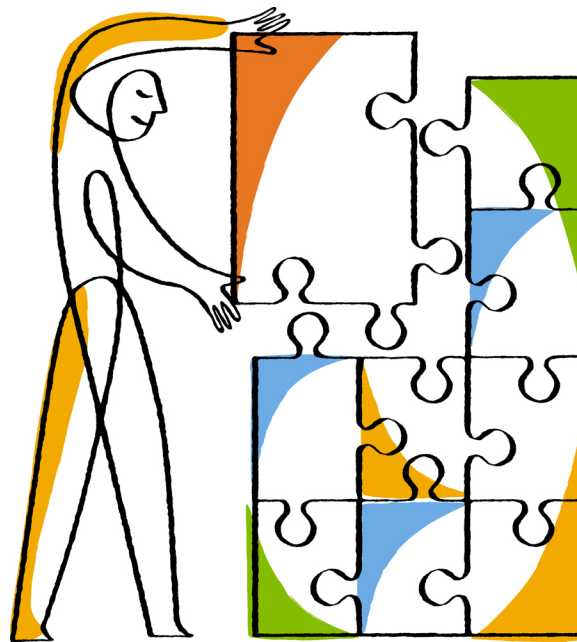




**NetApp®**

## SnapDrive® 7.1.2 for Windows®

### Release Notes



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## New in this release

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SnapDrive 7.1.2 for Windows introduces bug fixes to critical issues found in the previous release.

### New features in SnapDrive 7.1.2 for Windows

SnapDrive 7.1.2 for Windows is a maintenance release that includes important enhancements.

- Support for clustered Data ONTAP 8.3.1
  - Support for All Flash FAS
  - Support for 2-Node MetroCluster
- Critical bug fixes

### Upgrade notes

Upgrade notes describe important changes in support between the previous release of SnapDrive for Windows and this one, including any deprecated features. You should review this information carefully before upgrading SnapDrive for Windows. You should also check the NetApp Interoperability Matrix (IMT) for the most up-to-date information on supported configurations.

#### Supported upgrade paths

You can upgrade to SnapDrive 7.1.2 for Windows from the following previous versions:

- SnapDrive 7.1.1 for Windows
- SnapDrive 7.1 for Windows
- SnapDrive 7.0.x for Windows
- SnapDrive 6.5 for Windows

### Verifying support for your configuration in the IMT

You can use the NetApp Interoperability Matrix (IMT) to verify SnapDrive for Windows support for your configuration: Data ONTAP software, host operating system, and so on. You should verify your configuration before you install or upgrade to SnapDrive 7.1.2 for Windows.

#### Steps

1. Go to [mysupport.netapp.com/matrix](https://mysupport.netapp.com/matrix).
2. If SnapDrive for Windows is not the selected storage solution, click **Change** and select it under the Software | Management Software | Server Suite category:



3. In the **Component Explorer** pane, select each component you want to verify.

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

You are prompted to add the components to the worksheet.

4. Click **Add**.
5. When you are satisfied with your choices, click **Show Results**.
6. When the IMT lists each supported configuration, take one of the following actions:
  - 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, you should provide feedback using the **Feedback** control in the upper right corner of the IMT.

## SnapDrive for Windows supported components and system requirements

You must ensure that your storage system and your Windows system meet at least the minimum requirements to properly install and run SnapDrive for Windows.

**Note:** These SnapDrive for Windows system requirements are accurate as of the date of publication. However, requirements and supported versions might change after the release. For the latest system requirements information, see the Interoperability Matrix at [mysupport.netapp.com/matrix](https://mysupport.netapp.com/matrix).

| Component                                     | Supported versions                                                                                                                                                                                                                                                                  |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supported Data ONTAP storage system versions  | <ul style="list-style-type: none"> <li>• Data ONTAP 8.3.1 operating in cluster environments</li> <li>• Data ONTAP 8.2.3 operating in 7-Mode and cluster environments</li> <li>• Data ONTAP 8.1.4 operating in 7-Mode and cluster environments</li> <li>• Data ONTAP Edge</li> </ul> |
| Operating systems on the Windows host machine | <ul style="list-style-type: none"> <li>• Windows Server 2008</li> <li>• Windows Server 2008 R2</li> <li>• Windows Server 2012</li> <li>• Windows Server 2012 R2</li> </ul>                                                                                                          |
| .NET Framework requirements                   | <ul style="list-style-type: none"> <li>• .NET Framework 4.0</li> <li>• .NET Framework 3.5 SP1</li> </ul> <p>You must install both .NET Framework 3.5 SP1 and 4.0.</p>                                                                                                               |
| DSM                                           | <ul style="list-style-type: none"> <li>• Native Microsoft DSM</li> <li>• Data ONTAP DSM 4.1 P1</li> <li>• Data ONTAP DSM 4.0 (supports Windows Server versions earlier than 2012 R2)</li> </ul>                                                                                     |

