

Release Notes for SANtricity ES Storage Manager 10.86 for E-Series Storage Systems and the EF540 Flash Array

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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 10.86 for E-Series storage systems and the EF540 flash array.

Standard features available with SANtricity ES Storage Manager 10.86

A number of standard features are automatically available with SANtricity ES Storage Manager 10.86 for your NetApp E-Series storage system or EF540 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 10.86:

- High Performance Tier
- Thin Provisioning (not available for EF540 flash arrays)
- 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 flash arrays)
- Dynamic Disk Pools (not available for EF540 flash arrays)
- Mixed Drive Type (not available for EF540 flash arrays)

See the *Concepts Guide for SANtricity ES Storage Manager Version 10.86* 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 10.86 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 and the EF540 flash array (except as noted).

Availability of premium features for E-Series storage systems

The SANtricity ES Storage Manager 10.86 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 unavailable for all E-Series storage systems:

- Snapshot (legacy)
- Enterprise Security Key Manager

The following premium feature is available for E5500 series storage systems:

- Drive Security

The following premium features are available for E5400 series storage systems:

- Drive Security
- Snapshot (enhanced)
- Volume Copy
- Synchronous Mirroring
- Asynchronous Mirroring

The following premium features are available for E2600 series storage systems:

- Drive Security
- Volume Copy
- Synchronous Mirroring

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

Availability of premium and standard features for the EF540 flash array

The SANtricity ES Storage Manager 10.86 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 flash array.

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

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

The following premium features are available for the EF540 flash array:

- Snapshot (enhanced)
- Volume Copy
- Synchronous Mirroring
- Asynchronous Mirroring

NOTE Dynamic disk pools are not supported on solid state drives (SSDs). You cannot create dynamic disk pools when configuring storage for your EF540 flash array. Although dynamic disk pools are considered a standard feature in SANtricity ES Storage Manager 10.86 documentation, they are not supported on solid state drives (SSDs). Therefore, dynamic disk pools cannot be implemented for the EF540 flash array. 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 10.86, thin provisioning is not available for the EF540 flash array.

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

Firmware and Software Restrictions

This document provides updated information about the features and functionality of SANtricity Storage Manager version 10.86 and controller firmware version 7.86.

Unless other noted, references to "storage arrays" in the following restrictions also include the EF540 flash array.

Data Corruption occurs with RAID 1 or RAID 10, a Dynamic Capacity Expansion Operation, and a controller reboot

Severity: 1 Major

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- RAID 1 or 10

Problem or Restriction

Under certain rare circumstances, a controller may reboot during a Dynamic Capacity Expansion (DCE) on a RAID 1 or RAID 10 volume. Under these circumstances, data corruption will occur.

Workaround

Do not perform a DCE on a RAID 1 or RAID 10 volume.

Reference Number

200356200

SANtricity Storage Manager Installer Installs Components that Were Deselecting Using the Keyboard

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- InstallAnywhere 2009 SP1

Problem or Restriction

When you install SANtricity Storage Manager, the installer presents a series of windows to gather information. This problem occurs when the **Select Install Features** window appears. If you use the keyboard to deselect any of the default selections in this window, the features are installed anyway.

Workaround

In the **Select Install Features** window, clear the check box for each option that is selected.

Reference Number

200131300

A Host Reboots Automatically when You Install Software from the Command Line

Severity: 2 Functional

Operating System

Microsoft Windows

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- SANtricity Storage Manager version 10.80 and subsequent releases
- InstallAnywhere 2009 SP1

Problem or Restriction

When you run the installer executable with the `-i console` option on the command line, you are prompted to choose whether to restart the host manually or automatically. Even if you choose to restart the host manually, it restarts automatically when the uninstall process is completed.

Workaround

Use the installer from the graphical user interface rather than from the command line.

Reference Number

200132243

A Host Reboots Automatically when You Uninstall Software from the Command Line

Severity: 2 Functional

Operating System

Microsoft Windows

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- SANtricity Storage Manager version 10.80 and subsequent releases
- InstallAnywhere 2009 SP1

Problem or Restriction

When you enter the `Uninstall` command with the `-i console` option on the command line, you are prompted to choose whether to restart the host manually or automatically. Even if you choose to restart the host manually, it restarts automatically when the uninstall process is completed.

Workaround

Use the uninstaller from the graphical user interface rather than from the command line.

Reference Number

200132244

Access Volume is Added as a SCSI Device

Severity: 2 Functional

Operating System

Linux

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- Hosts using MPP

Problem or Restriction

This problem occurs when the access volume (UTM) is unmapped and then re-mapped using the MPP `hot_add` command. Input/output errors occur when the access volume is used for input/output operations.

Workaround

Do not unmap the UTM access volume. If this problem occurs, reboot the affected host.

Reference Number

200169078

2 Functional

Cache Restoration Fails when You Apply Power to a Storage Array

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.80 and subsequent releases
- E5400 controller-drive trays and EF540 flash arrays

Problem or Restriction

This problem occurs under the following conditions:

- Power to the storage array is removed while input/output operations are in progress.
- The next time start-of-day operations occur after power is restored, some drives are missing that were previously present. This condition might be the result of applying power to the controller-drive tray before you apply power to the attached drive trays, in which case the drives in the drive trays are missing, from the point of view of the controller-drive tray.
- Volume configurations were set to write through mode or were set to write back cache with cache mirroring disabled.

Cache restoration fails during start-of-day operations. You observe degraded or failed volumes on the storage array after start-of-day operations complete.

Workaround

None.

To reduce the risk of encountering this problem, take the following actions:

- When you turn on power to a storage array, turn on any attached drive trays before you turn on the controller-drive tray.
- Make sure that cache mirroring is enabled for any volumes where write-back cache is enabled.
- Do not remove any drives or drive trays from a storage array while it is power turned off.

Reference Number

200176080

A Controller Panics and Reboots during Staged Online Firmware Download

Severity: 2 Functional

Operating System

SUSE Linux Enterprise Server (SLES) version 11

Hardware/Software/Firmware

- Controller firmware release 7.80 and subsequent releases
- E5400 controller-drive trays and EF540 flash arrays

Problem or Restriction

During a staged online firmware download, a controller panics and reboots.

Workaround

None. The controller reboots and returns to normal operations.

Reference Number

200207464

2 Functional

When You Reboot a Controller, Major Event Log (MEL) Entries Indicate that a Drive-Side Timeout Occurred

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.83 and subsequent releases
- E2600 controller-drive trays

Problem or Restriction

When you reboot a controller, entries appear in the MEL indicating that a drive-side timeout has occurred.

Workaround

None. When this problem occurs, the storage array goes into cache-disabled mode. To restore normal caching, reboot one controller in the storage array and then reboot the other controller.

Reference Number

200306038

Japanese Characters Do Not Display Correctly in the License Agreement Window

Severity: 2 Functional

Operating System

Solaris 11

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.83 and subsequent releases

Problem or Restriction

When you install SANtricity Storage Manager on a host running the Solaris 11 operating system, if you choose Japanese localization, the Japanese characters do not display correctly in the **License Agreement** window.

Workaround

Us English localization.

The Host Context Agent Selects the Wrong Host Region

Severity: 2 Functional

Operating System

- Linux with DM-MP
- Solaris 11

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.83.xx.xx and subsequent releases
- SMAgent version 10.83.xx.xx

Problem or Restriction

This problem occurs when you add a new host and the host runs Linux with DM-MP or Solaris 11. The host runs in a mode without Asymmetric Logical Unit Access (ALUA), although the ALUA feature is available for the host operating system.

Workaround

After you add or update a host, manually select the correct host type on the SANtricity Storage Manager **Host Mappings** tab.

Reference Number

200328590

Creating a Volume Copy from a Volume without PI (Data Assurance) Enabled to a Volume with PI Enabled Results in an Error

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.83 and subsequent releases

Problem or Restriction

When you attempt to create a volume copy from a volume without PI enabled to a volume with PI enabled, you receive the error: The operation cannot complete because the volume protection (data assurance) is not valid.

Workaround

Do not attempt to create a volume copy from a volume that does not have PI (data assurance) enabled to a volume that does.

Reference Number

200267754

A Controller Reboots because of Ancient Input/Output after You Disable a SAS PHY on a Host

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.83 and subsequent releases
- E2600 controller-drive trays, E5400 controller-drive trays, and EF540 flash arrays with SAS host connections through an LSI6160 switch.

Problem or Restriction

This problem occurs when you disable a SAS PHY on a host. Ancient input/output causes the attached controller to reboot.

Workaround

Stop input/output operations on the host connection before you disable a SAS PHY. If this problem occurs, the controller reboots and resumes normal operations.

