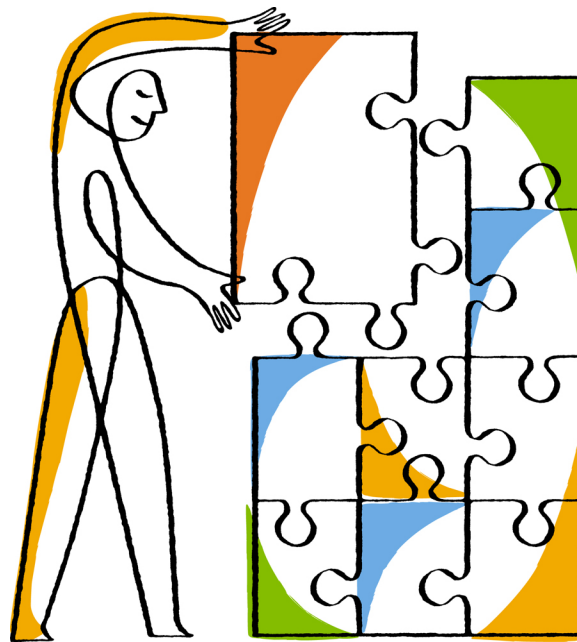




NetApp®

Virtual Storage Console 6.0 for VMware vSphere®

Release Notes



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Updates to these release notes

NetApp occasionally issues updates to release notes between product releases as new information becomes available. Review these updates carefully.

May 2015 update

The Release Notes were updated in May 2015 to address the following:

- Information about VSC support for MetroCluster has been updated to state that MetroCluster is only supported when using Data ONTAP operating in 7-Mode.
For more information, see [Known limitations](#) on page 13.

March 2015 update

The Release Notes were updated in March 2015 to address the following changes:

- When you work with VVOLs, you must back up the vCenter Server and VASA Provider for clustered Data ONTAP on a regular basis.
If you don't, you risk permanently losing access to VVOL datastores and the VVOL data contained within. For more information, see [Important cautions](#) on page 12.
- VSC 6.0 and VASA Provider 6.0 introduce several new features.
For more information, see [New in this release](#) on page 7.
- There are several known issues you should be aware of.
For more information, see [Known issues](#) on page 18.
- With this release, some new limitations have been reported.
These limitations affect support for cmdlets and VASA Provider. In addition, MetroCluster for clustered Data ONTAP is not supported in this release. For more information, see [Known limitations](#) on page 13 and [Limitations affecting VASA Provider for clustered Data ONTAP](#) on page 15.

Product overview

Virtual Storage Console for VMware vSphere software is a single vCenter Server plug-in that enables you to manage complete virtual machine end-to-end lifecycles in VMware environments using NetApp storage systems. It also serves as the management console for VASA Provider for clustered Data ONTAP.

VSC integrates smoothly with the VMware vSphere Web Client and enables you to use single sign-on (SSO) services. In addition, the VSC Summary page lets you quickly check the overall status of your vSphere environment.

By running VSC, you can perform tasks such as the following:

- Manage storage and configure the ESX host
- Provision datastores and clone virtual machines
- Perform online alignments and migrate virtual machines individually and in groups into new or existing datastores
- Back up and restore virtual machines and datastores

When you use VSC with VASA Provider, you get the ability to create storage capability profiles and set alarm thresholds. In addition, VASA Provider supports VMware virtual volumes (VVOLs), so you can use it to create and manage VVOLs.

New in this release

Virtual Storage Console 6.0 for VMware vSphere and VASA Provider 6.0 for clustered Data ONTAP add several new features.

New features include support for the following:

- (VSC only) Managing multiple vCenter Servers from a single vSphere Web Client
Each VSC server is registered with a single vCenter Server. This must be a unique one-to-one pairing.

Note: At this time, VASA Provider requires a single vCenter Server environment.
- Transport Layer Security (TLS) as the network security protocol for working with storage systems
Previous versions of VSC and VASA Provider used Secure Sockets Layer (SSL) to communicate with storage systems.
- PowerShell cmdlets that you can use to set up your own scripts
The PowerShell cmdlets are included in the VSC software download package so that you can install and use them.
For backup and restore tasks, you still need to use the SMVI API information.
Using either the cmdlets or the API is optional.
- Automatically setting ESXi host values for `NFS.MaxQueueDepth` and `NFS41.MaxVolumes`
`NFS41.MaxVolumes`, which applies to vSphere 6.0, is set to 256, and `NFS.MaxQueueDepth`, which applies to vSphere 5.0 and later, is set to 64.

Note: VSC 6.0 can discover NFSv4.1 datastores. For all other workflows, VSC uses NFSv3.
- VMware virtual volumes (VVOLs)
VASA Provider enables you to create and manage VVOLs. VSC supports VVOLs for provisioning operations.

Note: At this time, VSC does not support VVOLs for operations, such as backup, restore, cloning, optimization, and migration. For instructions on backing up VVOLs, see <https://kb.netapp.com/support/index?page=content&id=2023244&actp=LIST>.
- VSC and VASA Provider in Japanese and simplified Chinese
Translated versions of VSC and VASA Provider are available from the NetApp Support Site.
[NetApp Support](#)

Upgrade notes

Upgrade notes describe new requirements and changes in support between the last release of the product and this one, including any deprecated features. Review this information carefully before upgrading to the new release. See the NetApp Interoperability Matrix (IMT) for supported configurations and the product user documentation for complete system requirements.

