Veritas NetBackup™ Appliance Release Notes

Release 3.1.1

Document Revision 3
Veritas NetBackup™ Appliance Release Notes

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Veritas Technologies LLC
500 E Middlefield Road
Mountain View, CA 94043

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About NetBackup appliance 3.1.1

This chapter includes the following topics:

- About the NetBackup appliance 3.1.1
- About NetBackup Appliance third-party legal notices

About the NetBackup appliance 3.1.1

The NetBackup Appliance Release Notes document is meant to act as a snapshot of information about a version of NetBackup Appliance at the time of its release. Old information and any information that no longer applies to this release is either removed from the release notes, and you can check old information in the previous NetBackup Appliance documentation set.

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 created and included can be found on the Veritas Services and Operations Readiness Tools (SORT), and in the Release content appendix of this document.
NetBackup software version 8.1.1 is included with the NetBackup appliance 3.1.1 release. Information about the new features, enhancements, and fixes found in NetBackup 8.1.1 can be found in the *NetBackup 8.1.1 Release Notes* document on the Veritas Support website:

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NetBackup appliance 3.1.1 features, enhancements, and changes

This chapter includes the following topics:

- About new features, enhancements, and changes
- New features, enhancements, and changes for NetBackup Appliance 3.1.1

About new features, enhancements, and changes

In addition to a number of new features, this release offers many new features, 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.

New features, enhancements, and changes for NetBackup Appliance 3.1.1

The following list describes the new features, enhancements, and changes in the NetBackup appliance 3.1.1 release:

- Starting with this release, NetBackup appliances support the Federal Information Processing Standards (FIPS), as defined specifically by the FIPS 140-2 standard. From the NetBackup Appliance Shell Menu, you can enable the FIPS feature to increase security for NetBackup MSDP. For more information about this
feature, see the *NetBackup Appliance Security Guide*. For information about FIPS commands, see the *NetBackup Appliance Commands Reference Guide*.

**Note:** The FIPS feature is not currently supported for use with appliances (nodes) in a high availability (HA) setup.

- Starting with this release, you can upgrade NetBackup appliances by using the **Appliance Management Console**. Appliances that use software versions 2.7.3 and later are supported for upgrades through the console. For more information, see the *Veritas Appliance Management Guide*.

**Note:** The **Appliance Management Console** does not support upgrades for the NetBackup Virtual Appliance or the appliances (nodes) in a high availability (HA) setup. To upgrade these appliances, use the NetBackup Appliance Shell Menu.

- Starting with software version 3.1.1, the Veritas operating system (VxOS) has been updated and is based on Red Hat Enterprise Linux (RHEL) version 7.4.
NetBackup Appliance
Hardware features

This chapter includes the following topics:

■ NetBackup 52xx hardware features
■ NetBackup 53xx hardware features
■ Comparison of the NetBackup Appliances hardware

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.

Starting with appliance software version 3.1, NetBackup 5240 Appliances support up to six 2U12 storage shelves. I/O configurations H, J, K, and L are not supported in NetBackup Appliance software version 2.7.3 and earlier versions.

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

http://www.veritas.com/docs/100036440
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 functions, unless specifically noted:

- 5230 - Dual processor, six core processors, Intel-based systems.
- 5240 - Dual processor, eight core processors, 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 when configured as a media server. MSDP offers up to the maximum available storage capacity on a 52xx appliance.

The NetBackup 5230 Appliances use the Intel X520 SR2 10 Gb Ethernet card either as standard on the systems or an option.

The NetBackup 5240 Appliance uses 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 3-1 shows the available, formatted storage capacity of the NetBackup 5240 Appliance, with or without attached storage shelves. The NetBackup 5240 Appliance, Release 3.1, now supports six 2U12 storage shelves.
Table 3-1  NetBackup 5240 Appliance version 3.1.1 available storage capacity options

<table>
<thead>
<tr>
<th>Appliance and</th>
<th>Storage</th>
<th>Appliance and</th>
<th>Appliance and</th>
<th>Appliance and</th>
<th>Appliance and</th>
<th>Appliance and</th>
</tr>
</thead>
<tbody>
<tr>
<td>only only</td>
<td>shelf</td>
<td>one shelf</td>
<td>two shelves</td>
<td>three shelves</td>
<td>four shelves</td>
<td>six shelves</td>
</tr>
<tr>
<td>4TB</td>
<td>49TB</td>
<td>53TB</td>
<td>102TB</td>
<td>151TB</td>
<td>200TB</td>
<td>249TB</td>
</tr>
<tr>
<td>14TB</td>
<td>49TB</td>
<td>63TB</td>
<td>112TB</td>
<td>161TB</td>
<td>210TB</td>
<td>259TB</td>
</tr>
<tr>
<td>27TB</td>
<td>49TB</td>
<td>76TB</td>
<td>125TB</td>
<td>174TB</td>
<td>174TB</td>
<td>272TB</td>
</tr>
</tbody>
</table>

Refer to the NetBackup 5240 Appliance Product Description for additional details about storage capacity.

