

# Storage Manager 2020 R1 Release Notes

This document describes the changes in Storage Manager 2020 R1.

**Current Release Version:** 20.1.1

**Release Type:** Major (MA)

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## Revision History

**Table 1. Document revision history**

Revision	Date	Description
A	December 2020	Initial release of Storage Manager 2020 R1
B	January 2021	Added a known issue and documentation corrections
C	May 2021	Added DSM-47431 and DSM-47433 to Known issues
D	September 2021	Moved DSM-42715 from Resolved issues to Known Issues
E	August 2022	Updated the supported versions of VMware Site Recovery Manager (SRM)

## Product description

Storage Manager 2020 R1 represents another major software release for Dell EMC and includes several features and enhancements.

This release of Storage Manager supports the following Storage Center models:

- SCv2000 Series
- SCv3000 Series
- SC4020
- SC5020
- SC5020F
- SC7020
- SC7020F
- SC8000
- SC9000

# New features

The following features have been added in this release:

**Table 2. New features in Storage Manager 2020 R1**

Feature	Feature Description
Data Mobility	Added the ability to manage the following Data Mobility features in Unisphere Central: <ul style="list-style-type: none"><li>• Replication</li><li>• Live Volume</li><li>• Live Migrate</li><li>• Disaster Recovery</li><li>• Bandwidth Controls for Replication</li><li>• One Time Copy</li><li>• Remote Storage Centers</li><li>• Remote Data Collector</li><li>• Replication Thresholds</li><li>• Volume Advisor Recommendations</li></ul>
Reports	Added the following historical reports: <ul style="list-style-type: none"><li>• Added the <b>Live Volumes</b> report to Automated Reports.</li><li>• Added the <b>Volume Profile</b> report type to Automated Table Reports.</li><li>• Added the <b>Pressure Report</b> report type to Automated Table Reports.</li></ul>
Servers	Added the ability to manage Storage Center Servers and Registered Servers in Unisphere Central.
Dell Storage Replication Adapter (SRA)	Added the Dell Storage Replication Adapter (SRA) 20.1.1.13 for Photon-based SRM.

See the product support pages on <https://www.dell.com/support> for user documentation pertaining to the new features.

# Changed features

The following features have been changed in this release:

**Table 3. Changed features in Storage Manager 2020 R1**

Feature	Feature Description
Alert threshold definitions	Expanded alert threshold definitions to include disk class levels.
Automated daily reports	Added snapshot and deduplication size information to the automated daily reports
Distributed sparing	Added the ability to display the progress of the Distributed Sparing Optimizer.
Health checks	Added the ability to run upgrade health checks on demand.
Space reporting	Improved space reporting in the Storage Manager Client, Unisphere, and Unisphere Central.
Storage Center support	Removed support for Storage Center 7.1 and added support for Storage Center 7.5.
Storage Manager Data Collector	Improved the performance of Storage Manager Data Collector backend processes.
Storage Manager Infrastructure Update	<ul style="list-style-type: none"><li>• Added support for Transport Layer Security (TLS) version 1.3 to the Storage Manager Data Collector</li><li>• Migrated Storage Manager to the Java SE Development Kit (JDK) 11.</li></ul>
Virtual ports and fault domains	Added the ability to remove all the ports in a virtual fault domain and remove the fault domain in Unisphere and Unisphere Central. <b>NOTE:</b> All the ports in a virtual fault domain and the fault domain cannot be removed from SCv2000 series and SCv3000 series storage systems.
VMware support	<ul style="list-style-type: none"><li>• Added support for VMware Site Recovery Manager (SRM) 8.3.</li></ul>

**Table 3. Changed features in Storage Manager 2020 R1 (continued)**

Feature	Feature Description
	<ul style="list-style-type: none"> <li>Added support for VMware vCenter Photon-based SRM 8.2, 8.3, 8.4 and 8.5.</li> <li>Removed support for VMware SRM 6.0, 6.1, and 6.5.</li> <li>Added support for VMware vSphere 7.0.</li> <li>Removed support for VMware vSphere 6.0.</li> </ul>

## Resolved issues

The following high severity issues are resolved in this release:

**Table 4. Issues resolved in Storage Manager 2020 R1**

Issue	Functional area	Description
DSM-46784	Alerts and reporting	The password for Active Directory users might be visible in the Directory Services debug log of the Storage Manager Data Collector.
DSM-46625	Replication and Live Volumes	If the local user that was used to add a Storage Center to a Storage Manager Data Collector is deleted, Unisphere Central might incorrectly report that the Remote Storage Center is down when attempting to perform a replication.
DSM-45927	Storage Manager Data Collector	When two dual-port SAS HBAs are installed in a host server and a single port on each HBA is connected to a single fault domain, a Storage Manager Client that is connected to a Data Collector and Unisphere Central might incorrectly display a Partial connectivity status for the HBAs.
DSM-42392	Storage Manager Data Collector	Attempting to upload a custom SSL certificate to the Data Collector fails with the following error message:  <div style="background-color: #f0f0f0; padding: 5px; border: 1px solid #ccc;"> <p style="text-align: center;">Certificates do not conform to algorithm constraints</p> </div>
DSM-46304	Storage Manager Virtual Appliance	The <b>Maximum Server Memory Usage</b> setting of the Storage Manager Virtual Appliance is displayed incorrectly in the <b>Advanced</b> area on the <b>General &gt; Summary</b> tab of the <b>Data Collector</b> view in Unisphere Central.
DSM-45979	Storage Manager Virtual Appliance	When the Storage Manager Client is connected to a Storage Manager Virtual Appliance, the <b>Store report in public directory</b> option is displayed in the <b>Automated Reports</b> tab of the <b>Edit Data Collector Settings</b> dialog box, but the option is not supported by the Storage Manager Virtual Appliance.
DSM-47220	Storage Replication Adapter (SRA)	Site Recovery Manager (SRM) recovery plans might time out after 1000 seconds if the Data Collector is on a Storage Manager Virtual Appliance.
DSM-45610	Storage Replication Adapter (SRA)	Device discovery might fail in an SRM environment due to transaction rollbacks that occur when the Storage Manager Data Collector manages many more replications than normal.
DSM-39971	Storage Replication Adapter (SRA)	Performing a Test Recovery workflow in SRM might fail if the Data Collector is on a Storage Manager Virtual Appliance.
DSM-46797	Storage Manager Virtual Appliance	Updating a Storage Manager Virtual Appliance from Storage Manager 2018 R1 to Storage Manager 2020 R1 might result in a temporary session that displays a Virtual Appliance running Storage Manager 2018 R1.
DSM-47273	Unisphere	Slot 20 on SC460 expansion enclosures might incorrectly appear as disabled in Unisphere and Unisphere Central.
DSM-46862	Unisphere	The <b>Change Data Source</b> wizard in Unisphere Central displays a <code>You must enter a valid host or IP address</code> error message if SqlServer is selected as the database type and the FQDN or IP address that is specified includes a <code>\</code> , which is used to specify the SQL database instance.

**Table 4. Issues resolved in Storage Manager 2020 R1 (continued)**

Issue	Functional area	Description
DSM-46269	Unisphere	The events that are selected in the <b>Managed Events</b> tab on the <b>Edit User Settings</b> dialog box in Unisphere Central might not be saved when the <b>OK</b> button is clicked.
DSM-41788	Unisphere	The <b>Day Constraint</b> and <b>Time Constraint</b> options on the <b>Create Threshold Definitions</b> dialog box might not work as expected.
DSM-41267	Unisphere	When a Storage Center is selected in Unisphere Central, the <b>Summary</b> tab might display a list of customer notifications and no other information.
DSM-40359	Unisphere	Free Space and Spare Space information is missing from the <b>Growth</b> tab for Disk Folders in the <b>Disks</b> view.
DSM-39997	Unisphere	The <b>Replace Disk</b> button is missing on the <b>Disks</b> tab in the <b>Hardware</b> view of Unisphere.
DSM-36115	Unisphere	In the <b>Performance</b> view under the <b>Monitoring</b> menu of Unisphere Central, when the <b>Historical</b> radio button is selected, and <b>Custom</b> is selected from the <b>Display</b> drop-down menu, the <b>Update</b> button is not enabled when valid times are entered in the <b>Start Time</b> and <b>End Time</b> fields.
DSM-28814	Unisphere	In the column <b>Filters</b> dialog box, when a value with multiple decimal places is typed into a storage size or network speed field, the value is not parsed correctly and the filter does not work.
DSM-26784	Unisphere	In the column <b>Filters</b> dialog box of the global <b>Volumes</b> view, the <b>Equal to</b> option in the <b>% Full</b> drop-down menu does not work.
DSM-35710	User Management	Storage Center does not restrict directory service communication to manually defined LDAP servers. This issue might cause delays when joining a Storage Center to a directory environment or failures when adding directory users and groups to a Storage Center for authentication.
SCOS-11192	User Management	Storage Center cannot authenticate directory service users that are configured to use an alternate DNS suffix.

## Known issues

The following high severity issues remain unresolved in this release:

**Table 5. Known issues in Storage Manager 2020 R1**

Issue	Functional area	Description	Workaround/Resolution
DSM-26371	Cross-platform replication	Storage Manager might incorrectly display the progress of a cross-platform replication as 100% after pausing a cross-platform replication at 50% and then restarting the lead controller on the PS Group.	Resume the replication.
DSM-20458	Cross-platform replication	Storage Manager does not prevent the user from deleting a port that is used in replication. Deleting the port from the fault domain breaks the replication.	Contact technical support to restart the replication if a port has been deleted.
DSM-19844	Cross-platform replication	The Modify Space Settings option is displayed for PS Groups when cross-platform replication is not configured.	None
DSM-19667	Cross-platform replication	Storage Manager does not immediately display restore points for unplanned disaster recovery activations.	Refresh the Replications view or relaunch the Storage Manager Client.
DSM-17016	Cross-platform replication	Storage Manager displays replication schedules for replications from PS Group	None

