

SANtricity ES Storage Manager Product Release Notes v. 10.84

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Resolved Issues and Software Dependencies

Information in this document is periodically updated between major software and firmware releases. For the most up-to-date information about resolved issues and software dependencies, visit the [NetApp Support site download page](#). Log in to the support site, and then look in the list of products for "E-Series/EF-Series SANtricity Storage Manager" or "E-Series/EF-Series SANtricity Controller Firmware." For each product, select the applicable platform from the drop-down list and then click the **GO** button to download the most recent software or firmware updates. The files that you download will include a README file with the most recent updates to the Release Notes.

Standard Features and Premium Features

You should be familiar with the standard and premium feature offerings available with SANtricity ES Storage Manager 11.10 for E-Series storage systems and the EF540 and EF550 flash arrays.

Standard features available with SANtricity ES Storage Manager 11.10

A number of standard features are automatically available with SANtricity ES Storage Manager 11.10 for your NetApp E-Series storage system or EF540 and EF550 flash array without additional purchase. No keys are required to activate these standard features on your system.

The following features are standard in SANtricity version 11.10:

- Snapshot (enhanced)
- Volume Copy
- Synchronous Mirroring
- Asynchronous Mirroring
- RAID 6 Volumes
- SANshare Storage Partitioning
- Data Assurance (DA)
- Solid State Drive (SSD) Support
- SSD Cache
- High Performance Tier
- Thin Provisioning (not available for EF540 and EF550 flash arrays)
- Dynamic Disk Pools (not available for EF540 and EF550 flash arrays)
- Mixed Drive Type (not available for EF540 and EF550 flash arrays)

See the *Concepts Guide for SANtricity ES Storage Manager Version 11.10* for information about these standard features, as well as the premium features that are available for your E-Series system.

NOTE Standard features do not display in the SANtricity Array Management Window (AMW) Premium Features and Feature Pack Information dialog.

NOTE The SANtricity ES Storage Manager 11.10 online help does not distinguish between standard and premium features. The online help describes all SANtricity features as premium features, but the features listed above are in fact standard for E-Series storage systems, the EF550 flash array, and the EF540 flash array (except as noted).

Availability of premium features for E-Series storage systems

The SANtricity ES Storage Manager 11.10 documentation and online help discuss a number of premium features. Not all of the premium features are available for all NetApp E-Series storage systems.

The following premium features are available for all E-Series storage systems:

- Drive Security

The following premium features are not available for all E-Series storage systems:

- Snapshot (legacy)
- Enterprise Security Key Manager

Contact your local NetApp account representative for further questions about these premium features.

Availability of premium and standard features for the EF550 and EF540 flash arrays

The SANtricity ES Storage Manager 11.10 documentation and online help discuss a number of premium and standard features. Not all of the standard and premium features are available for the EF540 and EF550 flash array.

The following premium and standard features are unavailable for the EF550 and EF540 flash arrays.

- Snapshot (legacy)
- Enterprise Security Key Manager
- Drive Security
- Thin Provisioning (not available for EF550 or EF540 flash arrays)
- Dynamic Disk Pools (not available for EF550 or EF540 flash arrays)
- Mixed Drive Type (not available for EF550 or EF540 flash arrays)

NOTE Dynamic disk pools are not supported on solid state drives (SSDs). You cannot create dynamic disk pools when configuring storage for your EF550 or EF540 flash arrays. Although dynamic disk pools are considered a standard feature in SANtricity ES Storage Manager 11.10 documentation, they are not supported on solid state drives (SSDs). Therefore, dynamic disk pools cannot be implemented for the EF550 or EF540 flash arrays. The thin provisioning feature can only be enabled on dynamic disk pools. As a result, although it is also considered a standard feature in SANtricity ES Storage Manager 11.10, thin provisioning is not available for the EF550 or EF540 flash arrays.

Contact your local NetApp account representative for further questions about these premium features.

Product Release Notes

This document provides updated information about the features and functionality of SANtricity ES Storage Manager version 10.84 and controller firmware version 7.84.

The Host Software and the Shell Command Report Different Data Rates for an iSCSI Host Port

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.84
- CE5400 controllers with Emulex 10Gb/s iSCSI host interface connectors (HICs)

Problem or Restriction

This problem occurs in a configuration where two storage arrays are directly connected for mirroring operations using 10 Gb/s iSCSI HICs. Small form-factor pluggable (SFP) transceivers that support 10 Gb/s are used for the connection. If you use the SANtricity ES Storage Manager graphical user interface (GUI) to change the port data rate setting for the HICs on both storage arrays to 1 GB/s, the port data rate reported by the GUI subsequently changes to 1 Gb/s, but the port data rate reported by the command line interface remains 10 Gb/s.

Workaround

To avoid this problem, do not set the port data rate to 1 Gb/s when you use SFPs that support 10 Gb/s.

