

Storage Manager 2018 R1 Release Notes

Storage Manager allows an administrator to manage and monitor multiple Storage Centers, PS Series groups, and FluidFS clusters. Storage Manager 2018 R1 introduces new features and enhancements, and fixes issues present in the previous release.

Current Version: 2018 R1.20

Release Date: 2018-11

Previous Version: 2018 R1.2

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Revision History

Revision	Date	Description
A	April 2018	Initial release for Storage Manager 2018 R1
B	May 2018	Updated for Storage Manager 2018 R1.2
C	August 2018	Updated for Storage Manager 2018 R1.10
D	October 2018	Updated VMware vCenter Site Recovery Manager (SRM) version support
E	November 2018	Updated for Storage Manager 2018 R1.20
F	June 2019	Updated issue DSM-34466

Management Compatibility

Storage Manager manages storage products and also provides management integration for Microsoft and VMware products.

Storage Manager is compatible with the products listed in the following table.

Product	Versions
Storage Center	6.7–7.3

Product	Versions
	<p>NOTE: Storage Manager 2018 R1.10 can be used to connect to a storage system running Storage Center 6.6 and update it to a later supported version of Storage Center</p>
PS Series group firmware	7.0–10.0
Dell FluidFS	6.0.300135
	<p>NOTE: You must update FluidFS firmware to 6.0.300135 before updating to Storage Manager 2018 R1.</p>
Microsoft System Center Virtual Machine Manager (SCVMM)	2012, 2012 SP1, 2012 R2, and 2016
VMware vCenter Site Recovery Manager (SRM)	5.8, 6.0, 6.1.1, 6.5, and 8.1
Dell Storage Replication Adapter (SRA)	18.1.1.173
CITV	4.0
DSITV	4.1

Software and Hardware Requirements

The following sections list the requirements for the Storage Manager Data Collector, Storage Manager Client, and Storage Manager Server Agent.

Storage Manager Client Requirements

The following table lists the requirements for the Storage Manager Client.

Component	Requirements
Operating system	<p>Any of the following 32-bit or 64-bit operating systems (with the latest service packs):</p> <ul style="list-style-type: none"> Windows 8 Windows 8.1 Windows 10 <p>Any of the following 64-bit operating systems:</p> <ul style="list-style-type: none"> Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 Red Hat Enterprise Linux 7.1 Red Hat Enterprise Linux 7.2 Red Hat Enterprise Linux 7.3 SUSE Linux Enterprise 12 Oracle Linux 6.5 Oracle Linux 7.0 <p>NOTE: Windows Server Core is not supported.</p>
CPU	32-bit (x86) or 64-bit (x64) microprocessor

Component	Requirements
	<p>NOTE: Linux versions of the Storage Manager Client support only 64-bit microprocessors.</p>
Software	Microsoft .NET Framework 4.0 (Windows only)
Linux VM Access Client	<ul style="list-style-type: none"> VMware vSphere Web Client Hyper-V Manager
Web browser	<p>Any of the following web browsers:</p> <ul style="list-style-type: none"> Google Chrome Internet Explorer 11 Microsoft Edge Mozilla Firefox <p>NOTE: Google Chrome is the recommended browser. Other web browsers might work but are not officially supported.</p>

Data Collector Requirements

The following table lists the Storage Manager Data Collector requirements.

NOTE: For best results, install the Data Collector on a Windows Server VM on a traditional volume sourced from shared storage. Do not use a VVol for the Data Collector VM.

Component	Requirements
Operating system	<p>Any of the following 64-bit operating systems with the latest service packs:</p> <ul style="list-style-type: none"> Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 <p>NOTE: 32-bit operating systems are not supported, and Windows Server Core is not supported.</p>
Windows User Group	Administrators
CPU	<p>64-bit (x64) microprocessor with two or more cores</p> <p>The Data Collector requires four cores for environments with 100,000 or more Active Directory members or groups.</p>
Memory	<p>Varies based on size of the storage environment:</p> <ul style="list-style-type: none"> 4 GB – One to ten Storage Centers or up to 3000 total volumes 8 GB – More than ten Storage Centers, or up to 6000 total volumes 16 GB – More than ten Storage Centers, or up to 12,000 total volumes 32 GB – More than ten Storage Centers, or more than 12,000 total volumes
Disk space	<p>At least 20 GB; additional space is required to manage FluidFS cluster software updates.</p> <p>NOTE: If you chose to use an embedded database instead of an external database, an additional 64 GB is required to store the database on the file system. However, an embedded database is not recommended for a production environment.</p>
Software	Microsoft .NET Framework 4.5 Full

Component	Requirements
Web browser	<p>Any of the following web browsers:</p> <ul style="list-style-type: none"> • Google Chrome • Internet Explorer 11 • Microsoft Edge • Mozilla Firefox <p>NOTE: Google Chrome is the recommended browser. Other web browsers might work but are not officially supported.</p>
External database	<p>One of the following databases:</p> <ul style="list-style-type: none"> • Microsoft SQL Server 2012 • Microsoft SQL Server 2012 Express (limited to 10 GB) • Microsoft SQL Server 2014 • Microsoft SQL Server 2014 Express (limited to 10 GB) • Microsoft SQL Server 2016 • MySQL 5.6 • MySQL 5.7 <p>NOTE: The embedded database 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.</p>

Storage Manager Virtual Appliance Requirements

The Storage Manager Virtual Appliance has the following requirements:

Component	Requirement
VMware ESXi host version	6.0 and later
VMware vCenter Server version	6.0 and later
Datastore size	55 GB
CPU	<p>64-bit (x64) microprocessor with two or more cores</p> <p>The Data Collector requires four cores for environments with 100,000 or more Active Directory members or groups.</p>
Memory	<p>Varies based on size of the storage environment:</p> <ul style="list-style-type: none"> • 4 GB – One to ten Storage Centers or up to 3000 total volumes • 8 GB – More than ten Storage Centers, or up to 6000 total volumes • 16 GB – More than ten Storage Centers, or up to 12,000 total volumes • 32 GB – More than ten Storage Centers, or more than 12,000 total volumes
Software	<ul style="list-style-type: none"> • VMware vCenter Server • VMware vSphere High Availability

Server Agent Requirements

The following table lists the requirements for running the Storage Manager Server Agent on Windows servers.

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

New in This Release

The following features were added to Storage Manager 2018 R1.

Advanced Restripe

Several enhancements have been made to the RAID restripe process to integrate and remove disks from a storage system.

One major feature is the ability for the storage system to offload data transfers to RAID for reduced restripe times. The storage system also has improved targeting of data movement to reduce unnecessary effort. To provide accurate monitoring of RAID rebalances, the Storage Manager Client and Unisphere interface contain an improved RAID rebalance progress interface.

Automatic Disk Placement

Automatic disk placement allows you to configure the default disk folder to use for newly-inserted drives.

CloudIQ Support

CloudIQ simplifies storage management by providing:

- Centralized monitoring across your environment.
- Proactive serviceability that informs you about issues before they impact your environment.
- A dashboard that aggregates key information such as system health scores, performance metrics, and current capacity and trends.