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

<b>Issue</b>	<b>Functional area</b>	<b>Description</b>	<b>Workaround/Resolution</b>
		to PS Group. Storage Manager does not manage replications between PS Groups.	
DSM-16737	Cross-platform replication	Storage Manager does not allow you to set up a replication from a Storage Center to a PS Group when creating a volume on the Storage Center.	Set up the replication to the PS Group using the Replicate Volume wizard.
DSM-15904	Cross-platform replication	Storage Manager displays an incorrect error after setting up a replication from a Storage Center to a PS Group with insufficient delegated space.	Modify the amount of delegated space on the PS Group to accommodate the replication.
DSM-14648	Cross-platform replication	Storage Manager does not automatically map a volume to the server after activating disaster recovery on a replication from a PS Group to a Storage Center.	Manually map the volume to the server.
88549	Cross-platform replication	When replicating more than 16 volumes from a PS Series group to a Storage Center, Storage Manager displays replications in a Waiting state as Down.	Do not replicate more than 16 volumes at a time.
DSM-28532	Miscellaneous	After changing the Chargeback department of a volume that has the same index as a volume on a different Storage Center, Storage Manager might not show that the volume changed Chargeback departments. Storage Manager might also change the Chargeback department of the volume with the same index on the other Storage Center.	Perform a Copy/Mirror/Migrate to a new volume. This problem does not occur if the new volume does not share an index with a different volume on another system.
DSM-27414	Miscellaneous	When changing the BMC interface configuration mode from static to DHCP, the IP addresses remain set up in static mode. If you change the configuration mode from DHCP to static, and modify only the IPv4 address, Storage Manager changes the netmask and gateway IP addresses to invalid values.	After modifying the configuration mode, ensure that the IP addresses are correct.
DSM-16593	Miscellaneous	Applying SNMP setting to other Storage Centers without SNMP enabled fails without displaying an error.	Enable SNMP on the Storage Center before applying any settings.
DSM-23693	PS Series Group Management	Storage Manager displays a PS Series group as inactive after a controller failover on the PS Series group.	Remove the PS Series group from Storage Manager and then add it back.
DSM-13871	PS Series Group Management	When an online Thin Import of a boot volume is performed from a PS Series group to a Storage Center, the server is unable to boot from the volume after mapping it to the server.	Online Thin Import is not supported with boot volumes.
DSM-9294	Replications and Live Volumes	When creating multiple replications or Live Volumes simultaneously, correcting a configuration error and resuming the process can create duplicate replications or Live Volumes.	If a creation operation fails, do not use the wizard to correct the configuration error and continue. Instead, exit and restart the wizard, and then resume creating replications or Live Volumes from the point of failure.
ENHTKR-90	Replications and Live Volumes	When importing a volume, Storage Manager does not allow you to select 0 as the LUN number.	None

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

<b>Issue</b>	<b>Functional area</b>	<b>Description</b>	<b>Workaround/Resolution</b>
DSM-30033	Storage Management	Creating a server using the Create Server from VMware vSphere or vCenter wizard fails if the host contains adapters that are not VMware software iSCSI adapters.	Create the server manually using the Create Server dialog box.
DSM-28354	Storage Management	Storage Manager might not display information for some Hyper-V virtual machine volumes that are monitored with the Server Agent in the Servers view.	View information for those volumes in the Storage view.
DSM-28295	Storage Management	After reinstalling the Server Agent, it might fail to register the server with Storage Manager.	Register the server in the Storage Manager Client.
DSM-20038	Storage Management	During initial setup of Storage Center, the Discover and Configure Storage Centers wizard might close while updating the Storage Center. You cannot open the Discover and Configure Storage Centers wizard to complete the setup until the controllers finish restarting.	Wait for the controllers to power on, reconnect to the Storage Center, and then launch the Discover and Configure Uninitialized Storage Centers wizard.
DSM-13200	Storage Management	Storage Manager does not delete a Snapshot Profile until a refresh if the Snapshot Profile was deleted without the recycle bin and was assigned to a volume.	Refresh the Storage Manager Client.
DSM-11762	Storage Management	When creating a volume using the Server Agent, Storage Manager might show a warning that the label contains illegal characters if another volume on the Storage Center contains unsupported characters.	Remove the unsupported characters from the label of the volume.
DSM-9428	Storage Management	Creating a server cluster using the Create Server from vSphere or vCenter wizard creates server cluster Storage Center objects for each node in the server cluster.	None
DSM-9390	Storage Management	Creating an RDM for a VM hosted on an ESXi or vSphere host maps the volume to the server in the cluster instead of the cluster object.	Manually promote the volume to the ESXi server cluster mappings, then rescan for hosts on the vCenter server.
DSM-47431	Storage Manager Client	The <b>Discover and Configure Uninitialized Storage Centers</b> wizard does not open when the <b>Discover and Configure Uninitialized Storage Centers</b> clicking the link on the initial launch screen of a Storage Manager Client that it is installed on Windows Server 2012 R2. <b>NOTE:</b> The initial launch screen has a white background.	<ul style="list-style-type: none"> <li>Open the wizard by clicking the <b>Discover and Configure Uninitialized Storage Centers</b> link on the second launch screen of the Storage Manager Client. <b>NOTE:</b> The second login screen has a black background.</li> <li>Open the wizard by clicking the <b>Discover and Configure Uninitialized Storage Centers</b> link after connecting the Storage Manager Client to a Data Collector.</li> </ul>
DSM-47433	Storage Manager Client	If the Storage Manager Client is not connected to a Data Collector, using the <b>Discover and Configure Uninitialized Storage Centers</b> wizard to discover uninitialized Storage Centers might result in an Administrator rights error message. This issue occurs even when you are	Connect the Storage Manager Client to a Data Collector and then use the <b>Discover and Configure Uninitialized Storage Centers</b> wizard to discover uninitialized Storage Centers.

