



## **Manage storage**

### **SnapCenter Plug-in for VMware vSphere 4.9**

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# Manage storage

## Add storage

Before you can backup or restore VMs, you must add storage clusters or storage VMs. Adding storage enables the SnapCenter Plug-in for VMware vSphere to recognize and manage backup and restore operations in vCenter.

- Which GUI to use

Use the VMware vSphere client to add storage.

- Large LUNs

SnapCenter Plug-in for VMware vSphere 4.5 and later supports datastores on large LUN sizes up to 128 TB on ASA aggregates. For large LUNs, SnapCenter only supports thick provisioned LUNs to avoid latency.

- VMware virtual volumes (vVols)

You must first add the vVols storage system to ONTAP tools for VMware vSphere and then add it to SnapCenter Plug-in for VMware vSphere.

For more information, see [ONTAP tools for VMware vSphere](#)

### Before you begin

The ESXi server, the SnapCenter VMware plug-in, and each vCenter must be synchronized to the same time. If you try to add storage but the time settings for your vCenters are not synchronized, the operation might fail with a Java certificate error.

### About this task

The SnapCenter VMware plug-in performs backup and restore operations on directly connected storage VMs and on storage VMs in a storage cluster.



If you are using the SnapCenter VMware plug-in to support application-based backups on VMDKs, then you must use the SnapCenter GUI to enter storage authentication details and register storage systems.

- For vCenters in linked mode, you must separately add storage systems to each vCenter.
- If you are adding SVM, names for storage VMs must resolve to management LIFs.

If you have added entries to the *etc/hosts* file for storage VM names in SnapCenter, you must ensure that these are also resolvable from the virtual appliance. If they are not, you should add similar entries to the *etc/hosts* file within the appliance.

If you add a storage VM with a name that cannot resolve to the management LIF, then scheduled backup jobs fail because the plug-in is unable to discover any datastores or volumes on that storage VM. If this occurs, either add the storage VM to SnapCenter and specify the management LIF or add a cluster that contains the storage VM and specify the cluster management LIF.

- Storage authentication details are not shared between multiple instances of the SnapCenter VMware plug-

in or between Windows SnapCenter Server and the SnapCenter plug-in on vCenter.

## Steps

1. In the left Navigator pane of the vSphere client, click **Storage Systems**.
2. On the Storage Systems page, select **Add** option.
3. In the **Add Storage System** wizard, enter the basic storage VM or cluster information as listed in the following table:

For this field...	Do this...
Storage system	Enter the FQDN or Management LIF's IP address of a storage cluster or a storage VM. The SnapCenter VMware plug-in does not support multiple storage VM's with the same name on different clusters.
Authentication Method	Select either Credentials or Certificate. Two types of certificates are supported: - CA signed certificate - Self signed certificate
Username	This field is visible when you select Credentials as your authentication method. Enter the ONTAP username that is used to log on to the storage VM or the cluster.
Password	This field is visible when you select Credentials as your authentication method. Enter the storage VM or cluster login password.
Certificate	This field is visible when you select Certificate as your authentication method. Browse to select the certificate file.
Private Key	This field is visible when you select Certificate as your authentication method. Browse to select the private Key file.
Protocol	Select storage protocol.
Port	Port that the storage system accepts. - 443 for HTTPS connection - 80 for HTTP connection
Timeout	Enter the number of seconds SnapCenter VMware plug-in should wait before timing out the operation. The default is 60 seconds.
Preferred IP	If the storage VM has more than one management IP address, check this box and enter the IP address that you want SnapCenter VMware plug-in to use. <b>Note:</b> Do not use square brackets ([]) when entering the IP address.

