

# NetBackup™ Release Notes

Release 10.5.0.1

Document Version 1

**VERITAS™**

# NetBackup™ Release Notes

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## Veritas Services and Operations Readiness Tools (SORT)

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](https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf)

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# About NetBackup 10.5.0.1

This chapter includes the following topics:

- [About the NetBackup 10.5.0.1 release](#)
- [About NetBackup Late Breaking News](#)
- [About NetBackup third-party legal notices](#)

## About the NetBackup 10.5.0.1 release

The *NetBackup Release Notes* document is meant to act as a snapshot of information about a version of NetBackup at the time of its release. Old information and any information that no longer applies to a release is either removed from the release notes or migrated elsewhere in the NetBackup documentation set.

See [“About new enhancements and changes in NetBackup”](#) on page 9.

### About EEBs and release content

NetBackup 10.5.0.1 incorporates fixes to many of the known issues that affected customers in previous versions of NetBackup. Some of these fixes are associated with the customer-specific issues. Several of the customer-related fixes that were incorporated into this release were also made available as emergency engineering binaries (EEBs).

Listings of the EEBs and Etracks that document the known issues that have been fixed in NetBackup 10.5.0.1 can be found on the Veritas Operations Readiness Tools (SORT) website and in the *NetBackup Emergency Engineering Binary Guide*.

See [“About Veritas Services and Operations Readiness Tools”](#) on page 27.

### About NetBackup appliance releases

The NetBackup appliances run a software package that includes a preconfigured version of NetBackup. When a new appliance software release is developed, the

latest version of NetBackup is used as a basis on which the appliance code is built. For example, NetBackup Appliance 3.1 is based on NetBackup 8.1 This development model ensures that all applicable features, enhancements, and fixes that were released within NetBackup are included in the latest release of the appliance.

The NetBackup appliance software is released at the same time as the NetBackup release upon which it is based, or soon thereafter. If you are a NetBackup appliance customer, make sure to review the *NetBackup Release Notes* that correspond to the NetBackup appliance version that you plan to run.

Appliance-specific documentation is available at the following location:

<http://www.veritas.com/docs/000002217>

## About NetBackup Late Breaking News

For the most recent NetBackup news and announcements, visit the NetBackup Late Breaking News website at the following location:

<http://www.veritas.com/docs/000040237>

Other NetBackup-specific information can be found at the following location:

[https://www.veritas.com/support/en\\_US/15143.html](https://www.veritas.com/support/en_US/15143.html)

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

# New features, enhancements, and changes

This chapter includes the following topics:

- [About new enhancements and changes in NetBackup](#)
- [NetBackup 10.5.0.1 new features, changes, and enhancements](#)

## About new enhancements and changes in NetBackup

In addition to new features and product fixes, NetBackup releases often contain new customer-facing enhancements and changes. Examples of common enhancements include new platform support, upgraded internal software components, interface changes, and expanded feature support. Most new enhancements and changes are documented in the *NetBackup Release Notes* and the NetBackup compatibility lists.

---

**Note:** The *NetBackup Release Notes* only lists the new platform support that begins at a particular NetBackup version level at the time of its release. However, Veritas routinely backdates platform support to previous versions of NetBackup. Refer to the [NetBackup Compatibility List for all Versions](#) for the most up-to-date platform support listings.

---

See [“About the NetBackup 10.5.0.1 release”](#) on page 7.

See [“About NetBackup compatibility lists and information”](#) on page 35.

# NetBackup 10.5.0.1 new features, changes, and enhancements

New features, changes, and enhancements in NetBackup 10.5.0.1 are grouped below by category. Select a link to read more information about the topic.

## New features

- [Changes in Veritas terminology](#)
- [Support for file hash search with malware search](#)

## Secure communication features, changes, and enhancements

- **Note:** Before you install or upgrade to NetBackup 10.5.0.1 from a release earlier than 8.1, make sure that you read and understand the *NetBackup Read This First for Secure Communications* document. NetBackup 8.1 includes many enhancements that improve the secure communications of NetBackup components. The *NetBackup Read This First for Secure Communications* document describes the features and benefits of these enhancements:

[NetBackup Read This First for Secure Communications](#)

- [Changes to the VRTSpddes.rpm package in 10.5.0.1 for BYO storage server](#)

## Support changes and enhancements

- [Support for OpenStack Caracal added to NetBackup for OpenStack 10.5.0.1](#)
- [MSDP volume group \(MVG\) supports WORM storage](#)

## Cloud-related changes and enhancements

- [Update cloud configuration file on the primary server immediately after install or upgrade to NetBackup 10.5.0.1](#)
- [Support for backup of Azure Disk Encryption \(ADE\) enabled VMs](#)

## Workload and database agent changes and enhancements

- [Enhancements for Cassandra workload](#)

## Changes in Veritas terminology

To modernize our terminology, Veritas has begun to replace certain outdated terms with more current terms.

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**Note:** As Veritas continues to update its terminology, the deprecated terms and the new terms may be used interchangeably.