[NetApp Interoperability Matrix Tool](#)

Using VSC for VMware vSphere and VASA Provider together

VASA Provider for clustered Data ONTAP is designed to work with Virtual Storage Console for VMware vSphere as long as you install the same version of each product. For example, VASA Provider 6.0 does not work with VSC 5.0; it only works with VSC 6.0.

Both VSC 6.0 and VASA Provider 6.0 are available for download from the NetApp Support Site.

[NetApp Support](#)

Licensing requirements for backup and restore features

If you are using VSC's backup and restore features, you must purchase a license for SnapManager for Virtual Infrastructure (SMVI). The SMVI controller-based license is available in both the SnapManager Suite and the Premium Bundle. If you need help getting the license, please contact your sales representative.

Note: The VSC GUI displays the backup and restore interface even if you have not installed it or purchased the SMVI license. But, if you attempt to perform a backup, restore, mount, or unmount operation, you receive an error message.

Features that are no longer supported

Beginning with the 5.0 release, VSC no longer supports importing guest customization specifications using .csv files. VSC 6.0 provides PowerShell cmdlets that you can use instead of the .csv file.

Fixed issues

It is a good practice to review the known issues fixed in a new release before upgrading to it. If a Bugs Online report is available, the bug ID contains a hyperlink to the report.

General fixed issues

Several issues were fixed since the 5.0 release of Virtual Storage Console for VMware vSphere and VASA Provider for clustered Data ONTAP. Some of the key issues that were addressed include the following:

Bug ID	Description
767444	<i>Virtual Storage Console service does not start up successfully after installation</i>
821600	<i>Active Directory domain account locks out when accessing VMware vSphere Web Client with VSC 5.0</i>
788937	<i>VMware vCenter Server instability might be caused by frequent logins from VSC</i>
834767	<i>Resource Editor in VSC 5.0 for VMware vSphere causes NullPointerException if hyphen (-) is used in ifgroup name</i>
828861	<i>VSC 5.0 for VMware vSphere cloning operation throws NullPointerException</i>
816982	<i>Backup job fails because of a Data ONTAP timeout when executing a NetApp Manageability SDK</i>
849478	<i>Backup fails when a VSAN datastore is present in the ESX host inventory</i>
806554	<i>GNUTLS certification validation bypass in NetApp VASA Provider for clustered Data ONTAP</i>
830883	<i>GNUTLS buffer overflow in VASA Provider for clustered Data ONTAP</i>
856428	<i>Bash code injection through environmental variables in NetApp VASA Provider for clustered Data ONTAP</i>

Bug ID	Description
860712	<i>SSLv3 nondeterministic CBC padding vulnerability in NetApp VASA Provider for clustered Data ONTAP</i>
861839	<i>October 2014: Java Runtime Environment JRE vulnerabilities and their applicability to NetApp VASA Provider for clustered Data ONTAP</i>
862525	<i>October 2014: Java Runtime Environment JRE vulnerabilities and their applicability to Virtual Storage Console for VMware vSphere</i>

Fixed issues affecting backup and restore operations

Bug ID	Description
761188	<i>VMDKs from a spanned virtual machine change datastores when the VM is restored after a partial restore of the VMDKs</i>
726776	<i>An automatically generated SSL certificate used by SnapManager for Virtual Infrastructure needs to be updated</i>

Removing vSphere Web Client UI extensions from the vCenter Server

Before you can upgrade Virtual Storage Console for VMware vSphere from version 5.x to version 6.0, you must remove the user interface (UI) extensions from the vCenter Server. These extensions are stored on the vCenter Server when you log into the VMware vSphere Web Client.

If you attempt to perform an upgrade without first removing the UI extensions, you will receive an error.

After you remove the extensions, you can install VSC. The new UI extensions will be downloaded to the vCenter Server the first time you log into the vSphere Web Client after VSC completes its registration.

There are two ways to remove the extensions:

- From the virtual appliance console
- From the Windows server

After you perform the steps, it can several minutes for the vSphere Web Client to restart and initialize correctly.

Using a virtual appliance console to remove the UI extensions

1. In a virtual appliance console window, use a Secure Shell (SSH) to log into the vCenter Server as root.
2. Change to the `vsphere-client-serenity` directory:

```
cd /var/lib/vmware/vsphere-client/vc-packages/vsphere-client-serenity
```
3. Stop the vSphere Web Client:

```
Service vsphere-client stop
```
4. Remove the directories containing the UI extensions:

```
rm -rf com.netapp*
```

Note: Make sure you include the asterisk (*) at the end of the command.

This command removes both the VSC and VASA Provider extensions.

- Restart the vSphere Web Client:

```
Service vsphere-client start
```

Using a Windows server to remove the UI extensions

- Log onto a Windows server using administrator credentials.
- From the windows services snap-in, stop the VMware vSphere Web Client Service.
- Go to the C:\ProgramData\VMware\vCenterServer\cfg\vsphere-client\vc-packages\vsphere-client-serenity folder.
- Remove the directories containing the UI extensions: com.netapp*
Doing this removes both the VSC and VASA Provider extensions.
- Start the VMware vSphere Web Client Service.

