

Storage Center 7.3 Release Notes

This document describes the new features, enhancements, fixed issues, and open issues in Storage Center 7.3.

Current Version: 7.3.20

Previous Version: 7.3.11

Topics:

- [Document Revision History](#)
- [Compatibility](#)
- [New in This Release](#)
- [Storage Center 7.3 Feature Availability and Licenses](#)
- [Storage Center 7.3 Scalability](#)
- [Fixed Issues](#)
- [Open Issues](#)
- [Limitations](#)
- [Support Resources](#)

Document Revision History

Document Number: 680-021-021

Revision	Date	Description
A	April 2018	Initial release of Storage Center 7.3
B	May 2018	Updated the Data-in-Place Upgrade and iSCSI HBA Support information
C	August 2018	Updated for Storage Center 7.3.2
D	September 2018	Updated for Storage Center 7.3.3
E	October 2018	Updated for Storage Center 7.3.4
F	November 2018	Updated for Storage Center 7.3.5
G	February 2019	Updated for Storage Center 7.3.6
H	February 2019	Corrected the number of source replications supported by SC7020F and SC7020 storage systems
I	May 2019	Updated for Storage Center 7.3.11
J	May 2019	Added SCOS-55147
K	August 2019	Updated for Storage Center 7.3.20
L	October 2019	Updated DCB support information for iSCSI mezzanine cards

Compatibility

The following storage systems are compatible with Storage Center 7.3:

- SC9000
- SC8000
- SC7020F
- SC7020
- SC5020F

- SC5020
- SC4020
- SCv3000 Series
- SCv2000 Series

NOTE:

Storage Center 7.3 supports cabling mixed-speed expansion enclosures. SC400, SC420, and SC420F expansion enclosures can be cabled with SC200 and SC220 expansion enclosures.

New in This Release

The following features were added to Storage Center 7.3:

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-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.

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.

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: Storage Center 7.3.2 or later is required to support Data Center Bridging (DCB) on the 25 GbE and 100 GbE iSCSI HBAs/mezzanine cards.**

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.**

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 SMTP, 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 Manager 2018 R1

Storage Manager 2018 R1 or later is required to manage storage systems running Storage Center 7.3.

Thin Import from VNX and VNXe

Thin import from VNX and VNXe storage systems is supported in Storage Center 7.3.2.

Unisphere for SC Series

Unisphere for SC Series is a new web-based user interface for Storage Center. Unisphere for SC Series allows you to manage a Storage Center and to perform monitoring and administrative tasks.

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

Storage Center 7.3 Feature Availability and Licenses

The core licenses and support for optional licensed features varies depending on the storage system.

SC9000 Features and Licenses

The following licensed features and optional value-added bundles are available on SC9000 storage systems:

Licenses/Bundles	Licensed Features
Core Software Bundle	<ul style="list-style-type: none"> • Data Reduction (Compression and Deduplication) • Dell Storage Manager • Dynamic Capacity • Dynamic Controllers • Live Migrate • Local Data Protection <ul style="list-style-type: none"> • Data Instant Replay (Snapshots) • Manual Replay (Snapshots) • Multi-VLAN Tagging • Virtual Ports • Volume QoS • VVols
Optional Licenses	<ul style="list-style-type: none"> • Live Volume and Live Volume with Auto Failover • Remote Instant Replay (Replication), including Cross-Platform Replication

Licenses/Bundles	Licensed Features
	<ul style="list-style-type: none"> Replay Manager SED FIPS Secure Data Storage Manager Chargeback
Storage Optimization Bundle	<ul style="list-style-type: none"> Data Progression Fast Track
Storage Protection Bundle	<ul style="list-style-type: none"> Live Volume and Live Volume with Auto Failover Remote Instant Replay (Replication), including Cross-Platform Replication Replay Manager
Total Feature Bundle	<ul style="list-style-type: none"> SED FIPS Secure Data Storage Manager Chargeback Storage Optimization Bundle Storage Protection Bundle

SC8000 Features and Licenses

The following licensed features are available on SC8000 storage systems:

Licenses/Bundles	Licensed Features
Core Software Bundle	<ul style="list-style-type: none"> Data Reduction (Compression and Deduplication) Dell Storage Manager Dynamic Capacity Dynamic Controllers Live Migrate Local Data Protection <ul style="list-style-type: none"> Data Instant Replay (Snapshots) Manual Replay (Snapshots) Multi-VLAN Tagging Virtual Ports Volume QoS VVols
Optional Licenses	<ul style="list-style-type: none"> Live Volume and Live Volume with Auto Failover Remote Instant Replay (Replication), including Cross-Platform Replication Replay Manager SED FIPS Secure Data Storage Manager Chargeback

SC7020F and SC5020F Features and Licenses

The following licensed features are supported on SC7020F and SC5020F all-flash storage systems:

Licenses/Bundles	Licensed Features
Total Feature Bundle	<ul style="list-style-type: none"> Data Progression Data Reduction (Compression and Deduplication) Dell Storage Manager Dynamic Capacity Dynamic Controllers Live Migrate Live Volume and Live Volume with Auto Failover Local Data Protection

Licenses/Bundles	Licensed Features
	<ul style="list-style-type: none"> • Data Instant Replay (Snapshots) • Manual Replay (Snapshots) • Multi-VLAN Tagging • Remote Instant Replay (Replication), including Cross-Platform Replication • Replay Manager • SED FIPS Secure Data • Storage Manager Chargeback • Virtual Ports • Volume QoS • VVols

SC7020 and SC5020 Features and Licenses

The following licensed features and optional value-added bundles are supported on SC7020 and SC5020 storage systems:

Licenses/Bundles	Licensed Features
Core Software Bundle	<ul style="list-style-type: none"> • Data Reduction (Compression and Deduplication) • Dell Storage Manager • Dynamic Capacity • Dynamic Controllers • Live Migrate • Local Data Protection • Data Instant Replay (Snapshots) • Manual Replay (Snapshots) • Multi-VLAN Tagging • Virtual Ports • Volume QoS • VVols
Optional Licenses	<ul style="list-style-type: none"> • Live Volume and Live Volume with Auto Failover • Remote Instant Replay (Replication), including Cross-Platform Replication • Replay Manager • SED FIPS Secure Data • Storage Manager Chargeback
Storage Protection Bundle	<ul style="list-style-type: none"> • Live Volume and Live Volume with Auto Failover • Remote Instant Replay (Replication), including Cross-Platform Replication • Replay Manager
Storage Optimization Bundle	<ul style="list-style-type: none"> • Data Progression • Fast Track
Total Feature Bundle	<ul style="list-style-type: none"> • SED FIPS Secure Data • Storage Manager Chargeback • Storage Optimization Bundle • Storage Protection Bundle

