



Deployment planning and requirements

SnapCenter Plug-in for VMware vSphere 4.4

NetApp
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Deployment planning and requirements

You should be aware of the deployment requirements before you deploy the virtual appliance. The deployment requirements are listed in the following four tables.

Host requirements

Before you begin deployment of SnapCenter Plug-in for VMware vSphere, you should be familiar with the host requirements.

- You must deploy the SnapCenter VMware plug-in as a Linux VM.

The SnapCenter VMware plug-in is deployed as a Linux VM regardless of whether you use the plug-in to protect data on Windows systems or Linux systems.

- You should deploy the SnapCenter VMware plug-in on the vCenter Server.

Backup schedules are executed in the time zone in which the SnapCenter VMware plug-in is deployed. vCenter reports data in the time zone in which the vCenter is located. Therefore, if the SnapCenter VMware plug-in and vCenter are in different time zones, data in the SnapCenter VMware plug-in Dashboard might not be the same as the data in the reports.

- You must not deploy the SnapCenter VMware plug-in in a folder that has a name with special characters.

The folder name should not contain the following special characters: `!@#%^&()_+{}';,.*?"<>|`

- You must deploy and register a separate, unique instance of the SnapCenter VMware plug-in for each vCenter Server.
 - Each vCenter Server, whether or not it is in Linked Mode, must be paired with a separate instance of the SnapCenter VMware plug-in.
 - Each instance of the SnapCenter VMware plug-in must be deployed as a separate Linux VM.

For example, if you want to perform backups from six different instances of the vCenter Server, then you must deploy the SnapCenter VMware plug-in on six hosts and each vCenter Server must be paired with a unique instance of the SnapCenter VMware plug-in.

- The SnapCenter VMware plug-in provides limited support of shared PCI or PCIe devices (for example, NVIDIA Grid GPU) due to a limitation of the virtual machines in supporting Storage vMotion. For more information, see the vendor's document Deployment Guide for VMware.

- What is supported:

Creating resource groups

Creating backups without VM consistency

Restoring a complete VM when all the VMDKs are on an NFS datastore and the plug-in does not need to use Storage vMotion

Attaching and detaching VMDKs

Mounting and unmounting datastores

Guest file restores

- What is not supported:

Creating backups with VM consistency

Restoring a complete VM when one or more VMDKs are on a VMFS datastore.

- For a detailed list of the SnapCenter VMware plug-in limitations, see the [SnapCenter Plug-in for VMware vSphere Release Notes](#).

License requirements

You must provide licenses for...	License requirement
ONTAP	One of these: SnapMirror or SnapVault (for secondary data protection regardless of the type of relationship)
Additional products	vSphere Standard, Enterprise, or Enterprise Plus A vSphere license is required to perform restore operations, which use Storage vMotion. vSphere Essentials or Essentials Plus licenses do not include Storage vMotion.
Primary destinations	To perform application-based protection over VMware SnapCenter Standard To perform protection of VMware VMs and datastores only SnapRestore: used for restore operations FlexClone: used for mount and attach operations
Secondary destinations	To perform application-based protection over VMware SnapCenter Standard: used for failover operations To perform protection of VMware VMs and datastores only FlexClone: used for mount and attach operations

Software support

Item	Supported versions
vCenter vSphere	HTML5 client: 6.5U2d/U3, 6.7x, 7.0, 7.0U1 Flex client is not supported.
ESXi	5.5, 6.0 or later
IP addresses	IPv4, IPv6
Java	8
.Net Core	2.1
SnapCenter Plug-in for VMware vSphere MySQL database	MySQL 8.0.16
VMware TLS	1.2

Item	Supported versions
TLS on the SnapCenter Server	TLSv1.1 and later The SnapCenter Server uses this to communicate with the SnapCenter VMware plug-in for application over VMDK data protection operations.

For the latest information about supported versions, see the [NetApp Interoperability Matrix Tool](#).