For more information about using CloudIQ to monitor Storage Centers, see the [Storage Center CloudIQ Onboarding Quick-Start Guide](#) located on the Dell EMC Support site.

Conservation and Emergency Mode

The Conservation Mode threshold has been changed to 0.5 percent of the usable space in a storage system. The minimum amount of usable space might range from 100 GB to 2 TB, depending on size of the storage system.

When a storage system enters Conservation Mode, the volume queue depth is limited to reduce the rate at which servers consume space. Snapshots no longer expire automatically when a storage system is in Conservation or Emergency mode.

Conservation and Emergency mode messaging improvements have been added to Storage Manager and Unisphere. The storage system sends alerts every day the system is in Conservation mode. The Storage Manager Client and Unisphere interface also display a Conservation or Emergency mode banner that links to information about reducing space consumption.

Cross-Platform Replication

The following improvements have been made to cross-platform replication:

- Snapshot Management on PS Groups – Storage Center snapshots Time To Live (TTL) is monitored by the PS Group and snapshots are automatically deleted according to schedule. (Requires PS Series version 10.0 firmware.)
- Cross-Platform Replication on a remote Data Collector – If the primary Data Collector is unavailable, a remote Data Collector can be used for cross-platform replication.

Data Collector Management

The Data Collector management features in Storage Manager 2018 R1 have moved to the Unisphere Central web-based user interface.

When the Data Collector 2018 R1 software is installed on a Windows server, the Dell Storage Manager Data Collector shortcut is replaced by the Dell EMC Unisphere Central shortcut.

Opening the Dell EMC Unisphere Central shortcut starts a web browser that displays the Unisphere Central web-based user interface. The Data Collector management features are located in the Data Collector view of Unisphere Central.

 **NOTE:** Unisphere Central can also be accessed from a web browser on a computer that can communicate with the Data Collector server.

Data-in-Place Migration

Data-in-Place Migration is a new licensed feature in Storage Center 7.3.2 that can be used to upgrade an SC4020 storage system to an SC5020 or SC7020 storage system.

Direct Update

The Direct Update feature in Storage Manager 2018 R1.10 is available only when the Storage Manager Client is directly connected to a storage system running Storage Center 6.6.

The Direct Update feature allows you to update a storage system running Storage Center 6.6 to a later supported version of Storage Center.

Distributed Sparing

Distributed sparing allocates spare disk space across all drives rather than reserving an entire drive as a spare. Distributed sparing enables the storage system to use all disks in a balanced and optimized manner, which ensures the fastest recovery time following a drive failure.

After a storage system is updated to Storage Center 7.3, it automatically manages all spare drives and prompts the user to enable the Spare Optimizer feature. The option to enable the Spare Optimizer feature is displayed in the Storage Manager Client and Unisphere interface. This process moves RAID data to distribute the spare space among the drives. If Spare Optimizer is not enabled, all drives might appear to be managed, but sparing space is focused on a limited number of drives.

No dedicated spare drives are present in a storage system after updating to Storage Center 7.3.

Existing storage systems inherit the sparing ratio after updating a Storage Center. New installations of Storage Center default to a 20:1 sparing ratio.

Health Check for Software Updates

Before installing a software update, Storage Center checks the system to make sure it can update properly. If any health checks fail, Storage Manager reports information about the errors found.

Initial Setup and Configuration

Improvements have been made to the Storage Center initial setup and configuration workflow, including the option to use DHCP for assigning IP addresses.

NOTE: The option to use DHCP for assigning IP addresses is not available for SCv2000 series storage systems.

iSCSI HBA Support

This release supports 25 GbE and 100 GbE iSCSI HBAs for SC5020, SC7020, and SC9000 storage systems.

This release also supports 25 GbE and 100 GbE iSCSI mezzanine cards for SC5020 and SC7020 storage systems.

NOTE: The 25 GbE and 100 GbE iSCSI HBAs/mezzanine cards do not support Data Center Bridging (DCB) in Storage Center 7.3.1. The iSCSI HBAs/mezzanine cards fail to pause traffic after receiving PFC pause frames.

Live Volume ALUA

This release includes full support for Live Volume ALUA, including identification of optimized and non-optimized paths. A guided process is provided to enable this feature after the software update is completed.

Proactive Notifications

Dell EMC technical support can send notifications to your system based on alerts that are reported by Storage Center. These notifications may include a recommended Storage Center software update, a technical fix, a best practice, a specific issue, or other alerts.

Acknowledging a notification sends a message to technical support informing them that you have received the notification. Proactive notifications are displayed in the alerts section of Storage Manager and Unisphere. If the system is set up to send alerts using SNMP, customers also receive alerts through email.

Replication for SCv2000 Series Storage Systems

Replication is now supported between SCv2000 Series storage systems and the following storage systems:

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

SRA Improvements

Changes made to SRA code and API resolve issues found in SRA operation, resulting in:

- Improved SRA error handling and reporting.
- Better stability in multi-threaded environment.
- Resolution to generating duplicate volume IDs.

Storage Type Redundancy Improvements

When a new Storage Type is created in Storage Manager 2018 R1.10, the redundancy level must be selected for each disk tier if more than one redundancy level is available.

Thin Import from VNX and VNXe

Thin import from VNX and VNXe storage systems is supported in Storage Manager 2018 R1.10.

Unisphere and Unisphere Central for SC Series

Unisphere and Unisphere Central for SC Series are new web-based user interfaces that replace the Storage Manager Web UI and Data Collector Manager. Unisphere and Unisphere Central for SC Series allow you to manage Storage Centers and to perform monitoring and administrative tasks.

- Unisphere for SC Series is used to connect directly to a Storage Center.
- Unisphere Central for SC Series is used to manage multiple Storage Centers through a Data Collector and manage the settings of the Data Collector.

NOTE: Google Chrome is the recommended browser although Internet Explorer 11, Microsoft Edge and Firefox browsers are supported.

Not all of the functions of the Storage Manager Client are available in Unisphere. See [Limitations for Unisphere](#).

For more information about using Unisphere, see the *Unisphere and Unisphere Central for SC Series Administrator's Guide*.

Fixed Issues

The following sections summarize the issues fixed in Storage Manager 2018 R1.