If the problem occurs, use the SANtricity ES Storage Manager GUI to reset the port data rates to 10 Gb/s, and then reboot the controllers.

Reference Number

200216718

Storage Management Initiative Specification (SMI-S) Provider Responds to Commands Very Slowly after the Primary Controller Fails

Operating System

All systems that support SMI-S

Hardware/Software/Firmware

- All controllers that support SMI-S
- Controller firmware release 7.84

Problem or Restriction

When the primary controller owned by an SMI-S provider fails (or is disconnected), it takes several minutes for the SMI-S provider to respond to each content information model (CIM) active operation that is directed to it. Similar delays are also seen for CIM passive operations that involve live data from the SYMBol server.

Workaround

Place the primary controller back online.

As an alternative, you can edit the `ArrayHosts.txt` configuration file for the SMI-S provider to replace the IP address of the failed controller with that of the alternative controller, and then restart the SMI-S provider.

Reference Number

200227454

SANtricity ES Storage Manager Reports Incorrect Vital Product Data (VDP) for Small Form-Factor Pluggable (SFP) Transceiver

Operating System

All

Hardware/Software/Firmware

- SANtricity ES Storage Manager version 10.84
- CE5400 controllers with Cisco 10Gb/s iSCSI SFPs

Problem or Restriction

This problem occurs when a Cisco 10Gb/s iSCSI SFPs is installed in the iSCSI host port of a controller. SANtricity ES Storage Manager does not report the VPD for the SFP correctly. The information for the data rate is missing and information for the manufacture date is inaccurate.

Workaround

You can avoid this problem by using a different brand of SFP. If the problem occurs, you can ignore the incorrect data displayed by SANtricity ES Storage Manager.

Reference Number

200247292

The iSCSI Connection Used for Asynchronous Mirroring Fails when IP Addresses for Controller Ports Are Duplicated

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.84
- CE5400 controllers with iSCSI host interface cards (HICs)

Problem or Restriction

This problem occurs when two storage arrays share a direct iSCSI connection for asynchronous mirroring and you change the IP address for controller A port 1 on the storage array that is the initiator for mirroring operations to be the same as the IP address of controller A port 2 on the target storage array. The port on the target storage array is no longer visible to the initiator storage array and you are unable to reestablish communications between the two storage arrays.

Workaround

You can avoid this problem by not using the same IP address for ports on connected HICs in such a way that the address is used by two ports with different VLAN IDs. If the problem occurs, change the IP address of one port so that it is no longer the same as the IP address for the other port.

Reference Number

200250176

Cannot Create an iSCSI Asynchronous Mirroring Connection with the Default iSCSI Configuration using Emulex Host Interface Cards (HICs)

Operating System

All

Hardware/Software/Firmware

- CE5400 controllers CE2600 controllers with Emulex iSCSI host interface cards
- Controller firmware release 7.84
- SANtricity ES Storage Manager version 10.84

Problem or Restriction

This problem occurs when two storage arrays share a direct iSCSI connection using Emulex HICs for asynchronous mirroring. When you reset the configuration of the HICs so that the default IP address settings are used, and then disable and re-enable IPV6, communications over the iSCSI connection fail. When you attempt to use SANtricity ES Storage Manager to create an asynchronous mirroring relationship over the connection, you see the message `Cannot communicate with remote array`.

Workaround

To avoid this problem, do not use the default IP address settings on the HICs or avoid disabling and re-enabling IPV6 when default IP address settings are used.

If this problem occurs, reboot the controllers where the HICs are installed.

Reference Number

200257973

SCSI Bus Rescan Incorrectly Reports a Volume for Every Target ID on an InfiniBand Connection

Operating System

Red Hat Enterprise Linux (RHEL) release 6.1, SP1

Hardware/Software/Firmware

- Host connections that use Mellanox InfiniBand host channel adapters (HCAs).
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you issue a SCSI bus rescan command (`rescan_scsi_bus.sh`). The rescan reports that there is a separate volume for each target ID when there are actually eight target IDs associated with each volume.

Workaround

To avoid this problem, do not issue a SCSI bus rescan command after the volumes are initially discovered on the connection.

If this problem occurs, reboot the storage array.

This problem is fixed in RHEL 6.1, SP2.

Reference Number

200261494

After Re-Installing the Oracle Virtual Machine (OVM) Manager, International Standards Organizations (ISO) Files Are Listed by Universally Unique Identifier (UUID) Rather Than by Friendly Name

Operating System

Oracle OVM 3.0.3

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you re-install the OVM manager on the host using the same ID as the previous installation. ISO files systems that were imported with the previous OVM manager are now renamed with their UUIDs rather than their friendly names. This makes it difficult for you to identify the ISO file systems.

Workaround

None.