For this field...	Do this...
Event Management System(EMS) & AutoSupport Setting	<p>If you want to send EMS messages to the storage system syslog or if you want to have AutoSupport messages sent to the storage system for applied protection, completed restore operations, or failed operations, select the appropriate checkbox.</p> <p>Select the <b>Send AutoSupport Notification for failed operations to storage system</b> checkbox and the <b>Log SnapCenter Server events to syslog</b> checkbox to enable AutoSupport notifications.</p>
Log SnapCenter Server events to syslog	Check the box to log events for the SnapCenter Vmware plug-in.
Send AutoSupport Notification for failed operation to storage system	<p>Check the box if you want AutoSupport notification for failed data protection jobs.</p> <p>You must also enable AutoSupport on the storage VM and configure the AutoSupport email settings.</p>

#### 4. Click **Add**.

If you added a storage cluster, all storage VMs in that cluster are automatically added. Automatically added storage VMs (sometimes called “implicit” storage VMs) are displayed on the cluster summary page with a hyphen (-) instead of a username. Usernames are displayed only for explicit storage entities.

## Manage storage systems

Before you can back up or restore VMs or datastores using the VMware vSphere client, you must add the storage.

### Modify storage VMs

You can use the VMware vSphere client to modify the configurations of clusters and storage VMs that are registered in SnapCenter Plug-in for VMware vSphere and used for VM data protection operations.

If you modify a storage VM that was automatically added as part of a cluster (sometimes called an implicit storage VM), then that storage VM changes to an explicit storage VM and can be separately deleted without changing the rest of the storage VMs in that cluster. On the Storage Systems page, the username is displayed as N/A when the authentication method is through the certificate; usernames are displayed only for explicit storage VMs in the cluster list and have the ExplicitSVM flag set to true. All storage VMs are always listed under the associated cluster.



If you added storage VMs for application-based data protection operations using the SnapCenter GUI, you must use the same GUI to modify those storage VMs.

### Steps

1. In the left Navigator pane of the SCV plug-in, click **Storage Systems**.
2. On the **Storage Systems** page, select the storage VM to be modified and then select **Edit**.
3. On the **Edit Storage System** window, enter the new values, and then click **Update** to apply the changes.

## Edit Storage System ×

Storage System	<input type="text" value="sti104-vsimg-ucs555u-cm.cti.gdl.englab.netaj"/>
Platform	<input type="text" value="FAS"/>
Authentication Method	<input checked="" type="radio"/> Credentials <input type="radio"/> Certificate
Username	<input type="text" value="admin"/>
Password	<input type="text" value="Storage system password"/>
Protocol	<input type="text" value="HTTPS"/>
Port	<input type="text" value="443"/>
Timeout	<input type="text" value="60"/> <input type="text" value="Seconds"/>
<input type="checkbox"/> Preferred IP	<input type="text" value="Preferred IP"/>

**Event Management System(EMS) & AutoSupport Setting**

Log Snapcenter server events to syslog

Send AutoSupport Notification for failed operation to storage system

## Remove storage VMs

You can use the VMware vSphere client to remove storage VMs from the inventory in vCenter.



If you added storage VMs for application-based data protection operations using the SnapCenter GUI, you must use the same GUI to modify those storage VMs.

### Before you begin

You must unmount all datastores in the storage VM before you can remove the storage VM.

### About this task

If a resource group has backups that reside on a storage VM that you remove, then subsequent backups for that resource group fail.

### Steps

1. In the left Navigator pane of the SCV plug-in, click **Storage Systems**.

2. On the **Storage Systems** page, select the storage VM to be removed and then click **Delete**.
3. In the **Remove Storage System** confirmation box, check the box for **Delete storage system(s)** and then click **Yes** to confirm.  
**Note:** Only ESXi 7.0U1 and later releases are supported.

[Restart the VMware vSphere client service.](#)

## Modify the configured storage timeout

Even though backups have run successfully in the past, they might start failing when the time that the SnapCenter Plug-in for VMware vSphere must wait for the storage system exceeds the configured timeout period. If this condition occurs, you can increase the configured timeout.

You might encounter the error `Unable to discover resources on SCV: Unable to get storage details for datastore <xxx>...`

### Steps

1. In the VMware vSphere client, click **Storage Systems**.
2. On the Storage Systems page, select the storage system to be modified and click **Edit**.
3. In the Timeout field, increase the number of seconds.



180 seconds is recommended for large environments.

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