---

<b>Deprecated term</b>	<b>New term</b>
Master	Primary
Slave	Secondary or media server
Whitelist or white list	Allowed list
Blacklist or black list	Blocked list
White hat	Ethical
Black hat	Unethical

## Update cloud configuration file on the primary server immediately after install or upgrade to NetBackup 10.5.0.1

If you use cloud storage in your NetBackup environment, you may need to update your cloud configuration file on the NetBackup primary server immediately after you install or upgrade to NetBackup 10.5.0.1. If a cloud provider or related enhancement is not available in the cloud configuration file after you upgrade to NetBackup 10.5.0.1, related operations fail.

Veritas continuously adds new cloud support to the cloud configuration files between releases. Updating your cloud configuration files is necessary only if your cloud storage provider was added to the cloud configuration package after version 2.12.0.

The following cloud support has been added to version 2.12.1 and later but was not included in the NetBackup 10.5.0.1 final build:

- Cloud Object Store Protection (COSP) – Dell EMC PowerScale series
- Hitachi Content Platform (HCP) S3 Object Lock
- Beijing XSKY Enterprise Object Storage S3 Object Lock
- Calamu Protect (S3)
- Amazon (S3) - Canada West (Calgary) region
- NEC Cloud IaaS Object Storage N2 (S3)
- PSPACE InfiniStor (S3)
- Anzen AnzenStore (S3)
- NetApp ONTAP S3 Object Lock

- Wasabi (S3) - EU South 1 (Milan) region
- OVHcloud Standard Object Storage (S3)

For the latest cloud configuration package, see the following technical article:

[https://www.veritas.com/content/support/en\\_US/downloads/update.UPD971796](https://www.veritas.com/content/support/en_US/downloads/update.UPD971796)

For additional information on adding cloud storage configuration files, refer to the following technical article:

<http://www.veritas.com/docs/100039095>

## Support for OpenStack Caracal added to NetBackup for OpenStack 10.5.0.1

NetBackup for OpenStack 10.5.0.1 supports the OpenStack Caracal release. To install NetBackup for OpenStack on Caracal, see the [Installing on Kolla](#) topic in the [NetBackup for OpenStack Administrator's Guide 10.5](#). When you tag the NetBackup for OpenStack images as stated in the step 2 of the topic [Loading the images from tar and pushing them to the local repositior](#), ensure that you add `localhost/` before the image name. For example:

```
docker tag  
localhost/nbosdnapi-{{kolla-base-distro}}:{{NBOS_version}}-{{openstack_release}}
```

## MSDP volume group (MVG) supports WORM storage

In NetBackup 10.5.0.1, the WORM storage volume is supported for the MSDP volume group. Now, you can create an MVG volume with the WORM storage volumes. For more information about MVG, see the *NetBackup Deduplication Guide*.

## Changes to the VRTSpddes.rpm package in 10.5.0.1 for BYO storage server

For security reasons, the `/usr/opensv/pdde/pdopensource/supermin_appliance` directory has been removed from `VRTSpddes.rpm` package from 10.5.0.1 BYO storage server. As a result, VMs with the BTRFS file system or using Windows Logical Disk Manager (LDM) will experience the following:

- You cannot use instant access to browse, download, or restore files from the VMware backup image.
- Malware scan does not work for the VMs.

To support these features, you must manually download and install some packages. For detailed instructions, see the following article:

[https://www.veritas.com/content/support/en\\_US/article.100071923](https://www.veritas.com/content/support/en_US/article.100071923)

## Enhancements for Cassandra workload

NetBackup is enhanced to support Apache Cassandra version 5.0. The following enhancements are incorporated in this release:

- If the data masking is enabled on the families column, configure the `dynamic_data_masking_enabled` parameter as "true" in the `Cassandra.yaml` file of the DSS node.
- Scripted user-defined functions are NOT supported in Cassandra 5.0. Hence, DO NOT configure the `enable_scripted_user_defined_functions` parameter in the `cassandra.yaml` file for the DSS nodes.
- Indexes/Vectors are not restored in case of a rename column family scenario. Veritas recommends adding an index/vector to the renamed column family.

## Support for backup of Azure Disk Encryption (ADE) enabled VMs

NetBackup version 10.5.0.1 or later provides support for backup of ADE enabled VMs, but with the following limitation:

For a VM which is already encrypted with ADE and then additional data disks (which are not encrypted) are added to the VM, the snapshot and backup operation would be successful, but after restore the data on extra non-ADE disks would be lost or not present.

---

**Note:** Currently there is no workaround. Corresponding new disks would be present in the restored VM, but no data would be present on them.

---

For more information, refer to the *NetBackup™ Snapshot Manager for Cloud Install and Upgrade Guide*.

## Support for file hash search with malware search

For a NetBackup domain that is not managed by Alta View and with a configured file hash server, NetBackup version 10.5.0.1 or later provides the feature of file hash search with malware hash.

This feature complements the existing malware scanning service and provides the capabilities of identifying malware from backup images. When malware scan reports an infected status, an automated file hash search job navigates through the NetBackup images to identify an IOC (indicator of compromise).

For more information, refer to the *NetBackup™ Security and Encryption Guide*.

## NetBackup 10.5.0.1 support additions and changes

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**Note:** This information is subject to change. See the [NetBackup Compatibility List for all Versions](#) for the most recent product and services support additions and changes.