| Component                                           | Supported versions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows hotfixes required for your operating system | <p>Windows Server 2012 R2:</p> <ul style="list-style-type: none"> <li>• <a href="#">2903939</a></li> </ul> <p>Windows Server 2012:</p> <ul style="list-style-type: none"> <li>• <a href="#">2859162</a></li> <li>• <a href="#">2894032</a></li> </ul> <p>Windows Server 2008 R2:</p> <ul style="list-style-type: none"> <li>• <a href="#">2522766</a></li> <li>• <a href="#">2528357</a></li> <li>• <a href="#">2494016</a></li> <li>• <a href="#">2520235</a></li> <li>• <a href="#">2531907</a></li> <li>• <a href="#">974930</a></li> </ul> |
| Windows PowerShell                                  | <ul style="list-style-type: none"> <li>• Windows PowerShell 4.0</li> <li>• Windows PowerShell 3.0</li> <li>• Windows PowerShell 2.0</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                 |
| Windows Host Utilities Kit                          | <ul style="list-style-type: none"> <li>• Windows Host Utilities Kit 7.0</li> <li>• Windows Host Utilities Kit 6.0.2</li> <li>• Windows Host Utilities Kit 6.0.1</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     |
| ESXi                                                | <ul style="list-style-type: none"> <li>• ESXi 6.0</li> <li>• ESXi 5.0</li> <li>• ESXi 5.5</li> <li>• ESXi 5.1</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Virtual Storage Console                             | <ul style="list-style-type: none"> <li>• 6.0</li> <li>• 5.0</li> <li>• 4.2.2</li> <li>• 4.2.1</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Changed commands

You should review changes to SnapDrive for Windows commands before upgrading to SnapDrive 7.1.1 for Windows or later. You must be sure that the changes do not disable any scripts that you use to execute SDCLI commands or PowerShell cmdlets.

### SDCLI and PowerShell cmdlet changes introduced in SnapDrive 7.1.1 for Windows

| New and changed commands                                                                                                                                                                                                                                    | Change                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li><code>sdcli clone_split clone_estimate</code></li> <li><code>sdcli clone_split clone_start</code></li> <li><code>sdcli clone_split clone_status</code></li> <li><code>sdcli clone_split clone_stop</code></li> </ul> | Introduces SDCLI support for split clone operations.                                                                                                                |
| <ul style="list-style-type: none"> <li><code>Get-SdVolumeCloneSplitEstimate</code></li> <li><code>Start-SdVolumeCloneSplit</code></li> <li><code>Get-SdVolumeCloneSplit</code></li> <li><code>Stop-SdVolumeCloneSplit</code></li> </ul>                     | Introduces PowerShell cmdlet support for split clone operations.                                                                                                    |
| <code>-ValidateCloneDepth</code> in <code>Mount-SdSnapshot</code>                                                                                                                                                                                           | Stops your mount request, if you are attempting to mount a clone child that exceeds the clone depth. The default clone depth is two.                                |
| <code>-DeleteParentClones</code> in <code>Dismount-SdSnapshot</code>                                                                                                                                                                                        | Indicates that you want to unmount and delete any offline parent volume clones. You are prompted for confirmation before completing a parent clone volume deletion. |
| <code>sdcli snap mount -cn</code>                                                                                                                                                                                                                           | Specifies the name of the volume clone you want to mount.                                                                                                           |
| <code>sdcli disk connect -cn</code>                                                                                                                                                                                                                         | Specifies the name of the volume clone you want to mount.                                                                                                           |
| <code>sdcli disk create -thin</code>                                                                                                                                                                                                                        | Specifies that you want to create a thinly provisioned LUN.                                                                                                         |

## Highlighted fixed issues

It is a good practice to review the bugs fixed in SnapDrive 7.1.2 for Windows before upgrading to the new release.

