

Veritas NetBackup™ Enterprise Server and Server 9.0 - 9.x.x OS Software Compatibility List

Created on January 14, 2021

[Click here for the HTML version of this document.](https://download.veritas.com/resources/content/live/OSVC/100046000/100046611/en_US/nbu_90_scl.html)

[<https://download.veritas.com/resources/content/live/OSVC/100046000/100046611/en_US/nbu_90_scl.html>](https://download.veritas.com/resources/content/live/OSVC/100046000/100046611/en_US/nbu_90_scl.html)

Introduction

This Software Compatibility List (SCL) document contains information for Veritas NetBackup 9.0 through 9.x.x. It covers NetBackup Server (which includes Enterprise Server and Server), Client, Bare Metal Restore (BMR), Clustered Master Server Compatibility and Storage Stacks, Deduplication, File System Compatibility, NetBackup OpsCenter, NetBackup Access Control (NBAC), SAN Media Server/SAN Client/FT Media Server, Virtual System Compatibility and NetBackup Self Service Support. It is divided into bookmarks on the left that can be expanded.

IPV6 and Dual Stack environments are supported with few limitations, refer technote for additional information <<http://www.veritas.com/docs/100041420>>

For information about certain NetBackup features, functionality, 3rd-party product integration, Veritas product integration, applications, databases, and OS platforms that Veritas intends to replace with newer and improved functionality, or in some cases, discontinue without replacement, please see the widget titled "NetBackup Future Platform and Feature Plans" at <<https://sort.veritas.com/netbackup>>

Reference Article <<https://www.veritas.com/docs/100040093>> for links to all other NetBackup compatibility lists.

Browser Requirements for the NetBackup Web User Interface (NetBackup Web UI)

The NetBackup Web UI is compatible with the latest vendor-supported versions of web browsers.

For the best experience with the NetBackup Web UI, Veritas recommends that you use Google Chrome or Mozilla Firefox, without any plug-ins.

Web Browser	Versions	Notes
Mozilla Firefox	60 or later.	The latest browser edition is recommended. Download from < https://www.mozilla.org/en-US/firefox/ >
Google Chrome	65 or later.	The latest browser edition is recommended. Download from < https://www.google.com/chrome/ >

9.0 - 9.x.x OS Software Compatibility List Updates

Update Information

Description of Change	Date	NetBackup Version Start of Support
NetBackup GA 9.0	2021-01-01	NetBackup 9.0

Contents

<u>Operating Systems</u>	<u>Active Directory Support</u>	<u>Bare Metal Restore (BMR)</u>
<u>Bare Metal Restore File System/Volume Manager Support</u>	<u>Clustered Master Server Compatibility</u>	<u>Clustered Master Server Storage Stacks</u>
<u>Client Selections for Backup Policies</u>	<u>Compatibility between NetBackup versions</u>	<u>Deduplication Supported Operating Systems</u>
<u>File System Compatibility</u>	<u>NetBackup Administration Consoles</u>	<u>NetBackup in the Cloud</u>
<u>NetBackup OpsCenter Backup Product Support</u>	<u>NetBackup OpsCenter Operating System Requirements</u>	<u>NetBackup OpsCenter Web Browser Requirements</u>
<u>SAN Media Server/SAN Client/FT Media Server</u>	<u>Virtual Systems Compatibility</u>	<u>End of Life (EOL) announcement and platforms no longer supported by NetBackup</u>

Operating Systems

Most operating system vendors provide patches and updates to their products. It is a best practice of NetBackup Quality Engineering to test with the latest service pack or patch level of the operating system when testing a platform. If a known problem exists on a specific service pack or patched OS level, this information is identified in the tables below. Any required operating system patches for specific releases of NetBackup are documented in the NetBackup Release Notes. The current patch versions of releases will work with NetBackup for the operating systems listed below unless otherwise noted. Veritas supports the standard un-altered kernel/operating system levels as indicated in the table, provided the OS Vendor still provides support for that level. Should an issue arise on a revised kernel, operating system, or virtual system environment, Veritas support may request the recreation of the problem with the standard operating environment distribution.

NetBackup Vault:

This option runs on the same operating systems and versions and in the same clustering environments as NetBackup unless otherwise noted in the NetBackup Release Notes. NetBackup restrictions and limitations related to systems, clusters, and peripherals also apply to Vault.

Exception: Vault does not support standalone drives.

Data at Rest Key Management Service (KMS):

This feature is a master server-based symmetric key management service that manages symmetric cryptography keys for tape drives that conform to the T10 standard (i.e. LTO4). KMS is supported on all OS versions where the master server and media server are supported unless otherwise noted.

Support Definitions:

Veritas Maintenance/Support only applies to Veritas Licensed Software, assuming you have a current Veritas Maintenance/Support subscription for such software and such Veritas Licensed Software is operating in configurations which Veritas designates as supported. Veritas Maintenance/Support does not cover (and we have no responsibility for) providing technical support, installation services or other services for any other software or hardware products. Also, Veritas is not obligated to provide Maintenance/Support when your Veritas Licensed Software is operating in configurations Veritas does not designate as supportable/supported. Please see the current Veritas Technical Support Policy and your Veritas license agreement for more information, terms and limitations.

Supported Configurations:

For more information about technical notes in regards to Veritas supported configurations (such as operating system/levels, firmware levels, databases, devices, device drivers, applications, etc.), please refer to the Veritas Support website <https://www.veritas.com/support/en_US.html> Please note that while Veritas makes reasonable efforts to keep this information updated, we cannot assure that this information will be in all cases complete or the most current.

Third Party Products:

Where your problem may be related to product(s) from a third party vendor with whom we have a cooperative or collaborative relationship on such product(s), then Veritas may work with that vendor towards resolving your reported problem. Where Veritas does not have such a support relationship in place with the third party vendor, or where the vendor ceases to support such product(s), then our ability to support Veritas Licensed Software operating with such vendor's product(s) may be limited, affected, or prevented (and such third party product(s) may cease to be part of Veritas - supported configuration(s)). Veritas support may be limited by the hardware or software vendor due to their support lifecycle. Should a vendor announce End of Support for a product, Veritas support may be limited.

NetBackup plug-ins and agents

Verita supports modern, next-generation workloads and hyper-converged infrastructure environments in NetBackup 9.0

For further information, please refer to <https://www.veritas.com/support/en_US/article.000127427>

Contents

Beijing Linx Software Corp Linx

Canonical Ubuntu

CentOS

China Standard Software Co
NeoKylin Linux Advanced Server

Debian GNU/Linux

Hewlett Packard Enterprise HP-UX

IBM AIX

Microsoft Windows 8

Microsoft Windows 10

Microsoft Windows Server 2012

Microsoft Windows Server 2016

Microsoft Windows Server 2019

Microsoft Windows Server
Semi-Annual Channel

Oracle Linux

Oracle Solaris

Red Hat Enterprise Linux

SUSE SUSE Linux Enterprise Server

Beijing Linx Software Corp Linx

Beijing Linx Software Corp Linx - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Linx 6.0	x86-64	64	Y	64			9.0

Canonical Ubuntu

Canonical Ubuntu - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Ubuntu 20.04	x86-64	64	Y	64			9.0
Ubuntu 19.10	x86-64	64	Y	64			9.0
Ubuntu 19.04	x86-64	64	Y	64			9.0
Ubuntu 18.10	x86-64	64	Y	64			9.0
Ubuntu 18.04	x86-64	64	Y	64			9.0
Ubuntu 16.04	x86-64	64	Y	64			9.0

CentOS

NetBackup is supported on all editions (Advanced, Base, DC, etc.) and on all vendor GA updates (n.1, n.2, etc.) or service packs (SP1, SP2, etc.) unless stated otherwise in the tables below.

CentOS - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
CentOS 8 [1]	x86-64	64	Y	64	Y		9.0
CentOS 7	x86-64	64	Y	64	Y	Y	9.0

1. For installation prerequisites refer: <<https://www.veritas.com/docs/100045645>>

CentOS - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
CentOS 8 [1]	x86-64	64	Y	Y	64	Y			Y	9.0
CentOS 7	x86-64	64	Y	Y	64	Y			Y	9.0

1. For installation prerequisites refer: <<https://www.veritas.com/docs/100045645>>

China Standard Software Co NeoKylin Linux Advanced Server

China Standard Software Co NeoKylin Linux Advanced Server - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
NeoKylin Linux Advanced Server 7.0	x86-64	64	Y	64			9.0
NeoKylin Linux Advanced Server 6.0	x86-64	64	Y	64			9.0

Debian GNU/Linux

NetBackup is supported on all editions (Advanced, Base, DC, etc.) and on all vendor GA updates (n.1, n.2, etc.) or service packs (SP1, SP2, etc.) unless stated otherwise in the tables below.

Debian GNU/Linux - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
GNU/Linux 10	x86-64	64	Y	64			9.0
GNU/Linux 9	x86-64	64	Y	64			9.0

Hewlett Packard Enterprise HP-UX

Hewlett Packard Enterprise HP-UX - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
HP-UX 11.31	IA64	64	Y	64	Y	Y	9.0

IBM AIX

Veritas does not test all IBM POWER-based server models and relies on the IBM AIX compatibility statement.

Reference: "><<http://www-03.ibm.com/systems/power/software/aix/compatibility/index.html>

> NetBackup supports IBM AIX on POWER 7/8/9 hardware platforms.

IBM AIX - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
AIX 7.2	POWER [1]	64	Y	64	Y	Y [2]	9.0
AIX 7.1 [3]	POWER	64	Y	64	Y	Y [4]	9.0

1. Netbackup 9.0 supports IBM P9 on AIX 7.2(TL2) and later versions

2. On AIX 7.2, SAN Client supports Logical Partition(LPAR) with shared port VIO configuration. Please refer for additional details: <https://www.veritas.com/support/en_US/article.100024969>

3. NetBackup 9.0 and later does not support AIX 7.1 TL2 and earlier versions.

4. SAN Client supports a logical partition (LPAR) if it uses its own dedicated, physical Fibre Channel port for the backup. This port cannot be shared with more than one virtual FC adaptor.

Microsoft Windows 8

NetBackup Client is supported on all Windows 8 Editions for x86-64 architecture (Intel 64 and AMD64).