Fixed Issues Related to Cross-Platform Replication

The following issues related to cross-platform replication are fixed in Storage Manager 2018 R1:

Table 1. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-33154	Unable to replicate a Storage Center volume to a PS Group when the Storage Center volume has enabled the Duplication or Duplication and Compression settings.
DSM-28871	Attempting to recreate an iSCSI connection in a cross-platform replication after deleting the iSCSI connection fails.
DSM-27659	Unable to see cross-platform replications in the Replications tab and Storage Manager performs very slow when querying PS Series storage arrays.
DSM-25944	Storage Manager displays an incorrect name for the operating system of a Remote PS Group.
DSM-25697	After attempting to configure an iSCSI connection from a Storage Center to a PS Group that is already setup, then selecting another PS Group that is not setup, Storage Manager attempts to setup a connection to the PS Group that was selected first.
DSM-25282	If a remote PS Group fails to respond 90 seconds after creating an iSCSI connection the connection was still created successfully. However, the Configure iSCSI Connection wizard remains open. Clicking Finish again attempts to create the same connection again and fails.
DSM-23428	Storage Manager might freeze when activating disaster recovery on a large number of volumes.
DSM-23309	Storage Manager is unable to configure replications to a PS Group for multiple volumes from the Volumes node in the Storage tab.
DSM-20532	When the Free Reserved Space is fully consumed, Storage Manager reports the value as the full configured value.
DSM-17647	Storage Manager does not show replication information for PS Group volumes when the PS Group volumes were created with different Storage Manager administrator users.
DSM-16448	Restore points for deleted Storage Center to PS Series group replications might still appear in the Activate Disaster Recovery dialog box.
DSM-16095	Storage Manager might not display the proper volume information in the volumes list for volumes replicated from a PS Series group to a Storage Center.
DSM-13404	The Replication Validation plug-in on the Summary page for a Storage Center does not display volumes replicated from a PS Series group to a Storage Center.
DSM-13191	After deleting a replication partnership between a Storage Center and a PS Series group, users are unable to set up a replication partnership between the same Storage Center and PS Series group.
DSM-12865	Selecting Replicate Now for multiple volumes on a PS Series group replicates only the first volume.
DSM-10616	Storage Manager does not retain the server-to-volume mappings after restoring from a disaster recovery.
DSM-10461	After selecting multiple volumes to replicate to a PS Series group, PS Series groups do not appear as a destination storage array.

Fixed Issues Related to the Data Collector

The following issues related to the Data Collector are fixed in Storage Manager:

Table 2. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-38789	The vSphere/vCenter integration in the Servers view of Storage Manager does not support ESXi hosts connected to a Storage Center via SAS. Documentation updated to clarify this limitation.

Table 3. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-33710	A pop-up error message stating "User Preferences not found" is temporarily stopped after restarting the Data Collector.
DSM-31668	The Fast Track disk space information is missing when connecting to the Data Collector after replacing a controller.
DSM-30731, DSM-30030	To enable the Proxy server, Storage Manager requires access to Google websites.
DSM-30508	The Data Collector is unable to process the license file for the Chargeback feature in Storage Manager.
DSM-27877	Storage Manager does not change the time to account for Data Collectors in different time zones.
DSM-14882	Storage Manager retains reporting data in a Data Collector MySQL database for longer than the limit allows. This can use excessive space on the server.

Fixed Issues Related to Data-in-Place Upgrades

The following issues related to the Data-in-Place Upgrade feature are fixed in Storage Manager 2018 R1:

Table 4. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-38029	When SED disks are being unlocked during a Data-in-Place Upgrade, an incorrect message is displayed that states the second controller must be manually restarted.

Table 5. Issues Fixed in Storage Manager 2018 R1.2

Issue	Description
DSM-36989	SC4020 storage systems with SEDs are not supported by the Data-in-Place Upgrade feature.

Fixed Issues Related to FluidFS

The following issues related to FluidFS are fixed in Storage Manager 2018 R1:

Table 6. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-36182	When a FluidFS Admin user becomes temporarily blocked from logging into FluidFS due to an incorrect password, it causes all Admin users to be disconnected from FluidFS and requires them to reconnect by reentering their credentials.
DSM-36114	In the Data Collector Manager, the FluidFS cluster objects are only displayed for the user that added the cluster.

Fixed Miscellaneous Issues

The following miscellaneous issues are fixed in Storage Manager 2018 R1:

Table 7. Issues Fixed in Storage Manager 2018 R1.20

Issue	Description
DSM-37717	For the SLP discovery protocol to work the adapter on the server where DSM is installed must acquire its IP using DHCP. Using a static IP on the adapter is not supported when using SLP. Documentation updated to clarify this setting.

Table 8. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-38581	The Historical Usage chart in the Storage Types view of Storage Manager displays the top level historical usage data for the individual tiers.
DSM-37385	The Data Center Bridging (DCB) supported capability is not displayed properly in a Storage Manager Client connected to a Data Collector.

Table 9. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-28784	The Total Space of a disk folder in Storage Manager does not match the size of the same disk folder reported in SCVMM.
DSM-28524	When connected to a Storage Center through a Data Collector, Storage Manager does not allow you to change the name of an enclosure.
DSM-26037	SMI-S might show incorrect numbers for space remaining and used space.
DSM-16280	The Edit BMC Setting dialog box implies that BMC is accessed through the management Ethernet port. This information applies only to SCv2000 series and SC4020 storage systems.

Fixed Issues Related to Management of PS Series Groups

The following issues related to management of PS Series Groups are fixed in Storage Manager 2018 R1:

Table 10. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-30110	Adding and removing PS Series storage arrays can cause a memory leak in Storage Manager resulting in degraded Storage Manager performance.
DSM-15839	After updating a PS Series group managed by Storage Manager from version 8.0 to 9.0 using Group Manager, Storage Manager fails to refresh the status of the PS Series group.
DSM-14934	After restoring a volume from a snapshot to an offline state, the volume appears to be online in Storage Manager.

Fixed Issues Related to Replications and Live Volumes

The following issues related to replications and Live Volumes are fixed in Storage Manager 2018 R1:

Table 11. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-37797	Progress Reports and IO Reports charts are not displaying correctly for Live Volumes.

Table 12. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-36087	The activated side server mappings are removed from a Live Volume after performing a Force Delete.
DSM-30440	The Complete Live Migration dialog box shows Not Found for the destination server connectivity even when mappings from the destination Live Volume to the server exist and are active.
DSM-27850	The QoS tab in the Replications and Live Volumes view does not display the correct number of devices for the secondary QoS node in a Live Volume.
DSM-25028	Storage Manager fails to create a Live Volume if the volume uses a consistent snapshot profile.
DSM-24076	After mapping a destination volume to a server, Storage Manager might incorrectly show that there is no destination volume for the restore point in the Restore Points tab.
DSM-9421	A reprotect might fail and cause the recovery site to core dump if an RDM VM uses a recovery plan and protection group that manage more than one RDM VM.
DSM-9478	After a Copy or Migrate operation completes, Storage Manager does not delete the Copy or Migrate object when the Copy or Migrate was scheduled.
SCOS-41191	When the Storage Manager Client is directly connected to a Storage Center, the option to delete a volume associated with a Live Volume or Live Migration is displayed, but it is not supported.

Fixed Issues Related to Dell Storage Replication Adapter (SRA)

The following issues related to Dell Storage Replication Adapter (SRA) are fixed in Storage Manager 2018 R1:

Table 13. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-35711	Restore points for replicated volumes are not saved during the last step of the reprotect workflow.

Table 14. Issues Fixed in Storage Manager 2018 R1.2

Issue	Description
DSM-37697	An internal error might occur for an SRA site recovery configuration that uses bi-directional replication with replicated volumes that are not mapped to a host.
DSM-37326	The SRA discover device process fails after updating to Storage Manager 2018 R1.