### Highlighted fixed issues in SnapDrive 7.1.2 for Windows

The following bugs have been fixed in this release. BURT's with public reports in Bugs Online are hyperlinked. You can click the hyperlink to view additional details.

| Issue                  | Description                                                                                                                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 716253                 | In a SnapMirror fan out scenario, when you create a Source Volume using SnapMirror and SnapVault to the same destination Storage Virtual Machine (SVM), the SnapVault update also initiates the SnapMirror update and vice versa. |
| <a href="#">767205</a> | SnapManager for Hyper-V backup operations fail if the virtual machine configuration name or Snapshot copy location name do not end in a trailing backslash.                                                                       |
| <a href="#">821858</a> | All of your scripts and applications might be required to use PowerShell 4.0 as a result of your SnapDrive for Windows version 7.0.2 and later installation                                                                       |
| <a href="#">825590</a> | When using Space Reclaimer in SnapDrive, the estimate for space that can be reclaimed might vary, sometimes greatly, from the actual space reclaimed.                                                                             |
| 829995                 | Executing the new-sdsmbshare command with mandatory parameters creates conflicts with the template.                                                                                                                               |
| 888290                 | The UpdateMirror switch in the new-sdsnapshot cmdlet fails to update the SnapMirror destination.                                                                                                                                  |
| <a href="#">889494</a> | The procedure of formatting thin provisioned LUNs with SnapDrive for Windows version 7.1 on a clustered Data ONTAP 8.3RC2 system is very slow.                                                                                    |
| 889706                 | Disk creation cannot be completed while formatting a new thin LUN on FS.0RC2 with a Windows 2012 R2 operating system.                                                                                                             |
| <a href="#">892256</a> | There is no provision to create a thick LUN on a thin volume using SnapDrive CLI.                                                                                                                                                 |
| 895494                 | SnapDrive for Windows upgrade from 7.1.1 to 7.1.2 results in a message that Powershell 3.0 is required.                                                                                                                           |
| <a href="#">926378</a> | Using the command prompt on Microsoft Windows Server 2012 or 2012 R2 to create a Volume Shadow Services (VSS) DiskShadow Snapshot copies might produce an error message.                                                          |

## Important cautions

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Important cautions identify issues that might cause data loss or system failure. You should review these cautions carefully.

### **SnapDrive is not supported with Storage Virtual Machine (SVM) disaster recovery**

Storage Virtual Machine (SVM) disaster recovery (SVM DR) is supported in clustered Data ONTAP 8.3.1. If you use SnapDrive for Windows to manage volumes, LUNs, or SMB shares in an SVM and the SVM is configured for disaster recovery, then SnapDrive is not supported in this configuration.

### **Restoring Snapshot copies after 7-Mode to clustered Data ONTAP 8.3.0 transition**

You cannot use SnapManager products to restore or perform verification operations on Snapshot copies that reside on volumes that have been transitioned from 7-Mode to clustered Data ONTAP 8.3.0 using the 7-Mode Transition Tool. After you have transitioned from 7-Mode to clustered Data ONTAP 8.3.0, you should immediately back up your transitioned data, and then you can perform backup, restore, and cloning operations on the new Snapshot copies you created in your clustered Data ONTAP 8.3.0 environment.

To learn more about 7-Mode Transition Tool capabilities and limitations, see the 7-Mode Transition Tool documentation set.

### **Accessing dedicated and shared LUNs after transition**

If you do not perform this series of steps after transition from 7-Mode to clustered Data ONTAP, you cannot access your dedicated and shared LUNs:

1. After you have transitioned to clustered Data ONTAP using the 7-Mode Transition Tool, add the clustered Data ONTAP Storage Virtual Machine (SVM) management LIF to the SnapDrive for Windows transport protocol settings.
2. Refresh **Disks** in the SnapDrive for Windows GUI or use `sdcli` to see the SnapDrive for Windows disks created prior to the transition.
3. When the disks are available in SnapDrive for Windows, you can perform all regular SnapDrive for Windows operations in clustered Data ONTAP.
4. After your disks are available, you should perform an immediate backup on all the LUNs you have transitioned to clustered Data ONTAP.

**Note:** For complete details on accessing disks in Disk Management, see the *7-Mode Transition Supplement for SAN Hosts*.

### **Related information**

[7-Mode Transition Tool 2.1 Data and Configuration Transition Guide](#)

[7-Mode Transition Tool 2.1 SAN Host Transition and Remediation Supplemental Guide](#)

[7-Mode Transition Tool 2.1 Release Notes](#)

## Known limitations

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Known limitations identify platforms, devices, or functions that are not supported by SnapDrive 7.1.2 for Windows, or that do not interoperate correctly with SnapDrive for Windows. You should review these limitations carefully.