SC4020 Features and Licenses

The following licensed features and optional value-added bundles are supported on SC4020 storage systems:

Licenses/Bundles	Licensed Features
Core Licenses	<ul style="list-style-type: none"> • Data Reduction (Compression and Deduplication)

Licenses/Bundles	Licensed Features
	<ul style="list-style-type: none"> • Dell Storage Manager • Dynamic Capacity • Dynamic Controllers • Live Migrate • Local Data Protection <ul style="list-style-type: none"> • Data Instant Replay (Snapshots) • Manual Replay (Snapshots) • Multi-VLAN Tagging • Virtual Ports • Volume QoS • VVols
Optional Licenses	<ul style="list-style-type: none"> • Live Volume and Live Volume with Auto Failover • Remote Instant Replay (Replication), including Cross-Platform Replication • Replay Manager • SED FIPS Secure Data • Storage Manager Chargeback
Performance/Optimization Bundle	<ul style="list-style-type: none"> • Data Progression • Fast Track
Remote Data Protection Bundle	Remote Instant Replay (Replication), including Cross-Platform Replication
Remote Data Protection with Live Volume Bundle	<ul style="list-style-type: none"> • Remote Instant Replay (Replication), including Cross-Platform Replication • Live Volume and Live Volume with Auto Failover

SCv3000 Series Features and Licenses

The following licensed features and optional value-added bundles are supported on SCv3000 series storage systems:

Licenses/Bundles	Licensed Features
Core Software Bundle	<ul style="list-style-type: none"> • Data Compression • Dell Storage Manager • Dynamic Capacity • Dynamic Controllers • Live Migrate • Local Data Protection <ul style="list-style-type: none"> • Data Instant Replay (Snapshots) • Manual Replay (Snapshots) • Virtual Ports • Volume QoS • VVols
Optional Licenses	<ul style="list-style-type: none"> • Live Volume and Live Volume with Auto Failover • Replay Manager • SED FIPS Secure Data • Storage Manager Chargeback
Storage Protection Bundle	<ul style="list-style-type: none"> • Live Volume and Live Volume with Auto Failover • Remote Instant Replay (Replication), including Cross-Platform Replication • Replay Manager
Storage Optimization Bundle	<ul style="list-style-type: none"> • Data Progression • Fast Track

Licenses/Bundles	Licensed Features
Total Feature Bundle	<ul style="list-style-type: none"> • SED FIPS Secure Data • Storage Manager Chargeback • Storage Optimization Bundle • Storage Protection Bundle

SCv2000 Series Features and Licenses

The following licensed features are supported on SCv2000 series storage systems:

Licenses/Bundles	Licensed Features
Core Licenses	<ul style="list-style-type: none"> • Dell Storage Manager • Dynamic Capacity • Dynamic Controllers • Live Migrate
Optional Licenses	<ul style="list-style-type: none"> • Flex Port • Local Data Protection <ul style="list-style-type: none"> • Data Instant Replay (Snapshots) • Manual Replay (Snapshots) • Remote Data Protection (Asynchronous replication only)

Storage Center 7.3 Scalability

The following scalability guidelines apply to Storage Center 7.3.

Storage System Scalability Guidelines

The following scalability guidelines apply to SC9000, SC8000, SC7020F, SC7020, SC5020F, SC5020, SC4020, SCv3000 Series, and SCv2000 Series storage systems running Storage Center 7.3.

Table 1. Scalability Guidelines for Dual-Controller Storage Systems

Storage System (memory per controller)	Raw (512 KB pages)	Addressable (512 KB pages)	Raw (2 MB pages)	Addressable (2 MB pages)	Raw (4 MB pages)	Addressable (4 MB pages)
SC9000 (128 GB or 256 GB)	1500 TB	1000 TB	6000 TB	4000 TB	12,000 TB	8000 TB
SC8000 (64 GB)	750 TB	500 TB	3000 TB	2000 TB	3000 TB	2000 TB
SC7020F or SC7020 (128 GB)	1000 TB	650 TB	4000 TB	2600 TB	8000 TB	5200 TB
SC5020F or SC5020 (64 GB)	540 TB	350 TB	2160 TB	1400 TB	4320 TB	2800 TB
SC4020 (16 GB)	263 TB	175 TB	1054 TB	700 TB	1054 TB	700 TB
SCv3000 Series (16 GB)	250 TB	169 TB	1000 TB	675 TB	2000 TB	1350 TB
SCv2000 Series (8 GB)	168 TB	112 TB	672 TB	450 TB	N/A	N/A

NOTE: In the release notes for Storage Center 7.2 and Storage Center 7.1, the supported maximum storage space for an SC4020 using a 512 KB page size was incorrectly calculated as 500 TB raw and 400 TB addressable. The correct supported maximum storage space for an SC4020 using a 512 KB page size is 263 TB raw and 175 TB addressable.

Storage Center Scalability Guidelines

The following scalability guidelines are the maximum recommended design guidelines for storage systems running Storage Center 7.3.

Table 2. Storage Center Scalability Guidelines for SC9000, SC8000, SC7020F, SC7020, SC5020F, SC5020, and SC4020 Storage Systems


Storage Center Object	Supported Maximum
Drives	<ul style="list-style-type: none"> SC9000 – 1024 drives total, 192 drives per SAS chain SC8000 – 960 drives total, 168 drives per SAS chain SC7020F or SC7020 – 606 drives total, 192 drives per SAS chain SC5020F or SC5020 – 222 drives total, 192 drives per SAS chain SC4020 – 192 drives total, 168 drives per SAS chain
Disk Folder	10 disk folders
Server	<ul style="list-style-type: none"> 500 servers (Total number of servers includes physical servers, virtual servers, and server clusters) 500 server folders 1000 server HBA initiator ports (Total number of HBA initiator ports includes all physical and virtual ports that are visible to the SAN)
Volume	<ul style="list-style-type: none"> 500 TB maximum volume size (or the maximum addressable storage space, whichever is less) 2000 volumes 500 volume folders
Deduplication	1 PB data ingestion limit (SC4020 – 500 TB data ingestion limit)
Live Volume	500 Live Volumes
Thin Import	10 volumes (maximum simultaneous imports)
QoS Profiles	<ul style="list-style-type: none"> 100 Volume QoS Profiles 100 Group QoS Profiles 100 Volumes per Group QoS Profile
Data Instant Replay (Snapshots)	<ul style="list-style-type: none"> Snapshots: <ul style="list-style-type: none"> SC9000 – 32,000 snapshots SC8000 – 16,000 snapshots SC7020F or SC7020 – 16,000 snapshots SC5020F or SC5020 – 8000 snapshots SC4020 – 8000 snapshots 1000 snapshot profiles 100 snapshot history profiles 200 consistency groups 100 volumes per consistency group <ul style="list-style-type: none"> SC5020F or SC5020 – 50 volumes per consistency group SC4020 – 40 volumes per consistency group
Replications	<ul style="list-style-type: none"> Source replications: <ul style="list-style-type: none"> SC9000 – 1000 source replications SC8000 – 500 source replications SC7020F or SC7020 – 1000 source replications SC5020F or SC5020 – 500 source replications SC4020 – 500 source replications 2000 target replications <ul style="list-style-type: none"> SC4020 with Fibre Channel front-end ports – 1000 replications SC4020 with iSCSI front-end ports – 230 replications