Table 3-2 shows the available, formatted storage capacity of the NetBackup 5230 Appliance, with or without attached storage shelves.

Table 3-2  NetBackup 5230 Appliance version 3.1.1 available storage capacity options

<table>
<thead>
<tr>
<th>Appliance disk drives</th>
<th>Appliance disk drives</th>
<th>Storage shelf disk drives</th>
<th>Storage shelf</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TB</td>
<td>4.55 TB</td>
<td>2 TB</td>
<td>24 TB</td>
</tr>
<tr>
<td>1 TB</td>
<td>4.55 TB</td>
<td>3 TB</td>
<td>36 TB</td>
</tr>
<tr>
<td>3 TB</td>
<td>13.65 TB</td>
<td>2 TB</td>
<td>24 TB</td>
</tr>
<tr>
<td>3 TB</td>
<td>13.65 TB</td>
<td>3 TB</td>
<td>36 TB</td>
</tr>
</tbody>
</table>

* 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 document.

NetBackup 53xx hardware features

This release supports the NetBackup 5330 and 5340 Appliances.
The 53xx appliances can only be configured as a media server.
The NetBackup 53xx appliances offer the following features:
- **Memory**
  The NetBackup 5330 Appliance has 384 GB of RAM that runs at 800MHz. The NetBackup 5340 Appliance has 768 GB of RAM that runs at 2666 MHz.

- **Speed**
  The 5330 has Base 2.8-GHz and a Peak of 3.1GHz 10-core processors. The 5340 has Base 2.0-GHz and a Peak of 3.7GHz 20-core processors.

- **Operating voltage**
  The 5330 operates at 1.35V. The 5340 operates at 1.2V.

- **A resilient storage architecture**
  The redundant components of the NetBackup 53xx Appliances 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 53xx external RAID controllers are hot-swappable so that a faulty controller can be replaced without interrupting your operations.

- **Multiple redundant data paths**
  The NetBackup 53xx have 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 five 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.

**NetBackup 5340 Appliance storage capacities**

The NetBackup 5340 Appliance compute nodes do not contain internal disk space on which to store data. Instead, the NetBackup 5340 Appliance uses the required Veritas 5U84 Primary Storage Shelf as the main data storage device. The 5U84 Primary Storage Shelf connects to the NetBackup 5340 Appliance compute nodes and uses RAID 6 drive sets to protect the stored data.

If additional data storage space is required, you can connect up to three optional Veritas 5U84 Expansion Storage Shelves to the existing 5U84 Primary Storage Shelf. The 5U84 Expansion Storage Shelves connect to the 5U84 Primary Storage Shelf using SAS3 data cables. After connecting the shelves, the disk drives in the
5U84 Expansion Storage Shelf use RAID 6 sets that are controlled by the 5U84 Primary Storage Shelf to protect the stored data.

<table>
<thead>
<tr>
<th>Usable storage capacities (4-TB Drives)</th>
<th>Usable storage capacities (8-TB Drives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120TiB (132TB)</td>
<td>240TiB (264TB)</td>
</tr>
<tr>
<td>240TiB (264TB)</td>
<td>480TiB (528TB)</td>
</tr>
<tr>
<td>360TiB (396TB)</td>
<td>720TiB (792TB)</td>
</tr>
<tr>
<td>480TiB (528TB)</td>
<td>960TiB (1,056TB)</td>
</tr>
<tr>
<td>600TiB (660TB)</td>
<td>1,200TiB (1,320TB)</td>
</tr>
<tr>
<td>720TiB (792TB)</td>
<td>1,440TiB (1,583TB)</td>
</tr>
<tr>
<td>840TiB (924TB)</td>
<td>1,680TiB (1,847TB)</td>
</tr>
<tr>
<td>960TiB (1,056TB)</td>
<td>1,920TiB (2,111TB)</td>
</tr>
</tbody>
</table>

*NetBackup 5340 Appliance software version 3.1.2 supports up to 960TiB (1,056TB) of usable MSDP storage capacity.

For more information, see the Veritas 5340 Appliance Product Description.

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

About the NetBackup 5330 appliance storage shelves

The NetBackup 5330 Appliance does not contain any internal storage and relies on the use of the following external storage shelves:
Primary Storage Shelf
This storage shelf contains the RAID controller and is required for every 5330 appliance installation. The unit connects directly to the appliance with Fibre Channel (FC) cables. A NetBackup 5330 system requires one Primary Storage Shelf.