---

### Minimum operating system versions

The minimum operating system that is required for NetBackup is changed. Starting with NetBackup 10.5, the minimum operating system is as shown:

- RedHat Linux x86: 4.18.0-372
- IBMpSeriesRedHat: 4.18.0-372
- IBMzSeriesRedHat: 4.18.0-372
- Debian: 4.18.0-372
- IBMpSeriesSuSE: 5.3.18-22
- IBMzSeriesSuSE: 5.3.18-22

### Several shutdown commands to be deprecated in a future release

A new, fully documented command for shutting down NetBackup processes and daemons will be provided in an upcoming release. At that point, the following commands will no longer be available:

- `bp.kill_all`
- `bpdown`
- `bpclusterkill`

Please plan accordingly. The new command will be announced in future release notes and in the *NetBackup Commands Reference Guide*.

# Operational notes

This chapter includes the following topics:

- [About NetBackup 10.5.0.1 operational notes](#)
- [NetBackup installation and upgrade operational notes](#)
- [NetBackup administration and general operational notes](#)
- [NetBackup administration interface operational notes](#)
- [NetBackup Bare Metal Restore operational notes](#)
- [NetBackup for VMware operational notes](#)
- [NetBackup NAS operational notes](#)
- [NetBackup for OpenStack operational notes](#)
- [NetBackup internationalization and localization operational notes](#)

## About NetBackup 10.5.0.1 operational notes

NetBackup operational notes describe and explain important aspects of various NetBackup operations that may not be documented elsewhere in the NetBackup documentation set or on the Veritas Support website. The operational notes can be found in the *NetBackup Release Notes* for each version of NetBackup. Typical operational notes include known issues, compatibility notes, and additional information about installation and upgrade.

Operational notes are often added or updated after a version of NetBackup has been released. As a result, the online versions of the *NetBackup Release Notes* or other NetBackup documents may have been updated post-release. You can access the most up-to-date version of the documentation set for a given release of NetBackup at the following location on the Veritas Support website:

[NetBackup Release Notes, Administration, Installation, Troubleshooting, Getting Started, and Solutions Guides](#)

# NetBackup installation and upgrade operational notes

NetBackup can be installed and upgraded in heterogeneous environments using a variety of methods. NetBackup is also compatible with a mixture of servers and clients that are at various release levels in the same environment. This topic contains some of the operational notes and known issues that are associated with the installation, upgrade, and software packaging of NetBackup 10.5.0.1.

## If NetBackup 10.5.0.1 upgrade fails on Windows, revert to previous log folder structure

The legacy log folder structure for non-root or non-admin invoked process logs has changed. The new folder structure is created under the process log directory name. For more information, refer to the *File name format for legacy logging* section from the [NetBackup Logging Reference Guide](#).

For Windows, if the upgrade to NetBackup 10.5.0.1 fails and rollback occurs, run the following command to continue working on an earlier NetBackup version:

```
mklogdir.bat -fixFolderPerm
```

For more information, refer to the `mklogdir` command from the [NetBackup Commands Reference Guide](#).

## Native installation requirements

In NetBackup 8.2, a change was made to initial installs such that the answer file is now required. This change may have some negative effect on users who want to use the native packages to create VM templates or otherwise install the NetBackup packages without configuring the product. On Linux, one possible way of obtaining the previous behavior is with the `--noscripts` option of the RPM Package Manager. Providing this option when installing the `VRTSnbpck` package avoids the configuration steps. This option does not need to be provided when you install other packages. The answer file must still exist, but the only value that must be provided is the role of the machine, either a client or a media server. For example:

```
echo "MACHINE_ROLE=CLIENT" > /tmp/NBInstallAnswer.conf
rpm -U --noscripts VRTSnbpck.rpm
rpm -U VRTSspbx.rpm VRTSnbclt.rpm VRTSpddea.rpm
```

## NetBackup servers must use a host name that is compliant with RFC 1123 and RFC 952

Starting with NetBackup 8.0, all NetBackup server names must use a host name that is compliant with RFC 1123 ("Requirements for Internet Hosts - Application and Support") and RFC 952 ("DOD Internet Host Table Specification") standards. These standards include the supported and unsupported characters that can be used in a host name. For example, the underscore character ( `_` ) is not a supported character for host names.

More information is available about these standards and about this issue:

[RFC 952](#)

[RFC 1123](#)

<http://www.veritas.com/docs/000125019>

These standards should be applied to all computing hosts, including all NetBackup hosts. To accommodate legacy environments and functionality, features of NetBackup that were implemented before 2010 continue to allow some non-compliant characters. But newer features, as well as more recently integrated 3rd-party components, are not tested with nor expected to be compatible with host names that do not adhere to the industry standards.

In some situations, it may be possible to configure name services with a network hostname alias that is standards-compliant, and then use the alias when you configure NetBackup. But using host names that are standards-compliant is the only way to ensure compatibility with all features.

## About support for HP-UX Itanium vPars SRP containers

Hewlett-Packard Enterprise (HPE) introduced a new type of container for HP-UX Virtual Partitions (vPars)-enabled servers called Secure Resource Partitions (SRPs). As part of the security changes introduced by SRPs, native HP-UX install tools such as `swinstall` and `swremove` are disabled from being run within the SRP environment. The `swinstall` and `swremove` tools can only be called from the global host running vPars, which then pushes the native packages to the SRP containers.