### Support for SnapManager verifications with load sharing mirrors

SnapManager verification operations with load sharing mirrors does not work in clustered Data ONTAP environments.

### Support for concurrent SnapDrive operations

SnapDrive for Windows does not support concurrent SnapDrive operations.

### Support for selective LUN mapping

SnapDrive for Windows does not support selective LUN mapping. As a result, you must ensure that you have a data LIF on each cluster node.

### Support for VHDX

VHDX sharing is not supported in NAS volumes from Data ONTAP.

### 7-Mode to clustered Data ONTAP transition limitations

You cannot transition a VMDK disk, because Virtual Storage Console does not support 7-Mode Transition Tool. Transitioning from 7-Mode to clustered Data ONTAP using the 7-Mode Transition Tool has the following limitations in SnapDrive 7.1.2 for Windows:

- Mounting Snapshot copies and file-level restore operations fail on Snapshot copies transitioned from 7-Mode environments.  
However, after you have transitioned to clustered Data ONTAP 8.3.0, you should immediately back up your transitioned data, and then you can perform these same operations from the new Snapshot copies that you created in clustered Data ONTAP 8.3.0.
- The ability to clone a clone is not supported on Snapshot copies that have been transitioned from a 7-Mode environment to clustered Data ONTAP 8.3.0.

### Interoperability issues with Windows Server 2012 and 2012 R2

- In Windows 2012 and later, you should install Windows Host Utility (WHU) or Data ONTAP DSM, which enables the UNMAP feature.  
For more information, refer to the KB article [3013991](#).
- Data ONTAP 8.3 does not support Windows Server 2012 and 2012 R2 native thin provisioning.
- You should not perform any SnapDrive for Windows disk-related operations on the LUN that hosts the virtual machines during live virtual machine migration and storage migration.
- Although Windows Server 2012 and 2012 R2 enables you to create a disk larger than 16 TB, you cannot create a Data ONTAP LUN larger than 16 TB.
- When you add new nodes to your cluster on Windows Server 2012 and 2012 R2, you must remap the LUNs to the new nodes.

## Known issues

Known issues identify problems that might cause you inconvenience but do not prevent you from using SnapDrive 7.1.2 for Windows successfully.

NetApp Bugs Online provides complete information about most bugs, including any workarounds. If a Bugs Online report is available, the bug ID column in the table contains a hyperlink that you can click to view the report.

### Known issues identified in this release

The following known issues have been identified in this release.

| Bug ID                 | Description                                                                                                                                                                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">870108</a> | Storage Virtual Machine (SVM) name resolution in SnapDrive for Windows Transport Protocol Settings truncates any characters in an SVM name following the . character, if the SVM name contains an . character in it.                                                                                       |
| <a href="#">864540</a> | Splitting multiple clones of multiple Cluster Shared Volumes (CSV) disks using one command does not split all clones.                                                                                                                                                                                      |
| <a href="#">864547</a> | SnapDrive for Windows fails silently if the IP returned by Virtual Storage Console is not the same as the IP registered in the transport protocol for SnapDrive. SnapDrive for Windows is restricted to accessing the cluster mode storage system only through the IP returned by Virtual Storage Console. |
| <a href="#">885161</a> | In a VMware cluster environment, SnapDrive for Windows does not display or use initiators from each ESXi host when creating or choosing an igroup for mapping the shared raw device mapping (RDM) LUN.                                                                                                     |
| <a href="#">934785</a> | SnapDrive for Windows does not allow 7-Mode controllers to be configured in the Transport Protocol Settings using HTTPS.                                                                                                                                                                                   |

### Known issues identified in previous releases

The following issues are reported in previous editions of the release notes:

| Bug ID                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">817755</a><br><a href="#">401641</a> | Downgrading SnapDrive 7.1 to earlier versions might not work as expected. For example, when you try to install SnapDrive for Windows 7.0 or 7.0.2 on an ESX-Guest Operating System (Windows machines) on which SnapDrive for Windows 7.1 is installed currently, either an error message (on x86) is produced, or SnapDrive for Windows fails to detect the ESX machine as a physical machine (on x64) after the installation. |
| <a href="#">768623</a>                           | Your FlexClone volume disk disconnect operations fail if SMI-S Agent and SnapDrive are using the same virtual storage server.                                                                                                                                                                                                                                                                                                  |
| <a href="#">757590</a>                           | You might experience difficulty installing SnapDrive on systems without Internet access.                                                                                                                                                                                                                                                                                                                                       |
| <a href="#">743215</a>                           | You might not be able to immediately create Snapshot copy backups on volume shares when a restore operation is in progress.                                                                                                                                                                                                                                                                                                    |
| <a href="#">739462</a>                           | You encounter error messages when SnapDrive deletes certain LUNs.                                                                                                                                                                                                                                                                                                                                                              |