Reference Number

200265174

After Un-Mapping a Volume from an Oracle Virtual Machine (OVM) Server, the Volume Continues to Appear in the Storage Database on the Server

Operating System

OVM 3.0.3 with the generic SCSI plug-in

Hardware/Software/Firmware

- All controllers

Problem or Restriction

This problem occurs when you un-map a volume on an OVM server. The OVM manager continues to show the volume along with those that are still mapped to the server. When you try to assign one of the affected volumes to a virtual machine, you see the error `disk doesn't exist`.

Workaround

After you un-map the volumes, use the OVM manager to remove those volumes from the storage database on the server.

Reference Number

200265177

In the Oracle Virtual Machine (OVM) Manager User Interface, Only One Drive at a Time Can Be Selected for Deletion

Operating System

OVM 3.0.3 with the generic SCSI plug-in

Hardware/Software/Firmware

- All controllers

Problem or Restriction

In the OVM use interface, only one drive at a time can be selected for deletion.

Workaround

None

Reference Number

200265185

Kernel Panics During Controller Firmware (CFW) Download

Operating System

Oracle Linux 5.7 with UEK kernel release 2.6.32-200.13.1.el5uek

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you upgrade CFW. The kernel panics on an attached host when downloading the CFW and shows the following message:

```
Kernel panic - not syncing: Fatal exception
BUG: unable to handle kernel NULL pointer dereference at
00000000000000180
IP: [<ffffffff8123450a>] kref_get+0xc/0x2a
PGD 3c275067 PUD 3c161067 PMD 0
Oops: 0000 [#1] SMP
last sysfs file: /sys/block/sdc/dev
```

Workaround

To avoid this problem, do not perform a CFW upgrade on a storage array that is attached to hosts running the affected operating system version. If the problems occurs, cycle the power on the host off and then on.

Reference Number

200267631

BCM Driver Fails to Load

Operating System

Windows Server 2012 build 8250

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you attempt to install the BCM driver on a server. The driver installs, but the component reports one of the following errors:

This device is not configured correctly. (Code1)
The system cannot find the file specified.

or

The drivers for this device are not installed. (Code 28)
The system cannot find the file specified.

Workaround

None

Reference Number

200268897

Kernel Panics During Controller Firmware Download

Operating System

- Oracle Linux 5.8 with UEK kernel release 2.6.32-300.10.1.el5uek
- Oracle Linux 6.2 with UEK kernel release 2.6.32-300.3.1.el6uek
- Device Mapper MultiPath release 0.4.9-23.0.9.el5 and release 0.4.9-46.0.1.el6)

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you upgrade controller firmware. A host with the affected kernel with UEK support experiences a `devloss` error for one of the world-wide port numbers (WWPNs) followed by a kernel panic.

Workaround

To avoid this problem, upgrade the host kernel to release 2.6.32-300.23.1.

If the problems occurs, cycle the power on the host off and then on.

Reference Number

200275085

Job Access with Speech (JAWS) Reader Cannot Read the Calendar Fields in the Snapshot Schedule Dialog Box

Operating System

All

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs when you use the accessibility features with the JAWS screenreader to perform snapshot schedule operation. You will not be able to use the schedule date picker popup menu intuitively.

Workaround

None

Reference Number

200276685

A Controller Locks Down Due To a Failed Host Interface Card (HIC) and then Fails to Respond to the Startup Command when Rebooted

Operating System

All

Hardware/Software/Firmware

- CE4900 controllers with Qlogic iSCSI HICs
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when the QSlalom 1 Gb/s HIC is unresponsive, but still visible to the controller as a peripheral component interconnect (PCI) device during startup. The QLogic drive triggers a data abort each time the controller reboots until the limit of five reboot attempts is reached. This is the result of a rare hardware failure in the HIC which causes the HIC to respond to the PCI scan while the HIC is unresponsive to initialization commands.

Workaround

If this problem occurs, replace the faulty HIC.

Reference Number

200276687

Volume Resync Operation Fails on Legacy Snapshots in a Cluster Configuration

Operating System

Windows

Hardware/Software/Firmware

- NetApp VDS hardware provider with SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs when you perform a volume resync operation on a cluster resource volume. The operation fails and the volume goes offline. It is no longer visible in the `DiskManagment` utility or the `Diskpart` utility.

Workaround

None.

Reference Number

200277670

Volume Resync Operation Fails on a Base Volume with Point in Time (PiT) Images or Views

Operating System

Windows

Hardware/Software/Firmware

- NetApp VDS hardware provider with SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs whenever a VSS user selects a shadow copy created using the snapshot image method for volume resync operations. The VSS hardware provider fails the Resync operation request and the target volumes go offline.

Workaround

To avoid this problem, plan to create legacy snapshots on volumes, and resync from the legacy volumes.

When this problem occurs, you can bring the base volume back online manually using the `DiskManagement` tool by doing one of the following:

- From the `DiskManagement` utility, right click on the disk that went to offline and click on **Online**.
- In the `DiskPart` utility, select the disk which is in the offline state and enter the command `online disk`.