Table 3. Storage Center Scalability Guidelines for SCv3000 Series Storage Systems

Storage Center Object	Supported Maximum
Drives	<ul style="list-style-type: none"> SCv3000 – 208 drives total, 192 drives per SAS chain SCv3020 – 222 drives total, 192 drives per SAS chain
Disk Folder	10 disk folders
Server	<ul style="list-style-type: none"> 250 servers (Total number of servers includes physical servers, virtual servers, and server clusters) 250 server folders 500 server HBA initiator ports (Total number of HBA initiator ports includes all physical and virtual ports that are visible to the SAN)
Volume	<ul style="list-style-type: none"> 500 TB maximum volume size (or the maximum addressable storage space, whichever is less) 1000 volumes 500 volume folders
Live Volume	250 Live Volumes
Thin Import	10 volumes (maximum simultaneous imports)
QoS Profiles	<ul style="list-style-type: none"> 100 Volume QoS Profiles 100 Group QoS Profiles 100 Volumes per Group QoS Profile
Data Instant Replay (Snapshots)	<ul style="list-style-type: none"> 4000 snapshots 1000 snapshot profiles 100 snapshot history profiles 100 snapshots per volume 200 consistency groups 25 volumes per consistency group
Replications	<ul style="list-style-type: none"> 250 source replications 1000 target replications

Table 4. Storage Center Scalability Guidelines for SCv2000 Series Storage Systems

Storage Center Object	Supported Maximum
Drives	<ul style="list-style-type: none"> SCv2000 – 168 drives total, 156 drives per SAS chain SCv2020 – 168 drive totals, 144 drives per SAS chain SCv2080 – 168 drives total, 84 drives per SAS chain
Disk Folder	4 disk folders
Server	<ul style="list-style-type: none"> 100 servers (Total number of servers includes physical servers, virtual servers, and server clusters.) 100 server folders 200 server HBA initiator ports (Total number of HBA initiator ports includes all physical and virtual ports that are visible to the SAN.)
Volume	<ul style="list-style-type: none"> 500 TB maximum volume size (or the maximum addressable storage space, whichever is less) 1000 volumes 500 volume folders
Thin Import	10 volumes (maximum simultaneous imports)
QoS Profiles	<ul style="list-style-type: none"> 100 Volume QoS Profiles 100 Group QoS Profiles 100 Volumes per Group QoS Profile
Data Instant Replay (Snapshots)	<ul style="list-style-type: none"> 2000 snapshots

Storage Center Object	Supported Maximum
 NOTE: Data Instant Replay is a licensed feature.	<ul style="list-style-type: none"> • 1000 snapshot profiles • 100 snapshot history profiles • 100 snapshots per volume • 100 consistency groups • 25 volumes per consistency group
Replications	<ul style="list-style-type: none"> • 124 source replications • 1000 target replications

Fixed Issues

The following sections summarize the issues fixed in Storage Center 7.3.

Fixed Issues Related to Alerts and Reporting

The following issues are fixed in Storage Center 7.3:

Table 5. Fixed Alert and Reporting Issues in Storage Center 7.3.11

Issue	Description
SCOS-55661	The syslog server configuration file might be removed from a controller when the controller reboots.
SCOS-53062	Storage Center might fail to generate partial connectivity alerts when one of the four SAS connections to a server with two dual port SAS HBAs is removed.
SCOS-51847	Storage Center logs might contain many unnecessary <code>Lock ownership reacquired while lock outstanding, lock 'RAID Device Table Lock</code> messages.
SCOS-51965	Storage Center might generate invalid alerts when Dell SAS cables longer than 4 m are used to connect a Storage Center to SC280, SCv360, or SCv420 expansion enclosures. Dell SAS cables longer than 4 m are supported for use with SC280, SCv360, or SCv420 expansion enclosures.
SCOS-49321	On an SC7020, SC5020, or SCv3000 series storage system, iSCSI port down alerts might occur for unconfigured iSCSI ports.
SCOS-48807	Added a Storage Center system alert that states some data progression features might not run properly due to time differences on the controllers in a dual-controller storage system.

Table 6. Fixed Alert and Reporting Issues in Storage Center 7.3.6

Issue	Description
SCOS-53062	Partial connectivity alerts might occur on a storage system with front-end SAS ports if the front-end SAS ports on both storage controllers are connected to different SAS HBAs on the same sever.

Table 7. Fixed Alert and Reporting Issues in Storage Center 7.3.1

Issue	Description
SCOS-46024	A storage system with a scaled SED backend sends an unnecessarily large number of trusted peripheral device authentication success messages to the syslog server.
SCOS-45412	On an SC7020 storage system, a customer might receive false <code>Cache battery alert detected</code> alerts because the remaining capacity alarm threshold does not adjust over time to match the real-time capacity of the battery.
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-44159	The logs for the peer storage controller might not be sent when the Send SupportAssist Information Now option is initiated from Storage Manager.
SCOS-42702	Disk alerts might occur for drives that have been archived.
SCOS-38023	The email alert message that provides the location of a failed drive might be confusing.

Issue	Description
SCOS-18986	The Secure Console connection alert might fail to clear after Secure Console is disabled.

Fixed Issues Related to Data Reduction

The following issues are fixed in Storage Center 7.3:

Table 8. Fixed Data Reduction Issues in Storage Center 7.3.20

Issue	Description
SCOS-54104	Deduplication might fail to occur on a storage system because the Data Optimazation Dedup Capable attributes are set to false after a storage system is updated to Storage Center 7.3.4 or later.

Table 9. Fixed Data Reduction Issues in Storage Center 7.3.11

Issue	Description
SCOS-54988	Secondary storage data might be erroneously recovered as lost space during data progression.
SCOS-54249	On a storage system running deduplication, the deduplication ratio might be low because of an issue that prevents the deduplication dictionary from growing.
SCOS-54180	On a storage system with volumes that have many optimized pages, a controller might reset because of a memory exhaustion issue.
SCOS-52707	An SC8000 controller with 16 GB of memory might reset if the deduplication dictionary grows too large.
SCOS-48236	A restripe statistic might be incorrect within a 5-minute window during which a copy completes.