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

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.

About the 5U84 storage shelves
The NetBackup 5340 and the NetBackup 5340 High Availability (HA) compute nodes do not contain any internal storage. Both configurations rely on the use of external storage shelves as follows.

- 5U84 Primary Storage Shelf (required)
  This shelf connects directly to the compute node and to any optional Expansion shelves.

- 5U84 Expansion Storage Shelf (optional, up to three shelves)
  These shelves connect directly to the Primary shelf.

Features of the 5U84 storage shelves include:
- The storage shelves require a 220VAC at 20A with C19 and C20 connectors.
A storage shelf without disk drives weighs up to 61.65kg (135.72lbs). The disk drives ship separately from the storage shelf. Install the disks after the shelf has been installed into the rack.

From the inside of the front post to the inside of the rear post the rails measure 713mm to 884mm (28in to 34.8in). Be sure that your rack accommodates this distance. Allow extra space to accommodate power strips, power cords, and other cables.

Half capacity storage shelves are available if desired. Refer to the NetBackup 5340 Appliance Product Description Guide for details regarding available storage capacities.

### Comparison of the NetBackup Appliances hardware

Table 3-4 outlines the differences between the NetBackup 53xx and 52xx Appliances.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NetBackup 5340</th>
<th>NetBackup 5330</th>
<th>NetBackup 5240</th>
<th>NetBackup 5230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>Media server only</td>
<td>Media server only</td>
<td>Master or media server</td>
<td>Master or media server</td>
</tr>
<tr>
<td>Cores</td>
<td>40</td>
<td>20</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Cache</td>
<td>55 MB</td>
<td>50 MB</td>
<td>40 MB (20 MBs per CPU)</td>
<td>30 MB</td>
</tr>
<tr>
<td>RAID cache</td>
<td>32 GB</td>
<td>24 GB</td>
<td>1 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>CPU speed</td>
<td>2.0 GHz</td>
<td>2.8 GHz</td>
<td>2.4 GHz</td>
<td>2.0 GHz</td>
</tr>
<tr>
<td>Turbo speed</td>
<td>3.7 GHz</td>
<td>3.1 GHz</td>
<td>3.2 GHz</td>
<td>2.5 GHz</td>
</tr>
<tr>
<td>QPI speed</td>
<td>10.4 GT/s</td>
<td>8 GT/s</td>
<td>8 GT/s</td>
<td>7.2 GT/s</td>
</tr>
</tbody>
</table>
### Table 3-4  Comparison of NetBackup 5340, 5330, 5240, and 5230 Appliances (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NetBackup 5340</th>
<th>NetBackup 5330</th>
<th>NetBackup 5240</th>
<th>NetBackup 5230</th>
</tr>
</thead>
<tbody>
<tr>
<td>System memory**</td>
<td>768 GB</td>
<td>384 GB</td>
<td>64 GB</td>
<td>128 GB (with expansion storage)</td>
</tr>
<tr>
<td><strong>Note:</strong> 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. <strong>Note:</strong> A 256GB kit is also available that replaces the existing memory configuration (32 GB x 8).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory configuration **</td>
<td>Standard: 32 GB x 24 (768 GB)</td>
<td>Standard: 16 GB x 24 (64 GB)</td>
<td>Standard: 8 GB x 8 (64 GB)</td>
<td>Standard: 8 GB x 8 (64 GB)</td>
</tr>
<tr>
<td><strong>Note:</strong> (DIMMs, except where noted otherwise.)</td>
<td>Option: 64 GB x 24 (1536 GB)</td>
<td>Option: 32 GB x 24 (768 GB)</td>
<td>Options: 8 GB x 16 (128 GB)</td>
<td>Options: 8 GB x 16 (128 GB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 GB x 24 (192 GB)</td>
<td>8 GB x 24 (192 GB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>32 GB x 8 (256 GB)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3-4