If the participating base volume is a cluster disk and contains a snapshot image, the utility will list the file system as **unknown**, as shown in the following figure.



After you bring the base volume back online, perform the following steps to resynchronize the volume.

1. Create a temporary volume and then use the shadow copy (snapshot) command to copy the target volume to the temporary volume.
2. Identify the snapshot group related to the snapshot by selecting **Shadow Copy (Snapshot) -> Snapshot Image -> Snapshot Group**.
3. Increase the repository size of this snapshot group by 100% of the base volume size.
4. Perform volume copy operation from the temporary volume to the base (target) volume.

5. Delete the temporary volume.
6. Use the `DiskPart` utility or the `DiskManagement` utility to bring the base volume online.

Reference Number

200277753

Network Interface on Device `eth0` Fails to Come Online When Booting a Host

Operating System

Oracle Linux 5.8 with UEK kernel release 2.6.32-300.10.1.el5uek

Hardware/Software/Firmware

- PowerEdge 2950 servers
- PowerEdge 2970 servers
- System x3650 servers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs during a host boot process when a large number (112+) of volumes are mapped to the host. At the point in the boot process where the network interface should be brought online, the host displays the following message:

```
Bringing up interface eth0: Device eth0 has different MAC address than
expected. [FAILED]
```

The network interface does not come online during the boot process, and cannot subsequently be brought online.

Workaround

To avoid this problem, reduce the number of volumes mapped to host with the affected version of Oracle Linux to, for example, less than 112. You can map additional volumes to the host after it boots.

Reference Number

200280256

When Over 128 Volumes are Mapped to a Host, Paths to Only the First 128 Volumes are Restored after the Controller is Reset

Operating System

Oracle Linux 5.8 with UEK kernel release 2.6.32-300.10.1.el5uek

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you have more than 128 volumes mapped to a host, both of the controllers in an attached storage array reboot, and only one controller comes back online. Only the first 128 volumes mapped to the host are accessible to the host for input/output (I/O) operations after the reboot. During the controller reboot, there might be a delay before any of the volumes are accessible to the host. You experience I/O timeouts when the host tries to communicate with the inaccessible volumes.

Workaround

You can avoid this problem by mapping no more than 128 volumes to a host with the affected operating system release. If the problem occurs, run the `multipath` command again after the controller comes back online.

Reference Number

200280257

Tasks Aborts Are Logged During a Controller Firmware Upgrade

Operating System

- Red Hat Linux 6.2
- SuSe Enterprise Linux 11.2

Hardware/Software/Firmware

- Hosts attached through an LSI switch
- Controller firmware release 7.84

Problem or Restriction

This problem occurs during a controller firmware upgrade. The operating system logs task abort messages similar to those shown below.

```
May  3 21:30:51 ictc-eats kernel: [118114.764601] sd 0:0:101:3: task
abort: SUCCESS scmd(ffff88012383c6c0)
May  3 21:30:51 ictc-eats kernel: [118114.764606] sd 0:0:101:1:
attempting task abort! scmd(ffff88022705c0c0)
May  3 21:30:51 ictc-eats kernel: [118114.764609] sd 0:0:101:1: CDB: Test
Unit Ready: 00 00 00 00 00 00
May  3 21:30:51 ictc-eats kernel: [118114.764617] scsi target0:0:101:
handle(0x000c), sas_address(0x50080e51b0bae000), phy(4)
May  3 21:30:51 ictc-eats kernel: [118114.764620] scsi target0:0:101:
enclosure_logical_id(0x500062b10000a8ff), slot(4)
May  3 21:30:51 ictc-eats kernel: [118114.767084] sd 0:0:101:1: task
abort: SUCCESS scmd(ffff88022705c0c0)
```

You might experience input/output (I/O) timeouts or read/write errors after the upgrade.

Workaround

If this problem occurs, restart input/output operations. the affected resources will come back online without further intervention.

Reference Number

200281600

In Search Results from the Array Management Window Online Help, Text Matching the Search Term is Not Always Highlighted in the Results

Operating System

All

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

When a search in the online help produces over 100 matches in the text of help topics, the matching word is not always highlighted in the search results shown in the help window. Only the first 100 matches are highlighted.

Workaround

You can avoid this problem by providing a more focused search target that returns fewer than 100 matches. For example, provide a list of search terms rather than a single word.

Reference Number

200284801

In the SANtricity ES Storage Manager User Interface, a World Wide Name (WWN) Manually Associated with a Host Port Still Appears in the List of WWNs Not Associated with a Port

Operating System

All

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs when you manually create a host port for a host partition. The user interface lists all of the WWNs discovered on the storage array that are not associated with a host. When you choose a WWN from the list and associate it with a host in the host table, that WWN should be removed from the list of WWNs not associated with a port. However, the WWN remains in the list.