Table 15. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-36578	Running a re-protect in SRM failed and issued an Incomplete Reprotect error message.
DSM-34468	If a volume has the same index as a protocol endpoint volume index, SRM will not discover that device.
DSM-32339	DSM/SRA does not retain LUN numbers when using server mapping instead of cluster mapping.
DSM-29251	If the language in Windows is set to Portuguese (Brazil), the version for SRM is incorrect and causes errors.
DSM-28723	Performing the Forced DR workflow in SRM with Live Volumes might cause some restore points to be in a degraded state and some protected VMs to fail to register on the secondary system.
DSM-28278	Recovering a Live Volume using SRM can fail intermittently if the Live Volume was created using a remote Data Collector.
DSM-27783	Reprotect operation might fail if the source and destination volumes of a replication managed by SRM have the same volume index.
DSM-26741, DSM-27865	In some cases, duplicate restore points are created when running multiple recovery plans at once with SRM and Dell Storage Replication Adapter (SRA).

Fixed Issues Related to Storage Management

The following issues related to storage management are fixed in Storage Manager 2018 R1:

Table 16. Issues Fixed in Storage Manager 2018 R1.20

Issue	Description
DSM-39257	Changing the Maximum Server Memory Usage setting in the Data Collector does not change the actual setting.

Table 17. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-38641	Applying a snapshot profile to a volume that is the source of a replication might fail in Storage Manager.
DSM-38565	The Storage Manager Server Agent might format Windows 2016 volumes using MBR instead of GPT.
DSM-37720	The Edit Data Collector Settings dialog box can be accessed from the Reports view by Storage Manager users with Reporter privileges.
DSM-37188	The Do Not Expire option is not applied to snapshots created from the Snapshot Profiles node.
DSM-27862	The Discover and Configure Storage Centers wizard configures the key management server for SEDs but it does not manage the SEDs in a Secure Data folder.

Table 18. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-32796	Storage Manager is reporting database errors once a day after installing an upgrade.
DSM-32600	The server.log files expand to greater than 1 GB in size and cause the C drive to be filled.
DSM-29430	When editing the advanced volume settings, configuring the Maximum Configured Volume Space to more than the 500 terabyte limit of configured volume space per history may adversely affect failover behavior.
DSM-29371	The Storage Manager trim stats operation is timing out due to a very large MS SQL database due to retaining 365 days of data.
DSM-29001	Creating a server object for the local server might fail if the local server is running Windows Server 2016.
DSM-28683	Storage Manager displays an error after applying the High Priority Storage Profile to all volumes on an ESXi server.
DSM-28481	In some cases, the Shut Down/Restart dialog box remains open after restarting a Storage Center using Storage Manager.
DSM-27655	The Storage Manager Server Agent fails to format a volume on a server during a map and format operation on servers running Windows Server 2016 and displays an error message. The volume is successfully mapped to the server.
DSM-19752	Storage Center does not change the Data Progression Start Time if the time was changed by one hour only.
DSM-17166	Storage Manager allows you to create a fault domain using the same target address and/or VLAN ID as an existing fault domain.
DSM-16903	After removing and reinserting a controller on an SC7020 the ports are unbalanced but Storage Manager does not immediately display the option to rebalance the ports.
DSM-14705	The Estimated Full Time for a volume might show an incorrect date of Jan 1, 1970 12:00:00 AM.
DSM-13534	The Class of Service Priority field in the Fault Domain node might not match the iSCSI priority set on the ports in the fault domain as seen when viewing the Data Center Bridging Information for that port.
DSM-10124	Storage Manager allows users to set preallocated storage on a new volume being mapped to a down server. The operation fails.
DSM-9478	After a Copy/Mirror/Migrate schedule is complete, the schedule still appears in the client.
SCOS-45755	The volume space consumption limit cannot be set above 2 TB using Storage Manager.
SCOS-14951	After deleting volumes and snapshots, Storage Center does not immediately report the deleted volume space as free space for a disk folder.

Fixed Issues Related to the Storage Manager User Interface

The following issues related to the Storage Manager user interface are fixed in Storage Manager 2018 R1:

Table 19. Open Issues in Storage Manager 2018 R1.20

Issue	Description
DSM-38128	Attempting to create an IP filter with a Specific User setting results in a error and prevents the creation of any additional IP filters. Documentation updated to clarify this setting.

Table 20. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-38285	The Storage Summary chart displays inaccurate values for Storage Manager users with Volume Manager or Reporter privileges.
DSM-37538	Changes to the IPv4 port addresses in the Edit Fault Domain Settings dialog box might not be saved.

Table 21. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-32065	Storage Center volumes are showing a secured state when the disk folder is still in secure pending state.
DSM-30615	The snapshot column in the Automated Report for the volume Storage Report contains all zeros.
DSM-24010	After updating Storage Center, Storage Manager might not show some storage statistics in the Summary tab for a Storage Center.
DSM-20153	The Message column in the Audit Logs tab of the Monitoring view does not display messages for PS Series groups.
DSM-15322	When exporting storage usage data with the Save size data as MB option, the output is in blocks and must be manually converted to bytes.
DSM-14987	Storage Manager displays iSCSI ports on an SC4020 that are connected to a server but not configured in red and in a down state.
DSM-13758	When restarting a peer controller, a blank warning dialog box appears.
DSM-12518	The Mappings tab for a volume might not include a horizontal scroll bar.
SCOS-44972	If a storage system or storage controller reset is initiated from Storage Manager, the reset might not be recorded in Storage Center logs.
SCOS-41051	When the Storage Manager Client is connected to a Storage Center through a Data Collector, the Storage Manager Client does not allow you to change the name of an enclosure and asset tag.
SCOS-25031	After a controller failover, the peer controller might be reported as down by both SNMP and a Storage Manager Client that is directly connected to the peer controller.

Fixed Issues Related to the Unisphere User Interface

The following issues related to Unisphere are fixed in Storage Manager 2018 R1:

Table 22. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-36740	Unisphere disconnects from the Storage Center when the peer controller of a dual-controller storage system is restarted.
DSM-36605	The space usage information in the Storage Centers view is inaccurate.
DSM-36515	When the Configure Key Management Server Certificates dialog box is used to unlock a Storage Center with locked SEDs, the dialog box does not indicate the status of the unlock process.
DSM-36486	When the Use password has expired banner is displayed in Unisphere Central, clicking the Change Password link opens a Change Password dialog box that displays the username of the Storage Manager user instead of the Storage Center user.
DSM-35951	The Last Day display option on the Growth tab in the Disks view shows the wrong day.
DSM-34423	The Storage Chart in the Disks view is missing the Spare Space graph bar.

Fixed Issues Related to SupportAssist and Updating

The following issues related to SupportAssist and updating systems are fixed in Storage Manager 2018 R1:

Table 23. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-35475	Unable to configure a proxy server for SupportAssist in Storage Manager.
DSM-16901	After initiating a service-affecting Storage Center update, an error might appear stating "SC Update not found".

Fixed Issues Related to User Management

The following issues related to user management are fixed in Storage Manager 2018 R1:

Table 24. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-28536	After updating Storage Manager to version 2016 R3.10, Storage Manager might display an error on the Preferences tab in the Edit Storage Center Settings dialog box for the user that initiated the update.

