

vSAN Backups

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1. FAQ

Frequently asked questions about vSAN backups

1.1 Frequently Asked Questions on vSAN backup

How do I back up VMs on vSAN?

Many third-party data protection products use VMware vSphere Storage APIs - Data Protection to provide efficient, reliable backup and recovery for virtualized environments. These APIs are compatible with vSAN just the same as other datastore types such as VMFS and NFS. Nearly all of these solutions should work with vSAN. It is important to obtain a support statement for vSAN from the data protection product vendor you use. Best practices and implementation recommendations vary by vendor. Consult with your data protection product vendor for optimal results.

What VADP backup Methods are supported?

The following are supported:

NBD (network block device) and NBD SSL (encrypted) Transport

When no other transport is available, networked storage applications can use LAN transport for data access, either NBD (network block device) or NBDSSL (encrypted). NBD is a Linux-style kernel module that treats storage on a remote host as a block device. NBDSSL is similar but uses SSL to encrypt all data passed over the TCP connection. The NBD transport method is built into the virtual disk library, so it is always available, and is the fall-back when other transport methods are unavailable.

VMware libraries, and backup applications, often fall back to NBD when other transports are unavailable.

HotAdd is a VMware feature where devices can be added “hot” while a virtual machine is running. Besides SCSI disk, virtual machines can add additional CPUs and memory capacity.

If backup software runs in a virtual appliance, it can take a snapshot and create a linked clone of the target virtual machine, then attach and read the linked clone’s virtual disks for backup. This involves a SCSI HotAdd on the ESXi host where the target VM and backup proxy are running. Virtual disks of the linked clone are HotAdded to the backup proxy. The target virtual machine continues to run during backup.

The following are not supported:

San Transport

vSAN does not support SAN transport. Because vSAN uses modes that are incompatible with SAN transport, if the virtual disk library detects the presence of vSAN, it disables SAN mode. Other advanced transports do work. Note some backup providers optimize hot add to reduce network traffic.

Does do I need to consider when recovering to vSAN?

If the backup software provider does not support SPBM as part of the recovery, you may need to re-apply the policy. Note some vendors support SPBM in their backup and recovery workflow.

What considerations do I have for restoring or replacing a vCenter Server?

Restoring a vCenter that was aware of all nodes carries no special consideration. Re-deploying a new vCenter or restoring to a state not aware all host has additional considerations in vSAN 6.6 but not in prior releases. [Please see the recovering vCenter section of this link for more information.](#)

Does vSAN support snapshot offload for backups?

vSAN starting with version 6.0 and the 2.0 file system replaced traditional VMFS snapshots with a native vSAN snapshot format with significantly lower overhead. In addition improvements with the mirror driver for snapshot merges in 6.0 and other IO improvements offer significantly faster snapshot performance than traditional VMFS or SparseSE snapshots used with NFS or VMFS.

Does vSAN support SRM (Site Recovery Manager)?

yes, SRM is fully supported with VMware vSAN.

Does vSAN offer native replication?

VMware has native replication services for vSAN in the form of vSphere Replication. It offers delta and compression based efficient transportation of changed blocks and integrates with SRM. For a demonstration of a SRM with vSphere Replication failover, [see the following link](#). In addition to native replication VAIO, and VADP based replication solutions from 3rd parties offer numerous supported methods for achieving different levels of RPO and RTO.

Does vSAN support VAIO based Replication?

Yes vSAN supports VAIO (vSphere APIs for I/O Filtering). A number of backup providers including Veritas, StorageCraft Veeam and EMC have announced VAIO based replication support for vSAN. The current list of VAIO based supported products can be verified on the [VAIO VCG page](#).

2. Veeam

Links to content related to Veeam support for vSAN

2.1 Resources for Veeam and vSAN

Veeam Blogs, Videos, and KB entries.

The following is a list of links for KB's describing the support and configuration of Veeam.

<https://kb.vmware.com/kb/2149874> - Veeam backup and replication with vSAN datastores (2149874)

[Virtual Appliance Mode for VMs on vSAN](#) - Information on configuration of backup modes.

<https://www.veeam.com/kb2273> - Configuration for VMware vSAN

<https://www.veeam.com/blog/vsan-vvols-storage-backup-policy-management.html> - How Veeam eases vSAN & VVOL backup and restore

<http://thenicholson.com/vsan-backup-spbm-policies/> - Blog on backing up and restoring SPBM policies. [Video Demonstration of recovery and configuration of SPBM for vSAN with Veeam 9.5U1 and vSAN 6.6](#)

[Click to see topic media](#)

3. Dell EMC

Links to Content regarding Dell EMC support for vSAN

3.1 Resources for Avamar on vSAN

Dell-EMC Avamar on vSAN Resources

<https://kb.vmware.com/kb/2149872> - Back up and restore of VMs deployed on a vSAN datastore using DELL EMC Avamar (2149872)

[vSAN technical guide for Avamar](#)

Avamar Virtual Edition for VMware System Install Guide

https://support.emc.com/docu81577_Avamar_Virtual_Edition_7.4_and_Service_Packs_for_Vmware_System_Installation_Guide.pdf?language=en_US

Avamar VMware user guide

https://support.emc.com/docu81578_Avamar_7.4_and_Service_Packs_for_VMware_User_Guide.pdf?language=en_US

3.2 Resources for NetWorker on vSAN



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