Table 10. Fixed Data Reduction Issues in Storage Center 7.3.6

Issue	Description
SCOS-53301	A controller might reset when defragmentation is enabled on a storage system that uses deduplication.
SCOS-52955	If compression or deduplication is enabled on storage system with front-end SAS ports, a controller failover might cause a Permanent Device Loss (PDL) condition for an ESXi host.

Table 11. Fixed Data Reduction Issues in Storage Center 7.3.4

Issue	Description
SCOS-52711	During data deduplication operations, a read may not complete in a timely fashion, which could result in unexpected system behavior.

Table 12. Fixed Data Reduction Issues in Storage Center 7.3.2

Issue	Description
SCOS-50937	A controller might reset if the Deduplication Page Manager (DPM) defragmentation process is paused during Data Progression and the PagesBeingRead list is not cleared before the DPM defragmentation process resumes.
SCOS-50517	Deleting volumes that use deduplication might take longer than normal to complete and result in increased latency on the Storage Center.

Table 13. Fixed Data Reduction Issues in Storage Center 7.3.1

Issue	Description
SCOS-49144	Data progression might stop running or the Storage Center might reset when a payload checksum failure occurs due to table entries being read incorrectly from memory.
SCOS-49069	In rare instances, increased latency might occur on a storage system if a pagepool consolidation process is active.

Issue	Description
SCOS-48621	In rare instances, deduplication and compression might erroneously return pagepool pages with incorrect tags, which cause payload error counts to be incremented on the pagepool freelist.
SCOS-47507	Slow deduplication ingest rates might occur when multiple Storage Center processes are working on the same volume simultaneously.
SCOS-46684	A controller might reset because of multiple small memory allocation requests.
SCOS-46391	On a storage system in an unbalanced state that has volumes with deduplication or compression enabled, rebalancing the local ports might fail after creating a Copy Mirror Migrate to new volumes with deduplication or compression enabled.
SCOS-44165	Increased Data Progression run times might occur if a storage system is using deduplication and switches to compression only because of delays in freeing metadata space.
SCOS-44137	Storage Center data optimization might fail to stop after 72,000 seconds (20 hours).
SCOS-43550	Data optimization pause settings are not enforced for compression to deduplication and deduplication to compression data migrations.
SCOS-42781	In rare instances, increased latency might occur during deduplication or data progression on a storage system running Storage Center 7.2.11
SCOS-42539	The defragmentation process that runs at the end of the data progression post stage is a lengthy process and increases the data progression run time.
SCOS-42286	Deduplication ingest might fail to occur when expected on an unbalanced storage system after a Rebalance Local Ports operation is performed.
SCOS-42026	Deduplication and compression might continually skip some volumes due to reaching the 20 hour runtime limit.
SCOS-41825	The deduplication and compression statistics at the volume level are inaccurate.

Fixed Issues Related to Hardware

The following issues are fixed in Storage Center 7.3:

Table 14. Fixed Hardware Issues in Storage Center 7.3.20

Issue	Description
SCOS-56774	On storage systems that use Chelsio T3 iSCSI HBAs with port two enabled, the HBA might send TCP Reset commands to remote initiators on the wrong port.
SCOS-55735	On storage systems that use Chelsio T5/T6 iSCSI HBAs, a <code>Configured Adapter missing or failed:</code> error might occur after a controller is reset.
SCOS-55572	On storage systems that use Chelsio T3 iSCSI HBAs, connectivity issues might occur if the iSCSI driver memory allocations exceed a pre-defined threshold.

Table 15. Fixed Hardware Issues in Storage Center 7.3.11

Issue	Description
SCOS-52053	A Storage Center that is in distributed spare mode might select the wrong disk spare for SC460 or SCv360 expansion enclosures.

Table 16. Fixed Hardware Issues in Storage Center 7.3.6

Issue	Description
SCOS-53489	A storage system with iSCSI HBAs running a Chelsio T420 driver might experience elevated latency on replication connections.
SCOS-53386	A storage system with iSCSI HBAs running a Chelsio T420 driver might experience lost connectivity to the iSCSI ports.
SCOS-52494	The ports on 25 GbE and 100 GbE iSCSI mezzanine cards are reversed in the Storage Manager Client and Unisphere web interface.

Issue	Description
EH-1347	Storage Center might fail to recognize 10GBASE-T mezzanine cards if they are installed in SCv3000 series or SC5020 storage systems that were deployed without mezzanine cards.

Table 17. Fixed Hardware Issues in Storage Center 7.3.2

Issue	Description
SCOS-51118	An SC9000 controller might reset because of alignment changes to the virtual address space.
SCOS-49956	On SCv3000 series, SC5020, and SC7020 storage systems, rebooting the storage controllers might result in a BMC split-brain condition.
SCOS-49899	SCv360 and SC460 expansion enclosures might report false alerts for the cooling fan sensors and power supplies.
SCOS-49758	Improved HDD and SSD failure handling.

Table 18. Fixed Hardware Issues in Storage Center 7.3.1

Issue	Description
SCOS-45629	If unsupported drives were added to a storage system by technical support using CLI commands, the drives might go offline when the Storage Center software is updated on the storage system.
SCOS-45475	A controller might reset because of multiple FCoE RISC PAUSE hangs.
SCOS-45155	While attempting to gather enclosure logs from an SC400 and SC420 expansion enclosure, the expansion enclosure might unexpectedly reset.
SCOS-43877	On an SC4020 storage system, a storage controller might incorrectly report "Cache board battery charge is low".
SCOS-43848	On SCv2000 series, SCv3000 series, SC4020, SC5020, and SC7020 storage systems that are destinations for replications using the embedded iSCSI ports, if the source system uses 10 GbE iSCSI host bus adapters, replication performance may significantly drop until the source system 10 GbE iSCSI HBAs are restarted.
SCOS-43703	On SCv2000 series and SC4020 storage systems, the write cache might go down if one of the redundant power supply fails.
SCOS-43176	On SCv3000 series, SC5020, and SC7020 storage systems, the PCIe Link Reset command might fail for 10 GbE iSCSI host bus adapters, which causes the HBA to go down.
SCOS-42250	When an initiator performs an iSCSI login to a 10 GbE iSCSI host bus adapter, the HBA might reset and fail to exit the hibernate mode.
SCOS-39114	A single SSD failure might cause high latency on a storage system.
SCOS-22260	iSCSI I/O cards fail to honor an MTU value change made on a router.
SCOS-22152	A drive might become stuck performing a survey if the drive goes down and the drive does not receive writes after becoming unhealthy.
SCOS-21161	A single disk failure might cause system wide performance issues on storage system running Storage Center 6.6.11
SCOS-6516	In rare instances, the internal boot device on an SC9000 controller may become unusable following an unexpected power event and the controller will not boot.