Verifying support for your configuration in the IMT

You can use the NetApp Interoperability Matrix (IMT) to verify product support for your configuration: Data ONTAP software, host operating system, and so on. Verify support for your configuration before you install or upgrade to the new release.

Steps

- Access the IMT.

[NetApp Interoperability Matrix Tool](#)

- If Virtual Storage Console for VMware vSphere is not the selected storage solution, click **Change** and select it under the Standard Solutions category.



- In the **Component Explorer** pane, select each component you want to verify and click **Add** when prompted.

When you add an item, incompatible items are grayed out.

Tip: Select the parent of a set of components to select all of its children.

- When you are satisfied with your choices, click **Show Results**.

The IMT lists each supported configuration.

- You can:

- Scroll across a configuration to view the supported components and any notes or alerts for the configuration.
- Click the configuration name to display complete information for supported components, including support history and NetApp policies and guidelines for the selected Storage Solution category.

- If no results are returned for your configuration, use the feedback wizard to report the problem to NetApp:

- Click **Feedback** in the upper right corner of the IMT.

- b. Select **I cannot find my configuration** and then click **Next**.
- c. Choose Virtual Storage Console for VMware vSphere in the **Solution** drop-down list; then type your comments and click **Submit**.

Important cautions

Important cautions identify issues that could severely degrade product functionality. Review these cautions carefully.

Regular backups required for VVOLs

When you work with VVOLs, you must back up the vCenter Server and VASA Provider for clustered Data ONTAP on a regular basis. The vCenter Server and VASA Provider maintain information about the VVOL datastores in their database. If the vCenter Server or VASA Provider server goes down, you risk losing the entire VVOLs environment.

Instructions for backing up VASA Provider are in <https://kb.netapp.com/support/index?page=content&id=2023244&actp=LIST>.

For information about backing up the vCenter Server, see your VMware documentation.

Known limitations

Known limitations identify platforms, devices, or functions that are not supported by this release of the product, or that do not interoperate correctly with it. Review these limitations carefully.

Using PowerShell cmdlets with VSC

For this release of Virtual Storage Console for VMware vSphere, PowerShell cmdlets have the following limitations:

- You cannot use them with the standard roles that VSC provides as part of its role-based-access-control (RBAC) feature.
- For backup and restore tasks, you still need to use the SMVI API information.

Also, the cmdlet help syntax lists some parameters that are not required and have been disabled.

The `New-VscClone` cmdlet does not support the following parameters:

- `-poolName`
- `-vmsinPool`
- `-viewServerConnectionBrokerType`

The `Update-VscStorageSystem` cmdlet does not support the following parameter:

- `-flagSet`

MetroCluster for clustered Data ONTAP is not supported

Neither VSC nor VASA Provider for clustered Data ONTAP support MetroCluster for clustered Data ONTAP.

Note: VSC supports MetroCluster for Data ONTAP operating in 7-Mode. This configuration behaves in the same manner as a high-availability pair running Data ONTAP operating in 7-Mode.

Limitations affecting provisioning and cloning operations

There are several limitations that apply to the provisioning and cloning features of Virtual Storage Console for VMware vSphere.

NTFS partitions on dynamic disks not detected during space reclamation operation

The Reclaim Space feature provided by Virtual Storage Console for VMware vSphere does not support dynamic disks. If you execute this feature on a virtual machine that has NTFS partitions on a dynamic disk, it incorrectly reports that there are no NTFS partitions.

(Data ONTAP operating in 7-Mode) Fibre Channel datastore mount fails when initiator uses same LUN ID in igroups on both cluster storage systems

Mounting a datastore fails when you are using the FC protocol and the initiator in the igroups on both storage systems in a clustered pair uses the same LUN ID while one igroup is already using that ID.

This issue applies storage systems running Data ONTAP operating in 7-Mode.

To avoid a potential problem in the event of a failover, Data ONTAP does not allow igroup sharing across clustered storage systems.

(Data ONTAP operating in 7-Mode) Qtree Redeploy limitations

When you are provisioning storage, Virtual Storage Console for VMware vSphere does not always support redeploying qtrees.

The Redeploy feature is not supported in the following cases:

- On qtrees residing on vFiler volumes
- From NTFS qtrees to mixed qtrees

Limitations affecting optimization and migration operations

There are several limitations that apply to the optimization and migration features of Virtual Storage Console for VMware vSphere.

Issues seen when performing optimization and migration operations with Fault Tolerance enabled

Several Virtual Storage Console for VMware vSphere issues have been found when performing optimization and migration operations that involve virtual machines that have `Fault Tolerance` enabled.

If a virtual machine has `Fault Tolerance` enabled, VSC cannot perform the following tasks:

- Scan the virtual machine when it is powered on and residing on a VMFS datastore
- Migrate the virtual machine
If you are using vSphere 5.1 and you attempt to migrate a virtual machine with `Fault Tolerance` enabled, the migration fails, and the associated task remains incomplete. You must restart the vCenter service to clear this task.

In addition, VSC lists the primary and secondary virtual machines in a `Fault Tolerance` configuration.