Reference Number

200288523

A Storage Array with a Failed Volume Performs Very Slowly after Power Is Turned Off and Then Turned On

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.84 and subsequent releases

Problem or Restriction

This problem occurs when a storage array has one or more failed volumes. If you turn off power to the storage array and then turn on the power, all of the volumes on the storage array remain in write-through mode. This results in very slow performance for the storage array.

Workaround

Revive or replace any failed drives in the storage array, or delete any failed volumes.

Reference Number

200298611

A Controller Firmware Upgrade Takes More Than 40 Minutes to Complete

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80.xx.xx and subsequent releases.

Problem or Restriction

This problem occurs when you use the command line interface to initiate a controller firmware upgrade while the controller is experiencing a heavy load of input/output operations. The upgrade takes more than 40 minutes to complete.

Workaround

Balance the load of input/output operations between the two controllers in the storage array before you begin the controller firmware upgrade.

Reference Number

200299201

A Controller Panics and Reboots after a Long Period of Operation with Repeated Reboots

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80.xx.xx and subsequent releases

Problem or Restriction

This problem occurs when a controller operates for many hours under conditions of repeated reboots. The SAS driver causes a panic condition when it is unable to retrieve a configuration page from the IOC chip in the host interface card.

Workaround

None. The controller reboots and resumes normal operations.

Reference Number

200305054

A Controller Reboots after a Long Period of Operation with a Heavy Load of Input/Output Operations

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.84 and subsequent releases
- E5400 controller-drive trays and EF540 flash arrays with SAS host connections

Problem or Restriction

This problem occurs when a controller operates for more than 20 hours under a heavy load of input/output operations. The host interface card stops responding, causing the controller to reboot.

Workaround

None. The controller reboots and resumes normal operations.

Reference Number

200311466

Controllers Panics when You Disconnect a SAS Cable

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.84 and subsequent releases
- E2600 controller-drive trays, E5400 controller-drive trays and EF540 flash arrays with SAS host connections
- Quadfurcated SAS cables

Problem or Restriction

This problem occurs when the transfer size is set to 4 MB. When you disconnect a quadfurcated SAS cable from a controller, a data abort in the SAS driver causes the controller to panic and reboot.

Workaround

None. The controllers reboot and resume normal operations.

Reference Number

200311467

A Data Alignment Exception Occurs after You Replace a Controller

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.84.xx.xx and subsequent releases

Problem or Restriction

This problem occurs when you remove a controller from a duplex controller-drive tray without first placing the controller offline. A data alignment exception occurs when you insert the replacement controller.

Workaround

When you replace a controller in a storage array, set the controller offline before you remove it from the controller-drive tray.

Reference Number

200314061

iSCSI Connections for Asynchronous Remote Volume Mirroring (ARVM) Are Not Reestablished after a Power Failure

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- Configurations with iSCSI connections for asynchronous remote volume mirroring (ARVM)

Problem or Restriction

This problem occurs when both the primary and secondary storage arrays in an ARVM relationship reboot because of a power failure. The iSCSI connection to support ARVM between the storage arrays is not reestablished after the controllers reboot.

Workaround

Manually reboot the controllers in the two storage arrays.

Reference Number

200316027

The revive volumeGroup SMcli Command Produces an Error Message although the Command Completes Successfully

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.83 and subsequent releases
- SANtricity Storage Manager software version 10.83 and subsequent releases

Problem or Restriction

When you enter the SMcli command `revive volumeGroup ["vgname\""],` where `vgname` is the name of a failed volume group, the following message appears on the command line:

Error 18 - The operation cannot complete because of an internal target error

The graphical user interface, however, shows that the command successfully revived the volume group.

Workaround

None. The command succeeds, and normal operations continue.

Emulex iSCSI Host Interface Encounters an Unhandled Exception

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.83 and subsequent releases
- E5400 controller-drive trays and EF540 flash arrays with 10-Gigabit iSCSI Emulex host interface connections

Problem or Restriction

An Emulex iSCSI host interface connector encounters an unhandled exception.

Workaround

None. Input/Output operations return to normal. No reboot of the controller occurs.

Reference Number

200314504

A Controller Reboots Unexpectedly

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- E2600 controller-drive trays with 1-Gigabit iSCSI Emulex host interface connections

Problem or Restriction

This problem occurs when the Emulex firmware driver experiences a panic condition.

Workaround

None. The controller reboots and resumes normal operations.

Reference Number

200314988

In the SANtricity Storage Manager, the Title in the About Window Shows a Question Mark Instead of the Trademark Symbol

Severity: 2 Functional

Operating System

HP-UX

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86
- Java version 1.6.0.14

Problem or Restriction

The title of the **About** window shows a question mark (?) rather than the trademark symbol (™).

Workaround

None.

Reference Number

200315879

Emulex iSCSI Host Interface Connector Encounters an Unhandled Exception

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- E2600 controller-drive trays with 1-Gb iSCSI Emulex host interface connections

Problem or Restriction

An Emulex iSCSI host interface connector encounters an unhandled exception.

Workaround

None. Input/Output operations return to normal. No reboot of the controller occurs.

Reference Number

200316787

When you Install SANtricity Storage Manager Using the Graphical User Interface of the Installer, You Cannot Use the Enter Key to Select Options

Severity: 2 Functional

Operating System

Suse Linux Enterprise Server 11 SP2

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- InstallAnywhere 2009 SP1

Problem or Restriction

When you install the SANtricity Storage Manager using GUI mode, you are unable to select installation options by using the enter key on your keyboard.

Workaround

Use the mouse, rather than the keyboard, to select installation options.

Reference Number

200317279

In the Create Volume Group Wizard, You Cannot Select Options by Using the Tab Key

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

When you launch the **Create Volume Group** wizard, initially, no component of the first window has the input focus. You cannot select any component of the window by using the tab key on the keyboard. If you are relying on a screen reader, as opposed to visual cues, to navigate, you will hear only the title of the initial window.

Workaround

Use the mouse to select components of the window.

Reference Number

200319828

The Output from the `fdiCapture` Command Does Not Reflect a Change to a Tray ID Until the Controllers Are Rebooted

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86

Problem or Restriction

When you update a tray ID in a storage array, data in CASD and ASUP logs will not reflect the change in location information until you reboot the controllers in the storage array.

Workaround

None.

If you examine the logged data directly, use the World Wide Name to correlate data with a particular physical drive.

Two Enter Password Dialogs Appear Simultaneously: One for the Array Management Window and One for a Previously Opened Window

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs if your session times out while you are using the Array Management Window (AMW) and you have launched one of the following windows:

- **EventViewerLog**
- **Copy Manager**
- **FlashCache Performance Modelling**
- **Performance Monitor**

After the session times out, you can still perform read-only operations using any one of the listed windows. However, if you try to perform an active (write) operation in that window, you are prompted for the administrator password. When this occurs, you see two login windows: one for the AMW and another for the window where you attempted the active operation.

Workaround

None.

Reference Number

200321583

The Arrow to Scroll Forward in Drop-Down Menus Appears Enabled although No Sub-Menu Is Accessible

Severity: 2 Functional

Operating System

Windows 2008 R2

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

In the SANtricity Storage Manager graphical user interface, a sub-menu icon (>) appears enabled (not grayed out) although sub-menus are not visible.

Workaround

None.

Reference Number

200321585

Host Port Creation or Deletion Is Reported Unexpectedly

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S version 10.28.x.x

Problem or Restriction

This problem occurs when you move a host port or initiator from one host to another. The SMI-S provider generates unexpected creation and deletion events.

Workaround

None.

Reference Number

200321628

If You Miswire a Drive Tray by Connecting One Environmental Services Module (ESM) to the Other ESM in the Same Drive Tray, the Error Message Incorrectly Indicates that the ESM is Connected to Itself

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms except EF540 flash array
- Controller firmware release 7.86

Problem or Restriction

This problem occurs when you miswire a drive tray by connecting one ESM to the other ESM in the same drive tray. The recovery guru shows an error message similar to the following: **Drive Tray 1 ESMA(Left) Out is connected to Drive Tray 1 ESMA(Left) Out**. In this example, the correct error message would be: **Drive Tray 1 ESMA(Left) Out is connected to Drive Tray 1 ESMB(Right) Out**

Workaround

Correct the miswire condition.

Reference Number

200323122

The SMI-S Client Is Not Able to Use the `SNIA_StorageSynchronization` Class for Replica Management

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*

Problem or Restriction

SMI-S client applications is not able to manage replicas supported by Replication Services profile using `SNIA_StorageSynchronized` class as described in the SMI 1.4 specification.