Fixed Issues Related to Licensing, SupportAssist, and Updating

The following issues are fixed in Storage Center 7.3:

Table 19. Fixed Licensing, SupportAssist, and Updating Issues in Storage Center 7.3.11

Issue	Description
SCOS-54886	Storage Center might stop sending SupportAssist diagnostic data to CloudIQ if the Phone Home Daemon enters a recursive loop.
SCOS-54088	A Storage Center update check might report an update blocker because failed disks that have been previously replaced are not ignored when the update check is performed.

Table 20. Fixed Licensing, SupportAssist, and Updating Issues in Storage Center 7.3.4

Issue	Description
SCOS-52473	After an SCv2000 series or SCv3000 series storage system running Storage Center 7.3 is restarted, licenses are no longer displayed on the License tab of the Storage Manager Client or Unisphere interface.
SCOS-52120	Updating a storage system from Storage Center 6.7 to Storage Center 7.3 might cause purchased licenses to be disabled for new operations.

Table 21. Fixed Licensing, SupportAssist, and Updating Issues in Storage Center 7.3.3

Issue	Description
SCOS-52379	When a storage system that was deployed without an iSCSI front-end interface is updated to Storage Center 7.3, the Storage Manager Client and Unisphere interface might display a message that states the Storage Center requires initial configuration.

Table 22. Fixed Licensing, SupportAssist, and Updating Issues in Storage Center 7.3.2

Issue	Description
SCOS-49445	After updating an SCv2000 series or SC4020 storage system to Storage Center 7.3, a down cache device might be displayed for slot 0 because the cache device moved to slot 32. This issue required intervention from technical support to allow future Storage Center updates to occur.

Table 23. Fixed Licensing, SupportAssist, and Updating Issues in Storage Center 7.3.1

Issue	Description
SCOS-46903	An SSL certificate with an MD5 signature is no longer supported by Storage Center. Do not allow a storage system to be updated to Storage Center 7.3 if it uses an SSL certificate with an MD5 signature.
SCOS-46480	On a dual-controller storage system, if a Storage Center ISO update is performed on controller 2 and the storage system fails over to controller 1 before it is updated, the Storage Center software version on controller 2 might be downgraded to the version on controller 1, which can damage the Storage Center configuration.
SCOS-45573	When updating a dual-controller storage system, the iDRAC or BMC firmware updates might fail to install, which can cause the lead controller to go down and result in a full outage when the peer controller reboots to perform updates.
SCOS-44945	When updating a dual controller storage system, controller resets might occur during iDRAC firmware updates.
SCOS-43069	If a Storage Center contains pending firmware updates, newly downloaded firmware updates are not applied to the FRUs of a controller replacement or new expansion enclosure.
SCOS-41547	This issue is limited to a storage system on which a new version of the Storage Center software has been downloaded, but not yet installed. When a storage controller is replaced in the storage system, the storage system might fail to automatically update the low-level firmware to the same version as

Issue	Description
	the active storage controller. As a result, the storage controllers in the storage system might end up with different versions of the low-level firmware.
SCOS-32283	On SCv2000 series and SC4020 storage systems, the Storage Center software might indicate that a prior version of software is available to install after performing a Storage Center ISO update.
SCOS-19264	When updating a dual controller storage system, controller reset might occur because of multiple Storage Center update requests occurring at the same time and performing the same function.

Fixed Issues Related to Replication and Live Volume

The following issues are fixed in Storage Center 7.3:

Table 24. Fixed Replication and Live Volume Issues in Storage Center 7.3.20

Issue	Description
SCOS-2474	Deleting a copy/mirror/swap or replication during a controller failover might result in a situation that prevents snapshot reservations from being removed.

Table 25. Fixed Replication and Live Volume Issues in Storage Center 7.3.11

Issue	Description
SCOS-51239	After a Live Volume is converted to a replication, selecting the Replicate Storage to Lowest Tier checkbox in the Edit Replication dialog box has no effect on the replication. Selecting the Replicate Storage to Lowest Tier checkbox still works for replications that have not been converted to a Live volume and converted back to a replication.

Table 26. Fixed Replication and Live Volume Issues in Storage Center 7.3.6

Issue	Description
SCOS-50985	An automatic or manual Live Volume swap role might become stuck and require a controller reset to complete.

Table 27. Fixed Replication and Live Volume Issues in Storage Center 7.3.2

Issue	Description
SCOS-51183	A memory leak might occur on a Storage Center that is performing cross-platform replication over an iSCSI connection with a PS Series storage array.

Table 28. Fixed Replication and Live Volume Issues in Storage Center 7.3.1

Issue	Description
SCOS-47224	Write latency might increase for synchronous replications that have a sequential write I/O pattern.
SCOS-46819	On a storage system with Automatic Fail Over Live Volumes, a Live Volume fail over might cause an error because IORP codes are not transferred back to the originating controller over IPC.
SCOS-46572	The source and destination volumes associated with a replication might become different sizes if the source volume fails to expand due to Storage Center scalability limitations.
SCOS-45553	Storage Center might be able to manage replication volumes as physical drives.
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.
SCOS-27263	The replication of volumes with many recovered (unmapped) pages might be slower than expected.
SCOS-18102	The status of a cross-platform replication partner changes to down when the number of snapshots exceed 1025.

Fixed Issues Related to Security

The following issues are fixed in Storage Center 7.3:

Table 29. Fixed Security Issues in Storage Center 7.3.20

Issue	Description
SCOS-48576	A security scan showed a possible vulnerability in the Apache software in the Storage Center management interface.

Table 30. Fixed Security Issues in Storage Center 7.3.11

Issue	Description
SCOS-55131	Self-signed SSL certificates that the Storage Center generates have been identified as security vulnerabilities. The certificates do not have a validity period of 825 days or less.

Table 31. Fixed Security Issues in Storage Center 7.3.1

Issue	Description
SCOS-44666	A security scan showed possible security vulnerabilities on the iDRAC of SC8000 controllers.
SCOS-42015	A security scan showed a possible security vulnerability on the iDRAC of SC8000 and SC9000 controllers.
SCOS-41311	A security scan showed possible security vulnerabilities on the BMC of SCv2000 series and SC4020 storage systems.
SCOS-40684	A security scan shows possible security vulnerabilities on the iDRAC of SC9000 controllers. The following error might also occur during a warm boot of an SC9000 controller: <div>MEM0001 Multi-bit memory errors detected on a memory device at location(s) DIMM_XX</div>
SCOS-24991	Removed support for SSL 3.0 and TLS 1.0 from the Storage Center to address security vulnerabilities.