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

<b>Issue</b>	<b>Functional area</b>	<b>Description</b>	<b>Workaround/Resolution</b>
		logged in as a user with Administrator rights.	
DSM-47392	Storage Manager Client	The <b>Create Server</b> dialog box, <b>Create Server Cluster</b> dialog box, and <b>Preferences</b> tab in the <b>Edit Storage Center Settings</b> dialog box might not display properly in the Linux version of the Storage Manager Client.	Use Unisphere Central to perform the operations.
DSM-36674	Storage Manager Client	When an SCv3000 Series storage system contains both an iSCSI I/O card and a mezzanine card, the deployment wizard only shows the cabling diagram for the iSCSI I/O card.	None
DSM-36577	Storage Manager Client	When the Storage Manager Client and Data Collector are in different time zones, the timestamps are different.	Do not set a time zone value for the Data Collector UTC setting.
DSM-36253	Storage Manager Client	When creating a server, the <b>Operating System</b> information dialog box shows the <b>Maximum Path Count</b> as zero instead of 32 or unlimited.	None
DSM-31931	Storage Manager Client	If a system has multiple disk folders, the <b>Storage Alert Threshold</b> field on the <b>Summary</b> tab displays the data for the last disk folder in the list.	View the threshold data in the <b>Thresholds Alerts</b> view.
DSM-28859	Storage Manager Client	The welcome screen for the Storage Manager Client on Red Hat Linux Enterprise is blank when the Color Depth of the Windows Remote Desktop Connection is set to Highest Quality (32 bit).	Set the Color Depth of the Windows Remote Desktop Connection to True Color (24 bit) or High Color (16 bit).
DSM-26168	Storage Manager Client	The Storage Manager Client displays the delete option when volumes and volume folders are selected. However, the Storage Manager Client does not support deleting volumes and volume folders in one action.	Delete volumes and volume folders separately.
DSM-14009	Storage Manager Client	Refreshing the Storage Manager Client does not clear the red dot indicator from the Storage Center node.	Restart the Storage Manager Client.
DSM-9577	Storage Manager Client	The front-end SAS card for an SCv2000 series controller does not provide WWN information to ESXi host.	Record the SAS WWN information before installing it in an ESXi hosts.
DSM-9477	Storage Manager Client	The Storage Manager Client might report that a restart in sequence has completed even though the restart has not completed.	Verify that the restart completes before continuing.
DSM-7908	Storage Manager Client	The I/O Usage report that is exported in XML format does not display all the information for the French output when opened in a web browser.	Open the report using a text editor such as Notepad.
SCOS-12316	Storage Manager Client	The Storage Manager Client displays multi-VLAN tagging options for I/O cards that do not support multi-VLAN tagging.	Do not enable multi-VLAN tagging on QLogic cards that do not support it.