**Comparison of NetBackup 5340, 5330, 5240, and 5230 Appliances (continued)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NetBackup 5340</th>
<th>NetBackup 5330</th>
<th>NetBackup 5240</th>
<th>NetBackup 5230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data retention</td>
<td>Supercapacitors and flash memory in each of the 2 RAID controllers</td>
<td>1 Li-ion battery backup unit to NVRAM per RAID controller (2 per system)</td>
<td>One MFBU with a flash memory card for the internal RAID controller</td>
<td>One maintenance-free backup unit (MFBU) with Flash and Supercapacitor A second MFBU is added with expansion storage</td>
</tr>
<tr>
<td>PCI add-in card slots</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>On-board 10 Gb Ethernet ports</td>
<td>0 (Four on-board 1 GbE ports)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10 Gb Ethernet cards in PCI assembly</td>
<td>Up to 5 cards (10 ports)</td>
<td>Up to 4 cards (8 ports) *</td>
<td>Up to 3 cards (6 ports)</td>
<td>Up to 1 card (2 ports)</td>
</tr>
<tr>
<td>Additional 1 Gb Ethernet cards in PCI assemblies</td>
<td>No</td>
<td>No</td>
<td>Up to 1 card (4 ports)</td>
<td>No</td>
</tr>
<tr>
<td>SAS RAID card in PCI assemblies</td>
<td>No</td>
<td>No</td>
<td>Yes (with the purchase of the first storage shelf)</td>
<td>Yes (with expansion storage)</td>
</tr>
<tr>
<td>Dual redundant external storage-based RAID controllers</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>External storage</td>
<td>1 required Primary Storage Shelf and up to 3 optional Expansion Shelves</td>
<td>1 required Primary Storage Shelf and up to 5 optional Expansion Shelves</td>
<td>Up to 4 Storage Shelves</td>
<td>Up to 4 Veritas Storage Shelves</td>
</tr>
<tr>
<td>Maximum storage capacity with external storage**</td>
<td>1920 TB</td>
<td>1364 TB</td>
<td>201 TB</td>
<td>157 TB</td>
</tr>
</tbody>
</table>
Table 3-4  Comparison of NetBackup 5340, 5330, 5240, and 5230 Appliances (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>NetBackup 5340</th>
<th>NetBackup 5330</th>
<th>NetBackup 5240</th>
<th>NetBackup 5230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical power consumption with maximum external storage</td>
<td>5800 Watts (3.0 W per TB)</td>
<td>2442 Watts (1.79 W per TB)</td>
<td>1140 Watts (5.6 W per TB)</td>
<td>1500 Watts (9.5 W per TB)</td>
</tr>
</tbody>
</table>

* The NetBackup 5330 Appliance always includes two 10Gb Ethernet ports as standard components on every configuration.

** Refer to the following topic for important information on memory configuration and maximum storage capacity with external storage: See “About NetBackup Appliance memory requirements” on page 19.

About NetBackup Appliance memory requirements

Beginning with NetBackup Appliance software version 3.1, the security posture of MSDP has been improved by moving from MD5 to SHA-256 for the fingerprinting process. This change has increased the demand on memory consumption in large deduplication pool configurations.

The following describes the guidance for appliance memory footprint requirements that you should follow to ensure optimal performance with MSDP:

- **NetBackup 5230**
  For all 3- and 4-storage shelf configurations, Veritas strongly recommends that you upgrade the memory capacity from 128GB to 192GB when configured with an MSDP pool of 144TB or larger.

- **NetBackup 5240**
  For all 3- and 4-storage shelf configurations, Veritas strongly recommends that you upgrade the memory capacity from 128GB to a minimum of 192GB when configured with an MSDP pool of 150TB or larger.
  For all 5- and 6-storage shelf configurations, Veritas strongly recommends that you upgrade the memory capacity a minimum of 256GB when configured with an MSDP pool of 250TB or larger.
  A 256GB memory upgrade kit is now available for purchase, which replaces all existing DIMM modules in the appliance. Contact your Veritas account representative for details.

- **NetBackup 5330**
  For all storage configurations with an MSDP pool of 458TB or larger, Veritas strongly recommends upgrading the memory capacity to 768GB.

- **NetBackup 5340**
For all storage configurations with an MSDP pool of 960TB or larger, Veritas strongly recommends upgrading the memory capacity to 1536GB.

Other factors can also contribute to additional memory utilization, including but not limited to the following:

- High concurrent job/stream count
- Larger MSDP fingerprint cache configurations
- Master server scheduling responsibilities
NetBackup Appliance compatibility

This chapter includes the following topics:

- About software release types
- About NetBackup Appliance software upgrades

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. For example, 3.0. 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, 3.1. 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, 3.1.2. 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, 3.1.2.1. 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 is currently using a version earlier than 2.7.1, you must upgrade twice to get to version 3.1.1. Veritas recommends that you upgrade to version 3.1, and then upgrade to version 3.1.1.