Workaround

SMI-S client applications should use `CIM_StorageSynchronized` class instead of `SNIA_StorageSynchronized` class.

Reference Number

200323954

The Microsoft Storage Management Service Cache Is Not Dynamically Updated after You Make Configuration Changes

Severity: 2 Functional

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

If you are using the Microsoft Standards-Based Storage Management Service, this problem occurs when you make configuration changes outside of that service's environment. The Storage Management Service provider cache is not dynamically updated, even when the service's indication listener receives notification of an update.

Workaround

Manually update the Storage Management Service cache whenever you make a configuration change outside of the Storage Management Service environment.

Reference Number

200325118

MSFT_TargetPool Specification Is Incorrect for the Role Property

Severity: 2 Functional

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

This problem might occur if you develop a storage management API-based application that relies on the value of the MSFT_TargetPort.role. It does not affect operations through the PowerShell or through the File and Storage Services graphical user interface.

Workaround

None.

Reference Number

200325584

With Microsoft Standards-Based Storage Management Service, Dynamic Cache Is Not Updated Dynamically after Adding or Removing a Storage Subsystem

Severity: 2 Functional

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

If you are using the Microsoft Standards-Based Storage Management Service, this problem occurs when the SMI-S provider is registered with Microsoft Storage Management service and discovery is performed to update the service cache. When a storage subsystem is added or removed in the SMI-S provider through a third-party CIM client, the Storage Management Service provider cache is not dynamically updated, even when the service's indication listener receives notification of an update.

Workaround

Manually update the Storage Management Service cache whenever you add or remove a storage subsystem outside of the Storage Management Service environment.

Reference Number

200326004

You Are Unable to Specify a Target Pool while Creating a Snapshot on a Volume

Severity: 2 Functional

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

This problem occurs when you attempt to create a snapshot on a volume using the `New-VirtualDiskSnapshot` command and specify the target pool with the `TaregetStoragePoolName` parameter. The command fails with an argument validation error.

Workaround

Create the snapshot sing the `New-VirtualDiskSnapshot` command with the required parameters but without the optional `TaregetStoragePoolName` parameter.

Reference Number

200326900

Job Access With Speech (JAWS) Is Able to Read only Window Titles, Not Window Content, in the SANtricity Storage Manager User Interface

Severity: 2 Functional

Operating System

64-bit Windows

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86
- Java Accessibility Bridge and Java Runtime Environment (JRE), JAWS version 11 and version 13

Problem or Restriction

This problem occurs after you install the 32-bit versions of the Java Accessibility Bridge and JRE on a 64-bit Windows system. When you attempt to use JAWS to navigate in the SANtricity Storage Manager you can read only the title of the window that initially has the input focus. You cannot shift the input focus to other components of that window or navigate to other windows.

Workaround

Perform the following steps to enable 64-bit JAWS on a 64-bit Windows system work with 32-bit Java applications.

1. Download and install the 64-bit JAWS 12.0.1158 version or later from the Freedom Scientific web site.
2. Download the 32-bit JAVA 1.6U25 or later installer from:
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>
3. Download the JAVA AccessBridge 2.02 accessbridge-2_0_2-fcs-bin-b06.zip from:
<http://www.oracle.com/technetwork/java/javase/downloads/jab-2-0-2-download-354311.html>
4. Install the 32bit version of JAVA.
5. Reboot.
6. Extract the accessbridge-2_0_2-fcs-bin-b06.zip Zip archive to a folder on your system.
7. For 32-bit support, copy the WindowsAccessBridge-32.dll to the c:\Windows\syswow64 folder.
8. To enable 64-bit JAWS to access 32-bit Java components, copy the WindowsAccessBridge-64.dll to the c:\Windows\System32 folder.
9. For 32-bit support, copy the JavaAccessBridge-32.dll to the "C:\Program Files (x86)\Java\JRE6\bin" folder.

10. For 32-bit support, copy the JAWTAccessBridge-32.dll to the "C:\Program Files (x86)\Java\JRE6\bin" folder.
11. For 32-bit support, copy the accessibility.properties file to the "C:\Program Files (x86)\Java\JRE6\lib" folder.
12. For 32-bit support, copy the jaccess.jar file to the "C:\Program Files (x86)\Java\JRE6\lib\ext" folder.
13. For 32-bit support, copy the access-bridge-32.jar file to the "C:\Program Files (x86)\Java\JRE6\lib\ext" folder.

Reference Number

200327858

Job Access With Speech (JAWS) Repeats Entries in the SANtricity Storage Manager Online Help Index Tab

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86
- Java Accessibility Bridge and Java Runtime Environment (JRE), JAWS version 11 and version 13

Problem or Restriction

The content of the Index tab in the online help system is a hierarchic tree view of the help contents. When you traverse the tree for the first time using JAWS, you hear each entry in the list repeated multiple times.

Workaround

Traverse the entire tree once. On the second pass through the contents of the Index tab, the entries in the tree will be heard normally, without repetition.

Reference Number

200329211

Job Access With Speech (JAWS) Reads Content from a Background Window in the SANtricity Storage Manager

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86
- Java Accessibility Bridge and Java Runtime Environment (JRE), JAWS version 11 and version 13

Problem or Restriction

You hear JAWS reading the content of a background window although another window has the input focus.

Workaround

Press the INSERT+B key combination to re-initiate reading for the window that has the input focus.

Reference Number

200329868

Java Runtime Environment (JRE) Crashes while Using SANtricity Storage Manager Array Management Window (AMW)

Severity: 2 Functional

Operating System

Solaris10 ESXi VM

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86

Problem or Restriction

This problem occurs while you are using the SANtricity Storage Manager graphical user interface. A fatal error in the JRE is logged.

Workaround

Reboot the host where you are running the SANtricity Storage Manager client software.

Reference Number

200329955

Job Access with Speech (JAWS) Does Not Read Management Connections in the SANtricity Storage Manager Enterprise Management Window (EMW)

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86
- Java Accessibility Bridge and Java Runtime Environment (JRE), JAWS version 11 and version 13

Problem or Restriction

JAWS is unable to read the **Management Connections** pane in the EMW.

Workaround

In the EMW, select **Edit>>Remove>>Management Connection** to launch the **Management Connections** dialog. JAWS reads this dialog correctly, and it contains the same entries as the **Management Connections** pane in the EMW.

Reference Number

200330182

Job Access with Speech (JAWS) Incorrectly Reads or Repeats Entries in the SANtricity Storage Manager Online Help Index Tab

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86
- Java Accessibility Bridge and Java Runtime Environment (JRE), JAWS version 11 and version 13

Problem or Restriction

The content of the **Index** tab in the online help system is a hierarchical tree view of the help contents. When you navigate through the hierarchy, JAWS reads entries incorrectly or multiple times.

Workaround

Use the **Search/Find** tab in the online help system as an alternative to the **Index** tab.

Reference Number

200331090

Recovery Guru Message `Service action LED on component: Yes` is Misleading

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

When you use the Array Management Window (AMW) to place a controller in service mode, the recovery guru shows the message `Service action LED on component: Yes`. This message is intended to indicate that an LED is physically present on the controller whether or not the LED is illuminated.

The problem occurs if you interpret the message to mean that the LED is illuminated.

Workaround

None.

Reference Number

200331652

Recovery Guru Shows Incorrect Path to the Tray Tab

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs when you try to follow instructions in the recovery guru to navigate to the **Tray** tab for a storage array. The tab does not appear when you launch the **storage array profile** dialog.

Workaround

Navigate to the **Hardware** tab for the selected storage array.

Reference Number

200332950

Resize-VirtualDisk Command in PowerShell Fails to Increase the Capacity of a Thinly Provisioned Volume

Severity: 2 Functional

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

This problem occurs when the `Resize-VirtualDisk` command in Microsoft PowerShell fails.

Workaround

Use the SANtricity Storage Manager to increase the capacity of a thinly-provisioned volume.

Reference Number

200334841

SANtricity Storage Manager Reports that a Storage Array that Was Previously Added Has Been Successfully Added a Second Time

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs when you use SANtricity Storage Manager to add a storage array for management that has previously been added. A message reports that the storage array was added successfully rather than reporting that the storage array has already been added.

Workaround

None. The problem does not affect normal operations.

Reference Number

200335082

Unable to Simultaneously Upgrade Multiple Storage Arrays with Different Firmware Levels from SANtricity Storage Manager

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs when you use the **Upgrade Controller Firmware** dialog from the **Enterprise Management** window of the SANtricity Storage Manager. If you select multiple storage arrays to upgrade and those storage arrays do not all have the same release level of the controller firmware installed, a dialog appears warning that one of the storage arrays needs attention. You are unable to continue with the upgrade.