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

Issue	Functional area	Description	Workaround/Resolution
DSM-41119	Storage Manager Data Collector	Database errors might occur if a Data Collector uses an internal flat file database and manages a Storage Center with multiple disk folders.	Use an external database instead of an internal flat file database for the Data Collector. <b>CAUTION: Internal flat file databases are not recommended for Data Collectors in production environments.</b>
DSM-37868	Storage Manager Data Collector	If a Storage Center with an expired password disconnects from the Data Collector, the Storage Center cannot be reconnected to the Data Collector.	Change the password on the Storage Center by directly connecting to it using the Storage Manager Client or Unisphere.
DSM-42715	Storage Replication Adapter (SRA)	SRM generates the following error message when two separate volumes use the same LUN number mapped to different hosts and are both are configured for replication:  <pre>Duplicate LUN 'X' for initiatorGroup</pre>	None
DSM-43060	Storage Replication Adapter (SRA)	Site Recovery Manager (SRM) might generate the following error message when a recovery or reprotect operation is performed:  <pre>Unable to switch the site preference to the recovery site for the device. SRA command 'prepareFailover' failed for device.</pre>	<ol style="list-style-type: none"> <li>1. Stop the Remote Data Collector.</li> <li>2. Restart the Primary Data Collector.</li> <li>3. Start the Remote Data Collector.</li> </ol>
DSM-28137	Storage Replication Adapter (SRA)	SRM planned failovers with Live Volumes fail when vMotion is not enabled in the environment.	Enable vMotion. The Storage Replication Adapter (SRA) with Stretched Storage and Live Volumes requires vMotion.
DSM-18751	Storage Replication Adapter (SRA)	The installation wizard for the Storage Replication Adapter (SRA) allows you to begin updating from an older version of SRA. Updating from previous versions of the SRA is not supported.	Uninstall the previous version of the Storage Replication Adapter (SRA), and then install the new version.
DSM-47422	SupportAssist and Updating	On new installations of Storage Manager Data Collector 2020 R1, an "Unable to connect to external website using proxy settings specified" error might occur when a proxy server is configured for SupportAssist.	Uninstall Storage Manager Data Collector 2020 R1, install Storage Manager Data Collector 2019 R1, configure the proxy server, and update to Storage Manager Data Collector 2020 R1.
DSM-36088	SupportAssist and Updating	Occasionally, when starting a non-service affecting update for a Storage Center through the Data Collector, Storage Manager loses connectivity with the Storage Center.	The system automatically resolves the connectivity issue.
DSM-45590	Unisphere	Customers might experience issues displaying graphs on the Performance tab in Unisphere Central.	Use the Storage Manager Client connected to the Data Collector to display Performance graphs.
DSM-42195	Unisphere	Exporting monitoring data to PDF for multiple Storage Centers might cause Unisphere Central to become	Use the Storage Manager Client connected to the Data Collector to export monitoring data to PDF.

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

<b>Issue</b>	<b>Functional area</b>	<b>Description</b>	<b>Workaround/Resolution</b>
DSM-39691	Unisphere	<p>nonresponsive until the export is completed.</p> <p>The following error message might be displayed in the Unisphere web interface while performing the initial setup and configuration of a Storage Center:</p> <pre>The connection to the server has been lost</pre>	Refresh the browser to reload the Unisphere web page and continue the Storage Center initial setup and configuration.
DSM-38756	Unisphere	When a Storage Center contains over 50 expansion enclosures, the Unisphere Hardware view displays a server error.	Use the Storage Manager Client to view hardware information for large systems.
DSM-36355	Unisphere	Some views in Unisphere might fail to load and display an error message for storage systems with many expansion enclosures.	Use the Storage Manager Client to view information for storage systems with many expansion enclosures.
DSM-36253	Unisphere	When creating a server, the <b>Operating System</b> information dialog box shows the <b>Maximum Path Count</b> as zero instead of 32 or unlimited.	None
DSM-35454	Unisphere	When an action is applied to more than 128 objects, the action may fail.	None
DSM-34120	Unisphere	Unable to create an empty disk folder on a hot spare system that has available disks.	None
DSM-33384	Unisphere	Using Internet Explorer to view large numbers LDAP users might cause the user interface to become unresponsive.	Use a different web browser such as Chrome or Firefox.
DSM-32169	Unisphere	The <b>Performance</b> view may be cut off when using Internet Explorer.	Use a different web browser such as Chrome or Firefox.
DSM-16373	Unisphere	Unisphere Central does not show the progress of a Data Collector data source change.	Use the Storage Manager Client to change the data source of a Data Collector.
DSM-35011	User Management	Cannot configure an OpenLDAP directory server for a Storage Center using Storage Manager or Unisphere.	None
DSM-24536	User Management	Attempting to use the characters < or > in User and User Group settings might result in an error.	Do not use these characters in User and User Group settings.
DSM-15445	User Management	Adding Storage Manager to Active Directory fails when you use the distinguished name (DN) of a user.	Use the user principal name (UPN) to add Storage Manager to an Active Directory realm.
DSM-12329	User Management	When a user is unlocked, the status of the user might not change immediately.	Refresh the Storage Manager Client.
DSM-44104	VMware	Frequently migrating virtual machines from one vVol datastore to another vVol datastore might result in orphaned volumes.	None
DSM-16656	VMware	If you select the <b>Auto Manage Virtual Machines On Storage Centers</b> option during the initial Dell Storage Manager registration of a vCenter server, all the discovered ESXi hosts along with their VMs are rendered within the <b>Servers</b> tree	To remove these deleted VMs from Dell Storage Manager, right-click the VM and then delete it.