NetBackup only supports installing into the global view. NetBackup installation fails if you try to install into an HPE Itanium SRP container (private file system, shared file system, or workload).

# NetBackup administration and general operational notes

NetBackup provides a complete, flexible data protection solution for a variety of platforms. The platforms include Windows, UNIX, and Linux systems. In addition to a standard set of data protection features, NetBackup can also utilize several other licensed and non-licensed components to better protect a variety of different systems and environments. This topic contains some of the general operational notes and known issues that are associated with the administration of NetBackup 10.5.0.1.

## Intelligent catalog archiving (ICA) is not supported for MSDP cloud

In NetBackup 10.5, Intelligent catalog archiving (ICA) is not available for any MSDP cloud environments.

## For some workload environments, reduce the size of the job database before upgrade

Following an upgrade from NetBackup 9.0 or earlier to NetBackup 9.1 or later, existing jobs for certain workloads are assigned an asset namespace to enable access control at an asset level. This process may take some time. You should reduce the size of the jobs database before upgrade. This action minimizes the amount of processing required to perform the association and minimizes the effect on web services performance. Very large job databases may see an alert regarding high heap space usage.

The affected workloads include: Cloud, Nutanix AHV, RHV, and VMware

For further details see the following article:

<http://www.veritas.com/docs/100049808>

## Policies using Replication Director fail with error code 4224

When you try to modify any existing policy with the **Use Replication Director** and **Perform snapshot backups** options selected in the NetBackup web UI, this error appears:

```
Error code 4224: Host. STS Internal Error
```

You can see the following message in the BPFIS logs:

```
15:16:13.416 [35337] <2> onlfi_vfms_logf: INF - snapshot services:  
ostfi:2023-09-26 15:16:13.416029 <Thread id - 1> Failed to wait for
```

```
operation result, Error code [2060017] and message [system call failed]
15:16:13.417 [35337] <2> onlfi_vfms_logf: INF - snapshot services:
ostfi:2023-09-26 15:16:13.417125 <Thread id - 1> OST Library call
failed with message (STS API waitForAsyncCall failed with error
code : 2060017)
```

Workaround:

Do any of the following actions:

- In the **Policy validation** dialog displaying the error, click **Ignore errors** and save. Open the NetBackup Administration Console (Java UI), edit the policy, and then save it.
- In the **Policy validation** dialog displaying the error, click **Edit policy**. To save the policy, click **Save**. In the **Policy validation** dialog displaying topology validation options, select the topology validation option as **None** or **Basic**, instead of **Complete**, and save.

## NetBackup administration interface operational notes

The NetBackup administrator has a choice of several interfaces to use to administer NetBackup. All of the interfaces have similar capabilities. This topic contains some of the operational notes and known issues that are associated with these interfaces in NetBackup 10.5.0.1.

For more information about the specific NetBackup administration interfaces, refer to the *NetBackup Administrator's Guide* or the *NetBackup Administrator's Guide, Volume I*.

For information about how to install the interfaces, refer to the *NetBackup Installation Guide*. For information about platform compatibility with the administration consoles, refer to the various NetBackup compatibility lists available on the Veritas Support website.

See ["About NetBackup compatibility lists and information"](#) on page 35.

### Delay in NetBackup web UI when adding or removing columns in Catalog area

In the **Catalog** area of the web UI, you can add or remove columns from the table of images. The more images that are displayed, the longer it takes for the interface to refresh if you add or remove columns. This issue will be fixed in an upcoming release.

## Intermittent issues with X forwarding of NetBackup Administration Console

Intermittent issues may occur with X forwarding of the NetBackup Administration Console. This behavior only occurs when you use X forwarding. This issue does not occur at the local console. The issue is most commonly seen on Linux servers, but not exclusively. The issue generally occurs when older versions of X viewers are used, such as Xming and XBrowser.

The use of MobaXterm seems to minimize or eliminate the issue. If you experience issues with X forwarding, consider upgrading your X viewer and retrying the operation or access the server from the local console.

## NetBackup Administration Console fails in Simplified Chinese UTF-8 locale on Solaris SPARC 64-bit systems with Solaris 10 Update 2 or later

The NetBackup Administration Console may encounter a core dump issue when the Simplified Chinese UTF-8 locale is used on a Solaris SPARC 64-bit system with Solaris 10 Update 2 and later installed. For more information, refer to Bug ID 6901233 at the following URL on the Oracle Technology Network website:

[http://bugs.sun.com/bugdatabase/view\\_bug.do?bug\\_id=6901233](http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=6901233)

If you encounter this issue, apply the appropriate Solaris patches or upgrades that Oracle provides for this issue.

## NetBackup Bare Metal Restore operational notes

NetBackup Bare Metal Restore (BMR) automates and streamlines the server recovery process, making it unnecessary to reinstall operating systems or configure hardware manually. This topic contains some of the operational notes and known issues that are associated with BMR in NetBackup 10.5.0.1.