Space and sizing requirements

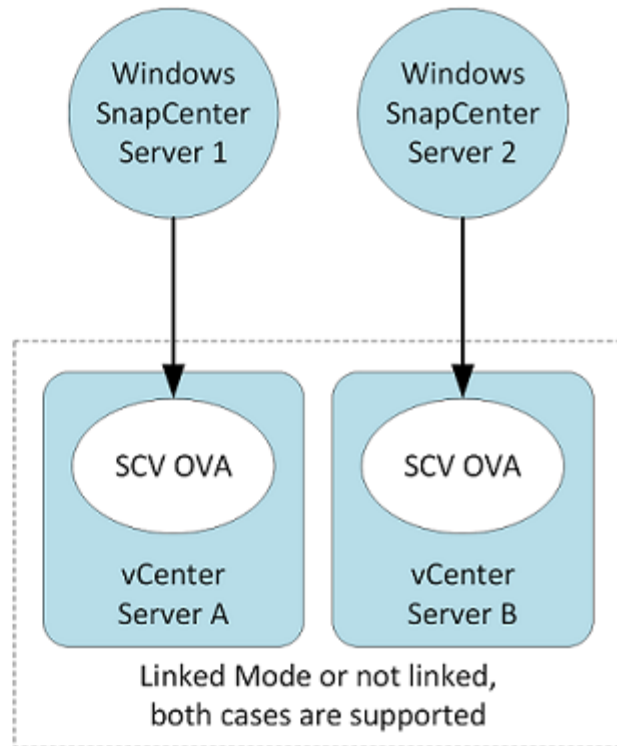
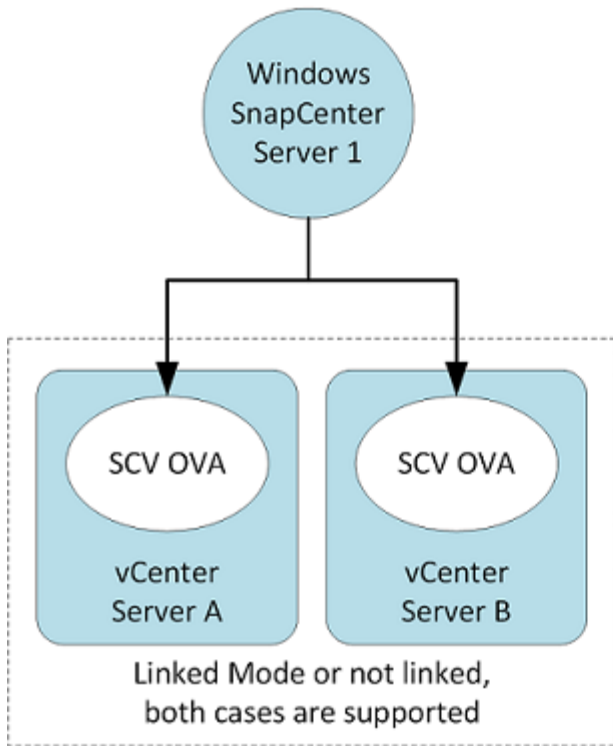
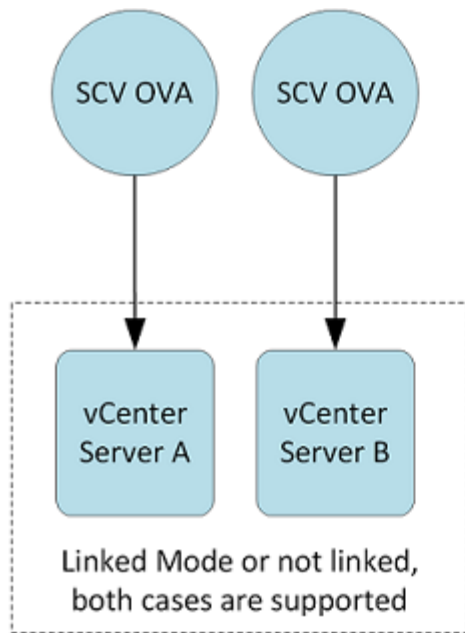
Item	Requirements
Operating system	Linux
Minimum CPU count	4 cores
Minimum RAM	Minimum: 12 GB Recommended: 16 GB
Minimum hard drive space for the SnapCenter Plug-in for VMware vSphere, logs, and MySQL database	100 GB

Connection and port requirements

Type of port	Preconfigured port
SnapCenter Plug-in for VMware vSphere port	8144 (HTTPS), bidirectional The port is used for communications from the VMware vSphere web client and from the SnapCenter Server. 8080 bidirectional This port is used to manage the virtual appliance. Note: You cannot modify the port configuration.
VMware vSphere vCenter Server port	443 (HTTPS), bidirectional The port is used for communication between the SnapCenter Plug-in for VMware vSphere and vCenter.