Microsoft Windows 8 - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Windows 8	x86-64	64	Y	64	Y		9.0
Windows 8.1	x86-64	64	Y	64			9.0

Microsoft Windows 10

NetBackup Client is supported on Windows 10 Enterprise, Professional and Education Edition for x86-64 architecture (Intel 64 and AMD64).
BMR Boot Server is not supported on Windows 10.

Microsoft Windows 10 - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Windows 10	x86-64	64	Y	64	Y		9.0

Microsoft Windows Server 2012

NetBackup Client is supported on Microsoft Windows Server 2012 Editions: Foundation, Essentials, Standard, and Datacenter, and with "core" option enabled or disabled. NetBackup supported functionality is listed in the tables below. 64-bit OS on Intel 64 and AMD64 architectures is supported.

NetBackup Master and Media Server are supported on Microsoft Windows Server 2012 Editions: Foundation, Essentials, Standard, and Datacenter, and with "core" option enabled or disabled. NetBackup supported functionality is listed in the tables below. 64-bit OS on Intel 64 and AMD64 architectures is supported.

Reference the MSFT web site for information on Editions.

NetBackup Client and Media Server are supported on Microsoft Storage Server 2012 and 2012 R2.

Windows Service Packs (SP) are supported by default, unless noted otherwise below.

Microsoft Windows Server 2012 - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Windows Server 2012 [1]	x86-64	64	Y	64	Y	Y	9.0
Windows Server 2012 R2 [1]	x86-64	64	Y	64	Y	Y	9.0

1. Refer to File System Compatibility table for support details regarding the Windows 2012 NTFS data deduplication feature, and the ReFS file system.

Microsoft Windows Server 2012 - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
Windows Server 2012 [1]	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0
Windows Server 2012 R2 [1]	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0

1. Refer to File System Compatibility table for support details regarding the Windows 2012 NTFS data deduplication feature, and the ReFS file system.

Microsoft Windows Server 2016

NetBackup Client is supported on Microsoft Windows Server 2016 Editions: Foundation, Essentials, Storage Server, Standard and Datacenter and with "core" option enabled or disabled.

NetBackup Master and Media Server is supported on Microsoft Windows Server 2016 Editions: Standard and Datacenter. Not supported on "core" option.

NetBackup supported functionality is listed in the tables below. 64-bit OS on Intel 64 and AMD64 architectures is supported. Reference the MSFT web site for information on Editions.

Windows Service Packs (SP) are supported by default, unless noted otherwise below.

Microsoft Windows Server 2016 - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Windows Server 2016 [1]	x86-64	64	Y	64	Y	Y	9.0

1. Refer to File System Compatibility table for support details regarding the Windows 2016 NTFS data deduplication feature, and the ReFS file system.

Microsoft Windows Server 2016 - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
Windows Server 2016 [1]	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0

1. Refer to File System Compatibility table for support details regarding the Windows 2016 NTFS data deduplication feature, and the ReFS file system.

Microsoft Windows Server 2019

NetBackup Client is supported on Microsoft Windows Server 2019 Editions: Essentials, Standard and Datacenter and with "core" option enabled or disabled.

NetBackup supported functionality is listed in the tables below. 64-bit OS on Intel 64 and AMD64 architectures is supported.

Refer the Microsoft web site for information on Editions. Windows Service Packs (SP) are supported by default, unless noted otherwise below.

Microsoft Windows Server 2019 - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Windows Server 2019 [1]	x86-64	64	Y	64	Y	Y	9.0

1. Refer to File System Compatibility table for support details regarding the Windows 2016 NTFS data deduplication feature, and the ReFS file system.

Microsoft Windows Server 2019 - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
Windows Server 2019 [1]	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0

1. Refer to File System Compatibility table for support details regarding the Windows 2016 NTFS data deduplication feature, and the ReFS file system.

Microsoft Windows Server Semi-Annual Channel

NetBackup Client is supported on Microsoft Windows Semi-Annual Channel.

- Only file system backup is supported.
- BMR is not supported on this platform.

This platform is supported as per Microsoft Lifecycle Policy.

Refer <<https://docs.microsoft.com/en-us/windows-server/get-started/windows-server-release-info>>

Microsoft Windows Server Semi-Annual Channel - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Windows Server 1909	x86-64	64	Y	64	Y	Y	9.0
Windows Server 1903	x86-64	64	Y	64	Y	Y	9.0
Windows Server 1809	x86-64	64	Y	64	Y	Y	9.0
Windows Server 1803	x86-64	64	Y	64	Y	Y	9.0
Windows Server 1709	x86-64	64	Y	64	Y	Y	9.0

Oracle Linux

NetBackup is supported on all editions (Advanced, Base, DC, etc.) and on all vendor GA updates (n.1, n.2, etc.) or service packs (SP1, SP2, etc.) unless stated otherwise in the tables below.

Oracle Linux - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Linux 8	x86-64	64	Y	64	Y		9.0
Linux 7	x86-64	64	Y	64	Y		9.0

Oracle Linux - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
Linux 8	x86-64	64		Y	64	Y		Y	Y	9.0
Linux 7	x86-64	64		Y	64	Y	Y	Y	Y	9.0

Oracle Solaris

Oracle Solaris - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Solaris 11	SPARC	64	Y	64	Y	Y	9.0
Solaris 11	x86-64	64	Y	64	Y	Y	9.0
Solaris 10 [1]	SPARC	64	Y	64	Y	Y	9.0
Solaris 10 [1]	x86-64	64	Y	64	Y	Y	9.0

1. Oracle Solaris 10 Update 11 or later is required.

Oracle Solaris - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
Solaris 11	SPARC	64	Y	Y	64	Y		Y	Y	9.0
Solaris 11	x86-64	64	Y	Y	64	Y		Y	Y	9.0
Solaris 10 [1]	SPARC	64	Y	Y	64	Y		Y	Y	9.0
Solaris 10 [1]	x86-64	64	Y	Y	64	Y		Y	Y	9.0

1. Oracle Solaris 10 Update 11 or later is required.

Red Hat Enterprise Linux

NetBackup is supported on all editions (Advanced, Base, DC, etc.) and on all vendor GA updates (n.1, n.2, etc.) or service packs (SP1, SP2, etc.) unless stated otherwise in the tables below.

IBM POWER 8/9 platform is supported only with Little Endian hardware architecture.

For Red Hat Security Enhanced Linux considerations refer to https://www.veritas.com/support/en_US/article.TECH76714 .

Red Hat Enterprise Linux - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
Enterprise Linux 8 [1]	POWER	64	Y	64			9.0
Enterprise Linux 8 [1]	x86-64	64	Y	64	Y	Y	9.0
Enterprise Linux 8 [1]	z/Architecture	64	Y	64	Y		9.0
Enterprise Linux 7	POWER	64	Y	64			9.0
Enterprise Linux 7	x86-64	64	Y	64	Y	Y	9.0
Enterprise Linux 7	z/Architecture	64	Y	64	Y		9.0

1. For installation prerequisites refer: <https://www.veritas.com/docs/100045645>

Red Hat Enterprise Linux - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
Enterprise Linux 8 [1]	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0
Enterprise Linux 7	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0

1. For installation prerequisites refer: <<https://www.veritas.com/docs/100045645>>

SUSE SUSE Linux Enterprise Server

NetBackup is supported on all editions (Advanced, Base, DC, etc.) and on all vendor GA updates (n.1, n.2, etc.) or service packs (SP1, SP2, etc.) unless stated otherwise in the tables below.

IBM POWER 8/9 platform is supported only with Little Endian hardware architecture.

SUSE SUSE Linux Enterprise Server - NetBackup Client

OS	CPU Architecture	OS Bits	NetBackup Client	NetBackup Bits	NBAC	SAN Client	Minimum NetBackup Level
SUSE Linux Enterprise Server 15	POWER	64	Y [1]	64			9.0
SUSE Linux Enterprise Server 15	x86-64	64	Y	64	Y	Y	9.0
SUSE Linux Enterprise Server 15	z/Architecture	64	Y	64	Y		9.0
SUSE Linux Enterprise Server 12	POWER [2] [3]	64	Y	64			9.0
SUSE Linux Enterprise Server 12	x86-64 [4]	64	Y [5]	64	Y	Y	9.0
SUSE Linux Enterprise Server 12	z/Architecture [4]	64	Y	64	Y		9.0
SUSE Linux Enterprise Server 11	x86-64 [6]	64	Y	64	Y	Y	9.0
SUSE Linux Enterprise Server 11	z/Architecture [6]	64	Y	64			9.0

1. Netbackup 9.0 supports IBM P9 on SUSE Linux Enterprise Server 15 and later versions
2. Netbackup 9.0 supports IBM P9 on SUSE Linux Enterprise Server 12 SP3 and later versions
3. Supported from SUSE Enterprise Linux Server version 12 SP3 and later.
4. SUSE Linux Enterprise Server 12 SP3 and later is supported.
5. Supports BTRFS filesystem with sub-volumes and snapshots, Supported with known Issue: <<http://www.veritas.com/docs/000106399>>
6. SUSE Linux Enterprise Server 11 SP3 and later is supported.

SUSE SUSE Linux Enterprise Server - NetBackup Server

OS	CPU Architecture	OS Bits	NetBackup Master Server	NetBackup Media Server	NetBackup Bits	NBAC	OpsCenter Server	OpsCenter Managed Server	NDMP	Minimum NetBackup Level
SUSE Linux Enterprise Server 15	x86-64	64	Y	Y	64	Y	Y	Y	Y	9.0
SUSE Linux Enterprise Server 12	x86-64 [1]	64	Y	Y	64	Y	Y	Y	Y	9.0
SUSE Linux Enterprise Server 11	x86-64 [2]	64	Y	Y	64	Y	Y	Y	Y	9.0

1. SUSE Linux Enterprise Server 12 SP3 and later is supported.
2. SUSE Linux Enterprise Server 11 SP3 and later is supported.

Active Directory Support

Active Directory is supported via the standard Windows file system agent when specifying System State:\ or Shadow Copy Components:\. Since it is a part of the standard system components, backup and recovery of Active Directory is supported on all Windows server platforms which NetBackup supports as a client.

Active Directory Granular Restore is a special restore option enabled by a policy selection. This option is also supported on all platforms in which Active Directory is supported by NetBackup.

Where support is shown for "Windows Server 2012 or Windows Server 2012 R2" it is implied that Standard Edition, Datacenter Edition, Essentials Edition, and Foundation Edition are supported.