Fixed Issues Related to Storage Management

The following issues related to storage management are fixed in Storage Center 7.3:

Table 32. Fixed Storage Management Issues in Storage Center 7.3.20

Issue	Description
SCOS-57359	A controller might reset if Storage Center returns a null pointer to an associated virtualization volume or hypervolume.
SCOS-56076	A controller might reset because of issues with metadata paging.
SCOS-55944	Attempting to clear a disk spare hunger alert on a Storage Center might fail when the only remaining hungry device is deleted.
SCOS-55897	On a dual-controller storage system with two ports per fault domain, volumes might become inaccessible if a customer performs the following actions: <ol style="list-style-type: none">1. A customer disables a switch port that is connected to a controller port in a fault domain.2. A customer performs a port rebalance on the Storage Center.3. A customer disables a switch port that is connected to the other controller port that is in the same fault domain as the port from step 1.4. A customer reenables the switch port from step 1.5. A customer reenables the switch port from step 3.
SCOS-55835	A controller might reset at the same time on multiple days because the Storage Center fails to skip null pointers when dequeuing IORPs from the delay queue.

Issue	Description
SCOS-55713	View volumes cannot be created on a Storage Center if a user creates a traffic profile of the type Group with a name that starts with text 'Default'.
SCOS-55306	Data progression might become suspended and fail to resume if DPM defrag and data progression are running simultaneously.
SCOS-55267	SNMP is unable to retrieve information about the power supply and cooling fan modules on SC7020, SC5020, and SCv3000 series storage systems.
SCOS-54981	On a dual-controller storage system, the SCSI target cannot handle persistent reservations requests for volumes that are active on the other controller.
SCOS-54737	Restripping pagepool devices might take longer to complete for storage systems that were originally deployed with Storage Center 5.5 or earlier.
SCOS-54696	When a storage system that is low on available disk space is updated from a version of Storage Center that does not support Distributed Sparing to a version of Storage Center that does support Distributed Sparing, the Storage Center might attempt to create more spare space when no space is available.
SCOS-54597	A controller might reset because of errors in memory accounting routines.
SCOS-54592	A RAID restripe might become stuck if there is not enough space to create a device in the tier where devices are being replaced.
SCOS-53017	A controller might reset because of excessive CPU usage while releasing memory.
SCOS-49035	The Disk Initializer Admin Status is not reset correctly when a disk release is canceled.

Table 33. Fixed Storage Management Issues in Storage Center 7.3.11

Issue	Description
SCOS-55468	Storage Center might report excessive RAID Scrub errors if a RAID scrub is in progress while a dual-controller storage system is updated from Storage Center 7.1 or earlier to Storage Center 7.3.
SCOS-55147	A controller might reset because of a background process that attempts to communicate with a subcomponent that no longer exists in Storage Center.
SCOS-54626	Storage Center might fail to remove pagepool devices that are marked as space optimized.
SCOS-54172	Storage Center RAID devices might become over degraded if writes to multiple disks fail around the same time.
SCOS-53504	A controller might reset if there is an issue deleting uninitialized http request because of connectivity issues that prevent the storage system from sending the http request.
SCOS-53429	When the SNMP settings on a Storage Center are changed and the SMTP sub-agent daemon is restarted, the log message that is displayed has been changed from: <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;">Warning, Daemon, , snmpSubagent: (((((((((((((SIGTERM))))))))))))))</div> to <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;">SNMP Sub-agent daemon is restarting to reflect the updated configuration</div>
SCOS-53078	When a dual-controller storage system is updated from Storage Center 7.2 to Storage Center 7.3, a controller might become stuck during controller failover because of improper cache flushing.
SCOS-51852	When a storage system is updated from Storage Center 7.2 or earlier to Storage Center 7.3, the Spare Optimizer feature might be automatically enabled on the storage system.
SCOS-51777	When a storage system is updated from Storage Center 7.2.51 or earlier to Storage Center 7.3, a dual-controller SC9000 storage system might reset unexpectedly if a controller becomes unresponsive.
SCOS-51737	The total number of scrub errors on a controller is not persistent after a controller reset.
SCOS-51692	Data progression might take several days to complete for large storage systems.
SCOS-50562	A controller might reset because of an IPMI null pointer error.

Table 34. Fixed Storage Management Issues in Storage Center 7.3.6

Issue	Description
SCOS-53212	A storage system using RAID rebalance might create a RAID device with an unexpectedly large stripe size.

Table 35. Fixed Storage Management Issues in Storage Center 7.3.5

Issue	Description
SCOS-52932	A controller might reset if volumes with RAID copies are deleted during a RAID rebuild.
SCOS-52788	On a storage system with a large number of RAID Copy objects, a controller might reset when the storage system is updated to Storage Center 7.3.4.
SCOS-51165	Disk allocations might be incorrectly marked for deletion during copy cleanup operations when a controller failover occurs after updating to Storage Center 7.3.3 or 7.3.4.
SCOS-51162	Disk allocations that are associated with a User Data extent might be incorrectly marked for deletion after a controller reset.
SCOS-49977	The generation of a default SSL cert on storage systems fails without IP addresses. This issue might cause the initial deployment wizard to stall for approximately 20 minutes.

Table 36. Fixed Storage Management Issues in Storage Center 7.3.4

Issue	Description
SCOS-52721	A large number of RAID copies and RAID rebuilds might cause a dual-controller storage system to reset due to over extended CPU resources.

Table 37. Fixed Storage Management Issues in Storage Center 7.3.3

Issue	Description
SCOS-51986	A controller might reset when front-end ports are rebalanced on a Storage Center connected to hosts running ESXi 6.0 or later.

Table 38. Fixed Storage Management Issues in Storage Center 7.3.2

Issue	Description
SCOS-51533	On SCv2000 series or SC4020 storage systems, a controller might reset because of a memory acquisition failure for a RAID operation.
SCOS-51430	When the SCVMM interface is used to create a LUN on a Storage Center that only has a 512 KB storage type, a new 2 MB storage type is created. The LUN is assigned to the 2 MB storage type instead of the 512 KB storage type.
SCOS-50614 SCOS-47361	If a drive failure occurs on a storage system that contains drives of multiple sizes, a larger spare drive might be resized to match the size of the smaller drives in the Storage Center.
SCOS-49683	When iSCSI TCP connections are unstable on embedded iSCSI ports, the Max Burst Window might be reduced, which could result in read performance degradation.
SCOS-49452	A dual-controller storage system might reset because of a CPU issue that occurs when there are a large number of RAID copies and RAID rebuilds.
SCOS-48583	An expansion enclosure with back-end communication issues might mark all the drives in the expansion enclosure with a SCOSPredictedError.