Workaround

Upgrade the storage arrays one at a time.

Reference Number

200335962

Unable to Quiesce or Suspend the Volumes in a Disk Pool

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- Storage arrays that support disk pools

Problem or Restriction

This problem occurs when failed drives in a disk pool produce a degraded or critical status. When there is heavy input/output activity to volumes in the disk pool, you are unable to perform storage array management operations that require quiescence or suspension of a volume.

Workaround

Replace any failed drives and add additional drives to the disk pool.

Reference Number

200340572

A Host Experiences a Kernel Panic and Reboots when Power to an Attached Storage Array is Turned Off and Then Turned On

Severity: 2 Functional

Operating System

Red Hat Enterprise Linux (RHEL) version 5.8 and version 5.9

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- MPP failover driver

Problem or Restriction

This problem occurs when there is a large number of volumes from a storage array mounted on a host. The host experiences a kernel panic and reboots when power to an attached storage array is turned off and then turned on.

Workaround

Stop input/output activity to the storage array before you turn off the power.

Reference Number

200340975

Input/Output Errors Occur after Each of the Two Controllers in a Storage Array Go Offline Then Come Back Online in Sequence

Severity: 2 Functional

Operating System

SUSE Linux Enterprise Server (SLES)

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- Device Mapper Multipath (DMMP)

Problem or Restriction

This problem occurs after one of the controllers in a storage array is taken offline while input/out operations are in progress, and then brought back online. When the second controller is taken offline, a path failure resulting in input/output errors occurs.

Workaround

After you take a controller offline and then bring it back online, run the command `multipath -v0` to rediscover the DMMP path.

Reference Number

200341137

With Microsoft Standards-Based Storage Management Service, Dynamic Cache Is Not Updated Dynamically after Pool and Volume Modification Events

Severity: 2 Functional

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

If you are using the Microsoft Standards-Based Storage Management Service, this problem occurs when you modify `StoragePool` or `StorageVolume` parameters outside of that service's environment. The Storage Management Service provider cache is not dynamically updated, even when the service's indication listener receives notification of an update from SMI-S.

Workaround

Manually update the Storage Management Service cache whenever you modify `StoragePool` or `StorageVolume` parameters outside of the Storage Management Service environment.

Reference Number

200341739

When a Suspended Initial Mirror Synchronization is Resumed, the System Reboots

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- Any platform using Asynchronous Remote Volume Mirror

Problem or Restriction

This problem occurs during an initial mirror synchronization when the storage management software is used to resume a suspended asynchronous mirror group (AMG). The system reboots, but the AMG does not resume or clear the suspension condition.

An I/O error occurs, but data integrity of the base volume and the remote volume data is not compromised. Mirror synchronization stops. To resume the AMG, you must perform a complete mirror synchronization.

NOTE This problem affects only the initial mirror synchronization, so in subsequent mirror synchronization, there is no remote recovery point to lose, and forcing a full synchronization affects only the period before an initial recovery point can be established, so.

Workaround

Force a full mirror synchronization. The mirror relationships between the primary volume and the secondary volume are deleted and reestablished, and the full synchronization starts.

Reference Number

200342208

MEL Logs Show the Critical MEL 282B, "Drive Tray Path of Redundancy Lost" MEL

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- E2600 controller-drive tray tray

Problem or Restriction

MEL 282B appears when the controller reboots itself during a controller firmware (CFW) download or non-volatile random-access memory (NVS RAM) download. When the MEL event collection SYMBOL command is active on the rebooting controller when the controller reboots itself as part of the CFW or NVS RAM download, the alternate controller temporarily holds the rebooting controller in reset for a few extra seconds to ensure appropriate handling and clean-up of the transaction in process. The additional delay in rebooting delays the discovery of the device's initiator target nexuses (ITNs) and triggers the MEL event.

Workaround

No action is necessary. When the rebooting controller completes the start of day process, the ITN discovery completes, and the Tray Loss Redundancy condition is cleared. The "Redundancy loss recovered" MEL event appears in the MELlogs.

Reference Number

200345386

Read Error Occurs on a Raid 5 Volume during a Cross Channel Data Link

Severity: 2 Functional

Operating System

RedHat Enterprise Linux version 6.3

Hardware/Software/Firmware

- E5400 controller-drive tray and EF540 flash array
- Controller firmware release 7.86
- HBA LPE12002 with firmware version 2.00x7
- HBA Coho 5735 with firmware version 2.00x7
- Driver: 8.3.5.68.5p
- Device mapper multipath

Problem or Restriction

This problem occurs when there is a path failure or a new path discovery. An I/O error occurs when all paths are lost due to a delayed uevent.

Workaround

If the device mapper does not add the new path after the controller returns online, run the following command to add the new path:

```
multipath -v0
```

Reference Number

200347354

I/O Error Occurs on Device Manager Multipath Due to an Unexpected Delay in Receiving uevents by multipathd

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- Device Mapper Multipath
- scsi_dh_rdac
- mpt2sas driver version

Problem or Restriction

This problem occurs when the storage array controllers go offline, and there is a delay in adding or discovering new controller paths when the controllers return online. The delayed uevent causes all paths to be lost, which results in an I/O error. The uevent is logged in the /var/log/message file on the host.

Workaround

If the device mapper does not add the new path after the controller returns online, run the following command to add the new path:

```
multipath -v0
```

NOTE Always run this command to rediscover the returning path so that the host does not encounter an I/O error due to the host losing all paths if the alternate path fails.

Reference Number

200347725

I/O Error Occurs on Both MultiPath Proxy (MPP) Hosts during a Cross Channel Data Link

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Linux host with MPP
- Controller firmware release 7.86
- iSCSI host interface card (HIC)
- iSCSI host ports
- Any OS and failover driver combination

Problem or Restriction

This problem occurs during the start of day (SOD) check to determine whether the iSCSI channels are up and ready when a controller reboots to activate its newly downloaded controller firmware (CFW) image. When the SOD check identifies that at least one iSCSI port is either disconnected or is experiencing a connection issue, SOD is delayed 120 seconds before it can continue and complete. The delay causes the host to mark LUN paths to the booting controller as offline, and the failover driver gives up on the path. Both controllers reboot to activate their new CFW images, and the host loses paths to the first controller to reboot due to the delay. When the second controller reboots, the host does not have a failover path remaining, which results in an I/O error.

Workaround

Do not use the link-up-link-down status as the criteria for determining readiness during the SCSI readiness check. Perform the following actions to ensure that no iSCSI ports are in a link-down state:

- Ensure that all iSCSI ports are connected to a compatible switch that is turned on ensure that all iSCSI host ports on the controller are linked up.
- Remove iSCSI HICs that are not in use from the controller.

If an I/O error occurs, force the host to rediscover any lost paths and restart the I/O application.

Reference Number

200348478

Only One Controller IP Registers in the Internet Storage Name Service Server

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- All iSCSI platforms

Problem or Restriction

This problem occurs when the system uses Internet Storage Name Service (iSNS) services on subnets with a restrictive subnet mask, which requires them to use two separate Virtual Local Area Networks.

iSNS discovery requires all ports to be sent to the iSNS server for registration. When the iSNS ports are sent for registration, the port information is sent for only "ready" channels. If the ports are not in a link-up state and the IP is not configured, the channels are not sent to the iSNS server for registration, and only half of the subnet ports are configured.

Workaround

Widen the subnet mask to include subnets to always allow contact with the iSCSI port IPs.

Reference Number

200350131

Array Profile Statistics Show a Drive Channel Has "Optimal" Status When it Actually Needs Attention

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- E5500 Controller-Drive Trays
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs when one of the controllers in a storage array is not operational while the other continues normal operations. The Array Management Window correctly shows that a drive channel needs attention while summary incorrectly show optimal status for that drive channel.

Workaround

None. Follow the instructions in the Recover Guru to resolve the problem.

Reference Number

200353994

Erroneous Reboot

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86.
- SMI-S Provider version 10.28.0G0x.xxxx

Problem or Restriction

This problem occurs when the controller firmware detects a "bit flip" during a periodic scan of the PCI.

A "bit flip" is an unintentional state switch from 0 to 1, or vice versa, of a bit stored to random access memory or other medium

Workaround

No action is necessary. If the controller firmware detects a bit flip, the controller reboots.

Reference Number

200354911

The New-VirtualDisk command, the Remove-VirtualDisk command, or the New-VirtualDiskClone Returns an Error Message when One Controller has Failed or is Rebooting

Severity: 2 Functional

Operating System

Windows Server 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

This problem occurs on a storage array where one controller has failed or is in the process of rebooting. If you run the `New-VirtualDisk` command, the `Remove-VirtualDisk` command, or the `New-VirtualDiskClone` command from the command line, the command returns an error, although the command has actually succeeded.