Workaround

None.

Reference Number

200286452

Unable to Add More Than 117 Volumes to the Oracle Virtual Machine (OVM) Manager Database

Operating System

Oracle VM 3.0.3

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you attempt to add more than 117 volumes to the database of the OVM manager. When the OVM manager scans for the additional volumes, it returns the following error:

```
OSCPlugin.OperationFailedEx:'Unable to query ocfs2 devices'
```

Workaround

You can avoid this problem by deleting volumes from the OVM manager database when those volumes are no longer mapped to the OVM server.

Reference Number

200288098

The Graphic Display in the SANtricity ES Storage Manager Solid State Disk (SSD) Cache Performance Modelling Tool Shows the Cache Hit Percentage in 25 Percent Increments

Operating System

Solaris

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs when you use the SSD cache performance modelling tool on a host running the Solaris operating system. The hit percentage, on the y axis, is shown in 25 percent increments rather than the expected 10 percent increments. This problem does not affect the performance of the tool.

Workaround

None

Reference Number

200288392

Write-Back Cache is Disabled after Controllers Reboot with Multiple Failed Volumes in a Storage Array

Operating System

All

Hardware/Software/Firmware

- CE2600 controller-drive trays
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when power is turned off and then back on to a controller-drive tray while there are failed volumes in the storage array. When the controllers reboot after the power cycle, they attempt to flush restored cache data to disk. If the controllers are unable to flush the cache data because of failed volumes, all of the volumes in the storage array remain in write-through mode after the controllers reboot. This will cause a substantial reduction in performance on input/output operations.

Workaround

None

Reference Number

200288495

Input/Output (I/O) Operations Time Out Because a Resource is Not Available to a Cluster

Operating System

Red Hat Enterprise Linux 6.2

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when a cluster loses access to a file system resource. A message similar to the following appears in the cluster log:

```
Device /dev/mapper/mpathaa not found. Will retry wait to see if it
appears.
The device node /dev/mapper/mpathaa was not found or did not appear in
the udev create time limit of 60 seconds
Fri Apr 27 18:45:08 CDT 2012 restore: END restore of file system
/home/smashmnt11 (err=1)
ERROR: restore action failed for resource /home/smashmnt11
/opt/LifeKeeper/bin/lcdmachfail: restore in parallel of resource
"dmmp19021"
has failed; will re-try serially
END vertical parallel recovery with return code -1
```

You might experience I/O timeouts.

Workaround

If this problem occurs, restart I/O operations on the storage array.

Reference Number

200291263

sas::SasAdapter *, unsign during 3x fault stress after ~20 hrs

Operating System

All

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.75 and subsequent releases

Problem or Restriction

Description

Workaround

The controller reboots automatically and return to normal operations.

Reference Number

200292223

Internal Cache is Not Restored after Power is Turned Off and Back On to a Controller-Drive Tray

Operating System

All

Hardware/Software/Firmware

- All
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when cache settings are 100% for cache flush and infinite for flush time. When the controllers perform start-of-day operations, if a drive has failed, the cache does not restore completely. You experience slow performance on input/output operations because all volumes operate in write-through mode.

Workaround

To avoid this problem, do not use the command line interface (CLI) to set the `CacheFlushModifier` parameter to infinite. If this problem occurs, use the CLI to set the `CacheFlushModifier` value to 8. Cache recover will run to completion.

Reference Number

200293218

Host Interface Card (HIC) Drops the iSCSI Session and HIC Core is Dumped after an Asynchronous Error Notification (AEN)

Operating System

All

Hardware/Software/Firmware

- CE4900 controller-drive trays with Qlogic Qslalom HICs
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when an iSCSI host interface drops packets during heavy loads of input/output (I/O) operations. In some rare circumstances, the HIC reboots, which causes the controller to panic.

Workaround

You can avoid this problem by reducing the load of I/O operations on the host connection.

The controller reboots and recovers automatically when this problem is encountered.

Reference Number

200295573

Controller Panics after Repeated Resets with Error PANIC : sasGetConfigPage

Operating System

All

Hardware/Software/Firmware

- CE2600 controller-drive trays and CE5400 controller-drive trays with iSCSI host connections.
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when the SAS driver controller firmware is unable to retrieve configuration data from the host interface. This is unlikely to occur in normal use.

Workaround

The controller will reboot and recover automatically when this problem is encountered.

Reference Number

200297065

After Multiple Drive Failures in Disk Pool with Protection Information (PI) Enabled, the SANtricity ES Storage Manager User Interface Show Reconstruction Stalled

Operating System

All

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs after multiple drives fail in a disk pool where the PI feature is enabled. The user interface show that reconstruction of previously failed drives is in progress. However, the progress indicator in the user interface stalls, preventing you from reconstructing an additional failed drive. This would be a very unusual occurrence in normal operations.