Time required for scanning datastores increases in large environments

If you have a large number of virtual machines, the Virtual Storage Console for VMware vSphere scan operation can take a long time.

For example, in tests using 1,371 virtual machines, three ESX hosts, and 140 datastores, the scan took 40 minutes.

When scanning virtual machines, VSC uses VMware snapshots. Taking these snapshots increases the time required for the scan. As a result, as more virtual machines are scanned, the longer the scan takes.

It is a good practice to schedule scans for non-critical production times.

Limitations when backing up and restoring virtual machines and datastores

Before you back up and restore datastores or virtual machines, you must be aware that you cannot use Virtual Storage Console for VMware vSphere in some cases.

Following are some restrictions when using VSC to back up or restore virtual machines and datastores:

- VSC does not support initiating a multipath SnapMirror configuration from a backup. However, because VSC does support a single-path SnapMirror initiation from a backup, you can use a multipath SnapMirror configuration if you ensure that the SnapMirror process occurs frequently and is triggered from the storage system rather than from within VSC through the SnapMirror job option.
- VSC does not back up traditional volumes; VSC backs up only FlexVol volumes.
- VSC does not restore a datastore that has been removed from the vCenter Server after a backup.
- VSC cannot back up a virtual machine that contains a disk in multiwriter mode. In such instances, VMware snapshots are not supported and selecting the **Perform VMware consistency snapshot** option for a backup fails.
- VSC does not support multiple vCenter Servers simultaneously.
- VSC cannot mount VMFS-5 file system backups on ESX 4.x hosts.
- VSC does not support datastores spanning more than one volume.
- VSC does not support VMFS datastores created with two or more LUN extents.
- VSC does not support more than four SCSI controllers for each virtual machine, and each controller can hold only up to 15 disks. If the virtual machine already has 15 disks on each of the four controllers, you cannot add more disks.
- VSC cannot take VMware snapshots of fault tolerance virtual machines.
- VSC cannot take VMware snapshots of Windows virtual machines that have iSCSI LUNs connected through Microsoft iSCSI Software Initiator or that have NPIV RDM LUNs. You can back up such virtual machines without selecting the **Perform VMware consistency snapshot** option. However, raw device maps are not backed up and are not recoverable from these backups.

[VMware KB article 1009073: Unable to take a quiesced VMware snapshot of a virtual machine](#)

Limitations affecting VASA Provider for clustered Data ONTAP

There are several limitations that apply to VASA Provider for clustered Data ONTAP.

The following list summarizes some of the limitations that can occur when you are using VASA Provider. Additional limitations are provided after this list.

- When virtual machine has a VM Storage Policy associated with it and you attempt to migrate that virtual machine within a storage container, the Recent Tasks pane reports that the operation completed successfully. However, the virtual machine remains in its original location.

This is a vCenter Server restriction. You can prevent it by reconfiguring the objects involved so that they use different profiles.

- If you use VASA Provider to rename a storage capability profile after you have added it to a VM Storage Policy, the VM Storage Policy will not reflect the new name.
You must manually modify the VM Storage Policy name to make it match the new storage capability name.
- VASA Provider does not support provisioning a virtual machine containing a VMDK that uses thick provisioning onto a datastore that contains only a thin-provisioned FlexVol.
If you attempt to perform this type of operation, it fails with the following error:
`Insufficient disk space on datastore '<datastore_name>'.`
- The vCenter Server displays an incorrect number of Protocol Endpoint (PE) LUNs.
The vCenter Server performs a query at the vSphere level, not at the container level. As a result, it displays the number of PE LUNs in all the containers on the Storage Virtual Machine (SVM, formerly known as Vserver), not just the container you are working with.
- If both nodes of a cluster that hosts a PE LUN are rebooted at the same time, you must not offline or unbind any VVOLs mapped to that PE LUN.
Offlining or unbinding VVOLs at that point can cause continuous timeout errors for remote procedure calls (RPCs). If this situation occurs, you must reboot the node where the command keeps timing out.

Migrating virtual machines with large capacity disks on NFS is time intensive

Migrating virtual machines that have large capacity disks on NFS can take a long time due to an issue with VMware Storage vMotion.

VMware Knowledge Base article *Support for virtual machine disks larger than 2 TB in vSphere 5.5 (2058287)* (http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2058287) discusses support for virtual machine disks (VMDKs) larger than 2 TB.

WinSCP hangs when downloading VASA Provider support bundles

When you attempt to download VASA Provider for clustered Data ONTAP support bundles using WinSCP, you might get an error message. Incompatibilities have been found when using WinSCP.

Workaround: If you encounter a problem, try using another tool, such as Filezilla, SFTP, or SCP, to download the support bundles.

Filter does not clear when you exit the page

If you set a filter on the Storage Mapping page, leave the page, and then return to the page, you will see that the filter is still there. However, it does not work.

This issue has also been seen on some other Virtual Storage Console for VMware vSphere pages, such as the **Storage System** page.

This is a known VMware issue.

Workaround: Manually delete the information in the filter.

VASA Provider reports that Flash Pool is enabled even if it cannot be used

VASA Provider for clustered Data ONTAP uses information from Data ONTAP to determine whether Flash Pool is enabled. This can result in situations where Flash Pool is enabled, but cannot be used.