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 3.1.1 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.
Operational notes

This chapter includes the following topics:

- About operational notes for NetBackup appliance 3.1.1
- New Operational Notes for NetBackup Appliance 3.1.1
- 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 3.1.1

This chapter contains the topics that explain important aspects of NetBackup Appliance 3.1.1 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 3.1.1. Therefore, Veritas recommends that you refer to the following link to view the latest release information:

Because NetBackup Appliance 3.1.1 installs NetBackup 8.1.1 software, the operational notes that apply to NetBackup 8.1.1 also apply to NetBackup appliance 3.1.1. For more information on the operational notes for NetBackup, refer to the NetBackup 8.1.1 Release Notes on the Veritas Support website.
New Operational Notes for NetBackup Appliance 3.1.1

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

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

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

- If you currently use NetBackup Appliance software versions 2.7.1 or 2.7.2 and plan to upgrade to version 3.1.1, you must download the release packages manually. For instructions on how to download upgrade packages manually, see the following documents:
  - *NetBackup Appliance Release 3.1.1*
  - *NetBackup Appliance Upgrade Guide*

  Any NetBackup 5220, 5230, and 5330 appliances with versions earlier than 2.7.1 must be upgraded twice to get to version 3.1.1. You can first upgrade these systems to version 3.1, and then upgrade to version 3.1.1.

- For this release, if IPSec functionality is configured on any appliance that you plan to upgrade, the IPsec certificates may not be retained after the upgrade has completed. To avoid this issue, you must export the IPsec certificates before upgrading those appliances. For complete details, see the topic "Pre-upgrade tasks for appliance upgrades" in the *Veritas NetBackup Appliance Upgrade Guide* for release 3.1.1.

- If you create a checkpoint and then enable the FIPS feature afterward, a rollback to that checkpoint may keep the feature enabled instead of disabling it. The same thing can happen in a scenario where FIPS is enabled before the checkpoint is created, but is disabled after the rollback.

  To ensure that the FIPS feature status is correct after a rollback to a checkpoint, run the following command after the rollback has completed:

  ```shell
  Settings > Security > FIPS Status
  ```

  If the command result shows the wrong feature status, run one of the following commands to set the feature correctly:

  ```shell
  Settings > Security > FIPS Enable
  ```
Settings > Security > FIPS Disable

- If you intend to preserve data during the reconfiguration process, you must use the NetBackup Appliance Shell Menu. Reconfiguration using the NetBackup Appliance Web Console is not supported. Note that if you perform a factory reset and choose to preserve storage, the existing Standard Share and Optimized Share partitions are deleted when initial configuration is performed from the NetBackup Appliance Web Console. This issue occurs only when you reconfigure from the NetBackup Appliance Web Console.

- When you upgrade a NetBackup appliance 3.1 to version 3.1.1 from the Appliance Management Console, the data for the appliance (like version) is not updated on the Appliance Management Console. To view the updated information and restore normal functionality, add the appliance again to the Appliance Management Console. See the Appliance Management Guide for instructions.

  **Note:** To add the appliance again, you do not need to remove the appliance from the Appliance Management Console.

- When Appliance Management Server (version 3.1.1) is used to upgrade a NetBackup appliance to version 3.1, the Version, Total capacity used, and Last contact time fields are not updated on the Appliance Management Console. Contact Technical Support for assistance.

- The data erasure always shows the following error message when it initializes the erasure task on the Configuration disk. This is because the status of the initialization is not available at that time. To check whether the task has been initialized and finished, contact Veritas Technical Support and ask the representative to refer to the internal technical article 100041952.

  - [Error] Cannot initialize the disk erasure for the disk ID "xxx xxx ... xxx". An unknown error has occurred. To solve the issue, contact Technical Support.

- This release does not support pure IPv6. However, IPv6 is supported for dual stack networks.

- The VpFs service hangs while using Universal Shares. To fix this issue, you must install an EEB NBAPP_EEB_ET3939554-3.1.1.0-1.x86_64.rpm before you use the Universal Shares. For more information about the EEB, see the following article:

  www.veritas.com/docs/100042155

- If Copilot Universal Shares are configured on any nodes in an HA setup, the preflight check may fail with the following error when you attempt to upgrade to version 3.1.1:
[Error] Failed to get complete service list on HA partner node [node_name].
To resolve this issue so that you can perform the upgrade, contact Veritas Technical Support and ask the representative to refer to the following article: www.veritas.com/docs/100041854.

- After the upgrade from version 3.1 to 3.1.1 is completed, you are not able to get the post-upgrade self-test result email alert. To check the post-upgrade self-test detail and result, view the logs under /log.

- LDAP configuration export and import operations can elevate any local users to an administrator role. Local users that are exported from the source appliance can automatically assume the administrator role when that configuration is imported on the same, or a different appliance. To address this problem, check the user Role membership from the NetBackup Appliance Shell Menu or the NetBackup Appliance Web Console, and change the administrator role membership as necessary.
This issue has been fixed for versions 3.1.2 and later.

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.