Workaround

None. To avoid this problem, issue the affected commands only on a storage array that has both controllers operating normally.

Reference Number

200356792

After a New Member is Added to an Asynchronous Mirror Group, the SYMBol Interface Show the State of Existing Group Member as INTIAL_SYNC in the Primary Storage Array but OPTIMAL in the Secondary Storage Array

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.84 and later.
- All platforms that support Asynchronous Remote Volume Mirroring

Problem or Restriction

This problem occurs when you add a new member to an asynchronous mirror group. If you use the SYMBol interface to report the status of the members of the group on the primary storage array before internal synchronization has completed, the state of those members is shown as INITIAL-SYNC. However, if you use the SYMBol interface to report the status of the corresponding members on the secondary storage array, the state of those members is shown as OPTIMAL.

Workaround

None. The status of all group members returns to optimal after initial synchronization is complete.

Reference Number

200357489

One Controller in a Storage Array Reboots when a Process Times Out

Operating System

All

Hardware/Software/Firmware

- All platforms that support disk pools
- Controller firmware release 7.86

Problem or Restriction

This problem occurs on storage arrays that support disk pools. When a state capture operation causes timeouts in other processes, the controller reboots.

Workaround

None. The controller reboots and returns to normal operations.

Reference Number

200358225

Operating System

All

Hardware/Software/Firmware

- All platforms that support disk pools
- Controller firmware release 7.86

Problem or Restriction

This problem occurs on storage arrays that support disk pools. When a state capture operation causes timeouts in other processes, the controller reboots.

Workaround

None. The controller reboots and returns to normal operations.

Reference Number

200358225

Auto-Support Data Collection Becomes Inconsistent When Cascading Failures Cause The Major Events Log to Log Many Events in a Short Time

Severity: 2 Functional

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86

Problem or Restriction

This problem occurs when cascading failures cause an "event storm" in the Major Events Log (MEL); that is, many events are logged over a short period of time. If you have enabled the Persistent Monitor for the Auto-Support feature, that feature fails to report, or delays reporting, all of the problems logged to the MEL.

Workaround

Stop and then restart the Persistent Monitor. Use the Recovery Guru to identify and fix all of the problems.

Reference Number

200358586

The Operating System Prompts for Approval When You Install Failover Drivers

Severity: 2 Functional

Operating System

Windows 2008 R2

Hardware/Software/Firmware

- SMInstaller

Problem or Restriction

This problem occurs when you install failover drivers for Windows Server 2008 R2. During installation a dialog with the prompt "Would you like to install this device software" appears.

Normally, installation should proceed without a prompt from the operating system. The prompt appears because the WHQL/WHCK certificate obtained from Microsoft was not applied to the failover installer packaged in this build for Windows Server 2008 R2.

Workaround

Select the **Install** button in the dialog. The failover drivers will install normally.

Reference Number

200377071

SANtricity Storage Manager Installer Fails to Highlight Selected Options in the Graphical User Interface

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- InstallAnywhere 2009 SP1

Problem or Restriction

When you install SANtricity Storage Manager, the installer presents a series of windows to gather information. This problem occurs when the **Select Product Features** window appears. When you select a feature in this window, the feature does not appear selected in the graphical user interface. The selected features are installed.

Workaround

None.

Reference Number

200131299

SANtricity Storage Manager Installer Stops Prompting for User Input before Completing the Installation

Severity: 3 Minor

Operating System

Microsoft Windows 2008 server

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.80 and subsequent releases
- InstallAnywhere 2009 SP1

Problem or Restriction

When you install SANtricity Storage Manager, the installer presents a series of windows to gather information. This problem occurs when the **AntiVirus\Backup Exclusion** window appears. If you do not continue to the **Support Monitor Profiler Default Config** window at that time, the input focus shifts to the main **Installation** window. After that, you are not prompted for the additional input that is needed to complete the installation.

Workaround

Click anywhere on the **Installation** screen. This action causes the input focus to return to the **Support Monitor Profiler Default Config** window.

Reference Number

200131310

Search Text Remains Highlighted after You Navigate away from the Search Tab in the Online Help

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- SANtricity Storage Manager version 10.80 and subsequent releases

Problem or Restriction

This problem occurs when you search for a word or words in the online help. When you navigate from the results window from the search back to the main **Help** menu, text that matches the search remains highlighted on any page that contains matching text.

Workaround

Select another topic in the online help table of contents to remove highlighting of matching text. This is a visual defect that does not affect normal operations.

Reference Number

200144136

A Taskbar Tray Icon Shows Wrong Name for SANtricity Storage Manager

Severity: 3 Minor

Operating System

Linux

Hardware/Software/Firmware

- All platforms
- SANtricity Storage Manager version 10.80 and subsequent releases

Problem or Restriction

When you group multiple windows as a single taskbar instance, the text and icon on the window appears as **devmgr-dmv-MainScreen**.

Workaround

None. This problem is a visual defect that does not affect normal operations.

Reference Number

200144148

The NEEDS ATTENTION Message Does Not Appear in the Array Management Window for a Controller that is Offline

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release and 7.83 and subsequent releases
- SANtricity Storage Manager software version 10.83 and subsequent releases

Problem or Restriction

When you place a controller offline, the "NEEDS ATTENTION" message does not immediately appear in the Array Management Window (AMW)

Workaround

Close and then re-open the AMW.

Reference Number

200273132

In the SANtricity Storage Manager, the Storage Array Tab of the Storage Array Profile Window Is Blank

Severity: 3 Minor

Operating System

Windows 2012 Server

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs after you install SANtricity Storage Manager on a host with the Windows 2012 Server operating system for the first time. When you navigate to the Storage Array tab of the Storage Array Profile window, the tab is blank.

Workaround

Close and re-open the Storage Array Profile window. The expected content appears.

Reference Number

200315574

The Initial SPRI Service Interface Window Does Not Appear after You Enter the Password and Then Press the Return Key

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

When you access the Service Interface, after you enter the password, you must press the return key twice to access the first menu. You should have to press the return key only once. The menu appears with the **Invalid Selection** message although you did not make any selection.

Workaround

Press the return key twice after you enter the password and ignore the **Invalid Selection** message.

Reference Number

200322146

With Microsoft Standards-Based Storage Management Service, Dynamic Cache Is Not Updated Dynamically after Creating a Snapshot or a Clone

Severity: 3 Minor

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

If you are using the Microsoft Standards-Based Storage Management Service, this problem occurs when you create snapshots or clones outside of the Storage Management Service's environment. The Storage Management Service provider cache is not dynamically updated. Any service that depends on the cache will not recognize the relationship between the source and destination volumes until the cache is manually updated.

Workaround

Manually update the Storage Management Service cache whenever you create a snapshot or clone outside of the Storage Management Service environment.

Reference Number

200327862

Controller Reboots and Logs the Message: IOC High Priority Queue full. IOC not responsive - depth 512

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- E5400 controller-drive trays and EF540 flash arrays

Problem or Restriction

A controller panics and reboots. The following message appears in the major events log: IOC High Priority Queue full. IOC not responsive - depth 512.

Workaround

None. The controller reboots and returns to normal operations.

Reference Number

200331744

The Performance Monitor Shows a Value for Cache Hit Percentage that Is Greater than 100 Percent

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86

Problem or Restriction

This problem occurs when you use the large block input/output setting. The Performance Monitor shows a value for cache hit percentage that is greater than 100 percent.

Workaround

None.

Reference Number

200336095

The Array Management Window Does Not Automatically Update to Show Conversion from Simplex to Duplex Configuration

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs after you change the configuration of a simplex storage array to duplex. If the Array Management Window (AMW) is open while you perform the conversion, the Physical View does not automatically update to show the addition of the second controller.

Workaround

Close the AMW and then re-open it.

Reference Number

200338423

Search Text Remains Highlighted after You Navigate away from the Search Tab in the Online Help

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- SANtricity Storage Manager version 10.80 and subsequent releases

Problem or Restriction

This problem occurs when you search for a word or words in the online help. When you navigate from the results window from the search back to the main **Help** menu, text that matches the search remains highlighted on any page that contains matching text.

Workaround

Select another topic in the online help table of contents to remove highlighting of matching text. This is a visual defect that does not affect normal operations.

Reference Number

200144136

A Taskbar Tray Icon Shows Wrong Name for SANtricity Storage Manager

Severity: 3 Minor

Operating System

Linux

Hardware/Software/Firmware

- All platforms
- SANtricity Storage Manager version 10.80 and subsequent releases

Problem or Restriction

When you group multiple windows as a single taskbar instance, the text and icon on the window appears as **devmgr-dmv-MainScreen**.