Workaround

Continue to replace additional drives as needed. The faulty indication in the user interface will not prevent normal reconstruction operations.

Reference Number

200298553

The SANtricity ES Storage Manager User Interface Allows Mapping Certain Volumes to an InfiniBand Host, but that Configuration is Not Supported

Operating System

All

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

Snapshots, mirrored volumes, thin volumes and volume that support copy services cannot be mapped to a host that is connect with the storage array through InfiniBand. However, the SANtricity ES Storage Manager user interface does not indicate this restriction. When you map an unsupported volume type to an InfiniBand host, the input/output operations between the host and the mapped volume fail.

Workaround

If this problem occurs, unmap the affected volume from the host.

Reference Number

200298982

After an NVSRAM Download, a Controller Reboots a Second Time when the NVSRAM is Activated

Operating System

All

Hardware/Software/Firmware

- All controllers
- Controller firmware releases 7.80 through 7.84

Problem or Restriction

This problem occurs when a controller detects corruption in the signature of the NVSRAM loaded on the controller. The controller restores the NSVRAM from the physical drive, and then reboots.

Workaround

The controller recovers and continues normal operations.

Reference Number

200298986

A Host Fails to Discover a Volume that has a Remote Volume Mirroring Relationship During Start-Of-Day Operations

Operating System

Linux with DMMP

Hardware/Software/Firmware

- CE7900 controller trays with iSCSI host connections
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when a controller connected to a host through an iSCSI connection comes back online after going offline. When a volume is the source volume in an Remote Volume Mirroring (RVM) relationship, it is not discovered by the host during start-of-day operations. Any attempt by the host to access the volume results in input/output errors.

Workaround

If this problem occurs, perform a host re-scan after the controller finishes coming online.

Reference Number

200299765

When a Controller is Not Set Offline Before Being Replaced, an Exception Occurs when the Replacement Controller is Brought Online

Operating System

All

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you fail to follow standard procedures when replacing a controller. If you do not set a controller offline before you replace it, and the replacement controller has a difference firmware level from the remaining controller, the firmware mismatch is not properly detected.

Workaround

You can avoid this problem by following the standard procedure for replacing a controller. If this problem occurs, the replacement controller reboots after the exception and the storage array returns to normal operations.

Reference Number

200300303

Input/Output (I/O) Errors Occur when Disconnection of Devices from a SAS Switch Is Not Detected

Operating System

All

Hardware/Software/Firmware

- Controllers attached to hosts through SAS switches
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when there is a heavy load of I/O operations between hosts and storage arrays that are connected through a SAS switch. The switch fails to notify the host when a volume is no longer available. A host experiences I/O errors or application timeouts.

Workaround

To avoid this problem, reduce some or all of the following factors:

- The number of ports on the switch that are used or zoned
- The number of volumes mapped to hosts through the switch
- The throughput of I/O operations

Reference Number

200300901

A Controller Reboots Under a Heavy Load of Input/Output (I/O) Operations

Operating System

All

Hardware/Software/Firmware

- CE5400 controller-drive trays with 6 Gb/s SAS HICs
- Controller firmware release 7.84

Problem or Restriction

This problem occurs while a controller experiences a heavy load of I/O operations. The controller reboots due to drive-side I/O timeouts.

Workaround

The controller reboots and resumes normal operations

Reference Number

200300925

A Path Failure and Premature Failover Occur when a Cable is Disconnected between a Host and a Controller

Operating System

Operating Systems with Device Mapper Multipath (DMMP)

Hardware/Software/Firmware

- Controller-drive trays with iSCSI host connections.
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you disconnect an iSCSI cable between a controller and a host. Even if you reconnect the cable before the normal failover timeout, the path fails and the controller fails over to the alternate.

Workaround

If this problem occurs, reconnect the cable. The path will be restored.

Reference Number

200301013

Volume Shadow Copy Service Error Occurs During Resync Operation on Snapshots

Operating System

- Windows Server 2008
- Windows Server 2012

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you perform a resync operation on one or more snapshots on a non-cluster resource. The event viewer shows an error with ID8173. No actual error has occurred.

Workaround

Normal operations are not affected by this problem. You can clear the error message by clearing the Event Viewer logs.

Reference Number

200301273

Input/Output (I/O) Errors Occur when a Cable is Disconnected between a Host and a Controller

Operating System

Linux 6.2 with Device Mapper Multipath (DMMP)

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when the maximum number of volumes (256) is mapped to a host. If you disconnect the cable between a controller and a host, and then reconnect the cable, I/O errors occur before the host can rediscover all of the volumes on the connection.

Workaround

After some delay, the host will rediscover all of the volumes and normal operations will resume.

Reference Number

200302120

An Error Message Appear while Installing SANtricity ES Storage Manager on a Host from the Console

Operating System

Solaris 10.9

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs when you install SANtricity ES Storage Manager from the console of a host running the Solaris 10.9 operating system. During the installation process, the following message appears on the console:

```
./SMIA-SOLX86-10.84.x0.00.bin: !: not found
```

Workaround

SANtricity ES Storage Manager installs successfully.