For example, the SSD size might be set to zero or read/write caching might be disabled. In these situations, VASA Provider reports that Flash Pool is enabled and does not report that the datastore is noncompliant because Flash Pool cannot be used.

Note: To simplify creating storage capability profiles, VASA Provider uses Flash Accelerated to manage NetApp's industry-leading flash integrations. Flash Accelerated currently includes NetApp Flash Pool and NetApp Flash Cache. When you specify that a storage capability profile use Flash Accelerated, VASA Provider automatically selects the appropriate datastores.

VASA Provider reports that Flash Cache is enabled even if some of the cluster nodes are non-optimized

VASA Provider for clustered Data ONTAP continues to report that Flash Cache is available even if it has been administratively disabled or has failed.

Note: To simplify creating storage capability profiles, VASA Provider uses Flash Accelerated to manage NetApp's industry-leading flash integrations. Flash Accelerated currently includes NetApp Flash Pool and NetApp Flash Cache. When you specify that a storage capability profile use Flash Accelerated, VASA Provider automatically selects the appropriate datastores.

Known issues

Known issues identify problems that might prevent you from using this release of the product successfully. NetApp Bugs Online provides complete information for most known issues, including any workarounds.

[NetApp Bugs Online](#)

If a Bugs Online report is available, the bug ID contains a hyperlink to the report.

Known issues identified in this release

The following issues have been added to the release notes since the last release.

Bug ID	Description
800605	<i>VSC backup and restore features cannot work with duplicate IPs in the storage interfaces</i>
837662	<i>VASA Provider can no longer be accessed after vCenter Server is rebooted</i>
863468	<i>Slow name resolution by DNS causes VVOLs provisioning wizard to fail</i>
863512	<i>Insufficient privileges error occurs while deleting a storage capability profiles</i>
883572	<i>Custom RBAC role to support NDMP fails in Data ONTAP 8.2.x</i>
883803	<i>Relocating aggregate causes VVOLs provisioning operation to fail</i>
883882	<i>Error occurs when provisioning a VVOLs virtual machine and performing a volume move</i>
884709	<i>Unable to provision a VVOL datastore with standard VSC Provision role</i>
892926	<i>Datastore mount fails with vCenter API NotFound exception</i>
893942	<i>Rapid clone operation times out on storage system running Data ONTAP operating in 7-Mode</i>
895698	<i>Non-default NFS export policies modified when virtual machines provisioned</i>
895943	<i>VVOLs FlexVol Summary page displays wrong message for limited Data ONTAP RBAC role</i>
896105	<i>VSC 6.0 installer does not include default Backup and Recovery option during upgrade</i>
896230	<i>Limiting retry attempts for the setVirtualDiskUuid vSphere API call in VSC 6.0</i>
898058	<i>Deploying virtual machine on NFS VVOL datastore fails</i>

Known issues identified in previous releases

Several issues were reported in previous editions of the release notes.

The tables list issues that have public reports associated with them. If an issue does not have a public report, these release notes provide detailed information about it.

To make it easier to locate the issues that might affect how you use VSC, these issues are organized based on VSC features. There are also some issues that pertain to ESX/ESXI hosts.

General VSC for VMware vSphere issues

Bug ID	Description
719731	<i>Error sometimes seen during login after new installation or upgrade of VSC 5.0 for VMware vSphere</i>
780380	<i>Free Capacity calculation is wrong when SyncMirror is being used</i>

Issues affecting provisioning and cloning operations

Bug ID	Description
738832	<i>VSC for VMware vSphere allows the VMFS the datastore size to exceed the maximum allowed size</i>
752853	<i>Recent Tasks window fails to update during a provisioning operation</i>
755097	<i>Creating a clone of an NFS virtual machine fails with an “unable to copy” error</i>
764782	<i>Cloning a powered-on Windows 2008R2 virtual machine fails due to an error saving a VMware snapshot</i>
784083	<i>Storage Capability Profiles fail to show up in the Datastore Provisioning wizard</i>

Issues affecting optimization and migration operations

Bug ID	Description
781611	<i>Unable to migrate newly cloned virtual machine</i>
781708	<i>VSC for VMware vSphere incorrectly evaluates the automatic grow maximum during optimization and migration operations</i>
782273	<i>VSC for VMware vSphere fails to list newly created datastores and newly migrated virtual machines correctly</i>

Issues affecting VASA Provider for clustered Data ONTAP

Bug ID	Description
743854	<i>VSC for VMware vSphere no longer displays the VASA Provider GUI after a VSC upgrade</i>
746378	<i>VASA Provider fails to start correctly if it loses its initial DHCP address</i>
751173	<i>During VASA Provider installation, the application status fails to show updated status.</i>
816967	<i>VASA Provider compliance checks don't recognize SnapMirror relationships that span clusters</i>

Backup and restore issues from previous releases

Bug ID	Description
794047	<i>VSC performs a datastore restore operation instead of a virtual machine restore when a datastore and a virtual machine have the same name</i>
772570	<i>A LUN serial number containing a special character causes unexpected behavior</i>

ESX/ESXi host issues from previous releases

Bug ID	Description
388992	<i>Cisco 10-Gb network or FCoE switch port in error disabled due to pause frames</i>
399389	<i>ESX with Windows Server 2003 MSCS guest uses partner path after controller giveback</i>

Known issues when using VSC for VMware vSphere

There are several known issues in these *Release Notes* that apply to general features of Virtual Storage Console for VMware vSphere. Here are some known issues that were discovered in previous releases.