Workaround

None. This problem is a visual defect that does not affect normal operations.

Reference Number

200144148

The NEEDS ATTENTION Message Does Not Appear in the Array Management Window for a Controller that is Offline

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release and 7.83 and subsequent releases
- SANtricity Storage Manager software version 10.83 and subsequent releases

Problem or Restriction

When you place a controller offline, the "NEEDS ATTENTION" message does not immediately appear in the Array Management Window (AMW)

Workaround

Close and then re-open the AMW.

Reference Number

200273132

In the SANtricity Storage Manager, the Storage Array Tab of the Storage Array Profile Window Is Blank

Severity: 3 Minor

Operating System

Windows 2012 Server

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs after you install SANtricity Storage Manager on a host with the Windows 2012 Server operating system for the first time. When you navigate to the Storage Array tab of the Storage Array Profile window, the tab is blank.

Workaround

Close and re-open the Storage Array Profile window. The expected content appears.

Reference Number

200315574

The Initial SPRI Service Interface Window Does Not Appear after You Enter the Password and Then Press the Return Key

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

When you access the Service Interface, after you enter the password, you must press the return key twice to access the first menu. You should have to press the return key only once. The menu appears with the **Invalid Selection** message although you did not make any selection.

Workaround

Press the return key twice after you enter the password and ignore the **Invalid Selection** message.

Reference Number

200322146

With Microsoft Standards-Based Storage Management Service, Dynamic Cache Is Not Updated Dynamically after Creating a Snapshot or a Clone

Severity: 3 Minor

Operating System

Windows 2012

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SMI-S provider version 10.28.*.*
- Microsoft Standards-Based Storage Management Service

Problem or Restriction

If you are using the Microsoft Standards-Based Storage Management Service, this problem occurs when you create snapshots or clones outside of the Storage Management Service's environment. The Storage Management Service provider cache is not dynamically updated. Any service that depends on the cache will not recognize the relationship between the source and destination volumes until the cache is manually updated.

Workaround

Manually update the Storage Management Service cache whenever you create a snapshot or clone outside of the Storage Management Service environment.

Reference Number

200327862

Controller Reboots and Logs the Message: IOC High Priority Queue full. IOC not responsive - depth 512

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- E5400 controller-drive trays and EF540 flash arrays

Problem or Restriction

A controller panics and reboots. The following message appears in the major events log: IOC High Priority Queue full. IOC not responsive - depth 512.

Workaround

None. The controller reboots and returns to normal operations.

Reference Number

200331744

The Performance Monitor Shows a Value for Cache Hit Percentage that Is Greater than 100 Percent

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86

Problem or Restriction

This problem occurs when you use the large block input/output setting. The Performance Monitor shows a value for cache hit percentage that is greater than 100 percent.

Workaround

None.

Reference Number

200336095

The Array Management Window Does Not Automatically Update to Show Conversion from Simplex to Duplex Configuration

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

This problem occurs after you change the configuration of a simplex storage array to duplex. If the Array Management Window (AMW) is open while you perform the conversion, the Physical View does not automatically update to show the addition of the second controller.

Workaround

Close the AMW and then re-open it.

Reference Number

200338423

Recovery Guru Shows "Security Key Mismatch"

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86
- Any controller platform with secure-enabled Full Disk Encryption drives

Problem or Restriction

This problem occurs when database adoption did not complete, and the storage array controllers reboot. The "Security Key Mismatch" message persists across system reboots.

Workaround

If this problem occurs, contact your technical support representative.

Reference Number

200343911

Target Portal Is Not Updated in the Internet Storage Name Service

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86 and earlier
- All iSCSI platforms
- Internet Storage Name Service (iSNS)

Problem or Restriction

This problem occurs when a controller or link is offline longer than the Enclosure Service Interface (ESI) threshold. The controller firmware responds only to parameter changes to perform a re-register event. When parameter changes occur on the iSCSI ports, the ports are re-registered with the iSNS server, but the storage array is not re-registering with the iSNS server after link-up or link-down events. When a link-up event follows a link-down event, the ports are not re-registered. After a link-down event, the iSNS server times out on ESI messages and drops the port registration.

Workaround

When any link failure occurs, manually disable and then re-enable the iSNS on every storage array.

Reference Number

200352008

iSNS Registration Erroneously Drops

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86 and earlier
- All iSCSI platforms
- Internet Storage Name Service (iSNS)

Problem or Restriction

This problem occurs when the Enclosure Services Interface (ESI) erroneously times out although no link-down events have occurred and the storage array is still accessible. The ESI messaging should be keeping the iSNS registration active.

Workaround

Disable and then re-enable iSNS on each storage array.

Reference Number

200352012

Autoconfig Fails while Attempting to Create a Volume

Severity: 3 Minor

Operating System

All

Hardware/Software/Firmware

- Controller firmware release 7.86 and earlier
- E2600 controller-drive tray
- Protection Information-capable (PI) drives

Problem or Restriction

This problem occurs when Autoconfig is used to automatically create volumes on a storage array with PI-capable drives, but the PI premium feature key is not enabled. The disk pool is created, but no volumes are created in the disk pool.

Workaround

Either enable the PI premium feature or create volumes manually.

Reference Number

200353673

The Java Logo Overlaps Menu Titles in Online Help

Severity: 4 Cosmetic

Operating System

All

Hardware/Software/Firmware

- All platforms
- SANtricity Storage Manager version 10.80 and subsequent releases

Problem or Restriction

This problem occurs when you select **Print** or **Page Setup** from a window in the online help. The **Print** or **Page Setup** window appears, but the Java logo overlaps the title bar.

Workaround

None. This problem is a visual defect that does not affect normal operations.

Reference Number

200144332

An Unexpected Line Is Printed to the Screen when You Install the Solaris Operating System from the Console

Severity: 4 Cosmetic

Operating System

Solaris 10 u9

Hardware/Software/Firmware

- All platforms
- SANtricity Storage Manager software version 10.84
- InstallAnywhere utility version 2009

Problem or Restriction

This problem occurs when you use the InstallAnywhere utility version 2009 to install SANtricity Storage Manager on a host with the Solaris operating system. The following message appears on the console during the installation:

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

Workaround

None. Installation proceeds normally after the message.

Reference Number

200316026

In the Create Volume Copy Wizard, You Cannot Select Options by Using the Tab Key

Severity: 4 Cosmetic

Operating System

All

Hardware/Software/Firmware

- All platforms
- Controller firmware release 7.86
- SANtricity Storage Manager version 10.86

Problem or Restriction

When you launch the **Create Volume Copy** wizard, initially, no component of the first window has the input focus. You cannot select any component of the window by using the tab key on the keyboard. If you are relying on a screen reader, as opposed to visual cues, to navigate, you will hear only the title of the initial window.

Workaround

Use the mouse and cursor to select components of the window.

Reference Number

200323057

Document Errata

This sections corrects errata from the documentation for SANtricity Storage Manager version 10.86.

Correction to Document 210-05847, "E5500 Controller-Drive Tray and Related Drive Trays Installation Guide"

Problem or Restriction

The call-outs in the figure do not match the description in the table on page 94.

The following topic shows the corrected text and graphics.

Reference Number

200359534

Things to Know – LEDs on the E5560 Controller-Drive Tray

The following topics provide details on the LEDs found on the E5560 controller-drive tray.

For details on the controller canister main faceplate or the host interface card subplates, refer to the main section.

Figure 1 LEDs on the Left Bezel

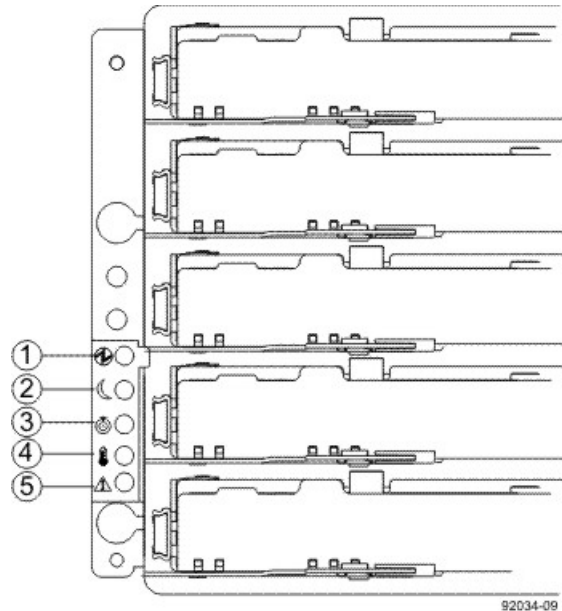


Table 1 LEDs on the Left Bezel

Location	LED	Color	On	Off
1	Power	Green	Power is present.	Power is not present.
2	Standby Power	Green	The controller-drive tray is in Standby Power mode.	The controller-drive tray is not in Standby Power mode.
3	Controller-drive tray Locate	White	Identifies a controller-drive tray that you are trying to find.	Normal status.
4	Controller-drive tray Over-Temperature	Amber	The temperature of the controller-drive tray has reached an unsafe level.	Normal status.
5	Service Action Required	Amber	A component within the controller-drive tray needs attention.	Normal status.