Table 39. Storage Management Issues Fixed in Storage Center 7.3.1

Issue	Description
SCOS-46611	A controller might reset due to multiple back-end I/O card firmware faults.
SCOS-46365	A controller might reset because of excessive memory consumption during a RAID rebuild. In addition, a RAID rebuild might fail to start due to excessive memory consumption caused by a rebuild read failure.

Issue	Description
SCOS-45755	The volume space consumption limit cannot be set above 2 TB using Storage Manager.
SCOS-45304	Storage Center is unable to create a mapping profile for a volume that is mapped to a Linux server without an HBA.
SCOS-45181	On SCv2000 series, SCv3000 series, SC4020, SC5020, and SC7020 storage systems, a controller might reset if a boot personality is detached and then the IPv6 address is removed from the embedded iSCSI ports.
SCOS-45042	A controller might reset because of a double delete on an alert object.
SCOS-44898	If a pagepool is creating a device and progression prune evaluation logic works on the same device simultaneously, Data Progression might identify the device as being too small and mark the device for pruning.
SCOS-44409	A Storage Center might be unable to join an Active Directory environment using LDAP.
SCOS-44163	A controller might reset because of IPMI errors that occur when attempting to communicate with the iDRAC or BMC.
SCOS-43994	A RAID rebalance might stall or fail if a snapshot is active and it is past the expiration time/date of the snapshot.
SCOS-43076	SSD initialization allocations might cause disk queuing, resulting in possible server timeouts.
SCOS-42003	Volume might suffer from high read/write latency while Offloaded Data Transfer (ODX) operations are in process.
SCOS-41309	A controller might reset because of out of space secondary storage get page aborts.
SCOS-35462	Storage Center might be unable to prune out pagepool devices because of control pages that cannot be moved or released from the storage system.
SCOS-21053	On an SC8000 controller, lost space messages might flood the console log at the end of a Data Progression cycle.
SCOS-18314	On an SC4020 storage system, the balancing of multi-threading CPU affinities increases performance and improves resilience of the BMC watchdog services.

Fixed Issues Related to the User Interface

The following issues related to the user interface are fixed in Storage Center 7.3:

Table 40. User Interface Issues Fixed in Storage Center 7.3.11

Issue	Description
SCOS-52572	In rare instances, the Dell Storage Manager Client might incorrectly display a LiveVolume as a replication, if the LiveVolume is mapped to a cluster with many servers.
SCOS-51215	When an iSCSI interface is removed from a Storage Center fault domain, the IP address on the iSCSI interface is not released.
SCOS-50682	SC460 or SCv360 expansion enclosure settings are not being displayed correctly in the Dell Storage Manager Client and Unisphere web interface.
SCOS-48963	When the minimum password age requirement is enabled on a Data Collector, attempting to change the password results in a command failure if the password does not meet the Minimum Age setting.
SCOS-44778	If NTP is not configured on a Storage Center, a mismatch in the clocks between the controllers might prevent users from logging into Storage Center using the Dell Storage Manager Client or Unisphere web interface.

Table 41. User Interface Issues Fixed in Storage Center 7.3.2

Issue	Description
SCOS-49176	For SCv2000, SCv2020, SCv2080, and SC4020 storage systems and legacy SAS enclosures, when the Storage Manager Client is directly connected to a Storage Center, the Request DC Undervoltage Clear command fails to clear the undervoltage indicator.

Table 42. User Interface Issues Fixed in Storage Center 7.3.1

Issue	Description
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.
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 User Management

The following issues related to user management are fixed in Storage Center 7.3:

Table 43. Fixed User Management Issues in Storage Center 7.3.1

Issue	Description
SCOS-42985	A Storage Center user with privileges based on a Directory Group might be unable to set some user preferences.

Fixed Issues Related to Virtual Volumes

The following issues related to virtual volumes are fixed in Storage Center 7.3:

Table 44. Fixed Virtual Volumes Issues in Storage Center 7.3.5

Issue	Description
SCOS-52965	On a dual-controller storage system that is connected to an ESXi host with VVols, a controller might reset because of an Inquiry VPD Response SCSI command sent to a Protocol Endpoint.
SCOS-52730	On a dual-controller storage system that is connected to an ESXi host with VVols, a controller might reset because of a Report Target Port Groups SCSI command sent to a Protocol Endpoint.

Table 45. Fixed Virtual Volumes Issues in Storage Center 7.3.1

Issue	Description
SCOS-47784	A dual-controller storage system might reset following the VMotion of a VM from a VVol container to a regular Storage Center datastore.

Fixed Issues Related to Vendors

The following issues related to vendors are fixed in Storage Center 7.3:

Table 46. Fixed Vendors Issues in Storage Center 7.3

Issue	Description
SQAI-7	Emulex 8 Gb Fibre Channel host bus adapters (for example, LPe1200x, LPe1205, and OEM equivalents) are unable to boot from SAN when using Emulex boot code 7.x.

Open Issues

The following sections summarize the open issues in Storage Center 7.3.

Open Issues Related to Alerts and Reporting

The following open issues are related to alerts and reporting:

Table 47. Open Alerts and Reporting Issues

Issue	Description
SCOS-38226	In rare instances, a Sync LiveVolume Auto Failover alert is not cleared when the condition is corrected. Workaround: Use Storage Manager to manually acknowledge and clear the alert.

Open Issues Related to Data Reduction

The following open issues are related to Data Reduction:

Table 48. Open Data Reduction Issues

Issue	Description
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

Open Issues Related to Hardware

The following open issues are related to hardware:

Table 49. Open Hardware Issues

Issue	Description
SCOS-49735	On SCv3000 series, SC5020, or SC7020 storage systems, the ports on Intel branded SFP+ modules in XL710 mezzanine cards might go into an infinite up/down loop. Workaround: Use Dell branded SFP+ modules in XL710 mezzanine cards instead of Intel branded SFP+ modules.

Open Issues Related to Replications and Live Volumes

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

Table 50. Open Replication and Live Volume Issues

Issue	Description
SCOS-55072	If a Windows host reboots after a volume is successfully Live Migrated to a secondary storage system, the host may be unable to access the volume. Workaround: Contact technical support.
SCOS-41280	Using a cluster shared volume (CSV) on a Storage Center within a Windows 2016 cluster solution might result in an I/O failure during an infrastructure fault condition where one of the Windows hosts is isolated from both its peer and its quorum witness. Workaround: Use redundant physical switches to reduce the possibility of the I/O failure.
SCOS-17981	Server mappings may not be completely removed when a server is removed from an OS cluster using Storage Manager before the server is removed from the OS cluster.