Agent	OS	CPU Architecture	OS Bit
Active Directory Granular Restore	Windows Server 2019	x86-64	64
Active Directory Granular Restore	Windows Server 2016	x86-64	64
Active Directory Granular Restore	Windows Server 2012 R2	x86-64	64
Active Directory Granular Restore	Windows Server 2012	x86-64	64

Bare Metal Restore (BMR)

General Information

Bare Metal Restore Server (BMR server) is a feature of the Master Server.

- BMR Boot Server

BMR Boot Server is supported on the same Operating Systems as the BMR client. In case of Windows, BMR Boot Server bitness is not relevant. I.E., a Windows x86 boot server can boot x86 and x64 servers and visa-versa.

- BMR Boot Server Requirements

Please Reference the Requirements for Bare Metal Restore (BMR) Boot Servers document for comprehensive information, <<http://www.veritas.com/docs/000041982>>

Please refer to the following link for BMR supported configurations: <https://www.veritas.com/support/en_US/article.000127612>

Disclaimer:

- NetBackup Bare Metal restore functionality is not supported for restoring the clients which have NetBackup version 9.0 installed.
- NetBackup does not support BMR restore operations in AIX and HP-UX environments for clients with NetBackup version 9.0
- BMR restores uses NBCA certificates hence master and media (servers which have backup images for BMR client) should have NBCA enabled for BMR restores to work.

For more information on supported workflows refer technote <https://www.veritas.com/support/en_US/article.100044534>

Bare Metal Restore File System/Volume Manager Support

Listed in the table below are the available File Systems and Logical Volume Managers compatible with Bare Metal Restore 9.0 through 9.x. Support is conditional according to the published notes corresponding to the individual OS platforms.

The table below contains scenarios that have been thoroughly tested with NetBackup. Due to the number of combinations, it is not possible to test all combinations for compatibility. If a particular scenario is not listed, it may work fine, but has not been explicitly tested by Veritas.

OS	File Systems	Volume Managers	Striping, Mirroring, RAID	Notes
AIX 7.1 POWER (TL0SP1 and above)	JFS, JFS2 VxFS 5.0 - 6.0 RP1	Native LVM, VxVM 5.0 - 6.0 RP1	All	<ol style="list-style-type: none"> 1. Qualification is done with VxVM 6.0 and 6.0 RP1. 2. If a Veritas Volume Manager managed disk has the Cross Platform Data Sharing (CDS) enabled and you map that disk to an IDE disk the CDS capability will be lost. For more information reference the VxVM Administrators Guide.
AIX 7.2 POWER (TL0 and above)	JFS, JFS2	Native LVM	All	
CentOS 8 (x64)	EXT2, EXT3, EXT4	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1 the mapped file system must also be RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing.
CentOS 7 (x64)	EXT2, EXT3, EXT4	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1 the mapped file system must also be RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing.
HP-UX 11.31 IA64	HFS, JFS, VxFS	Native LVM, VxVM 5.0	All	<p>Support is limited for LVM and VxVM</p> <ol style="list-style-type: none"> 1. For DDR operation, only volume size changing is supported. Re-mapping to different disks is not supported. 2. In case of VxVM, support is only the self restore of non-root/boot volumes. 3. Disk layout change, volume resizing and re-mapping to different disks is supported for LVM and VxVM. 4. VxVM 5.0.1 compatibility is a future effort. Use VxVM 5.0 based BMR SRT to restore clients with VxVM 5.0.1 based non system volumes.

OS	File Systems	Volume Managers	Striping, Mirroring, RAID	Notes
Red Hat 7 (x64)	EXT2, EXT3, EXT4, XFS, VFAT	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. Recovery of Persistent Devices are not supported 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1 the mapped file system must also be RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing. 4. Supports recovery of EFI machines along with GPT disks
Red Hat 8 (x64)	EXT2, EXT3, EXT4, XFS, VFAT	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. Recovery of Persistent Devices are not supported 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1 the mapped file system must also be RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing. 4. Supports recovery of EFI machines along with GPT disks
Solaris 11 SPARC (GA and above)	ZFS	ZFS	All	
Solaris 11 x64 (GA and above)	ZFS	ZFS	All	
SUSE Linux Enterprise Server 11 (x64)	EXT2, EXT3, Reiserfs	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. Recovery of Persistent Devices are not supported 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1 the mapped file system must also be RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing. 4. Recovery of client with root filesystems on multipath (Linux Native Multi-pathing/EMC PowerPath)is supported from 7.6.0.2 forward.
SUSE Linux Enterprise Server 12 (x64)	EXT2, EXT3, Reiserfs, XFS, BTRFS	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. Recovery of Persistent Devices are not supported 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1 the mapped file system must also be RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing. 4. BTRFS file system is not supported with sub-volumes and snapshots.

OS	File Systems	Volume Managers	Striping, Mirroring, RAID	Notes
Oracle Linux 7 (x64)	EXT2, EXT3, EXT4, XFS	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. Recovery of Persistent Devices are not supported 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing.
Oracle Linux 8 (x64)	EXT2, EXT3, EXT4, XFS	Native Partitioning, Native LVM	Striping, Mirroring, MultiDevices all layouts	<ol style="list-style-type: none"> 1. Support for Linux multidevices is limited, and BMR may not restore some configurations exactly. Recovery of Persistent Devices are not supported 2. If the root file system is created on a Linux multidevice, when performing a dissimilar disk restore you must map the root file system and retain the original level (for example, if the original level is RAID-1). If the level is changed, the kernel may panic and the system may not recover. 3. Supports recovery of non-root filesystems via Linux Native Multi-pathing.
Windows Server 2012 x64 (64-bit)	FAT32, NTFS, ReFS	Windows LDM	All	
Windows Server 2012 R2 x64 (64-bit)	FAT32, NTFS, ReFS	Windows LDM	All	
Windows Server 2016 x64 (64-bit)	FAT32, NTFS, ReFS	Windows LDM	All	<p>Windows Server 2016 by default formats ReFS volumes with ReFS version 3.x</p> <p>During NetBackup 8.1.1 Bare Metal Restore (BMR) restore of Windows Server 2016, the ReFS volumes which are restored are downgraded to ReFS version 1.2</p> <p>For more information, refer article ID - 100041695</p>
Windows Server 2019 x64 (64-bit)	FAT32, NTFS, ReFS	Windows LDM	All	<p>Windows Server 2016 by default formats ReFS volumes with ReFS version 3.x</p> <p>During NetBackup 8.2 Bare Metal Restore (BMR) restore of Windows Server 2019, the ReFS volumes which are restored are downgraded to ReFS version 1.2</p> <p>For more information, refer: <https://www.veritas.com/support/en_US/article.100041695></p>
Windows 8 x64 (64-bit)	FAT32, NTFS	Windows LDM	All	
Windows 8.1 x64 (64-bit)	FAT32, NTFS	Windows LDM	All	
Windows 10 x64 (64-bit)	FAT32, NTFS	Windows LDM	All	

Acronyms

LDM - Logical Disk Manager

LVM - Logical Volume Manager

SFW - Storage Foundation for Windows

SRT - Shared Resource Tool

SVM - Solaris Volume Manager
VxFS - Veritas File System
VxVM - Veritas Volume Manager

Clustered Master Server Compatibility

See NetBackup High Availability Administrator's Guide <<http://www.veritas.com/docs/000003214>> for details. Cluster compatibility is only listed for NetBackup Components that are cluster aware. NetBackup clients and agents are supported in cluster environments but are not cluster aware.

For Linux distributions shown in the tables below, NetBackup is supported on all "editions" and on all vendor GA updates (n.1, n.2, etc.) or service packs (SP1, SP2, etc.) unless otherwise footnoted in this document or in the NetBackup OS Compatibility List. <<http://www.veritas.com/docs/000040842>>

For information about certain NetBackup features, functionality, 3rd-party product integration, Veritas product integration, applications, databases, and OS platforms that Veritas intends to replace with newer and improved functionality, or in some cases, discontinue without replacement, please see the widget titled "NetBackup Future Platform and Feature Plans" at <<https://sort.veritas.com/netbackup>>

Cluster Type	Version	OS	CPU Architecture	Minimum NetBackup Level
VCS (InfoScale)	7.4.2	Redhat Enterprise Linux 7.9	x86-64	9.0
VCS (InfoScale)	7.4.2	Redhat Enterprise Linux 8.2	x86-64	9.0
VCS (InfoScale)	7.4.2	Redhat Enterprise Linux 8.2	x86-64	9.0
VCS (InfoScale)	7.4.2	Redhat Enterprise Linux 7.8	x86-64	9.0
VCS (InfoScale)	7.4.1	Redhat Enterprise Linux 7.8	x86-64	9.0
VCS (InfoScale)	7.4.1	Redhat Enterprise Linux 7.8	x86-64	9.0
VCS (InfoScale)	7.4.2	Redhat Enterprise Linux 7.7	x86-64	9.0
VCS (InfoScale)	7.4.1	Redhat Enterprise Linux 7.7	x86-64	9.0
VCS (InfoScale)	7.4.1	Redhat Enterprise Linux 8.2	x86-64	9.0
VCS (InfoScale)	7.4.2	Redhat Enterprise Linux 8.1	x86-64	9.0
VCS (InfoScale)	7.4.1	SUSE Enterprise Linux Server 12 SP4	x86-64	9.0
VCS (InfoScale)	7.4.1	Windows Server 2019	x86-64	9.0
VCS (InfoScale)	7.4	Windows Server 2016	x86-64	9.0
VCS (InfoScale)	7.4.1	Red Hat Enterprise Linux 7.7	x86-64	9.0
VCS (InfoScale)	7.4.1	Red Hat Enterprise Linux 7.6	x86-64	9.0
VCS (InfoScale)	7.3.1	Red Hat Enterprise Linux 7.6	x86-64	9.0
VCS (InfoScale)	7.2	Red Hat Enterprise Linux 7.6	x86-64	9.0
VCS (InfoScale)	7.4.1	Red Hat Enterprise Linux 7.5	x86-64	9.0