### After PIT restore, "The host ID does not exist" error appears

After a point in time (PIT) restore operation (which may include either a **Full File System** restore or a **BMR restore**), the error message **The host ID does not exist** appears.

In this scenario, a full backup is taken when a SERVICE\_USER as root/administrator account is configured. This account takes the backup of the NetBackup installed binaries with root/administrator ownership. Before a restore, SERVICE\_USER is configured with an account other than root/administrator, and then an incremental

backup is taken where the service user is backed up as part of `bp.conf`. In a PIT restore operation with the incremental backup, the `SERVICE_USER` entry gets restored. However, the binaries are restored in the root account ownership.

Workaround:

After changing the service user, you must take a full backup, whether it is a **MS-Windows\Standard Policy** for File System or **BMR** policy configuration.

## AIX BMR Shared Resource Tree (SRT) creation fails in NetBackup 10.5.0.1

The following error message appears on the command-line console while creating the Shared Resource Tree (SRT):

```
lslpp: Fileset libc++.rte not installed.  
  
ERROR:   Could not resolve major version level from [].  
  
ERROR: Detected an attempt to install incorrect platform and/or  
operating system and version client binaries on  
falcna12c3.abcus.abc.com.  
Required AIX OS libc++.rte runtime is not present.  
File /tmp/install_trace.xxxxxxxx contains a trace of this  
install. That file can be deleted after you are sure the  
install was successful.  
Do you want to retry install of Veritas NetBackup Client? (y/n) [y] :
```

During AIX BMR SRT creation, when you install NetBackup 10.5.0.1 client, you must have `libc++` runtime version 16.1.0.7 or later inside the SRT. If a `libc++` runtime version is not present in the AIX BMR SRT when you create it, then the NetBackup 10.5.0.1 client installation fails, which leads to the SRT creation failure.

Workaround:

See this technical article for workaround details:

[https://www.veritas.com/support/en\\_US/article.100060647](https://www.veritas.com/support/en_US/article.100060647)

## NetBackup services may not start automatically after BMR restore on a Linux client

NetBackup services may not start automatically after a Bare Metal Restore (BMR) restore operation is performed on the Linux client.

The NetBackup services may run for a while after a BMR restore operation, and the BMR post-restore scripts may complete successfully. Later, however, NetBackup services may stop.

This issue happens only if a service user is different than the root user that is defined on the NetBackup Linux client.

Workaround:

Start the NetBackup services manually on the Linux client. To start the services, run the following command:

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

## NetBackup for VMware operational notes

### **In NetBackup 10.5 and later, VMware server asset discovery in the Web UI needs a backup host at NetBackup 10.5 or later**

Starting with NetBackup 10.5, the host that is used for credential validation and asset discovery of a VMware server needs to be at version 10.5 or later. Otherwise, the discovery fails. By default, this value is the primary server. If you continue to use the primary server, no changes are needed.

## NetBackup NAS operational notes

NetBackup Snapshot Manager and NDMP V4 snapshot extension can make snapshots of client data on a NAS host. A NAS snapshot is a point-in-time disk image. You can retain the Snapshots on the disk for any duration. Using the Instant Recovery feature in NetBackup, you can efficiently restore the data from the disk. Broadly, in NetBackup, snapshot-based data protection for NAS can be performed using NAS-Data-Protection policy and NDMP policy. This topic contains some of the operational notes and known issues that are associated with NetBackup NAS in NetBackup 10.5.0.1.

## Parent directories in the path of a file may not be present in an NDMP incremental image

An issue can occur if a NetBackup Network Data Management Protocol (NDMP) backup policy is configured with the directive `set type=tar` in the backup selection. Parent directories in the path of a file that an incremental NDMP backup saves may not be present in the backup image. For more information on this issue, refer to the following tech note on the Veritas Support website:

<http://www.veritas.com/docs/000095049>

## RD storage units are not listed as Replication targets

While configuring a storage lifecycle policy (SLP) from the NetBackup web UI, the Replication Director (RD) storage units are not listed in the **Replication target** drop-down, under **Destination storage attributes**. This situation occurs when you have configured both ISM and RD replication targets on the same primary server.

Workaround:

Configure the SLP using the NetBackup Administration Console (Java UI) or the command line interface (CLI).

## NetBackup for OpenStack operational notes

NetBackup for OpenStack is an optional NetBackup application. This topic contains some of the operational notes and known issues that are associated with NetBackup for OpenStack in NetBackup 10.5.0.1.

### NetBackup for OpenStack Datamover API (NBOSDMAPI) service times out in the haproxy connection

The NBOSDMAPI service in the haproxy connection may time out due to slow response time in highly-used environments.

The default haproxy configuration works fine with most of the environments. When the time-out issue with the NBOSDMAPI is observed, customize the haproxy configuration. For more information, see the following tech note:

[https://www.veritas.com/support/en\\_US/article.100052551](https://www.veritas.com/support/en_US/article.100052551)

### Instance volumes in the incremental backups cannot be mounted

Newly added disks of an instance for incremental backup get backed up successfully but these disks cannot be mounted.

### Restored VMs have blank metadata config\_drive attached

For every restore, the metadata `config_drive` is set as blank value.