Fixed Issues Related to the Storage Manager Virtual Appliance

The following issues related to the Storage Manager Virtual Appliance are fixed in Storage Manager 2018 R1:

Table 25. Issues Fixed in Storage Manager 2018 R1.20

Issue	Description
DSM-38216	The Storage Manager Virtual Appliance may not complete the domain join process.

Table 26. Issues Fixed in Storage Manager 2018 R1.10

Issue	Description
DSM-38732	When a Storage Manager Virtual Appliance is updated from Storage Manager 2016 R3 to Storage Manager 2018 R1, the VASA port might change from 3034 to 60.  NOTE: If the VASA port in the Storage Manager Virtual Appliance was changed from 3034 to 60, change the VASA port back to 3034.

Table 27. Issues Fixed in Storage Manager 2018 R1.2

Issue	Description
DSM-37370	The Storage Manager Virtual Appliance cannot be updated to Storage Manager 2018 R1 because the filename of the update package is incorrect.

Table 28. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-36792	Vulnerability scan of Storage Manager Virtual Appliance discovered security issue with GNU C Library (glibc).
DSM-33701	Unable to register VASA provider to the VMware vCenter server after installing a new version of Storage Manager.
DSM-33373	The Active Directory server logs for the Storage Manager Virtual Appliance show account passwords in plain text.
DSM-30095	An error might appear after successfully sending SupportAssist data.
DSM-28390	After setting up the Storage Manager Virtual Appliance with a static IPv4 address, the VM might display an IPv6 address if DHCP is not available on the network.
DSM-24018	Changing the time zone on the Virtual Appliance does not change the time displayed for the Virtual Appliance in Unisphere.
DSM-19776	Logging in to the Virtual Appliance using an Open LDAP username with a domain suffix fails.
DSM-15808	After migrating to the Storage Manager Virtual Appliance, the Storage Manager Virtual Appliance does not have the same time zone as the original Data Collector.

Fixed Issues Related to Virtual Volumes

The following issues related to virtual volumes are fixed in Storage Manager 2018 R1:

Table 29. Issues Fixed in Storage Manager 2018 R1

Issue	Description
DSM-38035	VASA provider registration might fail if the hostname or Fully Qualified Domain name (FQDN) of the Storage Manager Data Collector server contains invalid characters. Valid characters for the hostname and FQDN are letters, numbers, a period (.), and a dash (-). Documentation updated to clarify valid and invalid characters.
DSM-30674	After restarting the Data Collector service, VVols storage containers might be inactive.
DSM-16659	If a VVol VM's disk is resized, and you perform Update information , the storage container's configured space does not reflect the modified value.
DSM-13801	If you have any applications or folders open during the Dell Storage Manager update process, you might not be able to start the Storage Manager Data Collector. It could fail with the error <code>Error setting up JBoss: deleting joboss directory</code> . The folders mentioned in this directory could be VASA logs folder, server logs folder, and the msa Service folder. Dell recommends that you close all applications and folders before proceeding with the update.
DSM-151	vCenter displays the VVol datastore as active even after a storage container is deleted from Dell Storage Manager. If you try to create a VM on the datastore, it is marked as inactive.

Open Issues

The following sections summarize the open issues in Storage Manager 2018 R1.

Open Issues Related to Cross-Platform Replication

The following open issues are related to cross-platform replication:

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

Issue	Description
	Workaround: None
DSM-16754	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. Workaround: Replicate no more than 16 volumes at a time.
DSM-16737	Storage Manager does not allow you to set up a replication from a Storage Center to a PS Series group when creating a volume on the Storage Center. Workaround: Set up replication to the PS Series group using the Replicate Volume wizard.
DSM-15904	Storage Manager displays an incorrect error after setting up a replication from a Storage Center to a PS Series group with insufficient delegated space. Workaround: Modify the amount of delegated space on the PS Series group to accommodate the replication.
DSM-14648	Storage Manager does not automatically map a volume to the server after activating disaster recovery on a replication from a PS Series group to a Storage Center. Workaround: Manually map the volume to the server.

Open Issues Related to the Data Collector

The following open issues are related to the Data Collector:

Issue	Description
DSM-37868	If a Storage Center with an expired password disconnects from the Storage Manager Data Collector, the Storage Center cannot be reconnected to the Data Collector. Workaround: Change the password on the Storage Center by directly connecting to it using the Storage Manager Client or Unisphere interface.
DSM-32951	The Data Collector continues to display alerts after they have been cleared. Workaround: None
DSM-28366	Storage Manager does not allow custom SSL certificates with CN names that do not match the hostname of the server hosting the Data Collector. Workaround: Ensure that the CN name matches the hostname of the Data Collector server.

Open Issues Related to Data Reduction

The following open issues are related to Data Reduction:

Issue	Description
DSM-16853	Storage Manager displays incorrect data for the Snapshot Overhead statistic for Storage Centers running version 6.7 and below. Workaround: None
SCOS-13237	The Storage Type Data Reduction statistics might be incorrect if the amount of data eligible for Data Reduction contains fewer than 256 pages. Workaround: None

Miscellaneous Open Issues

The following open miscellaneous issues are in Storage Manager:

Issue	Description
DSM-34466	Running a Nessus security scan on Storage Manager reports an SSL Medium Strength Cipher Suites Supported vulnerability. Workaround: None
DSM-28532	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. Possible Workaround: Perform a Copy/Mirror/Migrate to a new volume. This should work if the new volume does not share an index with a different pre-existing volume on another system.
DSM-27414	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. Workaround: After modifying the configuration mode, ensure that the IP addresses are correct.
DSM-18203	In multiple-node configurations using cluster shared volumes, Storage Manager might display an alert with the message <i>Cannot insert duplicate key in object 'compsauser.EMServerAgentClusterVolumeStats'</i> Workaround: The alert can be ignored.
DSM-16593	Applying SNMP setting to other Storage Centers without SNMP enabled fails without displaying an error. Workaround: Enable SNMP on the Storage Center before applying any settings.
DSM-15879	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. Workaround: Set up the server manually using the Create Server dialog box.
DSM-15757	When recovering a replay using the vSphere Web Client plugin, the default name given to the datastore shows an incorrect time. Workaround: None
DSM-8608	When a multi-page automated report is printed in portrait orientation, the first page is printed in portrait orientation and subsequent pages are incorrectly printed in landscape orientation. Workaround: Save the report as a PDF then print it using a different application.

Open Issues Related to Management of PS Series Groups

The following open issues are related to the management of PS Series Groups:

Issue	Description
DSM-32952	Storage Manager might not clear alerts for an issue after fixing the issue on a PS Series group. Workaround: None
DSM-32950	The alert status for PS Series Groups does not roll up into the parent object.

Issue	Description
	Workaround: Monitor alerts using the Group Manager , opening the Alerts view in Unisphere or opening the Events tab in Storage Manager.
DSM-23693	Storage Manager displays a PS Series group as inactive after a controller failover on the PS Series group. Workaround: Remove the PS Series group from Storage Manager then add it back.
DSM-17321	Storage Manager displays alerts and alarms for PS Series groups that have been cleared to the recycling bin in Group Manager. Workaround: Delete the alerts and alarms from the recycling bin in Group Manager.
DSM-13871	After performing an online Thin Import of a boot volume from a PS Series group to a Storage Center, the server is unable to boot from the volume after mapping it to the server. Workaround: Online Thin Import is not supported with boot volumes.