- If the STIG feature is enabled, the STIG login banner is not retained after you upgrade the appliance software version. To resolve this issue, perform one of the following workaround solutions:
  - To use the default STIG login banner, log in to the NetBackup Appliance Shell Menu and enter the following command: `Settings > Security > STIG enable`
  - To use a custom STIG login banner, log in to the NetBackup Appliance Web Console and click on `Settings > Notification > Login Banner` to change the 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:`.

- 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/100032270](http://www.veritas.com/docs/100032270)

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**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:
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.

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 requirement applies to configuration H of the NetBackup 5240 appliance. Configurations A, B, C, D, and E of the NetBackup 5340 appliance also support iSCSI.

A VLAN can be configured on either the network interface or the iSCSI interface. If a VLAN is configured on both the network and iSCSI interfaces, 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.

<table>
<thead>
<tr>
<th>Network interface</th>
<th>iSCSI interface</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td>VLAN</td>
<td>IP</td>
</tr>
<tr>
<td>Subnet X</td>
<td>None</td>
<td>Subnet X</td>
</tr>
<tr>
<td>Subnet X</td>
<td>None</td>
<td>Subnet Y</td>
</tr>
<tr>
<td>Subnet X</td>
<td>VLAN B</td>
<td>Subnet X</td>
</tr>
<tr>
<td>Subnet X</td>
<td>VLAN B</td>
<td>Subnet Y</td>
</tr>
</tbody>
</table>

If you run the `iscsi> Target Discover Portal` or the `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, only the recent record is displayed by the `Target Show All` command. For example if you run the `Target Discover iSNS` command for `iscsi1` and then `iscsi2`, the `Interfaces` column in the `Target Show All` command output may not show both of the interfaces (`iscsi1`, `iscsi2`) for some targets. It actually 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.

Upgrade and rollback notes

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

- If you currently use NetBackup Appliance software versions 3.1 or earlier and upgrade to version 3.1.1, all iSCSI commands become unavailable after the upgrade has completed. This issue occurs with all 3.1.1 upgrades on all NetBackup Appliance models. However, established initiator and target connections are not affected.

  After the upgrade, you are not able to perform the following tasks:

  - Add new connections.
  - Delete existing connections.
  - Use any commands that display iSCSI status and parameters.

  If you have not yet upgraded to version 3.1.1, you can avoid this issue by upgrading to version 3.1.2 which contains the fix.

  If you have already upgraded to version 3.1.1 and want to restore all iSCSI command functions, do one of the following:

  - Re-image the appliance with version 3.1.1.
  - Upgrade to version 3.1.2.

  During an upgrade to 3.1.1, if a canceled replication operation is restarted right after the checkpoint is created, the upgrade fails and the system rolls back automatically. After rollback, the backup cannot work because the media server is no longer active. To resolve this issue, activate the media server manually as follows:

  - Log on to the NetBackup Administration Console as administrator.
On the left panel, navigate to **Media and Device Management > Devices > Media Servers**.

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

---

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

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

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

---

**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 5-1 describes the methods you can use to access the appliance log files.

<table>
<thead>
<tr>
<th>From</th>
<th>Access methods</th>
<th>Log details</th>
</tr>
</thead>
<tbody>
<tr>
<td>NetBackup Appliance Web Console</td>
<td>You can use the <strong>Monitor &gt; SDCS Audit View</strong> screen from the NetBackup Appliance Web Console to retrieve the audit logs of an appliance.</td>
<td>Appliance audit logs</td>
</tr>
</tbody>
</table>
| 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 |
<table>
<thead>
<tr>
<th>From</th>
<th>Access methods</th>
<th>Log details</th>
</tr>
</thead>
<tbody>
<tr>
<td>NetBackup Appliance Shell Menu</td>
<td>You can use the Main &gt; Support &gt; Logs &gt; VxLogView Module <strong>ModuleName</strong> command to access the appliance VxUL (unified) logs. You can also use the Main &gt; Support &gt; Share Open command and use the desktop to map, share, and copy the VxUL logs.</td>
<td>Appliance unified logs:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ All</td>
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<tr>
<td></td>
<td></td>
<td>■ CallHome</td>
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<td>■ Checkpoint</td>
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<td>■ Commands</td>
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<td>■ Common</td>
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<td>■ Config</td>
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<td>■ CrossHost</td>
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<td>■ Database</td>
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<td></td>
<td></td>
<td>■ Hardware</td>
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<td>■ HWMonitor</td>
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<td>■ Network</td>
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<td>■ RAID</td>
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<td>■ Seeding</td>
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<td>■ SelfTest</td>
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<td>■ Storage</td>
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<td>■ SWUpdate</td>
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<td>■ Trace</td>
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<td>■ FTMS</td>
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<td>■ FTDedup</td>
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<td>■ TaskService</td>
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<tr>
<td></td>
<td></td>
<td>■ AuthService</td>
</tr>
<tr>
<td>NetBackup Appliance Shell Menu</td>
<td>You can use the Main &gt; Support &gt; DataCollect command to collect the storage device logs.</td>
<td>Appliance storage device logs</td>
</tr>
<tr>
<td>NetBackup-Java applications</td>
<td>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.</td>
<td>Logs relating to the NetBackup-Java applications</td>
</tr>
</tbody>
</table>
This appendix includes the following topics:

- About the current release content
- NetBackup Appliance 3.1.1 general release content
- NetBackup Appliance 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 3.1.1 release also contains all of the fixes that are included in NetBackup 8.1.1. For a complete listing of the NetBackup 8.1.1 fixes, refer to the *NetBackup 8.1.1 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 8.1.1 is included with the NetBackup appliance 3.1.1 release. Information about the new features, enhancements, and fixes found in NetBackup 8.1.1 can be found in the *NetBackup 8.1.1 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:
NetBackup Appliance 3.1.1 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:

NetBackup Appliance 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 software:

Spectre and Meltdown vulnerabilities

NetBackup Appliance release 3.1.1 includes fixes that are specific to the following variants:

- Variant 1 - Spectre, CVE-2017-5753
- Variant 3 - Meltdown, CVE-2017-5754

These fixes address the potential of a local user to install and run a binary to gain access to the memory of other processes.

Veritas recommends that you upgrade all NetBackup appliances to version 3.1.1 as soon as possible to mitigate these vulnerabilities. For more details about these vulnerabilities, see the following article:


The following describes additional vulnerabilities that have been addressed in version 3.1.1:

- Apache Struts vulnerability
  CVE-2017-5638
- WPA2 package updates for KRACK:
  - CVE-2017-13077
  - CVE-2017-13078
  - CVE-2017-13080
  - CVE-2017-13082
  - CVE-2017-13086
  - CVE-2017-13088

- DNS package updates
  - CVE-2017-14491
  - CVE-2017-14492
  - CVE-2017-14493
  - CVE-2017-14494
  - CVE-2017-14495
  - CVE-2017-14496

- Java Vulnerabilities
  - CVE-2017-10309
  - CVE-2017-10274
  - CVE-2017-10293
  - CVE-2017-10281
  - CVE-2017-10347
  - CVE-2017-10348
  - CVE-2017-10349
  - CVE-2017-10350
  - CVE-2017-10357
  - CVE-2017-10345
  - CVE-2017-10346
  - CVE-2017-10285

- Miscellaneous
  - CVE-2017-8030
  - CVE-2017-8046
  - CVE-2017-15288
  - CVE-2017-5645
  - CVE-2017-17485
  - CVE-2017-1000253
  - CVE-2017-7555
  - CVE-2016-10164
  - CVE-2017-2625
  - CVE-2017-2626
  - CVE-2016-10200
CVE-2017-2647
CVE-2017-8797
CVE-2015-8839
CVE-2015-8970
CVE-2016-9576
CVE-2016-7042
CVE-2016-7097
CVE-2016-8645
CVE-2016-9576
CVE-2016-9588
CVE-2016-9806
CVE-2016-10088
CVE-2016-10147
CVE-2017-2596
CVE-2017-2671
CVE-2017-5970
CVE-2017-6001
CVE-2017-6951
CVE-2017-7187
CVE-2017-7616
CVE-2017-7889
CVE-2017-8890
CVE-2017-9074
CVE-2017-9075
CVE-2017-9076
CVE-2017-9077
CVE-2017-9242
CVE-2014-7970
CVE-2014-7975
CVE-2016-6213
CVE-2016-9604
CVE-2016-9685
CVE-2016-10165
CVE-2016-8399
CVE-2016-9841
CVE-2017-1000111
CVE-2017-1000112
CVE-2017-10274
CVE-2017-10281
CVE-2017-10295
CVE-2017-7558
CVE-2017-10355
CVE-2017-7542
CVE-2017-10356
CVE-2017-10388
CVE-2017-7184
CVE-2017-12617
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. In addition, you can find information about the appliance hardware documents from the following table.

All these documents are posted on the [NetBackup Appliance Documentation page](#).