Reference Number

200303213

The SANtricity ES Storage Manager Array Management Window (AMW) Responds Slowly (5 Seconds Delays) when Viewing Hardware Components

Operating System

Unix operating systems

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs when you select the **Hardware** tab in the AMW. The images representing the hardware render slowly in the user interface.

Workaround

To avoid this problem, add the following line to the SMclient script file

```
OTHER_OPTS=-Dsun.java2d.pmosffscreen=false
```

and then modify the line in that file that executes the java virtual machine (JVM) to include \$OTHER_OPTS as shown below

```
$JAVA_EXEC $OTHER_OPTS -Ddevmgr.datadir ...
```

Reference Number

200303461

Immediate Failover Occurs when a Cable is Disconnected between a Host and a Controller

Operating System

Linux Operating Systems with Device Manager Multipath (DMMP)

Hardware/Software/Firmware

- Hosts with Brocade Fibre Channel host bus adapters (HBAs)
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you disconnect an Fibre Channel cable between a controller and a host. Even if you reconnect the cable before the normal failover timeout, the path fails and the controller fails over to the alternate.

Workaround

If this problem occurs, reconnect the cable. Normal operations will resume.

Reference Number

200303636

Input/Output (I/O) Timeouts Occur During a Controller Firmware Upgrade

Operating System

Linux Operating Systems with Device Manager Multipath (DMMP)

Hardware/Software/Firmware

- Hosts with LSI 3 Gb/s host bus adapters
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when you upgrade controller firmware during a heavy load of I/O operations. The host experiences I/O timeouts during firmware activation.

Workaround

If this problem occurs, restart I/O operations on the host.

Reference Number

200304175

Host Operating System Logs an I/O Error During a Path Failure

Operating System

Red Hat Enterprise Linux 6.1 with multipath proxy (MPP) driver

Hardware/Software/Firmware

- Hosts with SAS or iSCSI host bus adapters
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when there is a path failure through a host connection. The operating system logs an I/O error before the MPP driver can reconnect.

Workaround

This problem does not affect normal operations. You can disable the log message by entering the following command on the host command line:

```
echo 0 > /proc/sys/kernel/hung_task_timeout_secs
```

Reference Number

200304178

Controller Panics when a Cable is Disconnected between a Host and the Controller

Operating System

All

Hardware/Software/Firmware

- Controllers with SAS host connections
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when four hosts are connected by a quadfurcated cable to one host port on the controller and when the transfer size is set to 4 Mb. If the cable is disconnected, the controller panics.

Workaround

The controller reboots and return to normal operations when the cable is reconnected.

Reference Number

200305481

In The Download Drive Firmware Wizard, the Help Button is Not Available

Operating System

All Linux operating systems

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

When you use the **Download Drive Firmware** wizard in the SANtricity ES Storage Manager user interface, the help button is not available (grey).

Workaround

None

Reference Number

200305715

The Error EVF_TRCQUE_POS_INVALID DQ Entry: is Mistakenly Logged for Thin Provisioning Repositories

Operating System

All

Hardware/Software/Firmware

- All controllers
- Controller firmware releases 7.83 and 7.84

Problem or Restriction

This problem occurs when you use thin volumes. Under certain circumstance, the error message EVF_TRCQUE_POS_INVALID DQ Entry is logged when no error has occurred.

Workaround

This problem does not effect normal operations.

Reference Number

200305987

Storage Arrays Connected by iSCSI for Asynchronous Volume Mirroring Fail to Reconnect After a Power Outage

Operating System

All

Hardware/Software/Firmware

- Controllers with Emulex iSCSI host interface cards
- Controller firmware releases 7.70 through 7.84

Problem or Restriction

This problem occurs after a power outage. Two storage arrays connected for asynchronous remote volume mirroring fail to reestablish their connection over the iSCSI interface.

Workaround

If this problem occurs, reboot all of the controllers in the two connected storage arrays.

Reference Number

200306432

Unable to Install Driver Firmware for Qlogic Host Bus Adapter (HBA)

Operating System

SuSE Linux Enterprise Server 11 SP1

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs on a host when the operating system is booted from the storage area network. You are not able to install the driver firmware for a QLogic QMI2582 HBA.

Workaround

None. This problem does not interfere with normal operations.

Reference Number

200308186

Online Help Has Misleading Information about Enclosure Loss Protection and Drawer Loss Protection

Operating System

All

Hardware/Software/Firmware

- CE2600-60 controller-drive trays and a CE5400-60 controller-drive trays
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

The description of criteria for drawer loss protection and tray loss protection with respect to RAID 6 in the SANtricity ES Storage Manager online help is not consistent with the actual implementation of these features. The online help implies that, since RAID 6 requires a minimum of five physical disks, those disks must be distributed across at least five drive trays to provide tray loss protection. The actual implementation provides tray loss protection if no one drive tray contains more than two of the physical disks in the RAID 6 volume group. So, tray loss protection can be achieved with three drive trays when the physical disks are distributed in a 2/2/1 configuration.