Issue	Description
	<p>Workaround: Remove the server from the cluster through the OS first. After the server is rebooted, remove the server object using Storage Manager.</p> <p>When a server is removed from one Storage Center only, or a volume is un-mapped on one Storage Center only, the persistent reservations might not stay consistent between primary volume and secondary volume.</p> <p>Workaround: When removing a server from a cluster or simply un-mapping a volume, follow the below order</p> <ol style="list-style-type: none"> 1. Remove/un-map on the server side prior to make changes on the Storage Centers. 2. Delete the server on both Storage Centers, or un-map the volume on both Storage Centers using Storage Manager.
SCOS-14322	<p>A <code>one path to disk</code> alert is generated when a Live Volume is created and there is only one replication path per controller.</p> <p>Workaround: None</p>
SCOS-12067	<p>When importing a volume, Storage Manager does not allow you to select 0 as the LUN number.</p> <p>Workaround: None</p>

Open Issues Related to Storage Management

The following open issues are related to Storage Management:

Table 51. Open Storage Management Issues

Issue	Description
SCOS-40588	<p>Connecting to a storage system through Storage Manager Data Collector and setting up an iSCSI fault domain in legacy mode might result in the error <code>Unable to access controller port information</code> and an iSCSI fault domain with only one port.</p> <p>Workaround: Use the Storage Manager Client to connect directly to the storage system and then set up an iSCSI fault domain in legacy mode.</p>
SCOS-22150	<p>In very rare instances, a controller failover on an SC7020 or SC5020 storage system might prevent Secure Console access.</p> <p>Workaround: Contact technical support.</p>
SCOS-22026	<p>Removing an HBA or deleting a server object before unmapping it from volumes could result in the server losing access to volumes and a controller failover will not complete properly.</p> <p>Workaround: Remove volume mappings from the HBA prior to removing the HBA or server object from the system.</p>
HPEM-541	<p>In rare instances, SC7020 updates do not complete successfully and the Storage Center might indicate that updates are still required.</p> <p>Workaround: Contact technical support.</p>

Open Issues Related to User Management

The following open issues are related to user management:

Table 52. Open User Management Issues

Issue	Description
SCOS-11192	<p>Storage Center cannot authenticate directory service users that are configured to use an alternate DNS suffix.</p> <p>Workaround: None</p>

Open Issues Related to Vendors

The following open issues are related to vendors:

Table 53. Open Vendor Issues

Issue	Description
SQAI-9	<p>An ESXi 5.5 (Update 3b) host using FCoE and QLogic 8262 converged network adapters (CNAs) might cause the host to fail during controller failovers.</p> <p>Workaround: Update the QLogic firmware on the adapter. The QLogic firmware is available at https://www.dell.com/support/home/us/en/19/Drivers/DriversDetails?driverId=6RGDW.</p>
SQAI-3	<p>Software FCoE timeouts might occur when using CNAs in NIC mode.</p> <p>Workaround: Update the QLogic firmware on the adapter. The QLogic firmware is available at https://www.dell.com/support/home/us/en/19/Drivers/DriversDetails?driverId=6RGDW</p>
SQAI-2	<p>An ESXi 5.5 or 6.0 host with an Emulex FC/FCoE HBA running driver version 11.0.x.x might crash during a controller failover.</p> <p>Workaround: Update to the latest Dell custom images of ESXi 5.5, 6.0, or 6.5.</p>
SQAI-1	<p>Fibre-Channel boot from SAN does not work with Emulex LPe12002 boot code version 7.00a2 and the Linux servers RHEL 6.8, SLES 12, and XenServer 7.0.</p> <p>Workaround: Update to Emulex 12002 boot code version 11.20a8 or later.</p>
SCOS-27133	<p>Server bandwidth to the onboard 10 Gb Ethernet ports on an SC7020 drops significantly on reads when the server iSCSI initiator has interrupt moderation set to default (enabled).</p> <p>Workaround: From the server, disable interrupt moderation on the iSCSI cards as described in Dell EMC SC Series Storage: Microsoft Multipath I/O Best Practices.</p>
CVSE-3	<p>Storage Center 7.3.1 and 7.3.2 does not support Commvault Simpana Backup.</p> <p>Workaround: None</p>

Limitations

The following limitations exist in Storage Center 7.3:

Portable Volumes

Storage Center 7.3 does not support Portable Volumes.

Portable Volumes are supported in Storage Center 7.2 or earlier.

Support Resources

The following sections provide resources for finding more information about using a Storage Center storage system:

Storage Center Update Information

Contact technical support to determine the Storage Center software version that is required to update to Storage Center 7.3.

NOTE: When updating both the Storage Center and Storage Manager software, update the Storage Manager software before updating the Storage Center software. A storage system that is running a newer version of the Storage Center software cannot be managed by an older version of Storage Manager software.

Related Documentation

The following documents are available for a storage system running Storage Center 7.3.

- *Storage Center Software Update Guide*
Describes how to update Storage Center software from an earlier version to the current version.
- *Storage Center Update Utility Administrator's Guide*
Describes how to use the Storage Center Update Utility to install Storage Center software updates. Updating Storage Center software using the Storage Center Update Utility is intended for use only by sites that cannot update Storage Center using standard methods.
- *Storage Manager Release Notes*
Provides information about Storage Manager software releases, including new features, enhancements, fixed issues, and open issues.
- *Storage Manager Installation Guide*
Provides installation and setup instructions for the Storage Manager software.
- *Storage Manager Administrator's Guide*
Provides instructions for using the Storage Manager software.
- *Unisphere and Unisphere Central Administrator's Guide*
Provides instructions and information for managing storage systems using Unisphere and Unisphere Central.
- *Dell Storage REST API Release Notes*
Provides information about the Dell Storage REST API, which allows you to manage the Storage Manager Data Collector and Storage Centers.

Finding Documentation

The following locations contain documentation for Storage Center products:

- *Dell Support*
Provides documentation for Storage Center storage systems. Go to [Dell.com/support](https://dell.com/support).
- *Dell TechCenter*
Provides technical white papers, best practice guides, and frequently asked questions about Storage Center storage systems. Go to <https://en.community.dell.com/techcenter/storage/>.

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.

To contact Dell for sales, technical support, or customer service issues, go to Dell.com/support.

- For customized support, type your system service tag on the support page and click **Submit**.
- For general support, browse the product list on the support page and select your product.