Virtual machine cannot power on after NFS or VMFS datastore is restored

You cannot power on the virtual machine after restoring the datastore if the underlying volume has run out of space during the restore operation.

Workaround: Provision more space on the volume and try to manually power on the virtual machine.

Data ONTAP vsadmin role insufficient for VSC for VMware vSphere tasks

The standard Data ONTAP vsadmin role does not have sufficient privileges for Virtual Storage Console for VMware vSphere tasks.

Instead of using the vsadmin role, you should create a new role. There are several ways to do this, including the following:

- Using the "RBAC User Creator for Data ONTAP" tool
[NetApp Community Document: RBAC User Creator for Data ONTAP](#)
- Using OnCommand System Manager, which can be downloaded for either Windows or Linux platforms
- Using the CLI (command-line interface), with the `security login` set of commands

For more information about working with Data ONTAP privileges and VSC, see *Virtual Storage Console for VMware vSphere RBAC Configuration Guide for Experienced Users*.

VSC for VMware vSphere log export and file downloads fail when using IE 9 or higher

In some cases, exporting Virtual Storage Console for VMware vSphere log files fails. This problem occurs when you are running Internet Explorer 9 or higher with the `Do not save encrypted pages to disk` option enabled.

The following error messages are displayed:

```
Unable to download export-logs from [your VSC host].
Unable to open this Internet site.
The requested site is either unavailable or cannot
be found. Please try again later.
```

This issue affects all versions of VSC.

Workaround: There are two ways to resolve this issue. NetApp recommends that you first try Method 1. If that does not work, then try Method 2.

Method 1

From the Tools menu in Internet Explorer 9, perform the following tasks:

1. Click Internet Options.
2. Click the Advanced tab.
3. Clear the check from the Do not save encrypted pages to disk check box in the Security area.
4. Click OK.
This is the default Internet Explorer setting.

Method 2

If Method 1 does not work, then perform these following tasks:

1. Start the Registry Editor.
2. For a per-user setting, locate the following registry key:
HKEY_CURRENT_USER\SOFTWARE\Microsoft\Windows\CurrentVersion\Internet Settings
For a per-computer setting, locate the following registry key:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Internet Settings
3. On the Edit menu, click Add Value, and then add the following value:
"BypassSSLNoCacheCheck"=Dword:00000001
4. Exit the Registry Editor.

Volume container not destroyed even if the last LUN had been deleted

In some environments, Virtual Storage Console for VMware vSphere does not delete the volume container even though the last LUN has been deleted and the option "Delete a volume if the last LUN in it has been deleted" is enabled.

This issue has been seen in environments using clustered Data ONTAP as well as in environments using vFiler units with Data ONTAP operating in 7-Mode.

Workaround: There is no workaround for this issue at this time.

Application configuration error

You may see an error similar to the following when using the Virtual Storage Console for VMware vSphere to clone a virtual machine from non-NetApp or VMFS datastores, or when trying to import virtual machines into VMware View. It may also occur when you are using VSC to scan non-NetApp or VMFS datastores.

This application has failed to start because the application configuration is incorrect. Reinstalling the application may fix this problem.

Workaround: Run Windows updates to install the latest C++ runtime libraries.

Known issues when using provisioning and cloning operations

There are several known issues in these *Release Notes* that apply to the provisioning and cloning features of Virtual Storage Console for VMware vSphere. Here are some known issues that were discovered in previous releases.

VSC for VMware vSphere sometimes does not show all available volumes

Data ONTAP sometimes does not return the complete list of volumes to Virtual Storage Console for VMware vSphere when there is a large number of volumes that have a lot of metadata, such as snapshots and clones.

This problem can manifest as either volumes not being displayed in VSC when you choose a provisioning target or VSC not finding newly created volumes.

This problem has been fixed in the current releases of Data ONTAP. This includes Data ONTAP 8.1.4, 8.2.1RC1, and later. If you are using a version of Data ONTAP prior to those releases, there is no workaround at this time.

CD-ROMs not copied when clones created on systems using vSphere 5.5 virtual machines with hardware version 10 (715509)

Virtual Storage Console for VMware vSphere does not copy the CD-ROM configuration when you clone a vSphere 5.5. virtual machine with hardware version 10.

vSphere 5.5 introduced virtual machines with hardware version 10. By default, when you create a virtual machine with hardware version 10, the virtual machine comes with a CD-ROM on a SATA device. While the web client version of vSphere 5.5 supports SATA devices on a CD-ROM, the C# client does not support this feature. As a result, VSC does not copy the CD-ROM configuration file when you clone a virtual machine with hardware version 10.

This issue only affects virtual machines with hardware version 10.

Workaround: There is no workaround at this time.

VSC for VMware vSphere ignores network restrictions for VMFS datastores

When you are using Virtual Storage Console for VMware vSphere to provision and clone VMFS datastores, VSC uses all network resources associated with the storage system when connecting to the iSCSI target. It ignores any network restrictions that you set for that storage system in the Resource panel.