Workaround:

Delete metadata `config_drive` or set the desired value.

## No operation is permitted in insecure way for SSL-enabled Keystone URL

For SSL enabled OpenStack, Backup and Restore jobs fail with missing TLS CA certificate bundle error.

Workaround:

Configure the NetBackup appliance with OpenStack CA provided.

Or provide OpenStack CA to `/etc/nbosjm/ca-chain.pem`

## NBOS Backups and NBOS Backup Admin tabs disappear from Horizon UI after stack is updated

After you update the OpenStack stack, the **NBOS Backups** and **NBOS Backup Admin** tabs disappear from the NetBackup for OpenStack Horizon UI. The stack update incorrectly removes the endpoints from OpenStack. To resolve this issue, run the script `register_nbopenstack_service.sh`, which is provided with the installation package. This script registers the NetBackup for OpenStack service so that the **NBOS Backups** and **NBOS Backup Admin** tabs appear on the Horizon UI.

For more information, see the *NetBackup for OpenStack Administrator's Guide*.

# NetBackup internationalization and localization operational notes

This topic contains some of the operational notes and known issues that are associated with internationalization, localization, and non-English locales in NetBackup 10.5.0.1.

## Support for localized environments in database and application agents

Non-ASCII characters are supported in the following fields for NetBackup database and application agents.

- Oracle:  
Datafile path, Tablespace name, TNS path
- DB2:  
Datafile path, Tablespace name
- SAP:

English SAP runs on localized OS. (No specific SAP fields are localized.)

- Exchange:  
Mailboxes, Mails, Attachment names and contents, Public folders, Contacts, Calendar, Folders and Database paths
- SharePoint:  
Site Collection Names, Libraries and lists within the site collection
- Lotus Notes:  
Emails data /.nsf files
- Enterprise Vault (EV) agent:  
Vault store, Partitions, Data
- VMWare:  
Username, Password, VM display name, DataCenter, Folder, Datastore, Resource pool, VApp, Network name, VM disk path

## Certain NetBackup user-defined strings must not contain non-US ASCII characters

The following NetBackup user-defined strings must not contain non-US ASCII characters:

- Host name (primary server, media server, Enterprise Media Manager (EMM) server, volume database host, media host, client, instance group)
- Policy name
- Policy KEYWORD (Windows only)
- Backup, Archive, and Restore KEYWORD (Windows only)
- Storage unit name
- Storage unit disk pathname (Windows only)
- Robot name
- Device name
- Schedule name
- Media ID
- Volume group name
- Volume pool name
- Media description
- Vault policy names

- Vault report names
- BMR Shared Resource Tree (SRT) name
- Token name
- Storage lifecycle policy (SLP) names

# About SORT for NetBackup Users

This appendix includes the following topics:

- [About Veritas Services and Operations Readiness Tools](#)

## About Veritas Services and Operations Readiness Tools

Veritas Services and Operations Readiness Tools (SORT) is a robust set of standalone and web-based tools that support enterprise products. For NetBackup, SORT provides the ability to collect, analyze, and report on host configurations across UNIX/Linux or Windows environments. This data is invaluable when you want to assess if your systems are ready for an initial NetBackup installation or for an upgrade.

Access SORT from the following webpage:

<https://sort.veritas.com/netbackup>

Once you get to the SORT page, more information is available as follows:

- **Installation and Upgrade Checklist**

Use this tool to create a checklist to see if your system is ready for a NetBackup installation or an upgrade. This report contains all the software and the hardware compatibility information specific to the information provided. The report also includes product installation or upgrade instructions, as well as links to other references.
- **Hot fix and EEB Release Auditor**

Use this tool to find out whether a release that you plan to install contains the hot fixes that you need.

- **Custom Reports**

Use this tool to get recommendations for your system.

- **NetBackup Future Platform and Feature Plans**

Help for the SORT tools is available. Click **Help** in the upper right corner of the SORT home page. You have the option to:

- Page through the contents of the help similar to a book
- Look for topics in the index
- Search the help with the search option

# NetBackup installation requirements

This appendix includes the following topics:

- [About NetBackup installation requirements](#)
- [Required operating system patches and updates for NetBackup](#)
- [NetBackup 10.5.0.1 binary sizes](#)

## About NetBackup installation requirements

This release of NetBackup may contain changes to the minimum system requirements and procedures that are required for installation. These changes affect the minimum system requirements for both Windows and UNIX platforms. Much of the installation instructional information in the *NetBackup Release Notes* is provided for convenience. Detailed installation instructions are found in the *NetBackup Installation Guide* and the *NetBackup Upgrade Guide*.

See “[NetBackup installation and upgrade operational notes](#)” on page 16.

- Before you upgrade the NetBackup server software, you must back up your NetBackup catalogs and verify that the catalog backup was successful.
- Before upgrading to NetBackup 10.5.0.1, you must ensure that you have the free disk space that is twice the size of the NetBackup relational database. That means for default installations of the primary server, you are required to have that amount of free space on the file system containing the `/usr/opensv/db/data` (UNIX) or `<install_path>\Veritas\NetBackupDB\data` (Windows) directories. If you have changed the location of some of the files in either of these directories, free space is required in those locations equal to or greater than the size of the

files in those locations. Refer to the *NetBackup Administrator's Guide, Volume I* for more information about storing NBDB database files in alternate locations.