The online help implies that physical disks in a RAID 6 volume group must be distributed across at least four drawers of a CE2600-60 controller-drive tray or a CE5400-60 controller-drive tray in a 2/1/1/1 configuration to achieve drawer loss protection. The actual implementation also supports drawer loss protection using three drawers in a 2/2/1 configuration.

Workaround

None.

Reference Number

200314522

A Controller Panics Repeatedly During Start-Of-Day Operations

Operating System

All

Hardware/Software/Firmware

- All controllers
- SANtricity ES Storage Manager release 10.84

Problem or Restriction

This problem occurs on storage arrays with the Atomic Write Support feature. If a host write operations is in progress as well as a cache mirroring operation and the storage array experiences a power interruption, the two controller in the storage array do not synchronize their cache mirroring correctly. Over time, incorrect cache data that was flushed to disk is overwritten. However, if a controller fails while the incorrect data still persists, the alternative controller enters a panic loop.

Workaround

None

Reference Number

200317427

A Controller Panics Repeatedly During Start-Of-Day Operations

Operating System

All

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs on storage arrays with the Atomic Write Support feature. If power is interrupted during backup start-of-day operation, the atomic write cache recover process might not complete successfully. During subsequent start-of-day or failover operations, a controller enters a panic loop.

Workaround

None

Reference Number

200317442

Data is Misread when a Physical Drive Has an Unreadable Sector

Operating System

Red Hat Enterprise Linux

Hardware/Software/Firmware

- All controllers
- Controller firmware release 7.84

Problem or Restriction

This problem occurs when a read operation returns data from a region of a drive with an unreadable sector. The host operating system assumes that data up to the unreadable sector was read correctly, but this might not be the case.

Workaround

Replace any drives that have media errors.

Reference Number

200317773

SANtricity ES Storage Manager Fails to Report a Miswire Condition

Operating System

All

Hardware/Software/Firmware

- All controllers
- Controller firmware release 10.83 and subsequent releases

Problem or Restriction

This problem occurs when the connections to a drive tray is not a supported cabling configuration. The support bundle connection.txt file does not successfully record the miswire condition.

Workaround

To avoid this problem, refer to the product documentation to verify that your storage array is cabled correctly.

Reference Number

200318903

Document Errata: Add a New Topic to the Failover Drivers Guide

Document

Failover Drivers Guide

Description

The following topic should be added to the Failover Drivers Guide.

Running the DSM Failover Driver in a Hyper-V Guest with Pass-Through Disks

Consider a scenario where you map storage to a Windows Server 2008 'R2' (or above) parent partition. You then use the **Settings -> SCSI Controller -> Add Hard Drive** command to attach that storage as a pass-through disk to the SCSI controller of a Hyper-V guest running Windows Server 2008. By default, some SCSI commands are filtered by Hyper-V, so the DSM Failover driver will fail to run properly.

To work around this issue, SCSI command filtering must be disabled. Run the following PowerShell script in the Parent partition to determine if SCSI pass-through filtering is enabled or disabled:

```
# Powershell Script:  Get_SCSI_Passthrough.ps1
$TargetHost=$args[0]
foreach ($Child in Get-WmiObject -Namespace root\virtualization
Msvm_ComputerSystem -Filter "ElementName='$TargetHost'")
{
    $vmData=Get-WmiObject -Namespace root\virtualization -Query "Associators
of {$Child} Where ResultClass=Msvm_VirtualSystemGlobalSettingData
AssocClass=Msvm_ElementSettingData"
Write-Host "Virtual Machine:" $vmData.ElementName
Write-Host "Currently Bypassing SCSI Filtering:"
$vmData.AllowFullSCSICommandSet
}
```

If necessary, run the following PowerShell script in the Parent partition to disabled the SCSI filtering:

```
# Powershell Script: Set_SCSI_Passthrough.ps1
$TargetHost=$args[0]
$vsManagementService=gwmi MSVM_VirtualSystemManagementService -namespace
"root\virtualization"
foreach ($Child in Get-WmiObject -Namespace root\virtualization
Msvm_ComputerSystem -Filter "ElementName='$TargetHost'")
{
$vmData=Get-WmiObject -Namespace root\virtualization -Query "Associators
of {$Child} Where ResultClass=Msvm_VirtualSystemGlobalSettingData
AssocClass=Msvm_ElementSettingData"
$vmData.AllowFullSCSICommandSet=$true
$vsManagementService.ModifyVirtualSystem($Child,$vmData.PSBase.GetText(1
))|out-null
}
```


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