Open Issues Related to Replications and Live Volumes

The following are open issues are related to replications and Live Volumes:

Issue	Description
DSM-28520	After performing a test activate disaster recovery, Storage Manager does not allow you to delete that volume from the Replications and Live Volumes tab. Workaround: Unmap then delete the volume from the Storage view.
DSM-15338	Disaster recovery activation fails if the Snapshot Profile assigned to the restore point has been deleted. Workaround: Edit the restore point to remove the Snapshot Profile.
DSM-9294	When creating multiple replications or Live Volumes simultaneously, correcting a configuration error and resuming the process can create duplicate replications or Live Volumes. Workaround: If a creation operation fails, do not use the wizard to correct the configuration error and continue. Instead, exit and restart the wizard, then resume creating replications or Live Volumes from the point of failure.
SCOS-12067	When importing a volume, Storage Manager does not allow you to select 0 as the LUN number. Workaround: None

Open Issues Related to Dell Storage Replication Adapter (SRA)

The following open issues are related to Dell Storage Replication Adapter (SRA):

Table 30.

Issue	Description
DSM-39992	The following error message is displayed during the Synchronize Storage step of the Dell SRA workflow for all versions of SRM: Warning - Internal error: std::exception 'class Dr::Xml::XmlValidateException' "No character data is allowed by content model"

Issue	Description
	Workaround: Error message can be ignored.
DSM-31875	The VMware host setup is configuring iSCSI HBA Login Timeout from 5 to 60 incorrectly. Workaround: Refer to VMware best practices documentation.
DSM-28137	SRM planned failovers with Live Volumes fail when vMotion is not enabled in the environment. Workaround: Dell Storage Replication Adapter (SRA) with Stretched Storage and Live Volumes requires vMotion. Enable vMotion.
DSM-27978	The support link is broken when setting up Dell Storage Replication Adapter (SRA) on SRM 5.8. Workaround: Refer to support contact information at http://www.dell.com/learn/us/en/19/flatcontentg/ps-compellent .
DSM-18751	The installation wizard for the Dell 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. Workaround: Uninstall the previous version of SRA then install the new version.

Open Issues Related to Storage Management

The following open issues are related to storage management:

Issue	Description
DSM-39810	When a volume of one storage type is moved to a new storage type using CMM, the pressure reports do not update correctly. Workaround: Create volumes in the new storage type before migrating data.
DSM-38054	Storage Manager does not display all of the IPv4 addresses for a host using an iSCSI software initiator. Workaround: None
DSM-36978	Changing the password by clicking the 'change password' message displayed in the Storage Manager banner changes the Storage Manager password, not the Storage Center password. Workaround: Use the Storage Center Edit Settings dialog box to change the Storage Center password.
DSM-28354	Storage Manager might not display information for some Hyper-V virtual machine volumes monitored with the Server Agent in the Servers view. Workaround: View information for those volumes in the Storage view.
DSM-28297	Discover and Configure Storage Centers wizard displays an incorrect size for disks on a discovered Storage Center. Workaround: None
DSM-28295	After reinstalling the Server Agent, it might fail to register the server with Storage Manager. Workaround: Register the server in the Storage Manager Client.
DSM-20038	During initial setup of Storage Center, the Discover and Configure Storage Centers wizard might close while updating the Storage Center. You will not be able to open the Discover and Configure Storage Centers wizard to complete the setup until the controllers finish restarting. Workaround: Wait for the controllers to power on, reconnect to the Storage Center, then launch the Discover and Configure Uninitialized Storage Centers wizard.

Issue	Description
DSM-20037	<p>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.</p> <p>Workaround: Create the server manually using the Create Server dialog box.</p>
DSM-15660	<p>After adding disks to tier two in a three-tiered Storage Type that exceeds the limit for single redundancy level, tier three is forced to dual redundant instead of tier two.</p> <p>Workaround: None</p>
DSM-13200	<p>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.</p> <p>Workaround: Refresh the Storage Manager Client.</p>
DSM-11762	<p>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.</p> <p>Workaround: Correct the label of the volume with unsupported characters.</p>
DSM-9428	<p>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.</p> <p>Workaround: None</p>
DSM-9390	<p>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.</p> <p>Workaround: Manually promote the volume to the ESXi server cluster mappings. Then, rescan for hosts on the vCenter server.</p>

Open Issues Related to the Storage Manager User Interface

The following open issues are related to the Storage Manager user interface:

Issue	Description
DSM-36674	<p>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.</p> <p>Workaround: None</p>
DSM-36577	<p>When Storage Manager and the Data Collector are located in different time zones, the timestamps are also different.</p> <p>Workaround: Do not set a time zone value for the Data Collector UTC setting.</p>
DSM-36253	<p>When creating a new server, the Operating System information dialog box shows the Maximum Path Count as zero instead of 32 or unlimited.</p> <p>Workaround: None</p>
DSM-34423	<p>The Storage Chart in the Disks view is missing the Spare Space graph bar.</p> <p>Workaround: None</p>
DSM-32557	<p>The Allow Space recovery option is no longer supported in Storage Manager.</p> <p>Workaround: None</p>
DSM-31931	<p>If a system has multiple disk folders, the Storage Alert Threshold field on the Summary tab displays the data for the last disk folder in the list.</p>

Issue	Description
	Workaround: View the threshold data in the Thresholds Alerts view.
DSM-28859	<p>The welcome screen for the Storage Manager Red Hat Linux client appears blank when the Color Depth of the Windows Remote Desktop Connection is set to Highest Quality (32 bit).</p> <p>Workaround: Set the Color Depth of the Windows Remote Desktop Connection to True Color (24 bit) or High Color (16 bit).</p>
DSM-26168	<p>Storage Manager displays the option to delete when volumes and volume folders are selected.Storage Manager does not support deleting volumes and volume folders in one action and attempting to do so fails.</p> <p>Workaround: Delete volumes and volume folder separately.</p>
DSM-14009	<p>Refreshing the Dell Storage Manager Client does not clear the red dot indicator from the Storage Center node.</p> <p>Workaround: Restart the Dell Storage Manager Client.</p>
DSM-9577	<p>The front-end SAS card for an SCv2000 series controller does not provide WWN information to ESXi host.</p> <p>Workaround: Record the SAS WWN information before installing it in an ESXi hosts.</p>
DSM-9548	<p>Server Agent information in the Servers view does not display information for servers connected over iSCSI.</p> <p>Workaround: Refresh the Storage Manager Client.</p>
DSM-9477	<p>Storage Manager might report that a restart in sequence has completed when the restart has not completed.</p> <p>Workaround: Verify that the restart has completed before continuing.</p>
DSM-7908	<p>The I/O Usage report exported in XML format does not display all the information for the French output when opened in a web browser.</p> <p>Workaround: Open the report using a text editor such as Notepad.</p>
SCOS-12316	<p>Storage Manager displays multi-VLAN tagging options for I/O cards that do not support multi-VLAN tagging.</p> <p>Workaround: Do not enable multi-VLAN tagging on Glogic cards that do not support it.</p>