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**Note:** This free disk space requirement assumes that you have already performed the best practice of completing a successful catalog backup before you begin the upgrade.

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- Primary and media servers must have a minimum soft limit of 8000 file descriptors per process for NetBackup to run correctly. For more information about the effects of an insufficient number of file descriptors, refer to the following articles on the Veritas Support website:  
<http://www.veritas.com/docs/000013512>
- NetBackup primary and media servers exchange server version information at startup, and every 24 hours. This exchange occurs automatically. During startup after an upgrade, the upgraded media server uses the `vmd` service to push its version information to all of the servers that are listed in its server list.
- Veritas recommends that you have the primary server services up and available during a media server upgrade.
- All compressed files are compressed using `gzip`. The installation of these files requires `gunzip` and `gzip`, so make sure that they are installed on the computer before you attempt to install NetBackup. For all UNIX platforms except HP-UX, the binaries are expected to be in `/bin` or `/usr/bin` and that directory is a part of the root user's `PATH` variable. On HP-UX systems, the `gzip` and `gunzip` commands are expected to be in `/usr/contrib/bin`. Installation scripts add that directory to the `PATH` variable. These commands must be present to have successful UNIX installations.

## Required operating system patches and updates for NetBackup

NetBackup server and client installations are only supported on a defined set of operating systems (OSs) that are listed in the [NetBackup Compatibility Lists for All Versions](#). Most OS vendors provide patches, updates, and service packs (SPs) for their products. The best practice of NetBackup Quality Engineering is to test with the latest SP or update level of the OS when a platform is tested. Therefore, NetBackup is supported on all vendor GA updates (n.1, n.2, and so on) or SPs (SP1, SP2, and so on). However, if a known compatibility issue exists on a specific SP or updated OS level, this information is identified in the compatibility lists. If no

such compatibility issues are noted, Veritas recommends that you install the latest OS updates on your servers and clients before you install or upgrade NetBackup.

The most up-to-date required OS patch information for NetBackup 10.5.0.1 and other NetBackup releases can be found on the [Veritas Services and Operational Readiness Tools \(SORT\) website](#) and in the [NetBackup Compatibility Lists for All Versions](#). The compatibility lists include information about the minimum OS level that is required to support a minimum NetBackup version in the latest major release line. In some cases, new releases of NetBackup may require specific vendor OS updates or patches.

See [“About NetBackup compatibility lists and information”](#) on page 35.

See [“About Veritas Services and Operations Readiness Tools”](#) on page 27.

## NetBackup 10.5.0.1 binary sizes

The following table contains the approximate binary sizes of the NetBackup 10.5.0.1 primary server, media server, and client software for the various supported operating systems. These binary sizes indicate the amount of disk space occupied by the product after an initial installation. Note that for the sizes listed in the table, 1 MB equals 1024 KB.

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**Note:** As of NetBackup 8.3, the Java GUI and JRE packages are optional with most clients and media servers. The package sizes were calculated with the Java GUI and JRE included.

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**Note:** The table lists only the supported operating systems. For up-to-date information about the specific operating system versions that NetBackup currently supports, check the Installation and Upgrade Checklist on the Services and Operations Readiness Tools (SORT) website, or the [NetBackup Compatibility List for all Versions](#).

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**Table B-1**

OS	CPU Architecture	64-bit client	64-bit server	Notes
AIX	POWER	1887 MB	No longer supported	
Alma Linux		2096 MB		
Amazon Linux		2096 MB		

**Table B-1** (continued)

OS	CPU Architecture	64-bit client	64-bit server	Notes
BC-Linux		2096 MB		
Canonical Ubuntu	x86-64	2096 MB		
CentOS	x86-64	2096 MB	7184 MB	
Debian GNU/Linux	x86-64	2096 MB		
Kylin Linux Advanced Server 10.0		2096 MB		
NeoKylin Linux Advanced Server		2096 MB		
Oracle Linux	x86-64	2096 MB	7184 MB	
Red Hat Enterprise Linux Server	POWER	489 MB		
Red Hat Enterprise Linux Server	x86-64	2096 MB	7184 MB	
Red Hat Enterprise Linux Server	z/Architecture	1105 MB	No longer supported	Media server or client compatibility only.
Rocky Linux client		2096 MB		
Solaris	SPARC	1035 MB	No longer supported	
Solaris	x86-64	1013 MB	No longer supported	
SUSE Linux Enterprise Server	POWER	487 MB		

**Table B-1** (continued)

<b>OS</b>	<b>CPU Architecture</b>	<b>64-bit client</b>	<b>64-bit server</b>	<b>Notes</b>
SUSE Linux Enterprise Server	x86-64	1749 MB	6701 MB	
SUSE Linux Enterprise Server	z/Architecture	1133 MB	No longer supported	Media server or client compatibility only.
Windows	x86-64	772 MB	5723 MB	Covers all compatible Windows x64 platforms.

