

  - CVE-2016-3606

  - CVE-2016-3610

  - CVE-2016-0686

  - CVE-2016-0695

- The Kernel packages have been updated to `kernel-2.6.32-573.el6` to address the following security vulnerabilities:

  - CVE-2015-5157

  - CVE-2015-8767

- The `openssl-1.0.1e-48.el6_8.1` and `openssl-devel-1.0.1e-48.el6_8.1` packages have been updated to address the following security vulnerabilities:

  - CVE-2016-2108

  - CVE-2016-2105

  - CVE-2016-2106

  - CVE-2016-2107

- CVE-2016-0799

- CVE-2016-2842

- CVE-2016-2109

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
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 iSCSI Guide	This document describes how iSCSI works on the NetBackup appliance.
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.

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

Guide	Description
NetBackup Copilot for Oracle Configuration Guide	This document outlines how to configure Copilot using NetBackup and the NetBackup Appliance.
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
NetBackup™ Appliance High Availability Reference Guide	This document contains the information about the High Availability (HA) solution. It helps you to understand the deployment of the high availability configuration.

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*