Configurations supported

Each plug-in instance supports only one vCenter Server. vCenters in linked mode are supported. Multiple plug-in instances can support the same SnapCenter Server as shown in the following figure.



RBAC privileges required

The vCenter administrator account must have the required vCenter privileges, as listed in the following table.

To do this operation...	You must have these vCenter privileges...
Deploy and register the SnapCenter Plug-in for VMware vSphere in vCenter	Extension: Register extension
Upgrade or remove the SnapCenter Plug-in for VMware vSphere	Extension * Update extension * Unregister extension

To do this operation...	You must have these vCenter privileges...
Allow the vCenter Credential user account registered in SnapCenter to validate user access to the SnapCenter Plug-in for VMware vSphere	sessions.validate.session
Allow users to access the SnapCenter Plug-in for VMware vSphere	SCV Administrator SCV Backup SCV Guest File Restore SCV Restore SCV View The privilege must be assigned at the vCenter root.

AutoSupport

The SnapCenter Plug-in for VMware vSphere provides a minimum of information for tracking its usage, including the plug-in URL. AutoSupport includes a table of installed plug-ins that is displayed by the AutoSupport viewer.

Minimum ONTAP privileges required

The minimum ONTAP privileges that are required vary according to the SnapCenter plug-ins you are using for data protection.

All SnapCenter plug-ins require the following minimum privileges, except where noted in the information following these tables.

All-access commands: Minimum privileges required for ONTAP 8.3 and later
event generate-autosupport-log
job history show job stop

All-access commands: Minimum privileges required for ONTAP 8.3 and later

lun
lun create
lun delete
lun igroup add
lun igroup create
lun igroup delete
lun igroup rename
lun igroup show
lun mapping add-reporting-nodes
lun mapping create
lun mapping delete
lun mapping remove-reporting-nodes
lun mapping show
lun modify
lun move-in-volume
lun offline
lun online
lun persistent-reservation clear
lun resize
lun serial
lun show

snapmirror list-destinations
snapmirror policy add-rule
snapmirror policy modify-rule
snapmirror policy remove-rule
snapmirror policy show
snapmirror restore
snapmirror show
snapmirror show-history
snapmirror update
snapmirror update-ls-set

Version

All-access commands: Minimum privileges required for ONTAP 8.3 and later

volume clone create
volume clone show
volume clone split start
volume clone split stop
volume create
volume destroy
volume file clone create
volume file show-disk-usage
volume offline
volume online
volume modify
volume qtree create
volume qtree delete
volume qtree modify
volume qtree show
volume restrict
volume show
volume snapshot create
volume snapshot delete
volume snapshot modify
volume snapshot rename
volume snapshot restore
volume snapshot restore-file
volume snapshot show
volume unmount

vserver cifs
vserver cifs share create
vserver cifs share delete
vserver cifs shadowcopy show
vserver cifs share show
vserver cifs show
vserver export-policy
vserver export-policy create
vserver export-policy delete
vserver export-policy rule create
vserver export-policy rule show
vserver export-policy show
vserver iscsi
vserver iscsi connection show
vserver show
network interface
network interface failover-groups
network interface show

Read-only Commands: Minimum Privileges Required for ONTAP 8.3 and Later

vserver

Additional ONTAP information

- If you are running ONTAP 8.2.x:

You must login as `vsadmin` on the storage VM to have the appropriate privileges for SnapCenter Plug-in for VMware vSphere operations.

- If you are running ONTAP 8.3 and later:

You must login as `vsadmin` or with a role that has the minimum privileges listed in the tables above.

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