Open Issues Related to the Unisphere User Interface

The following open issues are related to the Unisphere user interface:

Issue	Description
DSM-38756	<p>When a Storage Center contains over 50 expansion enclosures, the Unisphere Hardware view displays a server error.</p> <p>Workaround: Use Storage Manager Client instead of Unisphere to view hardware information for large systems.</p>
DSM-36800	<p>SAS fault domain object notes cannot be edited in Unisphere.</p> <p>Workaround: Use the Storage Manager to edit the fault domain Notes field.</p>
DSM-36355	<p>Some views in Unisphere fail to load and display object data.</p> <p>Workaround: None</p>

Issue	Description
DSM-36253	<p>When creating a new server, the Operating System information dialog box shows the Maximum Path Count as zero instead of 32 or unlimited.</p> <p>Workaround: None</p>
DSM-36243	<p>Unisphere seems to allow users to remove the last virtual port from a fault domain and indicates that the attempt was successful even when the final port was not actually removed.</p> <p>Workaround: Do not attempt to remove the last port from a fault domain.</p>
DSM-36115	<p>After entering valid start and end times to show custom historical performance data, the Update button displays as disabled in the Performance view from the Monitoring menu.</p> <p>Workaround: Click the Update button and the performance data is displayed.</p>
DSM-35865	<p>Occasionally, text strings in Unisphere are displayed in non-English language even when the Preferred Language setting in the Data Collector is set to English.</p> <p>Workaround: Restart the Data Collector.</p>
DSM-35454	<p>Performing a procedure that is applied to more than 128 objects may fail.</p> <p>Workaround: None</p>
DSM-34120	<p>Unable to create an empty disk folder on a hot spare system that has available disks.</p> <p>Workaround: None</p>
DSM-33384	<p>Using Internet Explorer to view a large number of LDAP users, the user interface is unresponsive.</p> <p>Workaround: Use a different web browser such as Chrome, Edge or Firefox.</p>
DSM-32169	<p>The Performance view may display cut off when using Internet Explorer.</p> <p>Workaround: Use a different web browser such as Chrome, Edge or Firefox.</p>
DSM-31674	<p>Notification for multi-step task provides insufficient information.</p> <p>Workaround: None</p>
DSM-28814	<p>When entering a value into storage size and link speed fields using multiple decimal places, the value is converted to bytes but the calculation is incorrect and does not match the original size. This causes the filter to fail.</p> <p>Workaround: None</p>
DSM-28393	<p>Automated reports are not delivered through the SMTP server even when the email address has been properly configured.</p> <p>Workaround: None</p>
DSM-26784	<p>The Equal to choice from the percent drop-down menu on the Filters dialog box does not work correctly.</p> <p>Workaround: None</p>
DSM-16373	<p>Unisphere does not show the progress of a Data Collector data source change.</p> <p>Workaround: Use the Storage Manager to change the data source of a Data Collector.</p>

Open Issues Related to SupportAssist and Updating

The following open issues are related to SupportAssist and updating systems:

Issue	Description
DSM-36088	<p>Occasionally, when starting a non-service affecting update for a Storage Center through the Data Collector, Storage Manager loses connectivity with the Storage Center.</p> <p>Workaround: The system automatically resolves the connectivity issue.</p>

Open Issues Related to User Management

The following open issues are related to user management:

Issue	Description
DSM-40010	<p>A blank red error banner is displayed when uploading a self-signed certificate.</p> <p>Workaround: Change the extension of the public key to .cert, .cer or .der and change the extension of the private key to .p12</p>
DSM-35881	<p>Unable to import chained SSL certificate in Storage Manager.</p> <p>Workaround: If the certificate to be imported is signed by an intermediate CA instead of a root CA, then the entire certificate chain must be imported in PEM format. The certificate chain must also include the root CA apart from all the intermediate CAs.</p>
DSM-35779	<p>Unable to upload an SSL wildcard certificate that includes a subject alternative name (SAN).</p> <p>Workaround: Do not include a SAN or make sure that the SAN names for the IP address or DNS match the DNS/IP of the Data Collector.</p>
DSM-35741	<p>After trying to upload an invalid TLS certificate, Directory Service is enabled.</p> <p>Workaround: Clear the Directory Service checkbox to restart the Data Collector and disable Directory Service.</p>
DSM-35710	<p>Storage Center does not restrict directory service communication to manually defined LDAP servers. This issue might cause delays when joining Storage Center to a directory environment or failures when adding directory users and groups to Storage Center for authentication.</p> <p>Workaround: None</p>
DSM-35011	<p>Cannot configure OpenLDAP directory server using Storage Manager or Unisphere.</p> <p>Workaround: None</p>
DSM-31688	<p>Invalid characters in the Storage Center Directory Services configuration may cause Active Directory or OpenLDAP authentication failures for the Data Collector.</p> <p>Workaround:</p> <ol style="list-style-type: none">1 Remove the illegal character in the Kerberos realm attribute of the Storage Center by reconfiguring Active Directory or OpenLDAP using Unisphere or Storage Manager.2 Make sure that the Storage Center and the Data Collector are included in the same trusted Active Directory domain.
DSM-30243	<p>Unable to add directory user groups because the session expires before any groups are displayed.</p> <p>Workaround: Increase the default five-minute transaction timeout window to ten minutes by editing the standalone.xml configuration file in the Data Collector.</p>

Issue	Description
DSM-24536	Using the characters < or > in fields in the settings for a user causes an error. Workaround: Do not use those characters.
DSM-15445	Adding Storage Manager to Active Directory fails if you are using the distinguished name (DN) of a user. Workaround: Use the user principal name (UPN) to add Storage Manager to an Active Directory realm.
DSM-12329	After unlocking a user, the status might not change to unlocked immediately. Workaround: Refresh the Storage Manager Client.
SCOS-11192	Storage Center cannot authenticate directory service users that are configured to use an alternate DNS suffix. Workaround: None

Open Vendor Issues

The following issues are open vendor issues:

Issue	Description
DSM-15341	The Virtual Appliance CLI menu in the VMware Console appears in English for a Virtual Appliance deployed for Japanese or Chinese languages. Workaround: Access the Virtual Appliance CLI using SSH.
DSM-15000	A VVol VM snapshot with quiesce guest file-system option fails. Workaround: Install the VMware Tools without the VSS feature. For more information, see VMware Knowledge Base article number 2069952.
DSM-14997	When using sDRS with VVols, vCenter incorrectly recommends migrating the VM when both VVols are on the same Storage Center. Workaround: Review the recommendations from vCenter before taking any actions.
DSM-12732	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 (in the vCenter user interface) for an oversubscribing container reflect the actual free or total physical capacity values of the array instead of the logical storage container values. Workaround: None
DSM-11417	When high availability (HA) is configured between two hosts, 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 currently is not supported with VVols. Workaround: 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.

Open Issues Related to Virtual Volumes

The following open issues are related to virtual volumes in Storage Manager 2018 R1.