Correction to Document 53020-00, "Replacing a Drive in the E2660 Controller-Drive Tray"

Problem or Restriction

The call-outs in the figure do not match the description in the table on page 2.

The following topic shows the corrected text and graphics.

Reference Number

200359124

Things to Know – LEDs on the E2660 Controller-Drive Tray

The following topics provide details on the LEDs found on the E2660 controller-drive tray.

For details on the controller canister main faceplate or the host interface card subplates, refer to the main section.

Figure 2 LEDs on the Left Bezel

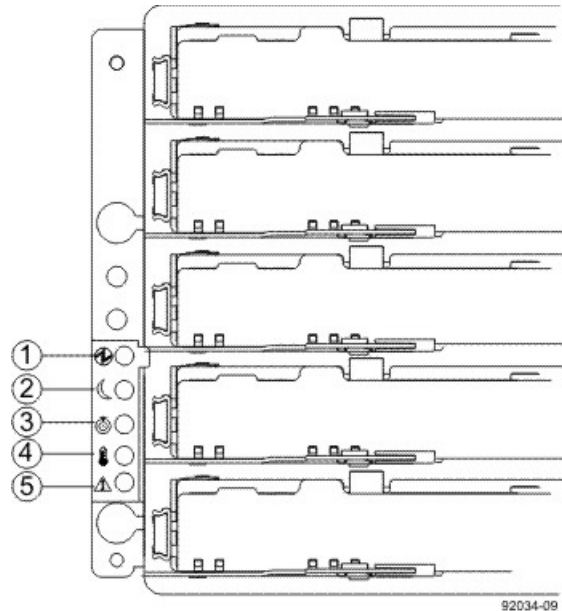


Table 2 LEDs on the Left Bezel

Location	LED	Color	On	Off
1	Power	Green	Power is present.	Power is not present.
2	Standby Power	Green	The controller-drive tray is in Standby Power mode.	The controller-drive tray is not in Standby Power mode.
3	Controller-drive tray Locate	White	Identifies a controller-drive tray that you are trying to find.	Normal status.
4	Controller-drive tray Over-Temperature	Amber	The temperature of the controller-drive tray has reached an unsafe level.	Normal status.
5	Service Action Required	Amber	A component within the controller-drive tray needs attention.	Normal status.

Correction to Document 53051-00 Rev. A, "Replacing a Drive in the E5460 Controller-Drive Tray"

Problem or Restriction

The call-outs in the figure do not match the description in the table on pages 1 and 2.

The following topic shows the corrected text and graphics.

Reference Number

200359124

Things to Know – LEDs on the E5460 Controller-Drive Tray

The following topics provide details on the LEDs found on the E5460 controller-drive tray.

For details on the controller canister main faceplate or the host interface card subplates, refer to the main section.

Figure 3 LEDs on the Left Bezel

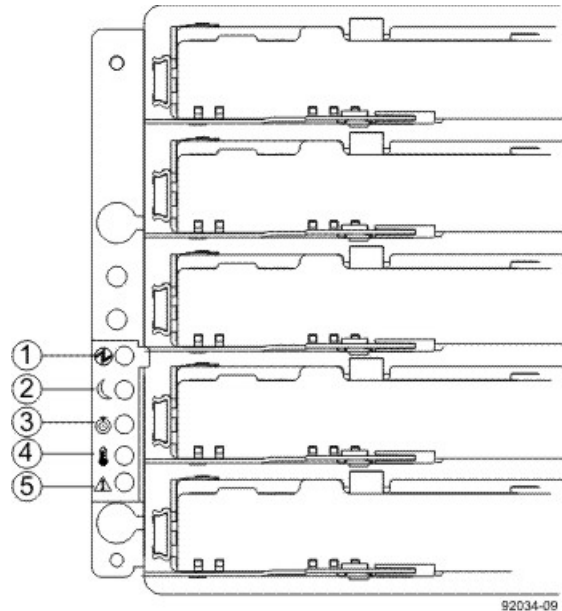


Table 3 LEDs on the Left Bezel

Location	LED	Color	On	Off
1	Power	Green	Power is present.	Power is not present.
2	Standby Power	Green	The controller-drive tray is in Standby Power mode.	The controller-drive tray is not in Standby Power mode.
3	Controller-Drive Tray Locate	White	Identifies a controller-drive tray that you are trying to find.	Normal status.
4	Controller-Drive Tray Over-Temperature	Amber	The temperature of the controller-drive tray has reached an unsafe level.	Normal status.
5	Service Action Required	Amber	A component within the controller-drive tray needs attention.	Normal status.

Correction to Document 210-05820, "Replacing a Drive in the E5560 Controller-Drive Tray"

Problem or Restriction

The call-outs in the figure do not match the description in the table on pages 1 and 2.

The following topic shows the corrected text and graphics.

Reference Number

200359124

Things to Know – LEDs on the E5560 Controller-Drive Tray

The following topics provide details on the LEDs found on the E5560 controller-drive tray.

For details on the controller canister main faceplate or the host interface card subplates, refer to the main section.

Figure 4 LEDs on the Left Bezel

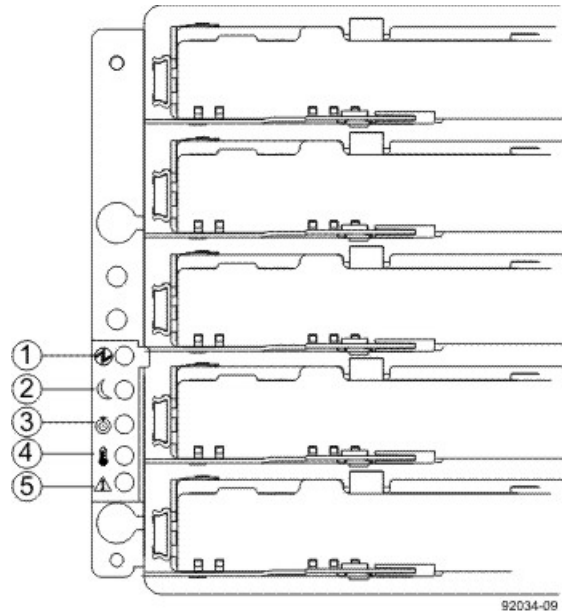


Table 4 LEDs on the Left Bezel

Location	LED	Color	On	Off
1	Power	Green	Power is present.	Power is not present.
2	Standby Power	Green	The controller-drive tray is in Standby Power mode.	The controller-drive tray is not in Standby Power mode.
3	Controller-Drive Tray Locate	White	Identifies a controller-drive tray that you are trying to find.	Normal status.
4	Controller-Drive Tray Over-Temperature	Amber	The temperature of the controller-drive tray has reached an unsafe level.	Normal status.
5	Service Action Required	Amber	A component within the controller-drive tray needs attention.	Normal status.

Correction to Document 210-05847, "E5500 Controller-Drive Tray and Related Drive Trays Installation Guide"

Problem or Restriction

The call-outs in the figure do not match the description in the table on page 106.

The following topic shows the corrected text and graphics.

Reference Number

200359534

Things to Know – LEDs on the DE6600 Drive Tray

Figure 5 LEDs on the Left Bezel

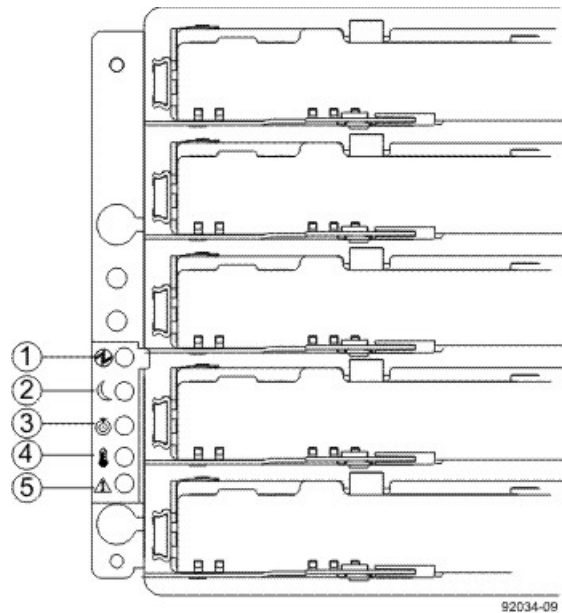


Table 5 LEDs on the Left Bezel

Location	LED	Color	On	Off
1	Drive Tray Power	Green	Power is present.	Power is not present.
2	Drive Tray Standby Power	Green	The drive tray is in Standby Power mode.	The drive tray is not in Standby Power mode.
3	Drive Tray Locate	White	Identifies a drive tray that you are trying to find.	Normal status.
4	Drive Tray Over-Temperature	Amber	The temperature of the drive tray has reached an unsafe level.	Normal status.
5	Drive Tray Service Action Required	Amber	A component within the drive tray needs attention.	Normal status.