At this time, there is no workaround for this issue.

Using VSC for VMware vSphere mount operation across data centers fails

When you are performing provisioning and cloning operations, the Virtual Storage Console for VMware vSphere mount operation sometimes fails to perform correctly in environments that have multiple ESX hosts on different data centers using the same vCenter Server.

Instead of mounting the new datastores on a new ESX host, VSC remounts the datastores currently mounted on one of the other hosts. If you continue to attempt the mount operation, it fails.

Workaround: At this time, there is no workaround for this issue.

Issue found when using VSC for VMware vSphere with direct-connect SVMs using load-sharing mirrors

Virtual Storage Console for VMware vSphere fails to provision storage or clone datastores correctly in environments where the root volume of the Storage Virtual Machine (SVM, formerly called

Vserver) is on a load-sharing mirror, the storage system is directly connected to the SVM, and the storage system is running clustered Data ONTAP.

Note: VSC's optimization and migration features might also experience this issue when creating datastores.

Using SnapMirror to make the root volume a load-sharing mirror is considered a best practice; however, when the storage system is accessed by connecting directly to the SVM rather than to the cluster, the SVM does not have SnapMirror ZAPI support. As a result, VSC cannot update the load-sharing mirror.

VSC does not detect an error when this occurs. However, VSC fails to mount a newly created volume. This issue can affect the following VSC tasks:

- Provisioning NFS datastores
- Provisioning VMFS datastores with a wrapper volume
- Cloning a new datastore that is either NFS or VMFS
- Cloning multiple NFS datastores

Workaround: To prevent this problem, you should not use SVMs directly connected to storage systems in environments where the following is true:

- The root volume of the SVM is on a load-sharing mirror
- The storage system is running clustered Data ONTAP

(Data ONTAP operating in 7-Mode) VSC for VMware vSphere fails to discover storage systems if `licensed_feature.iscsi.enable` and `licensed_feature.flex_clone.enabled` are set to off

If a storage system is running Data ONTAP operating in 7-Mode and the parameters `licensed_feature.iscsi.enable` and `licensed_feature.flex_clone.enabled` are set to off instead of on, Virtual Storage Console for VMware vSphere reports an exception and does not discover the storage controller when you are performing provisioning and cloning operations.

This problem only occurs when you are performing provisioning and cloning operations.

Workaround: To enable discovery of the storage controller, you must set both `licensed_feature.iscsi.enable` and `licensed_feature.flex_clone.enabled` to on.

Note: Installing the licenses does not automatically enable them.

Wrong disk format displayed after cloning a thin disk virtual machine on an NFS datastore

The cloning feature of Virtual Storage Console for VMware vSphere incorrectly displays the disk format when you specify thick format for the clone, but the original virtual machine uses a thin disk format and is on an NFS datastore. VSC reports that the cloned virtual machine is using thin format.

The operation actually reserves enough volume space for the thick disk format. It just reports the format of the cloned disk incorrectly.

This issue is only seen when the original virtual machine uses thin disk format and resides on an NFS datastore.

There is no workaround at this time.

Mounting an FC datastore fails if backup operation is performing a mount or unmount

Virtual Storage Console for VMware vSphere provides a mount feature that works with its provisioning and cloning operations. If you attempt to mount a Fibre Channel datastore while a backup or restore operation is performing a mount or unmount, the datastore mount might fail.

Workaround: When a backup or restore operation is performing a mount operation, do not attempt any other mounts.

Datastore Destroy operation fails

During a datastore Destroy operation, if a host cannot disconnect the datastore, the operation fails.

Failure of the Destroy operation can be caused by a virtual machine being powered up after the Destroy process is initiated.

Workaround: Resolve the issue that caused the datastore disconnect to fail. Then perform the Destroy operation from the ESX host that cannot disconnect.

Known issues when using optimization and migration features

There are several known issues in these *Release Notes* that apply to the optimization and migration features of Virtual Storage Console for VMware vSphere. Here are some known issues that were discovered in previous releases.

Error message: Another instance of Derby may have already booted the database

When this error message occurs, the optimization and migration features of Virtual Storage Console for VMware vSphere fail to start.

This error appears in the `caster.log` file. It is seen in configurations running multiple vCenter sessions with different role-based access control (RBAC) users.

Workaround: If you see this error `caster.log` file, perform the following steps:

1. Shut down VSC.
2. Remove the following `.lck` files associated with Derby:
 - `<VSC_INSTALL_DIR>\etc\caster\derby\alignmentdb\db.lck`
 - `<VSC_INSTALL_DIR>\etc\caster\derby\alignmentdb\dbex.lck`

Where `<VSC_INSTALL_DIR>` is the directory where you installed VSC.

3. Restart the VSC Windows service.

If this error occurs frequently, you should check the `nvpf.log` and `wrapper.log` files to see if there are other errors in them that indicate the system is unstable.

Unlisted VMDK snapshot results in virtual machine going into Other folder

If Virtual Storage Console for VMware vSphere encounters a virtual machine with an unlisted VMDK snapshot while performing a scan operation, it lists the state of that virtual machine as Other. VSC does not support configurations with unlisted snapshots.