Cluster Type	Version	OS	CPU Architecture	Minimum NetBackup Level
VCS (InfoScale)	7.4	Red Hat Enterprise Linux 7.4	x86-64	9.0
VCS (InfoScale)	7.4	SUSE Enterprise Linux Server 11 SP4	x86-64	9.0
VCS (InfoScale)	7.4	SUSE Enterprise Linux Server 11 SP3	x86-64	9.0
VCS (InfoScale)	7.3.1	SUSE Enterprise Linux Server 11 SP3	x86-64	9.0
VCS (InfoScale)	7.2	SUSE Enterprise Linux Server 11 SP3	x86-64	9.0
VCS (InfoScale)	7.1	SUSE Enterprise Linux Server 11 SP3	x86-64	9.0
VCS (InfoScale)	7.1	Solaris 11	x86-64	9.0
VCS (InfoScale)	7.4	Red Hat Enterprise Linux 7.5	x86-64	9.0
VCS (InfoScale)	7.4	Red Hat Enterprise Linux 7.3	x86-64	9.0
VCS (InfoScale)	7.0.1	Red Hat Enterprise Linux 7.4	x86-64	9.0
VCS (InfoScale)	7.3.1	Windows Server 2016	x86-64	9.0
VCS (InfoScale)	7.3.1	Solaris 11	SPARC	9.0
VCS (InfoScale)	7.3.1	Red Hat Enterprise Linux 7.5	x86-64	9.0
VCS (InfoScale)	7.3.1	Red Hat Enterprise Linux 7.4	x86-64	9.0
VCS (InfoScale)	7.3.1	Red Hat Enterprise Linux 7.3	x86-64	9.0
VCS (InfoScale)	7.3	Red Hat Enterprise Linux 7.1	x86-64	9.0
VCS (InfoScale)	7.3	SUSE Enterprise Linux Server 11	x86-64	9.0
VCS (InfoScale)	7.3	Windows Server 2016	x86-64	9.0
VCS (InfoScale)	7.3	Solaris 11	SPARC	9.0
VCS (InfoScale)	7.3	Solaris 11	x86-64	9.0
VCS (InfoScale)	7.2	Solaris 11	SPARC	9.0
VCS (InfoScale)	7.1	Solaris 11	SPARC	9.0
VCS (InfoScale)	7.3	Red Hat Enterprise Linux 7.4	x86-64	9.0
VCS (InfoScale)	7.2	Red Hat Enterprise Linux 7.4	x86-64	9.0
VCS (InfoScale)	7.1	Red Hat Enterprise Linux 7.4	x86-64	9.0
VCS (InfoScale)	7.3	Red Hat Enterprise Linux 7.3	x86-64	9.0
VCS (InfoScale)	7.2	Red Hat Enterprise Linux 7.3	x86-64	9.0
VCS (InfoScale)	7.1	Red Hat Enterprise Linux 7.3	x86-64	9.0

Cluster Type	Version	OS	CPU Architecture	Minimum NetBackup Level
VCS (InfoScale)	7.3	Red Hat Enterprise Linux 7.2	x86-64	9.0
VCS (InfoScale)	7.2	Red Hat Enterprise Linux 7.2	x86-64	9.0
VCS (InfoScale)	7.1	Red Hat Enterprise Linux 7.2	x86-64	9.0
VCS (InfoScale)	7.2	Red Hat Enterprise Linux 7.1	x86-64	9.0
VCS (InfoScale)	7.1	Red Hat Enterprise Linux 7.1	x86-64	9.0
VCS (InfoScale)	7.2	Windows Server 2016	x86-64	9.0
VCS (InfoScale)	7.3	Windows Server 2012 R2	x86-64	9.0
VCS (InfoScale)	7.2	Windows Server 2012 R2	x86-64	9.0
VCS (InfoScale)	7.1	Windows Server 2012 R2	x86-64	9.0
VCS (InfoScale)	7.3	Windows Server 2012	x86-64	9.0
VCS (InfoScale)	7.2	Windows Server 2012	x86-64	9.0
VCS (InfoScale)	7.1	Windows Server 2012	x86-64	9.0
VCS (InfoScale)	7.3	SUSE Enterprise Linux Server 12	x86-64	9.0
VCS (InfoScale)	7.2	SUSE Enterprise Linux Server 12	x86-64	9.0
VCS (InfoScale)	7.1	SUSE Enterprise Linux Server 12	x86-64	9.0
VCS (InfoScale)	7.2	SUSE Enterprise Linux Server 11	x86-64	9.0
VCS (InfoScale)	7.1	SUSE Enterprise Linux Server 11	x86-64	9.0
VCS (InfoScale)	7.1	AIX 7.2	POWER	9.0
PowerHA Cluster Manager	7.1	AIX 7.1	POWER	9.0
Solaris Cluster	4.0	Solaris 11	SPARC	9.0
Solaris Cluster	4.0	Solaris 11	x86-64	9.0
WSFC [1]	2019	Windows Server 2019	x86-64	9.2
WSFC [1]	2016	Windows Server 2016	x86-64	9.0
WSFC [1]	2012 R2	Windows Server 2012 R2	x86-64	9.0
WSFC [1]	2012	Windows Server 2012	x86-64	9.0
VCS (SFWHA)	7.0	Windows Server 2012 R2	x86-64	9.0 [2] [3]
VCS (SFWHA)	7.0	Windows Server 2012	x86-64	9.0 [2] [3]
VCS (SFHA)	6.2.1	Red Hat Enterprise Linux 7	x86-64	9.0 [2]

Cluster Type	Version	OS	CPU Architecture	Minimum NetBackup Level
HP Service Guard MC SG	11.20	HP-UX 11.31	IA64	9.0
HP Service Guard MC SG	11.19	HP-UX 11.31	IA64	9.0
HP Service Guard MC SG	11.18	HP-UX 11.31	IA64	9.0

1. Windows Server Failover Cluster (WSFC), formerly MSCS.
2. FlashBackup is not currently supported when using Storage Foundation 6 or greater volume manager.
3. VSS based snapshot at a volume-level is supported, but snapshots at a LUN level will not work due to a Microsoft issue.

Clustered Master Server Storage Stacks

The table below captures the NetBackup clustering solution supported volume manager on shared disk. For example, when configuring NetBackup on a Linux OS VCS cluster, the only supported volume manager for the shared disk used by NetBackup is VxVM.

Note that the table below does not include OS versions. Please see the preceding table for specific OS version support.

NetBackup support of the FlashBackup policy with Storage Foundation 6 volume manager is scheduled for a future NetBackup release.

NetBackup support of Storage Foundation 6 features of Deduplication and Compression is scheduled for a future NetBackup release.

Cluster Technology	OS	Storage Stack
HACMP	AIX [1]	VxVM, LVM
HPSG	HP-UX [1]	VxVM, Veritas Cluster Volume Manger, LVM
MSCS/WSFC	Windows [1]	VxVM, LDM
Sun Cluster	Solaris [1]	VxVM, SVM, HAStoragePlus
Solaris Cluster	Solaris [1]	VxVM, SVM, HAStoragePlus, ZFS
VCS	AIX [1]	VxVM, LVM
VCS	HP-UX [1]	VxVM, LVM
VCS	Linux [1]	VxVM
VCS	Solaris [1]	VxVM
VCS	Windows [1] [2]	VxVM

1. Supported on all OS versions as noted in the preceding table.

2. With VCS 6.0 (VCSW/SFWHA 6.0) VSS based snapshot at a volume-level is supported, but snapshots at a LUN level will not work due to a Microsoft issue.

Client Selections for Backup Policies

The information in the Client Selection column of the table below is the client type that should be selected when installing NetBackup as a client on the Operating System/Version and Architecture listed in this table.

Where support is shown for "Windows Server 2008" or "Windows Server 2008 R2" it is implied that Standard Edition, Enterprise Edition, Datacenter Edition, and Web Edition are supported.

Where support is shown for "Windows Server 2012" or "Windows Server 2012 R2" it is implied that Standard Edition, Datacenter Edition, Essentials Edition, and Foundation Edition are supported.

NetBackup 8.1.2 and later will require Linux Kernel version 2.6.32 or higher

OS	CPU Architecture	NetBackup 9.0 Client Selection
AIX 7.1, 7.2	POWER	RS6000,AIX6
Canonical Ubuntu 20.04	x86-64	Linux,Debian2.6.18
Canonical Ubuntu 19.10	x86-64	Linux,Debian2.6.18
Canonical Ubuntu 19.04	x86-64	Linux,Debian2.6.18
Canonical Ubuntu 18.10	x86-64	Linux,Debian2.6.18
Canonical Ubuntu 18.04	x86-64	Linux,Debian2.6.18
Canonical Ubuntu 16.04	x86-64	Linux,Debian2.6.18
CentOS 8	x86-64	Linux,RedHat2.6.18
CentOS 7	x86-64	Linux,RedHat2.6.18
Debian GNU/Linux 10	x86-64	Linux,Debian2.6.18
Debian GNU/Linux 9	x86-64	Linux,Debian2.6.18
HP-UX 11.31	IA64	HP-UX-IA64,HP-UX11.31
NeoKylin Linux Advanced Server 7.0 Update 2	x86-64	Linux, Debian 2.6.18
NeoKylin Linux Advanced Server 6.0 Update7	x86-64	Linux, Debian 2.6.18
Mac OS X 10.10	x86-64	MACINTOSH,MacOSX 10.8
Mac OS X 10.9	x86-64	MACINTOSH,MacOSX 10.8
Mac OS X 10.8	x86-64	MACINTOSH,MacOSX 10.8
Novell Open Enterprise Server 11	x86-64	Linux,SuSE2.6.16
Novell Open Enterprise Server 2	x86-64	Linux,SuSE2.6.16

OS	CPU Architecture	NetBackup 9.0 Client Selection
Oracle Linux 8	x86-64	Linux,RedHat2.6.18
Oracle Linux 7	x86-64	Linux,RedHat2.6.18
Red Hat Enterprise Linux 8	x86-64	Linux,RedHat2.6.18
Red Hat Enterprise Linux 7	x86-64	Linux,RedHat2.6.18
Red Hat Enterprise Linux 7	z/Architecture	Linux-s390x,IBMzSeriesRedHat2.6.18
Solaris 11	SPARC	Solaris,Solaris10
Solaris 11	x86-64	Solaris,Solaris_x86_10_64
SUSE Linux Enterprise Server 12	x86-64	Linux,SuSE2.6.16
SUSE Linux Enterprise Server 12	z/Architecture	Linux-s390x,IBMzSeriesSuSE2.6.16
SUSE Linux Enterprise Server 11	x86-64	Linux,SuSE2.6.16
SUSE Linux Enterprise Server 11	z/Architecture	Linux-s390x,IBMzSeriesSuSE2.6.16
Windows Server 2019	x86-64	Windows-x64,Windows
Windows Server 2016	x86-64	Windows-x64,Windows
Windows Storage Server 2016	x86-64	Windows-x64,Windows
Windows Server 2012 and R2	x86-64	Windows-x64,Windows
Windows Storage Server 2012 and R2	x86-64	Windows-x64,Windows
Windows 10	x86-64	Windows-x64,Windows
Windows 8	x86-64	Windows-x64,Windows
Windows 8.1	x86-64	Windows-x64,Windows

Compatibility between NetBackup versions

For compatibility between major versions, the latest available release of NetBackup is compatible with media servers and clients that run a release of NetBackup that is up to one major version behind. However, this compatibility ceases to be supported in any configuration once the previous major version has reached its End of Support Life.