Table 31. Open Issues in Storage Manager 2018 R1

Issue	Description
DSM-16665	<p>After upgrading an ESXi host from version 5.5 to 6.0, Dell Storage Manager does not properly reflect the host and its attributes as being ESXi 6 capable, in particular the recognition of the protocol endpoint. An extra artifact is that a VVol datastore is identified with improper size of 0 bytes.</p> <p>Workaround: Remove the server and then add it back to Dell Storage Manager.</p>
DSM-16656	<p>If you select the Auto Manage Virtual Machines On Storage Centers 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 Servers tree of the Storage panel. If any of these VMs are later deleted from vCenter, they still remain in the Dell Storage Manager view.</p> <p>Workaround: To remove these deleted VMs from Dell Storage Manager, right-click the VM and then delete it.</p>
DSM-16248	<p>On rare occurrences, selecting Update information in the Dell Storage Manager Server view results in the error <code>java.net.SocketException: Unexpected end of file from server</code>.</p> <p>Workaround: Despite the vCenter appearing to be online and able to accept connections, a restart of vCenter is needed to reestablish proper connectivity between Dell Storage Manager and vCenter. A case for this has been logged with VMware.</p>
DSM-15980	<p>By design, a storage container on the Storage Center created by one Dell Storage Manager Data Collector cannot be managed by another Dell Storage Manager. However, you can select the storage container, and attempt to create a datastore. Dell Storage Manager should filter out storage containers it does not manage from the list of available storage containers.</p> <p>Workaround: Select a storage container which was created by the same Dell Storage Manager. Alternatively, use vCenter to create the datastore from an existing storage container. vCenter properly filters the available storage containers.</p>
DSM-15879	<p>When establishing an integrated environment with Dell Storage Manager and VMware, various options are 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>Workaround: Although the option exists in the Storage tab to create from vCenter server, the preferred and more reliable method is to use the Dell Storage Manager Server tab. Select the Server folder then Register Server > Add VMware vCenter Server. Then, select Auto Manage Storage Centers to populate the Storage Center.</p>
DSM-15803	<p>In rare circumstances when migrating a VVol VM 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>Workaround: Contact technical support to handle the removal of the VM.</p>
DSM-15302	<p>If you attempt to delete a datastore which is populated (not empty) using Dell Storage Manager, an error results. A false indicator of connectivity is represented by a red X on the vCenter server.</p> <p>Workaround: Click the Update Information button in the top-level menu.</p>
DSM-14891	<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>

Issue	Description
	<ul style="list-style-type: none"> Changing a storage container's Data Reduction profiles might cause future fast cloned VMs to be created with mismatched Data Reduction profiles for the config and data VVols. 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. <p>Workaround: None</p>
DSM-14806	<p>Migrate or Clone operations on virtual machines with snapshots might fail if not enough space is available in the VVol datastore hosting the VM. The temporary space overhead required by these operations depends on the size of the individual disks and the number of snapshots of the VM.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1 Check if the VVol datastore (storage container) is nearing capacity. 2 Increase the size of the VVol datastore to sufficiently accommodate the overhead and then retry the operation.
DSM-14570	<p>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>.</p> <p>Workaround: Ignore the error message, and register VASA Provider with a DSM user with Administrator privilege.</p>
DSM-14301	<p>The Datastore Connectivity tab in the Storage Manager Data Collector user interface is blank when viewing a datastore on a vCenter 6.0 server or an ESXi 6.0 host.</p> <p>Workaround: Use the vCenter or ESXi 6.0 client to view connection information.</p>
DSM-14149	<p>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>.</p> <p>Workaround: Reapply the new storage policy after Storage vMotion has completed.</p>
DSM-13316	<p>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.</p> <p>Workaround: Unmount and then remount the datastore.</p>
DSM-13274	<p>The Dell Storage Manager VASA Provider, whether using VASA1 or VASA2, can have only one vCenter server registered to it at any time. You cannot register multiple vCenter servers to the Dell VASA Provider at the same time. If you register a vCenter server to Dell Storage Manager and then register the server to the Dell VASA Provider, you first must unregister the server from the VASA Provider before registering a different vCenter server to the Dell VASA Provider.</p> <p>Workaround: If you try to register any vCenter server to the Dell VASA Provider, and the registration fails, make sure that no other vCenter servers are registered to the Dell VASA Provider.</p>
DSM-13042	<p>Under rare circumstances, usually involving VVol operations (cloning and snapshots) on multiple VMs concurrently using scripting and 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.</p> <p>Workaround: 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 sequential operations or operations with interjected delays.</p>
DSM-12728	<p>In rare occurrences, the space consumption information for a volume might be blank.</p> <p>Workaround: Close and reopen your client.</p>

Issue	Description
DSM-11945	<p>Even after unregistering VASA, powered-off VMs are accessible and VVol datastores are active. If you try to power on the VMs or create a new VM, vCenter eventually discovers that the VASA Provider is not present and it marks the VVol datastores as inactive.</p> <p>Workaround: None</p>
DSM-9825	<p>If you create a storage container in Dell Storage Manager, and then create a datastore from vCenter, there could be a delay before the VASA Provider detects the datastore.</p> <p>Workaround: Dell recommends that you create VVol datastores from Dell Storage Manager. This task creates the storage container on the Storage Center and the datastore on vCenter in one operation. If you want to create the storage container in Dell Storage Manager, and then create the datastore from vCenter, you will need to wait 1-2 minutes after creating the storage container in Dell Storage Manager before it is visible in vCenter. After the new storage container is visible in vCenter, the VVol datastore can be created.</p>

Notes and Limitations

This section contains information important to this release of Storage Manager 2018 R1.

Limitations For Unisphere

The following features are not currently available for Unisphere in Storage Manager 2018 R1.

- Chargeback
- Disaster recovery
- FluidFS management
- Initial Storage Center setup and configuration
- Live Volume and Live Migrate
- Managed servers
- Replication
- Reporting
- PS Series Group management
- Threshold alerts
- VVols

Dell 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.

Support Resources

The following section provides resources for finding more information on using Storage Manager.

Related Documentation

The following documents are available for Storage Manager version 2018 R1.

- *Storage Manager Administrator's Guide*

Provides instructions for using the Storage Manager software.

- *Storage Manager Online Help*

Provides context-sensitive help for the Storage Manager software,

- *Storage Manager Installation Guide*

Provides installation and setup instructions for the Storage Manager software.

- *Unisphere and Unisphere Central for SC Series Administrator's Guide*

Provides instructions and information for managing storage systems using Unisphere and Unisphere Central for SC Series.

Finding Documentation

The following locations contain documentation that might be useful when managing Dell EMC Storage products with Storage Manager.

- *Dell EMC Support*

Provides documentation for Dell EMC Storage Products. Go to: www.dell.com/support.

- *Dell TechCenter*

Dell TechCenter has moved to other locations on the Dell support site. You can find technical white papers, best practice guides, and frequently asked questions about Dell Storage products on the following sites.

- [TechCenter Migration FAQ](#) (more information about the TechCenter content migration)
- [Dell Support](#) (Searchable knowledge base)
- [Dell Technical Resources](#) (migrated TechCenter topic areas such as Networking, Servers, Storage, etc.)

Contacting Dell

For more information and customer support, go to www.dell.com/support.