Known issues when backing up and restoring virtual machines and datastores

There are several known issues in the *Release Notes* that apply to the backup and restore features of Virtual Storage Console.

Many issues have a corresponding bug ID. If a bug ID is available, it is shown in parentheses at the end of the titles of the topics in this section. You can find information about bugs by entering the ID at Bugs Online on the NetApp Support Site at mysupport.netapp.com/NOW/cgi-bin/bol.

VMDKs should be removed from original datastore

After you restore a VMFS virtual machine, VMDKs should be removed from the original datastore and appear in the newly created folder on the destination datastore. Typically, the folder name consists of the original name with a sequence number added to it.

Workaround: If the VMDK remains in the original datastore after restoring the virtual machine, you might want to delete it, to free space on the datastore. Before you delete any files or folders on the original datastore, review the contents of the destination folder to ensure that the backup restored properly.

Unable to mount an NFS volume if the export policy for the parent volume and the mounted backup volume are not the same

When you are mounting a backup, if the parent NFS volume has a customized export policy but the mounted backup volume has a default export policy, an error occurs and the mount operation fails.

Workaround: If you are mounting a backup copy to a different ESX server than the server on which the parent NFS volume is mounted, you must make sure that the export policy for the parent volume is the same as the export policy for the mounted backup volume. If you are using a customized export policy for the parent volume, then you must mount the backup to the same ESX server on which the volume was initially mounted and not to a different ESX server.

Restoring a VMDK to an alternate datastore causes loss of the original VMDK on a virtual machine

If there is not enough space on the alternate datastore to hold the VMDK, the restore operation fails and you receive an error message stating that resources are unusable on the virtual machine.

Workaround: When restoring a VMDK, ensure that there is enough free space on the datastore for the VMDK.

Successful backup job might trigger a notification during backup

When a scheduled backup job is configured to send email for warnings or errors, a successful backup might trigger a warning, because the Backup and Recovery capability was unable to create any vCenter tasks during the backup.

Even though the email you receive from the Backup and Recovery capability indicates a warning, the backup job completes successfully.

Workaround: Re-register VSC for VMware vSphere with the vCenter Server or restart the vCenter Server.

Disconnecting the FC initiator used to mount a LUN clone from the ESX server results in the mounted backup being removed from the server

The Backup and Recovery capability does not allow you to specify which initiators (iSCSI or FC) you want to have a LUN mapped to. If you back up a datastore of an iSCSI-based LUN and then mount it on the host, the Backup and Recovery capability might use FC instead of iSCSI initiators. If

you then remove the FC initiator from the storage system, the mounted backup is removed from the server.

CLI times out during a backup

During a backup, if the SnapManager for Virtual Infrastructure server does not respond in a timely manner, the CLI times out and the following message appears:

```
Connection to SMVI server was refused. Ensure that the server is running.
```

Workaround: If the Backup and Recovery capability detects this error, make sure that the server is running and then perform the backup.

Virtual machine is unresponsive during a backup that uses a VMware snapshot

Running a backup job that uses a VMware snapshot might result in the loss of remote desktop connectivity and the virtual machine being unresponsive until the backup is finished running.

Workaround: Run the backup job without using a VMware snapshot.

Unable to verify which disk is being restored

During backup and restore of a virtual disk, the disk is identified by the name used in vCenter Server (such as Hard Disk 1). There is no correlation in SnapManager for Virtual Infrastructure between this name and the drive letter used by the underlying virtual machine operating system.

Workaround: Before running a restore operation, mount the backup and manually verify that the disk corresponds to the drive to be restored.

Running a script during backup results in an error

Running a script using perl script.pl in the Backup and Recovery capability user interface or CLI does not work for the Perl system command.

Workaround: You must remove the word *Perl* from the system command and specify script.pl in the script.

Automount is enabled by default

The automount feature is enabled by default on Windows (XP, Vista, and Windows 7) operating systems, and the feature cannot be disabled. Windows automatically assigns a drive letter and mounts the disks. In offline mode, disks are mounted to a drive letter when they are attached to the virtual machine.

Virtual Storage Console cannot verify whether the scripts ran successfully

If the path for Perl was not set up correctly, Virtual Storage Console might not be able to verify whether the Perl script ran successfully during prebackup or postbackup phase.

Virtual machine is unresponsive during a backup

When you back up a datastore of a powered-on virtual machine that is experiencing heavy I/O activity, the vCenter Server might time out. During this time, the host might be disconnected from the vCenter Server.

Workaround: Check the performance of your storage system and make sure you have installed the latest VMware patches.

Known issues affecting ESX and ESXi hosts

There are several known issues in these *Release Notes* that apply to EXS and ESXi hosts. Here is a known issue that was discovered in a previous release.

DataMover.HardwareAcceleratedMove disabled for ESXi 5.0, 5.0 update 1

The adapter setting DataMover.HardwareAcceleratedMove is disabled on hosts running ESXi 5.0 or 5.0 update 1 and storage systems running clustered Data ONTAP 8.2 or later.

Hosts running these versions of ESXi sometimes panic after the storage system sends a failed status for a VAAI extended copy operation. Disabling this adapter setting prevents this problem from occurring.

This issue has not been seen on other versions of ESXi.

Where to get help and find more information

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