For information on Veritas End of Life Policy, refer to <https://www.veritas.com/support/en_US/article.000116439>

NetBackup does not support any scenario where a media server or client runs a software release update version that is higher than that of their Master server. For more information, refer to the NetBackup Release Notes and the NetBackup Upgrade Guide: <https://www.veritas.com/support/en_US/article.000116412>

NetBackup Master Server	NetBackup Media Server	NetBackup Client
9.0	8.0	7.7.3, 8.0
9.0	8.1	7.7.3, 8.0, 8.1
9.0	8.1.1	7.7.3, 8.0, 8.1, 8.1.1
9.0	8.1.2	7.7.3, 8.0, 8.1, 8.1.1, 8.1.2
9.0	8.2	7.7.3, 8.0, 8.1, 8.1.1, 8.1.2, 8.2
9.0	8.3	7.7.3, 8.0, 8.1, 8.1.1, 8.1.2, 8.2, 8.3
9.0	9.0	7.7.3, 8.0, 8.1, 8.1.1, 8.1.2, 8.2, 8.3, 9.0

Other general rules for compatibility:

- OpsCenter/OpsCenter Analytics must always be running the same or higher Dot-Zero or Single-Dot or Double-Dot release as the master servers in the environment.
- All components (master, media, client, console, and agent) on an individual system must be at the same version.
- Backup images created under an older version of NetBackup will always be recoverable with a newer version of NetBackup
- A new feature may not be functional until the master, media and client are updated.
- Administration Consoles cannot be at an earlier version than the NetBackup server version they connect to via the "change server" functionality in the console

Deduplication Supported Operating Systems

If you are looking for information regarding PureDisk support, and not media server deduplication, reference article <http://www.veritas.com/docs/000008731>>

For further details on recommended hardware reference NetBackup Deduplication: Additional Usage Information: <http://www.veritas.com/docs/000041111>>

Where support is shown for "Windows Server 2012", or "Windows Server 2012 R2" it is implied that Foundation Edition, Essentials Edition, Standard Edition, and Datacenter Edition are supported.

Where support is shown for "Windows Server 2016" it is implied that Essentials Edition, Standard Edition, and Datacenter Edition are supported.

Where support is shown for "Windows Server 2019" it is implied that Essentials Edition, Standard Edition, and Datacenter Edition are supported.

Media Server Deduplication (MSDP) is supported in an Infrastructure as a Service (IaaS) environment on any cloud platform that meets minimum requirements. For additional details on minimum and recommended configurations see NetBackup Media Server Deduplication (MSDP) in the Cloud https://www.veritas.com/support/en_US/article.000004584>

OS	CPU Architecture	Media Server Dedupe	Client Deduplication	Minimum NetBackup Level
Red Hat Enterprise Linux 8	x86-64	Yes	Yes	9.0
SUSE Enterprise Linux Server 15	x86-64	Yes	Yes	9.0
Windows Server 2019 [1]	x86-64	Yes	Yes	9.0
Ubuntu Linux 20	x86-64	No	Yes	9.0
Ubuntu Linux 19	x86-64	No	Yes	9.0
Ubuntu Linux 18	x86-64	No	Yes	9.0
Ubuntu Linux 16	x86-64	No	Yes	9.0
Red Hat Enterprise Linux 7	POWER	No	No	9.0
SUSE Enterprise Linux Server 12	POWER	No	No	9.0
Oracle Linux 8	x86-64	No	Yes	9.0
CentOS 8	x86-64	Yes	Yes	9.0
CentOS 7	x86-64	Yes	Yes	9.0
Oracle Linux 7	x86-64	Yes	Yes	9.0
Red Hat Enterprise Linux 8	x86-64	Yes	Yes	9.0
Red Hat Enterprise Linux 7	x86-64	Yes	Yes	9.0
SUSE Enterprise Linux Server 15	x86-64	Yes	Yes	9.0
SUSE Enterprise Linux Server 12	x86-64	Yes	Yes	9.0

OS	CPU Architecture	Media Server Dedupe	Client Deduplication	Minimum NetBackup Level
SUSE Enterprise Linux Server 11 [2]	x86-64	Yes	Yes	9.0
Windows Server 2016 [3]	x86-64	Yes	Yes	9.0
Windows Server 2016 Storage Server	x86-64 (64-bit only)	Yes	Yes	9.0
Windows Server 2012 R2 Storage Server	x86-64 (64-bit only)	Yes	Yes	9.0
Windows Server 2012 R2 [4]	x86-64	Yes	Yes	9.0
Windows Server 2012 [4]	x86-64	Yes	Yes	9.0
Windows 10	x86-64	No	Yes	9.0
Windows 8.1	x86-64	No	Yes	9.0
Solaris 11 [5]	x86-64	Yes	Yes	9.0
Solaris 11 [5]	SPARC	Yes	Yes	9.0

1. See the File System Compatibility table for support details regarding the Windows 2019 NTFS data deduplication feature, and the ReFS file system.
2. SuSE Enterprise Linux 11 SP3 and older versions are not supported
3. See the File System Compatibility table for support details regarding the Windows 2016 NTFS data deduplication feature, and the ReFS file system.
4. See the File System Compatibility table for support details regarding the Windows 2012 NTFS data deduplication feature, and the ReFS file system.
5. ZFS file system is not supported as a backend storage location for a MSDP disk pool.

File System Compatibility

NetBackup supports backing up file data on all POSIX compliant file systems. The table below represents the platform configurations that have been tested for compatibility with ACLs and other extended attributes. Unless otherwise noted in the table below, ACLs and other extended attributes are not supported.

NetBackup has improved its integration with the Veritas File System (VxFS) product to ensure interoperability on all compatible VxFS versions. If you run a VxFS version that is older than VxFS 4.0 then you need to install new VxFS libraries on the client to back up the systems that run VxFS. You can search and download the appropriate VxFS libraries to your system from Patch Central on the Veritas Support Web site. See, <<https://sort.veritas.com/patch/finder>>

Note :

- For Linux Operating Systems, the backup and restore of extended attributes set by the chattr command on XFS, ZFS, BTRFS etc. is not supported
- Cross platform restore of extended attributes is not supported.

OS	Versions	CPU Architecture	File System	ACL	Other Extended Attributes or Named Data Streams	Notes / Exceptions
AIX	7.1	POWER	VxFS	Yes	Yes	- Support for file system compression on VxFS requires Storage Foundation 6.0.1 or later. Please check Storage Foundation Release Notes for Operating System levels. - Flashbackup does not support Disk Layout Versions 8 or greater. Disk Layout Version 8 was introduced in VxFS 5.1
AIX	7.1, 7.2	POWER	GPFS 3.5, GPFS 4.1, GPFS 4.1.1, GPFS 4.2, GPFS 4.2.2	Yes	Yes	GPFS metadata is supported in NetBackup (ACLs, EAs, StoragePools, and Replication). During backup of migrated file data housed on GPFS, retrieval of that data will be triggered from storage. NetBackup version 9.0 enables support to skip premigrated and migrated filesystem data. Refer: https://www.veritas.com/support/en_US/article.100046593
AIX	7.1, 7.2	POWER	JFS/JFS2	Yes	No	
CentOS	7, 8	x86-64	Ext2, Ext3, Ext4, XFS, VxFS, Lustre 2.12.5	Yes	Yes	- Support for file system compression on VxFS requires Storage Foundation 6.0.1 or later. Please check Storage Foundation Release Notes for Operating System levels. - Lustre Filesystem is not supported on CentOS 5 and 6
Debian GNU/Linux	9, 10	x86-64	Ext2, Ext3, Ext4, XFS, JFS	Yes	Yes	XFS and JFS support starts from Debian 9
HP-UX	11.31	IA64	Base JFS or UFS	Yes	Yes	
HP-UX	11.31	IA64	VxFS	Yes	Yes	- Support for file system compression on VxFS requires Storage Foundation 6.0.1 or later. Please check Storage Foundation Release Notes for Operating System levels. - Flashbackup does not support Disk Layout Versions 8 or greater. Disk Layout Version 8 was introduced in VxFS 5.1