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

Issue	Functional area	Description	Workaround/Resolution
DSM-16248	VMware	<p>of the Storage panel. If any of these VMs are later deleted from vCenter, they remain in the Dell Storage Manager view.</p> <p>On rare occasions, selecting <b>Update information</b> in the Dell Storage Manager <b>Server</b> view results in the error <code>java.net.SocketException: Unexpected end of file from server</code>.</p>	<p>Despite the vCenter appearing to be online and able to accept connections, the vCenter must be restarted to reestablish proper connectivity between Dell Storage Manager and vCenter.</p>
DSM-15879	VMware	<p>The Host Setup wizard for VMware does not allow you to select an HBA on an ESXi host that contains adapters that are not VMware software iSCSI adapters. When establishing an integrated environment with Dell Storage Manager and VMware, there are multiple options available for you to import the VMware known inventory into Dell Storage Manager for enhanced management benefits. You can choose to add hosts individually, or by creating and registering from a vCenter server.</p>	<p>Although the option exists in the <b>Storage</b> tab to create from vCenter server, the preferred and more reliable method is to use the Dell Storage Manager <b>Server</b> tab. Select the <b>Server</b> folder and then <b>Register Server &gt; Add VMware vCenter Server</b>. Then, select <b>Auto Manage Storage Centers</b> to populate the Storage Center.</p>
DSM-15803	VMware	<p>On rare occasions, when a vVol VM is migrated from one vVol datastore to another, a config or data vVol might become orphaned on the original datastore. This vVol counts against the total vVol scale and takes up unnecessary space.</p>	<p>Contact technical support to handle the removal of the VM.</p>
DSM-15302	VMware	<p>If you attempt to delete a datastore which is populated (not empty) using the Storage Manager Client, an error occurs. A false indicator of connectivity is represented by a red X on the vCenter server.</p>	<p>Click the <b>Update Information</b> button in the top-level menu.</p>
DSM-15000	VMware	<p>A vVol VM snapshot with quiesce guest file-system option fails.</p>	<p>Install the VMware Tools without the VSS feature. For more information, see VMware Knowledge Base article number 2069952.</p>
DSM-14997	VMware	<p>When using sDRS with vVols, vCenter incorrectly recommends migrating the VM when both vVols are on the same Storage Center.</p>	<p>Review the recommendations from vCenter before taking action.</p>
DSM-14891	VMware	<p>A fast clone VM shows history with the VM from which it was created. Hence the data vVols of this clone VM inherit the settings of the data vVols of the original VM. This shared history also has the following consequences:</p> <ul style="list-style-type: none"> <li>• Changing the Data Reduction profiles for a storage container might cause future fast cloned VMs to be created with mismatched Data Reduction profiles for the config and data vVols.</li> <li>• If a user applies a VM Storage Policy to the original VM, the same changes apply to the data vVols of the fast clone VM and conversely.</li> </ul>	<p>None</p>
DSM-14806	VMware	<p>Migrate or Clone operations on virtual machines with snapshots might fail if</p>	<ol style="list-style-type: none"> <li>1. Check if the vVol datastore (storage container) is nearing capacity.</li> </ol>

**Table 5. Known issues in Storage Manager 2020 R1 (continued)**

<b>Issue</b>	<b>Functional area</b>	<b>Description</b>	<b>Workaround/Resolution</b>
		not enough space is available in the vVol datastore hosting the VM. The temporary space overhead that is required by these operations depends on the size of the individual disks and the number of snapshots of the VM.	2. Increase the size of the vVol datastore to sufficiently accommodate the overhead and then retry the operation.
DSM-14570	VMware	If you attempt to register the VASA Provider with a DSM user with Reporter privilege, it fails as expected. However, an incorrect error message <code>Username or password is incorrect</code> is reported. The correct error should be <code>user with Reporter privilege is not allowed to register VASA provider</code> .	Ignore the error message, and register VASA Provider with a Storage Manager Data Collector user with Administrator privilege.
DSM-14149	VMware	If you try to apply a new VM Storage Policy while Storage vMotion of a VM is in progress, the compliance status of the VM goes to <code>Out of Date</code> .	Reapply the new storage policy after Storage vMotion has completed.
DSM-13316	VMware	After increasing the storage container size in Dell Storage Manager, the vCenter user interface shows the datastore with the new size. However, it still displays an error for insufficient space when it tries to create a VM.	Unmount and then remount the datastore.
DSM-13042	VMware	On rare occasions, if vVol operations (cloning and snapshots) are occurring on multiple VMs concurrently using scripting that results in the eventual deletion of vVols, an attempt to delete a vVol VM might result in vVols not being deleted. This scenario results in inefficient space consumption and reduction in total vVols available for future use.	Removal of the vVols is not a user-level corrective option. Contact technical support for assistance. Avoid running concurrent vVol operations using scripting. Instead, script either sequential operations or operations with interjected delays.
DSM-12732	VMware	It is possible to create a storage container, and a subsequent vVol datastore using it, of a logical size that exceeds the physical capacity of the storage array. The capacity values that are displayed in vCenter for an oversubscribing container reflect the correct free or total physical capacity values instead of the logical storage container values.	None
DSM-11417	VMware	When high availability (HA) is configured, vVols are migrated from the active host to the standby host when management network access to the active host is lost. This situation is similar to VMFS, and is the expected behavior. However, if only the data network goes down, VMFS datastores migrate to the standby host, but vVols do not fail over. VMCP is not supported with vVols.	No workarounds are available when the data network goes down, but the management network stays up. However, if the management network to the active host goes down, failover is triggered, regardless of the state of the data network .