# NetBackup compatibility requirements

This appendix includes the following topics:

- [About compatibility between NetBackup versions](#)
- [About NetBackup compatibility lists and information](#)
- [About NetBackup end-of-life notifications](#)

## About compatibility between NetBackup versions

You can run mixed versions of NetBackup between primary servers, media servers, and clients. This back-level support lets you upgrade NetBackup one server at a time, which minimizes the effect on overall system performance.

NetBackup supports only certain combinations of servers and clients. In mixed version environments, certain computers must be the highest version. Specifically, the version order is: NetBackup Snapshot Manager computer, primary server, media server, and then clients. For example, the scenario that is shown is supported: 10.2 NetBackup Snapshot Manager > 10.0 primary server > 9.0 media server > 8.3.0.1 client.

All NetBackup versions are four digits long. The NetBackup 10.0 release is the 10.0.0.0 release. Likewise, the NetBackup 9.1 release is the NetBackup 9.1.0.0 release. For the purposes of supportability, the fourth digit is ignored. A 9.1 primary server supports a 9.1.0.1 media server. An example of what is not supported is a 9.1 primary server with a 10.0 media server.

The NetBackup catalog resides on the primary server. Therefore, the primary server is considered to be the client for a catalog backup. If your NetBackup configuration

includes a media server, it must use the same NetBackup version as the primary server to perform a catalog backup.

For complete information about compatibility between NetBackup versions, refer to the [Veritas SORT website](#).

Review the [End of Support Life](#) information available online.

## About NetBackup compatibility lists and information

The *NetBackup Release Notes* document contains a great deal of the compatibility changes that are made between NetBackup versions. However, the most up-to-date compatibility information on platforms, peripherals, drives, and libraries can be found on the Veritas Operations Readiness Tools (SORT) for NetBackup website.

See “[About Veritas Services and Operations Readiness Tools](#)” on page 27.

For NetBackup, SORT provides an Installation and Upgrade Checklist report as well as the ability to collect, analyze, and report on host configurations across your environments. In addition, you can determine which release contains the hot fixes or EEBs that you may have installed in your environment. You can use this data to assess whether your systems are ready to install or upgrade to a given release.

### NetBackup compatibility lists

In addition to SORT, Veritas has made available a variety of compatibility lists to help customers quickly reference up-to-date compatibility information for NetBackup:

[NetBackup Compatibility Lists for All Versions](#)

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**Note:** For information about which versions of NetBackup are compatible with each other, select a **Software Compatibility List (SCL)**, and then select **Compatibility Between NetBackup Versions** from within the SCL.

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## About NetBackup end-of-life notifications

Veritas is committed to providing the best possible data protection experience for the widest variety of systems: platforms, operating systems, CPU architecture, databases, applications, and hardware. Veritas continuously reviews NetBackup system support. This review ensures that the proper balance is made between maintaining support for existing versions of products, while also introducing new support for the following:

- General availability releases

- Latest versions of new software and hardware
- New NetBackup features and functionality

While Veritas continually adds support for new features and systems, it may be necessary to improve, replace, or remove certain support in NetBackup. These support actions may affect older and lesser-used features and functionality. The affected features and functionality may include support for software, OS, databases, applications, hardware, and 3rd-party product integration. Other affected items may include the products that are no longer supported or nearing their end-of-support life with their manufacturer.

Veritas provides advance notification to better help its customers to plan for upcoming changes to the support status of the various features in NetBackup. Veritas intends to list older product functionality, features, systems, and the 3rd-party software products that are no longer supported in the next release of NetBackup. Veritas makes these support listings available as soon as possible with a minimum of 6 months where feasible before major releases.

## Using SORT

Advance notification of future platform and feature support including end-of-life (EOL) information is available through a widget on the Veritas Services and Operations Readiness Tools (SORT) for NetBackup home page. The NetBackup Future Platform and Feature Plans widget on the SORT for NetBackup home page can be found directly at the following location:

<https://sort.veritas.com/nbufutureplans>

NetBackup end-of-support-life (EOSL) information is also available at the following location:

[https://sort.veritas.com/eosl/show\\_matrix](https://sort.veritas.com/eosl/show_matrix)

See “[About Veritas Services and Operations Readiness Tools](#)” on page 27.

## About changes in platform compatibility

The NetBackup 10.5.0.1 release may contain changes in support for various systems. In addition to using SORT, you should make sure to review the *NetBackup Release Notes* document and the NetBackup compatibility lists before installing or upgrading NetBackup software.

See “[About new enhancements and changes in NetBackup](#)” on page 9.

<http://www.netbackup.com/compatibility>

# Other NetBackup documentation and related documents

This appendix includes the following topics:

- [About related NetBackup documents](#)

## About related NetBackup documents

Veritas releases various guides that relate to NetBackup software. Unless otherwise specified, the NetBackup documents can be downloaded in PDF format or viewed in HTML format from the [NetBackup Documentation Landing Page](#).

Not all documents are published with each new release of NetBackup. In the guides, you may see references to other documents that were not published for NetBackup 10.5.0.1. In these cases, refer to the latest available version of the guide.

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**Note:** Veritas assumes no responsibility for the correct installation or use of PDF reader software.

All references to UNIX also apply to Linux platforms unless otherwise specified.

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