OS	Versions	CPU Architecture	File System	ACL	Other Extended Attributes or Named Data Streams	Notes / Exceptions
NeoKylin Linux Advanced Server	7.0	x86-64	Ext2, Ext3, Ext4	Yes	Yes	- Update 2 and later
NeoKylin Linux Advanced Server	6.0	x86-64	Ext2, Ext3, Ext4	Yes	Yes	- Update 7 and later
Mac OS X	10.8, 10.9, 10.10	x86-64	HFS/HFS+	Yes	Yes	- Resource forks supported. - HFS compression is not supported when restoring files; data is restored in uncompressed format.
Oracle Linux	7, 8	x86-64	Ext2, Ext3, Ext4, XFS, VxFS	Yes	Yes	- Support for file system compression on VxFS requires Storage Foundation 6.0.1 or later. Please check Storage Foundation Release Notes for Operating System levels. For Oracle Enterprise Linux 8.0, XFS Copy-On-Write feature and VxFS is not supported.
Red Hat	7, 8	POWER	Ext2, Ext3, Ext4, XFS	Yes	Yes	Supported from Red Hat Enterprise Linux version 7.2 and above. XFS Copy-On-Write feature is not supported.
Red Hat	7, 8	x86-64	Ext2, Ext3, Ext4, XFS, VxFS, Lustre 2.12.5	Yes	Yes	- Support for file system compression on VxFS requires Storage Foundation 6.0.1 or later. Please check Storage Foundation Release Notes for Operating System levels. - Flashbackup does not support Disk Layout Versions 8 or greater. Disk Layout Version 8 was introduced in VxFS 5.1 - For Red Hat Enterprise Linux 8.0, XFS Copy-On-Write feature and VxFS is not supported. - Lustre Filesystem is not supported on RedHat Enterprise Linux 5 and 6
Red Hat	7	x86-64	GPFS 4.1, GPFS 4.1.1, GPFS 4.2, GPFS 5.0.4, VxFS	Yes	Yes	GPFS metadata is supported in NetBackup (ACLs, EAs, StoragePools, and Replication). GPFS is not supported from Red Hat Enterprise Linux 7.3 as the default kernel version of Red Hat Enterprise Linux 7.3 is 3.10.0-514.el7.x86_64 and these file system versions supports until kernel 3.10.0-229.el7.x86_64 During backup of migrated file data housed on GPFS, retrieval of that data will be triggered from storage. NetBackup version 9.0 enables support to skip premigrated and migrated filesystem data. Refer: https://www.veritas.com/support/en_US/article.100046593
Red Hat	6	x86-64	GPFS 3.5, GPFS 4.1, GPFS 4.1.1, GPFS 4.2	Yes	Yes	GPFS metadata is supported in NetBackup (ACLs, EAs, StoragePools, and Replication). During backup of migrated file data housed on GPFS, retrieval of that data will be triggered from storage. NetBackup version 9.0 enables support to skip premigrated and migrated filesystem data. Refer: https://www.veritas.com/support/en_US/article.100046593

OS	Versions	CPU Architecture	File System	ACL	Other Extended Attributes or Named Data Streams	Notes / Exceptions
Red Hat	7, 8	x86-64	GFS2	Yes	No	
Red Hat	6, 7	z/Architecture	Ext2, Ext3	No	Yes	
Solaris	11	SPARC	UFS, ZFS, VxFS	Yes	Yes	- ZFS file system is not supported as a backend storage location for an MSDP disk pool.
Solaris	11	x86-64	UFS, ZFS	Yes	Yes	- ZFS file system is not supported as a backend storage location for an MSDP disk pool.
SUSE SLES	12, 15	POWER	Ext2, Ext3, Ext4, ReiserFS, XFS, BTRFS	Yes	Yes	Supported from SUSE Linux Enterprise Server version 12 SP4 and above.
SUSE SLES	12, 15	x86-64	Ext2, Ext3, Ext4, ReiserFS, XFS, BTRFS, Lustre 2.12.5	Yes	Yes	BTRFS filesystem with sub-volumes and snapshots are supported NetBackup Master Server installation on a BTRFS filesystem is not supported. Lustre Filesystem is not supported on SuSE Linux Enterprise Server Version 15 and above
SUSE SLES	12, 15	z/Architecture	Ext2, Ext3, Ext4, ReiserFS, XFS, BTRFS	No	Yes	BTRFS filesystem with sub-volumes and snapshots are supported EA is not supported on SUSE 12 SP2
SUSE SLES	11	z/Architecture	Ext2, Ext3, ReiserFS	No	Yes	
SUSE SLES	11	x86-64	Ext2, Ext3, Ext4, ReiserFS, XFS, NSS, VxFS	Yes	Yes	- Support for file system compression on VxFS requires Storage Foundation 6.0.1 or later. Please check Storage Foundation Release Notes for Operating System levels. - NSS file system attributes, rich ACLs, trustees, and multiple data streams are not supported. - Flashbackup does not support Disk Layout Versions 8 or greater. Disk Layout Version 8 was introduced in VxFS 5.1
Ubuntu	18.04, 18.10, 19.04, 19.10	x86-64	Ext2, Ext3, Ext4, XFS, GFS2	Yes	Yes	
Ubuntu	16.04	x86-64	Ext2, Ext3, Ext4	Yes	Yes	
Windows	2012, 2012 R2, 2016, 2019, 8.1, 10	x86-64	NTFS	Yes	Yes	Regarding the Microsoft Windows Server data deduplication feature: - NTFS deduplication volume can be backed up to any type of storage unit which does not further deduplicate the data. - Optimized Backup occurs for NTFS deduplication volumes when possible. Per Microsoft design, any restore from Optimized Backup is non-optimized. This means, after restore, files are in non-optimized form until the next optimization is run by the OS schedule. Be sure adequate space is available for restore. - By design, TIR is not supported on NTFS deduplication volumes. - FlashBackup is not supported with NTFS deduplication volumes.

OS	Versions	CPU Architecture	File System	ACL	Other Extended Attributes or Named Data Streams	Notes / Exceptions
Windows	2012, 2012 R2, 2016, 2019	x86-64	ReFS	Yes	Yes	<p>The ReFS file system is supported with the following caveats:</p> <ul style="list-style-type: none"> - Installing the NetBackup master, media server or client components on an ReFS volume is not supported. - Restoring files backed up from an NTFS file system to an ReFS file system is not supported. As a workaround, restore the files the NTFS file system, remove attributed not supported by ReFS and then copy the files to the ReFS volume. - MSDP cannot be installed on an ReFS volume. - FlashBackup is not supported with the ReFS file system

NetBackup Administration Consoles

The NetBackup Java Administration Console is an interface to configure and manage NetBackup installed on the same machine. The interface can run on any NetBackup Java-capable system.

The Backup Archive and Restore (BAR) console is an interface to the NetBackup client. The Backup, Archive, and Restore utility performs backups and archives for the system on which it is installed and restores for this system and other clients.

For information on how to install the consoles mentioned above reference the NetBackup Installation Guides. And for information on usage reference the NetBackup Administrator's Guides.

The table below is a list of the platforms that support the NetBackup-Java Administration Console and the Backup Archive and Restore Interface.

Note: If a supported NetBackup client is not listed in the table below the client is supported for backup and restore, but it does not support any of the available graphical interfaces.

Where support is shown for "Windows Server 2012" or "Windows Server 2016" it is implied that Standard Edition, Datacenter Edition, Essentials Edition, and Foundation Edition are supported.

Where support is shown for "Windows Server 2019" it is implied that Standard Edition, Datacenter Edition, Essentials Edition are supported.

Administrative consoles for supported versions of NetBackup are included in the NetBackup installation packages.

console versions are installed for all versions of NetBackup that are not beyond their End of Support Life (EOSL).

For information on supported versions of NetBackup see <https://sort.veritas.com/eosl>.

OS	CPU Architecture	NetBackup-Java Administration Console	Backup, Archive, and Restore Interface
AIX 7.1, 7.2	POWER	Y	Y
Redhat 7, 8	x64	Y	Y
Red Hat 7, 8	z/Architecture	Y	Y
Solaris 11	SPARC	Y	Y
Solaris 11	x64	Y	Y
SUSE Linux Enterprise Server 11, 12, 15	x64	Y	Y
SUSE Linux Enterprise Server 11, 12, 15	z/Architecture	Y	Y
Windows Server 2012, 2012 R2, 2016, 2019	x64	Y	Y
Windows 8.1	x64	Y	Y
Windows 10	x64	Y	Y
CentOS 7, 8	x64	Y	Y

OS	CPU Architecture	NetBackup-Java Administration Console	Backup, Archive, and Restore Interface
Oracle Linux 7, 8	x64	Y	Y

NetBackup in the Cloud

NetBackup now supports cloud-based Master Servers and Media Servers as part of extending data protection into workloads in the cloud. For more information, see the "360 Data Management" <https://www.veritas.com/360.html?inid=us_veritas_home_trend_cloud> page.

NetBackup in the Cloud - Considerations

Subject	Notes
Support assumptions	<ol style="list-style-type: none"> 1. NetBackup is supported on any cloud infrastructure environment that meets NetBackup's minimum resource requirements. For details on operating systems supported by NetBackup, please refer to the "NetBackup 8.0 - 8.x.x Operating System Software Compatibility List" <https://www.veritas.com/content/support/en_US/doc/NB_80_OSSCL> . For details on NetBackup minimum resource requirements, please refer to the "NetBackup Installation Guide" <https://www.veritas.com/content/support/en_US/doc/27801100-130536338-0/> . 2. Veritas does not certify the cloud compute layer or the cloud block storage layer. They are assumed to work as similar physical resources do. 3. NetBackup-certified cloud object storage support is listed in the vendor tables in the Cloud Storage Solutions section of this HCL. 4. NetBackup deployment templates are available for some operating systems and cloud infrastructure solutions. Supported templates are listed in the vendor tables below. For a quicker and easier NetBackup deployment, Veritas strongly recommends using these templates for deploying NetBackup instead of doing a manual NetBackup installation. For examples, see Setting up NetBackup CloudCatalyst in AWS <https://www.veritas.com/content/support/en_US/doc/CC_AWS_guide> and NetBackup in the Cloud - Guidelines for AWS Deployments <https://www.veritas.com/content/dam/Veritas/docs/briefs/NBU-Guidelines-for-AWS-Deployments.pdf> .

NetBackup in the Cloud - Links to Solution Information

NetBackup is supported on any cloud infrastructure environment that meets NetBackup's minimum resource requirements. Solution briefs have been created for the cloud infrastructures listed in the table below.

Vendor	URL
Amazon	< https://www.veritas.com/solution/amazon-web-services >
Google	< https://www.veritas.com/solution/google-cloud-platform >
IBM	< https://www.veritas.com/solution/ibm-cloud >
Microsoft	< https://www.veritas.com/solution/microsoft-cloud >
Oracle	< https://www.veritas.com/solution/oracle-cloud >

NetBackup in the Cloud - Deployment Templates

Contents

[Amazon](#)

[Microsoft](#)

Amazon

This solution deploys a NetBackup Master or Media Server in an Amazon Web Services EC2 instance, using the AWS CloudFormation feature.

Amazon Machine Image (AMI) for NetBackup

Operating System	NetBackup template file	NetBackup Master Server support	NetBackup Media Server support	Supported Locales / Regions
Red Hat Enterprise Linux	Veritas NetBackup for AWS (BYOL) < https://aws.amazon.com/marketplace/pp/B07N2F4PV7 >	Yes	Yes	All Locales

Microsoft

This solution deploys a NetBackup Master or Media Server in a Microsoft Azure Virtual Machine, using an Azure Resource Manager (ARM) template.