# Limitations

The following limitations exist in this release:

**Table 6. Limitations in Storage Manager 2020 R1**

Limitation	Description
Planned Failover of Live Volumes in SRM 8.2 and 8.3	<p>SRM 8.2 and 8.3 fail to send the ReverseReplication command to the Dell Storage Replication Adapter (SRA) during the planned failover of Live Volumes. To resolve this issue, perform the following steps on the servers that are running SRM 8.2 or 8.3 at both sites:</p> <ol style="list-style-type: none"> <li>On the servers that are running SRM, open the <code>vmware-dr.xml</code> file in a text editor. <ul style="list-style-type: none"> <li>The default location of the <code>vmware-dr.xml</code> file in Windows is <code>C:\Program Files\VMware\VMware vCenter Site Recovery Manager\config\vmware-dr.xml</code>.</li> <li>The default location of the <code>vmware-dr.xml</code> file in the Photon-based SRM is <code>/opt/vmware/srm/conf/vmware-dr.xml</code>.</li> </ul> </li> <li>Search for the XML tag <code>&lt;storage&gt;</code> in the file.</li> <li>Add the following entry between the XML tags <code>&lt;storage&gt;</code> <code>&lt;/storage&gt;</code> : <pre>&lt;forcePrepareAndReverseReplicationForNoopDevices&gt;true&lt;/forcePrepareAndReverseReplicationForNoopDevices&gt;</pre> </li> <li>Save the changes to the <code>vmware-dr.xml</code> file.</li> <li>Restart the SRM service on the servers at both sites.</li> </ol>
Storage Manager Scalability	To optimize performance and prevent connectivity issues, Dell EMC recommends that one Data Collector manages no more than ten Storage Centers. A Data Collector may exceed that recommendation depending on the network latency, I/O load, and number of volumes.
Unisphere Central features	<p>The following features are not available in Unisphere Central:</p> <ul style="list-style-type: none"> <li>Chargeback</li> <li>FluidFS management</li> <li>PS Series Group management</li> </ul>

# Environmental and system requirements

This section describes the environmental and system requirements in this release.

The following table lists products that are compatible with Storage Manager:

**Table 7. Storage Manager Compatibility**

Product	Versions
Storage Center	7.2 – 7.5
PS Series group firmware	9.0 – 10.0
Dell FluidFS	6.0.400016
Microsoft System Center Virtual Machine Manager (SCVMM)	2012, 2012 SP1, 2012 R2, 2016, and 2019
<ul style="list-style-type: none"> <li>VMware Site Recovery Manager (SRM) for Windows</li> <li>VMware Photon-based SRM</li> </ul>	<ul style="list-style-type: none"> <li>8.1, 8.1.1, 8.2, and 8.3</li> <li>8.2, 8.3, 8.4, and 8.5</li> </ul> <p>SRM 8.4 does not currently support stretched storage on Storage Center, but stretched storage is supported on SRM 8.5.</p> <p>To see the supported upgrade paths for SRM, select VMware Site Recovery Manager from <a href="https://interopmatrix.vmware.com/Upgrade">https://interopmatrix.vmware.com/Upgrade</a>.</p>

**Table 7. Storage Manager Compatibility (continued)**

Product	Versions
	When upgrading to SRM 8.5, storage policy protection groups must be migrated to datastore protection groups. For more information, see Dell Knowledge Base article <a href="https://www.dell.com/support/kbdoc/000202315">https://www.dell.com/support/kbdoc/000202315</a> .
	<b>i</b> <b>NOTE:</b> A Storage Center must have Fibre Channel or iSCSI front-end ports to work with SRM.
Dell Storage Replication Adapter (SRA) for Windows	18.1.1.173
Dell SRA for Photon-based SRM	20.1.1.13
DSITV and DSVCP	6.0

The following table lists the Storage Manager Client requirements:

**Table 8. Storage Manager Client Requirements**

Component	Requirements
Operating system	Any of the following 64-bit operating systems: <ul style="list-style-type: none"> <li>• Windows 8.1</li> <li>• Windows 10</li> <li>• Windows Server 2012 R2</li> <li>• Windows Server 2016</li> <li>• Windows Server 2019</li> <li>• SUSE Linux Enterprise 12</li> <li>• SUSE Linux Enterprise 15</li> <li>• Red Hat Enterprise Linux 7.5</li> <li>• Red Hat Enterprise Linux 7.6</li> <li>• Red Hat Enterprise Linux 8.0</li> <li>• Oracle Linux 7.0</li> <li>• Oracle Linux 7.3</li> <li>• Oracle Linux 7.6</li> </ul> <b>i</b> <b>NOTE:</b> Windows Server Core is not supported.
CPU	64-bit (x64) microprocessor with two or more cores
Software	Microsoft .NET Framework 4.5 or later (Windows only)
Linux VM Client Access	<ul style="list-style-type: none"> <li>• VMware vSphere Client</li> <li>• Hyper-V Manager</li> </ul>
Web browser	Any of the following web browsers: <ul style="list-style-type: none"> <li>• Google Chrome</li> <li>• Microsoft Edge</li> <li>• Mozilla Firefox</li> </ul> <b>i</b> <b>NOTE:</b> Google Chrome is the recommended browser. Other web browsers might work but are not officially supported.