Correction to Document 53003-00 Rev. A, "Replacing a Drive in the DE6600 Drive Tray"

Problem or Restriction

The call-outs in the figure do not match the description in the table on pages 1 and 2.

The following topic shows the corrected text and graphics.

Reference Number

200359124

Things to Know – LEDs on the DE6600 Drive Tray

Figure 6 LEDs on the Left Bezel

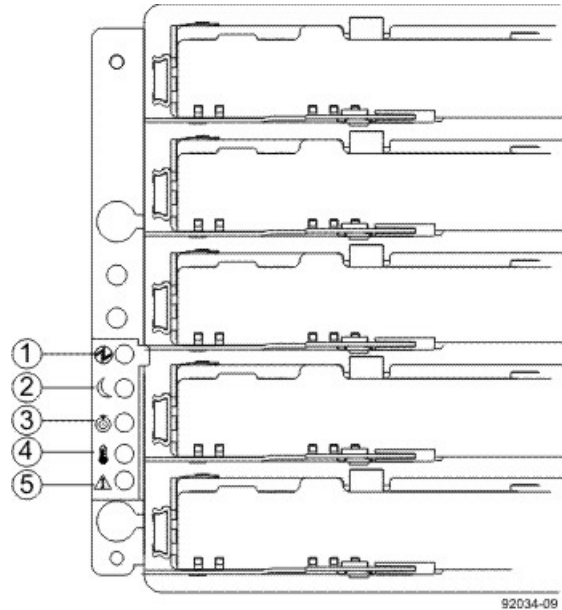


Table 6 LEDs on the Left Bezel

Location	LED	Color	On	Off
1	Drive Tray Power	Green	Power is present.	Power is not present.
2	Drive Tray Standby Power	Green	The drive tray is in Standby Power mode.	The drive tray is not in Standby Power mode.
3	Drive Tray Locate	White	Identifies a drive tray that you are trying to find.	Normal status.
4	Drive Tray Over-Temperature	Amber	The temperature of the drive tray has reached an unsafe level.	Normal status.
5	Drive Tray Service Action Required	Amber	A component within the drive tray needs attention.	Normal status.

Correction to Document 210-05833, "NetApp Software Command Line Interface and Script Commands for Version 10.86"

Problem or Restriction

The values for the `cacheFlushModifier` parameter in the table on page 317 are incorrect.

The following table shows the corrections.

Value	Description
Immediate	Data is flushed as soon as it is placed into the cache.
.25	Data is flushed after 250 ms.
.5	Data is flushed after 500 ms.
.75	Data is flushed after 750 ms.
1	Data is flushed after 1 s.
1.5	Data is flushed after 1500 ms.
2	Data is flushed after 2 s.
5	Data is flushed after 5 s.
10	Data is flushed after 10 s.
20	Data is flushed after 20 s.
60	Data is flushed after 60 s (1 min.).
120	Data is flushed after 120 s (2 min.).
300	Data is flushed after 300 s (5 min.).
1200	Data is flushed after 1200 s (20 min.).
3600	Data is flushed after 3600 s (1 hr.).
Infinite	Data in cache is not subject to any age or time constraints. The data is flushed based on other criteria that are managed by the controller.

Reference Number

None.

Correction to Document 210-05836, "NetApp Software Configuring and Maintaining a Storage Array Using the Command Line Interface for Version 10.86"

Problem or Restriction

The values for the `cacheFlushModifier` parameter in the table on page 76 are incorrect.

The following table shows the corrections.

Value	Description
Immediate	Data is flushed as soon as it is placed into the cache.
.25	Data is flushed after 250 ms.
.5	Data is flushed after 500 ms.
.75	Data is flushed after 750 ms.
1	Data is flushed after 1 s.
1.5	Data is flushed after 1500 ms.
2	Data is flushed after 2 s.
5	Data is flushed after 5 s.
10	Data is flushed after 10 s.
20	Data is flushed after 20 s.
60	Data is flushed after 60 s (1 min.).
120	Data is flushed after 120 s (2 min.).
300	Data is flushed after 300 s (5 min.).
1200	Data is flushed after 1200 s (20 min.).
3600	Data is flushed after 3600 s (1 hr.).
Infinite	Data in cache is not subject to any age or time constraints. The data is flushed based on other criteria that are managed by the controller.

Reference Number

None.

Correction to Document 210-05837, "Concepts Guide"

Problem or Restriction

The RAID Level Configuration table is missing on page 8.

The following topic shows the missing table.

Reference Number

None.

RAID Level Configuration Table

These are the RAID level descriptions.

RAID Level	Short Description	Detailed Description
RAID Level 0	No protection against loss of a drive (non-redundant), striping mode	■ A minimum of one drive is required for RAID Level 0. ■ RAID Level 0 can use the maximum number of drives in a storage array. ■ You can use RAID Level 0 for high-performance needs, but it does not provide <i>data redundancy</i>. ■ Data is striped across all of the drives in the volume group. ■ Do not use this RAID level for high data-availability needs. RAID Level 0 is better for non-critical data. ■ A single drive failure in a volume group causes all of the volumes associated with the volume group to fail, and data loss occurs.

RAID Level	Short Description	Detailed Description
RAID Level 1 or RAID Level 10	Striping and mirroring mode	■ A minimum of two drives are required for RAID Level 1: one for the user data and one for the mirrored data. If you select four or more drives, RAID Level 10 is automatically configured across the volume group: two drives for the user data, and two drives for the mirrored data. ■ RAID Level 1 and RAID Level 10 can use the maximum number of drives in a storage array. ■ RAID Level 1 and RAID Level 10 typically provide the best write performance, but not in all cases. On a RAID Level 1 volume, data is written to a duplicate drive. On a RAID Level 10 volume, data is striped across mirrored pairs. ■ If one of the drives in a drive-pair fails, the system can instantly switch to the other drive without any loss of data or service. ■ RAID Level 1 and RAID Level 10 use drive mirroring to make an exact copy from one drive to another. ■ A single drive failure causes associated volumes to become degraded, but the mirror drive allows access to the data. ■ Two or more drive failures in a volume group causes the volumes associated with the volume group to fail, and data loss occurs.

RAID Level	Short Description	Detailed Description
RAID Level 3	High-bandwidth mode	■ A minimum of three drives is required for RAID Level 3. ■ RAID Level 3 is limited to a maximum of 30 drives in a volume group. ■ RAID Level 3 stripes user data across the drives. The redundancy data is stored on a drive dedicated to parity. ■ RAID Level 3 uses the equivalent of the capacity of one drive (in a volume group) for redundancy data. ■ RAID Level 3 is used for applications with large data transfers, such as multimedia or medical imaging that write and read large sequential chunks of data. ■ A single drive failure in a volume group causes the associated volumes to become degraded, but the redundancy data allows access to the data. ■ Two or more drive failures in a volume group causes the volumes associated with the volume group to fail, and data loss occurs.
RAID Level 5	High I/O mode	■ A minimum of three drives is required for RAID Level 5. ■ RAID Level 5 is limited to a maximum of 30 drives in a volume group. ■ RAID Level 5 stripes both user data and redundancy data (parity) across the drives. ■ RAID Level 5 uses the equivalent of the capacity of one drive (in a volume group) for redundancy data. ■ A single drive failure in a volume group causes associated volumes to become degraded, but the redundancy data allows access to the data. ■ Two or more drive failures in a volume group causes the volumes associated with the volume group to fail, and data loss occurs.
RAID Level 6	High I/O mode with simultaneous drive failure protection	■ A minimum of five drives is required for RAID Level 6. ■ RAID Level 6 is limited to a maximum of 30 drives in a volume group. ■ RAID Level 6 stripes both user data and redundancy data (parity) across the drives. ■ RAID Level 6 uses the equivalent of the capacity of two drives (in a volume group) for redundancy data.

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