| Bug ID                 | Description                                                                                                                                                                                                                                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">724404</a> | SnapManager for SQL Server backup verification or mount operations fail on a Windows Failover Cluster running on VMware when using FC RDM LUNs.                                                                                                                                       |
| <a href="#">708057</a> | When you perform VMDK SnapRestore operations on a VM running Windows Server 2012 and ESX 5.0U2, data is not restored.                                                                                                                                                                 |
| <a href="#">664512</a> | You experience slow restarts when the hotfixes associated with Microsoft KB 2729452 or 2742599 are installed on a Windows Guest account with SnapDrive and ESX integration.                                                                                                           |
| <a href="#">656135</a> | You cannot create an RDM LUN larger than 2 TB when SnapDrive is configured with vCenter credentials. This issue is fixed in vSphere versions 5.0U3, 5.1U2, and 5.5 GA; this issue still exists if you are working on systems with earlier versions of these vSphere version families. |
| <a href="#">642832</a> | You cannot automatically rename CSV reparse points.                                                                                                                                                                                                                                   |
| <a href="#">567067</a> | Your pass-through disk delete or disconnect operations fail after changing drive letter                                                                                                                                                                                               |

The following issues are not addressed on the Bugs Online web site:

| Bug ID                   | Description                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 861781                   | Issue: Your SnapDrive for Windows GUI displays the storage system IP address instead of the Storage Virtual Machine (SVM) host name for VMDK disks when you are using MetroClusters in switchover mode.<br>Workaround: None.                                                                                                                                       |
| 851995                   | Issue: SnapDrive for Windows does not limit the clone level to two when cloning VMDK disks on VMFS datastores.<br>Workaround: None.                                                                                                                                                                                                                                |
| 826201                   | Issue: Shrinking a thinly provisioned LUN fails with a connection timeout error.<br>Workaround: Shrink the LUN in smaller increments.                                                                                                                                                                                                                              |
| 850838                   | Issue: In MetroCluster environments, after you perform a switchover and switchback operation, the Storage Virtual Machine (SVM) name is changed from vs1 to vs1-mc, and vice versa. In this case, if the SnapDrive for Windows host is using VMDK disks exclusively, restore and mount workflows might fail.<br>Workaround: Restart the SnapDrive service (SWSVC). |
| Microsoft hotfix 2908783 | Windows Server 2008 R2, Windows Server 2012, and Windows Server 2012 R2 environments display data corruption issues when there are connections to multiple iSCSI storage array targets.<br>Workaround: Download and install Microsoft hotfix 2908783.<br><a href="#">Microsoft Support Article 2908783: Data corruption occurs on iSCSI LUNs in Windows</a>        |

## Documentation errors and omissions

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Review these errors and omissions in the published SnapDrive for Windows 7.1 documentation carefully.

### **Wrong syntax for sdcli snap delete command**

The syntax of the `snap delete` command is referred as `-D MountPointList [. . .]` in the *SnapDrive 7.1 for Windows Administration Guide for SAN Environments*. The correct syntax is `-d MountPoint`.

### **No information regarding SnapDrive versions to be installed on cluster nodes**

The SnapDrive for Windows documents do not specify that all the nodes in the cluster must be running the same version of SnapDrive for Windows.

## How to get help and find more information

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The NetApp Support Site provides access to troubleshooting tools, product documentation, and technical assistance. You can use NetApp Community forums to connect with peers, and the NetApp Library to access technical reports and white papers.

| Resource                                             | Description                                                                                  |
|------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <a href="#"><i>NetApp Support Site</i></a>           | Access troubleshooting tools, product documentation, and technical support assistance.       |
| <a href="#"><i>NetApp Community public forum</i></a> | Connect with peers, ask questions, exchange ideas, find resources, and share best practices. |
| <a href="#"><i>NetApp Library</i></a>                | Access technical reports, white papers, and other documents.                                 |

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