The following table lists the Storage Manager Data Collector requirements:

**i** **NOTE:** For best results, install the Data Collector on a Windows Server VM using a traditional volume source from shared storage. Do not use a vVol for the Windows Server VM on which the Data Collector is installed.

**Table 9. Storage Manager Data Collector Requirements**

Component	Requirements
Operating system	Any of the following 64-bit operating systems with the latest service packs: <ul style="list-style-type: none"> <li>• Windows Server 2012 R2</li> <li>• Windows Server 2016</li> </ul>

**Table 9. Storage Manager Data Collector Requirements (continued)**

Component	Requirements
	<ul style="list-style-type: none"> <li>Windows Server 2019</li> </ul> <p><b>NOTE:</b> Windows Server Core is not supported.</p>
Windows User Group	Administrators
CPU	64-bit (x64) microprocessor with two or more cores <b>NOTE:</b> The Data Collector requires a microprocessor with four cores for environments that have 100,000 or more Active Directory members or groups.
Memory	Varies based on size of the storage environment: <ul style="list-style-type: none"> <li>4 GB – One to ten Storage Centers, or up to 3000 total volumes</li> <li>8 GB – More than ten Storage Centers, or up to 6000 total volumes</li> <li>16 GB – More than ten Storage Centers, or up to 12,000 total volumes</li> <li>32 GB – More than ten Storage Centers, or more than 12,000 total volumes</li> </ul>
Disk space	At least 20 GB ; additional space is required to manage FluidFS cluster software updates. <b>NOTE:</b> Using an embedded database requires an additional 64 GB to store the database on the file system. However, an embedded database is not recommended for a production environment.
Software	Microsoft .NET Framework 4.5 or later, full installation
Web browser	Any of the following web browsers: <ul style="list-style-type: none"> <li>Google Chrome</li> <li>Microsoft Edge</li> <li>Mozilla Firefox</li> </ul> <b>NOTE:</b> Google Chrome is the recommended browser. Other web browsers might work but are not officially supported.
External database	One of the following databases: <ul style="list-style-type: none"> <li>Microsoft SQL Server 2016</li> <li>Microsoft SQL Server 2016 Express (limited to 10 GB)</li> <li>Microsoft SQL Server 2017</li> <li>Microsoft SQL Server 2017 Express (limited to 10 GB)</li> <li>Microsoft SQL Server 2019</li> <li>Microsoft SQL Server 2019 Express (limited to 10 GB)</li> <li>MySQL 5.7</li> <li>MySQL 8.0</li> </ul> <b>NOTE:</b> An embedded database that is stored on the file system can be used instead of an external database. However, the embedded database is limited to 64 GB and retains only the last 30 days of data. The embedded database is not recommended for a production environment.

**Table 10. Storage Manager Virtual Appliance Requirements**

Component	Requirement
VMware ESXi host version	6.5, 6.7, or 7.0
VMware vCenter Server version	6.5, 6.7, or 7.0
Datastore size	55 GB
CPU	64-bit (x64) microprocessor with two or more cores <b>NOTE:</b> The Data Collector requires a microprocessor with four cores for environments that have 100,000 or more Active Directory members or groups.
Memory	Varies based on size of the storage environment: <ul style="list-style-type: none"> <li>4 GB – One to ten Storage Centers, or up to 3000 total volumes</li> </ul>

**Table 10. Storage Manager Virtual Appliance Requirements (continued)**

Component	Requirement
	<ul style="list-style-type: none"><li>• 8 GB – More than ten Storage Centers, or up to 6000 total volumes</li><li>• 16 GB – More than ten Storage Centers, or up to 12,000 total volumes</li><li>• 32 GB – More than ten Storage Centers, or more than 12,000 total volumes</li></ul>
Software	<ul style="list-style-type: none"><li>• VMware vCenter Server</li><li>• VMware vSphere High Availability</li></ul>

The following table lists the Storage Manager Server Agent requirements:

**Table 11. Storage Manager Server Agent Requirements**

Component	Requirements
Operating system	Any of the following 64-bit operating systems with the latest service packs: <ul style="list-style-type: none"><li>• Windows Server 2012 R2 (full or core installation)</li><li>• Windows Server 2016</li><li>• Windows Server 2019</li></ul>
CPU	64-bit (x64) microprocessor
Software	Microsoft .NET Framework 4.5 Full

## Installation and upgrade considerations


For instructions on installing Storage Manager 2020 R1 or upgrading to Storage Manager 2020 R1, see the *Storage Manager 2020 R1 Installation Guide* on <https://www.dell.com/support>.

## Where to get help

The Dell Technologies Support site (<https://www.dell.com/support>) contains important information about products and services including drivers, installation packages, product documentation, knowledge base articles, and advisories.

A valid support contract and account might be required to access all the available information about a specific Dell Technologies product or service.

## Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.