Azure Resource Manager (ARM) for NetBackup

Operating System	NetBackup template file	NetBackup Master Server support	NetBackup Media Server support	Supported Locales / Regions
Microsoft Windows Server	Veritas NetBackup on Azure Marketplace < https://azuremarketplace.microsoft.com/en-us/marketplace/apps/veritas.veritas-netbackup-8-s?tab=Overview >	Yes	Yes	All Locales

NetBackup OpsCenter Backup Product Support

There are two OpsCenter products: Veritas NetBackup OpsCenter and Veritas NetBackup OpsCenter Analytics.

OpsCenter does not require any license and is included with the NetBackup Enterprise Server and Server products. OpsCenter provides single deployment configuration and user interface for monitoring, alerting, and reporting functionality. It provides monitoring, management and administration capabilities for NetBackup as well as operational reporting for other products as designated in the following table.

OpsCenter Analytics is the licensed version of OpsCenter. In addition to the features available in the unlicensed OpsCenter version, Analytics offers report customization, chargeback reporting and support for third-party data protection products as designated in the following table. The primary objectives of this product are to help organizations assess their compliance with business standards, e.g., service level agreements, and assist in effective business planning, e.g., future backup requirements via backup trend analysis.

Listed in the table below are the backup and archiving products and versions supported by OpsCenter and OpsCenter Analytics.

Backup Product	Version	Support Level	Analytics License Required
Veritas NetBackup	7.7 and higher versions	All supported NetBackup platforms by Remote Agent. Native OpsCenter agent for Windows 2008 (SP2 and R2) and Solaris 10 and 11. BCS customer are entitled to receive support for the legacy products until 2019. Refer to https://www.veritas.com/support/en_US/business-critical-services/support-extensions-program.html	No
Veritas NetBackup Appliance	See NetBackup Hardware Compatibility List for Appliance support information. http://www.veritas.com/docs/000025228	Data collection happens automatically by NBSL	No
Veritas NetBackup PureDisk	6.2, 6.2.2, 6.5, 6.5.1, 6.5.1.2, 6.6, 6.6.0.1, 6.6.0.2, 6.6.0.3, 6.6.1, 6.6.1.2, 6.6.3a, 6.6.5	PureDisk supported platform (PDOS) by the OpsCenter integrated Agent. You do not need a separate Agent to collect data from PureDisk. You can use the inbuilt Agent of the OpsCenter Server for data collection. To create or configure the data collector, select the Agent that is installed as Integrated Agent.	No

NetBackup OpsCenter Operating System Requirements

OpsCenter Analytics has the same Operating System requirements as OpsCenter.

Check the Operating Systems server table for the exact version of NetBackup in which OpsCenter server support started.

Veritas Cluster Server (VCS) support for OpsCenter 7.1 Server, OpsCenter 7.5 Server, OpsCenter 7.6 Server and OpsCenter 7.7.1 in cluster mode:

VCS versions 4.3, 5.0 MP3 and 5.1 on Solaris

VCS versions 4.2 RP2, 5.1 and 5.1 SP1 on Windows

Veritas Cluster Server (VCS) support for OpsCenter 7.7.2, OpsCenter server 7.7.3, OpsCenter server 8.0, OpsCenter server 8.1 in cluster mode:

VCS version 6.1 on Windows 2012 R2.

OpsCenter Agent and OpsCenter View Builder installations are not supported in a cluster environment.

32-bit View Builder binaries are used on 64-bit platforms.

OS	CPU Architecture	OpsCenter Server	OpsCenter Agent	OpsCenter View Builder
Oracle Linux 8	x86-64	Yes	No	No
Oracle Linux 7	x86-64	Yes	No	No
Red Hat Enterprise Linux 8	x86-64	Yes	No	No
Red Hat Enterprise Linux 7	x86-64	Yes	No	No
SUSE Linux Enterprise Server 12	x86-64	Yes	No	No
SUSE Linux Enterprise Server 11 [1]	x86-64	Yes	No	No
Windows 2019	x86-64	Yes	Yes	Yes
Windows 2016	x86-64	Yes	Yes	Yes
Windows 2012 R2	x86-64	Yes	Yes	Yes
Windows 2012	x86-64	Yes	Yes	Yes

1. SUSE Linux Enterprise Server 11 SP2 or earlier versions not supported

NetBackup OpsCenter Web Browser Requirements

Web Browser	Versions	Notes
Microsoft Internet Explorer	<ul style="list-style-type: none"> - 7.x, 8.x, 9.0, 10.0, 11.0 - 32-bit and 64-bit 	<ul style="list-style-type: none"> - IE 7.0 and later versions may display a security certificate warning page when you access OpsCenter. Reference "Disabling security certificate warnings permanently from browsers" instructions in the NetBackup OpsCenter Administrator's Guide. - It may not be possible to view reports, jobs, or audit data when exporting from IE 9.0. Alternatively, IE 9.0 may show a "Internet Explorer Cannot Download" error when exporting reports, jobs, or auditing data from OpsCenter. - Reference "Exporting OpsCenter reports or data with IE 9.0" instructions in the NetBackup OpsCenter Administrator's Guide. - Extra steps are required to access the OpsCenter console using Internet Explorer version 7 or 8 on a 32-bit Windows computer. For more information, see "About web browser considerations" in the NetBackup OpsCenter Administrator's Guide. - NetBackup 7.7.2 and later support OpsCenter with IE 11 - The NetBackup OpsCenter Administrator's Guide and other Guides are available by selecting the appropriate NetBackup version link at http://www.veritas.com/docs/000003214
Mozilla Firefox	<ul style="list-style-type: none"> - 3.0, 3.5.x, 3.6.x, 9.0.1 and above for OpsCenter 7.0 to 7.5. - 15.0 and later versions for OpsCenter 7.6 and later. - 32-bit and 64-bit - 27.0 and later versions for OpsCenter 8.0 and later 	<ul style="list-style-type: none"> - Mozilla Firefox may display an Untrusted Connection page when you access OpsCenter. Reference "Disabling the Untrusted Connection page in Mozilla Firefox" instructions in the Veritas OpsCenter Administrator's Guide.

SAN Media Server/SAN Client/FT Media Server

- Unless otherwise noted the minimum NetBackup level for SAN Client support is NetBackup 6.5 GA.

SAN style backups via SAN Media Server

SAN media servers are NetBackup media servers that back up their own data. SAN media servers cannot back up data that resides on other clients. SAN media servers are useful for certain situations. For example, a SAN media server is useful if the data volume consumes so much network bandwidth that it affects your network negatively.

- Enables LAN-free data protection with high performance access to shared resources.
- Can share tape resources with NetBackup Master and Media Servers.
- Can only back itself up, not other clients.
- Software is installed stand-alone on each cluster node and linked to the virtual host via an application cluster.
- When you define a backup policy for a SAN media server, add only the SAN media server as the client.
- The NetBackup Shared Storage Option is able to use NetBackup SAN media servers.
- There is no platform restriction regarding SAN Media Servers - any Media Server can be a SAN Media Server. The only difference is in the license authentication mechanism. Application and DB Agents are supported with the SAN Media Server.

SAN style backups via SAN Client

A NetBackup SAN client is a NetBackup client on which the Fibre Transport service is activated. The SAN client is similar to the SAN media server that is used for the Shared Storage Option; it backs up its own data. However, the SAN client is based on the smaller NetBackup client installation package, so it has fewer administration requirements and uses fewer system resources.

- It connects to a NetBackup media server over Fibre Channel.
- The NetBackup SAN Client Fibre Transport Service manages the connectivity and the data transfers for the FT pipe on the SAN clients. The SAN client FT service also discovers FT target mode devices on the NetBackup media servers and notifies the FT Service Manager about them.
- Requires SAN connectivity with a Media Server running Fibre Transport Services (reference additional information below in regards to the FT Media Server).

SAN client does not support the following types of backup:

- SharePoint
- Enterprise Vault
- Exchange DAG or CCR backups through a passive node of an Exchange cluster
- All other application and database agents are supported with the SAN Client.

Note: SAN client does support the use of FlashBackup but all restores from FlashBackup backups will use the LAN connection, not the SAN connection.

SAN client and NetBackup Deduplication

- SAN Client is a NetBackup optional feature that provides high speed backups and restores of NetBackup clients. Fibre Transport is the name of the NetBackup high-speed data transport method that is part of the SAN Client feature. The backup and restore traffic occurs over a SAN.
- SAN clients can be used with the deduplication option; however, the deduplication must occur on the media server, not the client. Configure the media server to be both a deduplication storage server (or load balancing server) and an FT media server. The SAN client backups are then sent over the SAN to the deduplication server/FT media server host. At that media server, the backup stream is deduplicated.
- Do not enable client deduplication on SAN Clients. The data processing for deduplication is incompatible with the high-speed transport method of Fibre Transport. Client-side deduplication relies on two-way communication over the LAN with the media server. A SAN client streams the data to the FT media server at a high rate over the SAN.

FT Media Server

A NetBackup FT media server is a NetBackup media server on which the Fibre Transport services are activated. NetBackup FT media servers accept connections from SAN clients and send data to the storage units. The host bus adapters (HBAs) that accept connections from the SAN clients use a special NetBackup target mode driver to process FT traffic. The media server FT service controls data flow, processes SCSI commands, and manages data buffers for the server side of the FT pipe. It also manages the target mode driver for the host bus adapters.

Reference the HCL document Fibre Transport Media Server HBAs section for supported Operating Systems and HBAs. <<http://www.veritas.com/docs/000025228>>

Virtual Systems Compatibility

This Statement of Support for NetBackup in a Virtual Environment document describes the extent of support for NetBackup within a virtual environment. Ideally, every NetBackup configuration supported in a traditional physical environment would also be supported in any virtual environment without qualification. While that is our mission, it is not always possible.

Therefore, the purpose of this document is to:

- Clarify differences between NetBackup support in physical vs. virtual environments
- Describe general guidelines for support in virtual environments.
- Describe impact upon specific NetBackup components: clients, servers, options, etc.
- Provide references to related information.

VMware Compatibility

Virtual Systems Compatibility - Refer: Support for NetBackup in a Virtual Environment - "><https://www.veritas.com/content/support/en_US/article.100040093

> • For supported vSAN configurations, refer article "><<https://kb.vmware.com/s/article/55071>

> • NetBackup supports all minor patch releases (like: EP, U1x) unless otherwise noted.

• Software Defined Data-Center(SDDC) environments which includes NSX, NSX-T or other networking technologies are transparent to NetBackup and are supported.