**Table B-1**  
NetBackup Appliance Software documentation

<table>
<thead>
<tr>
<th>Guide</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NetBackup™ 52xx Initial Appliance Configuration Guide</td>
<td>This document guides you through the 52xx configuration process from the NetBackup Appliance Web Console or from the NetBackup Appliance Shell Menu.</td>
</tr>
<tr>
<td>NetBackup™ 53xx Initial Appliance Configuration Guide</td>
<td>This document guides you through the 53xx configuration process from the NetBackup Appliance Web Console or from the NetBackup Appliance Shell Menu.</td>
</tr>
<tr>
<td>NetBackup Appliance Upgrade Guide</td>
<td>This document guides you through the required steps to upgrade a NetBackup appliance.</td>
</tr>
<tr>
<td>NetBackup™ Appliance Administrator’s Guide</td>
<td>The NetBackup™ Appliance Administrator’s Guide contains the following types of information:</td>
</tr>
<tr>
<td></td>
<td>- Deployment information</td>
</tr>
<tr>
<td></td>
<td>- Administering your appliance</td>
</tr>
<tr>
<td></td>
<td>- Monitoring information</td>
</tr>
</tbody>
</table>
Table B-1  NetBackup Appliance Software documentation (continued)

<table>
<thead>
<tr>
<th>Guide</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NetBackup™ Appliance Command Reference Guide</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Appliance Management Guide</strong></td>
<td>This document helps you to use the Veritas Appliance Management Console to centrally manage multiple appliances. The Veritas Appliance Management Console provides enterprise-wide monitoring and management of NetBackup appliances. With 3.1 and later, you can manage software upgrades or install EEBs on multiple appliances.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance Release Notes</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance Troubleshooting Guide</strong></td>
<td>This document provides a general overview of how to troubleshoot NetBackup appliance issues and an explanation of the appliance troubleshooting tools and log files. If you need more specific troubleshooting information about a particular issue, go to the NetBackup Appliance page on the Veritas Support website. You can use the search function to look for articles relating to specific issues.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance Capacity Planning and Performance Tuning Guide</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance Security Guide</strong></td>
<td>This document describes the security features in NetBackup Appliance and how to use those features to ensure that your appliance environment is secure.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance Fibre Channel Guide</strong></td>
<td>This document describes the supported Fibre Channel (FC) capabilities and configurations for NetBackup appliances.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance iSCSI Guide</strong></td>
<td>This document describes how iSCSI works on the NetBackup appliance.</td>
</tr>
</tbody>
</table>
### Table B-1  NetBackup Appliance Software documentation (continued)

<table>
<thead>
<tr>
<th>Guide</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NetBackup Appliance Decommissioning and Reconfiguration Guide</strong></td>
<td>This document describes how to decommission and reconfigure a NetBackup appliance.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance SNMP Trap Reference Guide</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>NetBackup Copilot for Oracle Configuration Guide</strong></td>
<td>This document outlines how to configure Copilot using NetBackup and the NetBackup Appliance.</td>
</tr>
<tr>
<td><strong>NetBackup Appliance Third-party Legal Notices</strong></td>
<td>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: <a href="https://www.veritas.com/about/legal/license-agreements">https://www.veritas.com/about/legal/license-agreements</a></td>
</tr>
<tr>
<td><strong>NetBackup™ Appliance AutoSupport 2.0 Reference Guide</strong></td>
<td>This document contains the information about the AutoSupport 2.0. It helps you to understand the deployment of the AutoSupport infrastructure, and how does the AutoSupport infrastructure analyzes the Call Home data from each appliances.</td>
</tr>
<tr>
<td><strong>NetBackup™ 53xx Appliance High Availability Reference Guide</strong></td>
<td>This document contains the information about the High Availability (HA) solution. It helps you to understand the deployment of the high availability configuration.</td>
</tr>
</tbody>
</table>

### Table B-2  NetBackup Appliance Hardware documentation

<table>
<thead>
<tr>
<th>Guide</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NetBackup™ 5230 Appliance and Storage Shelf Product Description</strong></td>
<td>This guide introduces you to the NetBackup 5230 Appliance and Storage Shelves.</td>
</tr>
<tr>
<td><strong>NetBackup™ 5240 Appliance Product Description</strong></td>
<td>This guide introduces you to the NetBackup 5240 Appliance and Storage Shelf.</td>
</tr>
<tr>
<td><strong>NetBackup™ 5330 Appliance Product Description</strong></td>
<td>This guide introduces you to the NetBackup 5330 Appliance and Storage Shelves.</td>
</tr>
<tr>
<td><strong>NetBackup™ 5340 Appliance Product Description</strong></td>
<td>This guide introduces you to the NetBackup 5340 Appliance and the 5U84 Storage Shelves.</td>
</tr>
</tbody>
</table>
This document provides safety maintenance information for the following hardware:

- NetBackup 52xx appliances
- NetBackup 53xx appliances
- Veritas 3U16 24TB/36TB Storage Shelves
- Veritas 2U12 49TB Storage Shelf
- Veritas 5U84 Storage Shelves