• VMware Cloud on AWS(VMC) is supported on NetBackup 9.0

NetBackup Versions	VDDK Versions	vSphere Versions	vCloud Director Versions	Backup/Restore Host Versions
9.0	7.0	vSphere 7.0, 7.0 U1 vSphere 6.7, 6.7 U1, 6.7 U2, 6.7 U3 vSphere 6.5, 6.5 U1, 6.5 U2, 6.5 U3 VMware vSAN 6.5, 6.6, 6.6.1, 6.7, 6.7 U1, 6.7 U2, 6.7 U3 VMware vSAN 7.0 , 7.0 U1 Refer VMware VDDK release notes URL below for additional information on supported vCenter and ESXi versions.	Service Provider Versions: 9.0, 9.1, 9.5, 9.7, 10, 10.1	All 64 bit only: Windows Server 2019, 2016, 2012 R2, 2012 Red Hat Enterprise Linux (RHEL) 7.7, 8.0 SUSE Linux Enterprise Server (SLES) 12SP5, 15SP1 CentOS 7.7

• NetBackup does not support the vCloud Director 8.20, 9.0 and 10 feature called "Automatic discovery and import of vCenter VMs."

Note the following:

• NetBackup Instant access is not supported with VMware vSphere 7.0 U1 on NetBackup 9.0

• VMware version information can also be obtained from the VMware Product Interoperability Matrix, and is subject to change by VMware. For the latest information, see the following: <http://www.vmware.com/resources/compatibility/sim/interop_matrix.php>

• NetBackup supports installation of the backup host in a virtual machine (VMware "hotadd"). The guest operating systems that NetBackup supports for hotadd are the same as the above.

• For the Linux VMware backup host or restore host, locales other than UTF-8 are not supported.

- NetBackup 9.0 supports VMware Virtual Volumes (VVols)
- NetBackup supports all triple-dot versions of VMware vCloud Director, unless otherwise noted.
- Install "VMware ESXi 6.0, Patch Release ESXi600-201511001 (2137545)" for consistent backups. This ESX patch is mandatory, according to VMware, to fix the data loss situation reported in VMware KB article 2136854.

For more information about the cause and the resolution of this issue, see: http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2136854

VMware VDDK Release Notes:

- VDDK 7.0 Release Notes: <https://code.vmware.com/docs/11697/virtual-disk-development-kit-7-0-release-notes>.

Hyper-V Servers Compatibility

Hyper-V is supported on Microsoft Windows Server Editions which are compatible with NetBackup Client. Refer to Operating System Compatibility table for details.

Hyper-V Servers Compatibility - Reference Article: TECH127089 Statement of Support for NetBackup in a Virtual Environment: <http://www.veritas.com/docs/000006177>

Note:

- NetBackup Client must be installed on the Hyper-V server
- Master and Media Server platform support as supported by the appropriate NBU release

NetBackup Versions	Hyper-V Server Versions	System Center Virtual Machine Manager Versions	Comments
9.0	Hyper-V Server 2019 Hyper-V Server 2016 Hyper-V Server 2012 R2 Hyper-V Server 2012 R2 U1 Hyper-V Server 2012 R2 U2 Hyper-V Server 2012 R2 U3 Hyper-V Server 2012	NetBackup Add-In and Hyper-V Intelligent Policy for • SCVMM 2012 R2 • SCVMM 2012 R2 Rollup 1 through 8 [1] • SCVMM 2016 • SCVMM 2019	• Hyper-V Intelligent Policy supported only for Hyper-V Server 2012 R2 (and associated updates), Hyper-V Server 2016, Hyper-V Server 2019. • VHD and VHDX support

1. Refer to TECH231399 for important notes on SCVMM 2012 R2 Update Rollup 5 and onwards support: <http://www.veritas.com/docs/000025555>

File-level recovery from a Hyper-V backup is not supported in case of following scenarios.

- Any guest OS volume that resides on a 4Kn virtual disk (VHDX file).
- Files in guest OS that reside on REFS or NTFS deduplicated volume.

WMI backup features and limitations:

- WMI method is supported for Windows Server 2016 and above.
- Requires a VM configuration version later than 5.
- VMs can be hosted on either the NTFS, ReFS, Windows Storage Spaces, Storage Spaces Direct or SMB 3.0 file shares.
- WMI backup method does not support backup or restore of user-created checkpoints of the VM.

- Faster Hyper-V backup and recovery feature requires block-level incremental to be enabled and can only be saved to deduplication storage unit.

VSS backup limitations:

- VMs must reside on the NTFS file system (ReFS or NTFS Deduplication is not supported).
- Block-level incremental backup is not supported.
- Backing up VM's residing on SMB 3.0 file shares is not supported.

Hyper-V Limitations

- Backup of a Hyper-V guest OS that use VHD Sets or shared VHDX file is not supported.
 - Hyper-V Server on windows Server Semi-Annual Channel builds are supported with partial functionality.
- Refer technote for additional details <<https://www.veritas.com/docs/100041472>>

Nutanix AOS versions and backup host

Supported Nutanix AOS versions and backup host operating systems

NetBackup for Nutanix AHV protects Nutanix AHV virtual machines by integrating with Nutanix APIs for Data Protection. All minor versions of Nutanix AOS are supported unless specifically noted in the table below.

NetBackup Versions	Nutanix AOS Versions	Backup/Restore Host Versions	Notes
9.0	5.10 5.11 5.15 5.17	NetBackup 9.0 supported x86-64 platforms of Red Hat Enterprise Linux and SUSE Linux Enterprise Server will work as backup hosts.	"Hypervisor" policy type to be used for protecting Nutanix AHV on supported AOS versions

Note the following:

- Starting NetBackup 9.0, BigData policy cannot be used to protect Nutanix AHV VMs. Refer: <https://www.veritas.com/content/support/en_US/doc/127664414-145604802-0/index>
- > • To backup other hypervisors like VMware ESX or a Hyper-V on a Nutanix Acropolis cluster, please see VMware ESX or a Hyper-V SCL for support matrix. To backup VMware ESX or a Hyper-V on a Nutanix Acropolis cluster, use a VMware policy or a Hyper-V, respectively.
- NetBackup supports installation of the backup host in a virtual machine.
- English only AHV is supported.
- Backups are Crash Consistent.
- AHV Community Edition is not supported.
- Veritas recommends having NetBackup Media server as Backup-Host. For Nutanix Backup Hosts earlier than NetBackup version 9.0, please refer: <https://download.veritas.com/resources/content/live/OSVC/100046000/100046611/en_US/nbu_80_scl.html?__gda__=1609411610_3ee50aa4e31e9ef3fb902c7b37a126126>
- > • Backup of VMs having volume groups is not supported.
- NetBackup currently does not support file-level recovery. Backup and recovery of the entire virtual machine for all guest operating systems is supported.

Azure Stack versions and backup host

Supported Azure Stack versions and backup host operating systems

NetBackup protects Azure Stack virtual machines by integrating with Azure Stack APIs for Data Protection. Azure Stack Plugin can be installed on NetBackup Master, Media or Client to be used as Azure Stack Backup Host. All minor versions of Azure Stack are supported unless specifically noted in the table below. Customers that have a license for NetBackup Azure Stack agent can download the install package at: <https://my.veritas.com>

NetBackup Versions	Azure Stack Versions	Backup/Restore Host Versions
9.0	2002	All 64 bit only: Red Hat Enterprise Linux: 7.4, 7.5 Veritas NetBackup Appliance: 3.1.2

Note the following:

- NetBackup 9.0 supports Managed disk
- NetBackup 9.0 supports restore unmanaged disk VMs in Managed Disk VM format
- NetBackup 9.0 supports restore unmanaged disk in Managed Disk format
- NetBackup supports installation of the backup host in a virtual machine.
- Backups are Crash Consistent.
- Only full VM backup are supported. Backup and recovery of the entire virtual machine for all guest operating systems is supported.
- File-level recovery and protection of Managed Disks are not supported.
- For any issues, please refer the troubleshooting section in the "Veritas NetBackup for Azure Stack Administrator Guide"

Red Hat Virtualization Compatibility

Supported RedHat Virtualization (RHV) Versions

- NetBackup currently supports only x86-64 editions of RHV servers.

NetBackup Versions	RHV Versions
9.0	4.2 4.3, 4.4

Note:

- Support of Red Hat Virtualization Manager and Hypervisor starts from version 4.2.7
- NetBackup 9.0 supported x86-64 platforms of Microsoft Windows Server, Red Hat Enterprise Linux and SUSE Linux Enterprise Server will work as backup hosts.
- Application consistent backup needs RHV Guest Agent.
- Pass through disk cannot be backed up by RHV agent. Please install NetBackup client inside the VM to protect data on such disks.

- RHV 4.3.3 has issue in restoring thick provision disk. Till fix is available from RedHat, please restore disk as thin provision.
- VMs in suspended state cannot be protected.
- Cinder storage is currently not supported.
- Backup of VMs based on a template (thin clone) may fail to delete snapshots created by the backup job. If such a condition is encountered, then subsequent backups would fail.

This issue is related to a race condition in RHV Manager versions 4.2.x, 4.3.0 to 4.3.3. Red Hat recommends upgrading RHV Manager to 4.3.4 before protecting such VMs.

Refer: "<https://access.redhat.com/support/policy/updates/rhev>

>

OpenStack Virtualization Compatibility

Supported OpenStack Versions

Distributions which include the following OpenStack versions are supported.

Supported Hypervisor: KVM

NetBackup Versions	OpenStack Revisions	Backup/Restore Host Versions
9.0	Mitaka, Newton, Ocata, Pike, Queens, Rocky, Stein, Train	NetBackup 9.0 supported x86-64 platforms of Red Hat Enterprise Linux and SUSE Linux Enterprise Server will work as backup hosts.

VMware vRealize Compatibility

Veritas NetBackup plug-in for VMWare vRealize Version	VMWare vRealize Orchestrator Versions	NetBackup Versions
1.0	7.5 7.6	NetBackup 9.0

End of Life (EOL) announcement and platforms no longer supported by NetBackup

The following Operating System and Application Versions/Architectures in the 9.x.x versions of NetBackup will be End of Life.

Platform and Application Versions	CPU Architecture	OS Bits	NetBackup	Last NetBackup Release Supported
-----------------------------------	------------------	---------	-----------	----------------------------------