ReleaseOrder ID: DCSG00409601
Headline: *Unified StorCLI Phase 17 : StorCLI release order version 007.1613.0000.0000*
Release Version: *007.1613.0000.0000*
UCM Project: *SAS35_StorCLI*
Sub UCM Project: *SAS35_StorCLI_7.16_Ph17*
UCM Stream: *SAS35_StorCLI_7.16_Rel*
Release Type: *GCA*
State: *Released*
Release Baseline: *SAS35_StorCLI_7.16_Rel_2020-10-29@\SAS35*
Release Date: *2020-10-29 16:50:08.000000*
Date Generated: *Nov 18, 2020*

Release History

- **DCSG00394105 - Unified StorCLI Phase 17 : StorCLI release order version 007.1610.0000.0000**

- **DCSG00326338 - Unified StorCLI Phase 17 : StorCLI release order version 007.1604.0000.0000**

- **DCSG00315172 - Unified StorCLI Phase 17 : StorCLI release order version 007.1603.0000.0000**

- **DCSG00283172 - Unified StorCLI Phase 17 : StorCLI release order version 007.1601.0000.0000**

ReleaseOrder ID: DCSG00394105 Open In CQWeb
Headline: *Unified StorCLI Phase 17 : StorCLI release order version 007.1610.0000.0000*
Release Version: *007.1610.0000.0000*
UCM Project: *SAS35_StorCLI*
Sub UCM Project: *SAS35_StorCLI_7.16_Ph17*
UCM Stream: *SAS35_StorCLI_7.16_Rel*
Release Type: *ReleaseCandidate*
State: *Released*
Release Baseline: *SAS35_StorCLI_7.16_Rel_2020-10-16_1610@\SAS35*
Release Date: *2020-10-16 15:20:36.000000*
Date Generated: *Nov 18, 2020*

Defects Fixed (4):

ID: DCSG00299788
Headline: Storcli "show file" command does not report correct FW version
Description Of Change: For Sea IT, StorCLI will now iterate to the FW header flash offset and display the FW version.
Issue Description: This issue is seen only for Sea IT images. StorCLI is not iterating to the FW header image offset to display the FW version. This is resulting in displaying the CBB version because the CBB is the first header in the FW image.
Steps To Reproduce:
Attached image has Bootloader version 16.250.03.00 and FW version 16.250.01.00.

storcli shows FW version as 16.250.03.00.
It is supposed to show FW's version as 16.250.01.00.

ID: DCSG00342456
Headline: Logical ID of Cobra expander not displayed properly in Storcli and LSA
Description Of Change: Swapping the enclosure logical ID which fixed displaying the proper data as displayed in other applications
Issue Description: Logical ID of Cobra expander not displayed properly in Storcli and LSA
Steps To Reproduce: Logical ID of Cobra expander not displayed properly in Storcli and LSA

storcli /c0/eall/sall show all

ID: DCSG00359247
Headline: DiskGroup show all list Hostpare in Unconfigured drive list
Description Of Change: When a drive state is Dedicated or global hotspare, then not listing it under unconfigured drive list
Issue Description: DiskGroup show all list Hostpare in Unconfigured drive list
Steps To Reproduce: DiskGroup show all list Hostpare in Unconfigured drive list

storcli /cx/dall show all

ID: DCSG00368376
Headline: coverity: fixing non-array delete and dereferencing before NULL checks
Description Of Change: Updated the code with initializing the variable, adding NULL pointer checks and removed the resource leaks
Issue Description: coverity: fixing non-array delete and dereferencing before NULL checks
Steps To Reproduce: Run coverity analysis tool and look for resource leaks and add checks for NULL pointer access

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ReleaseOrder ID: DCSG00326338 Open In CQWeb
Headline: *Unified StorCLI Phase 17 : StorCLI release order version 007.1604.0000.0000*
Release Version: *007.1604.0000.0000*
UCM Project: *SAS35_StorCLI*
Sub UCM Project: *SAS35_StorCLI_7.16_Ph17*
UCM Stream: *SAS35_StorCLI_7.16_Rel*
Release Type: *Beta*
State: *Released*
Release Baseline: *SAS35_StorCLI_7.16_Rel_2020-08-21@\SAS35*
Release Date: *2020-08-21 10:41:38.000000*
Date Generated: *Nov 18, 2020*

Defects Fixed (4):

ID: DCSG00315152
Headline: PH17 PA - StorCLI ARM - show file command displays incorrect output for BIOS image
Description Of Change: Changed the logic to return "invalid image" if the image provided is a IT BIOS image.
Issue Description: StorCLI ARM - show file command displays incorrect output for BIOS image
Steps To Reproduce: Run the show file command for Ventura and Aero IT BIOS images.

```
1) ./storcli64 show file= Ventura/mpt35sas_ARM.rom
2) ./storcli64 show file= Ventura/mpt35sas_legacy.rom
3) ./storcli64 show file= Ventura/mpt35sas_x64.rom
4) ./storcli64 show file= 3516_1792K.rom
5) ./storcli64 show file= AERO_N_1792K.rom
6) ./storcli64 show file= IT_HBA_X64_BIOS_PKG_E6.rom
7) ./storcli64 show file= IT_HBA_ARM_UEFI_PKG_E6.rom
```

ID: DCSG00320649

Headline: MR 7.16: Storcli: learnStartTime displayed incorrectly in command details

Description Of Change: Corrected spelling and made alignment in help file for 'bbu set' and 'start sanitize' command.

Issue Description: MR 7.16: Storcli: learnStartTime displayed incorrectly in command details

Steps To Reproduce: storcli64 /cx/bbu set ?
storcli64 /cx/ex/sx start sanitize ?

ID: DCSG00320844

Headline: StorCLI listing failed NVMe drives in non-sorted order

Description Of Change: Sorting the Nvme init error list before processing any command.

Issue Description: StorCLI listing failed NVMe drives in non-sorted order

Steps To Reproduce: storcli64 /cx show failednvmedevices

ID: DCSG00323721 (Port Of Defect DCSG00323054)

Headline: PERC10.6 - CLI crashes when issuing the phyerrorcounters command on a 14G Expander backplane

Description Of Change: We are now passing down the SMP Response general API to read the number of phys for an expander if its a edge expander during visit expander call.

Issue Description: While retrieving the number of phys for 14G Expander, during the visit expander call for an edge expander, We are seeing that the SMP Response general API is not being referenced which is resulting in segfault.

Steps To Reproduce: PERC10.6 - CLI crashes when issuing the phyerrorcounters command on a 14G Expander backplane

command:
perccli64.exe /c0 /e64 show phyerrorcounters

This command works fine when using the same CLI on a PERC11 with 15G Expander backplane
This command works fine when using the previous 10.5 (7.13 based) PERCCLI on the same 14G Expander backplane

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Enhancements Implemented (3):

ID: DCSG00214472

Headline: MR7.16 : Support WJ Pinning for both WB and WT Parity RAID VDs

Description Of Change: As part of this implementation, StorCLI will display information whether WJ pinned cache is supported or not as per MR_CTRL_INFO.adapterOperations6.supportWJPinning bit.

ID: DCSG00313996

Headline: Make updating the embedded key(step 1) of securesign optional.

Description Of Change: Added CLI argument '-noembed' which turns off the logic to embed the public key hash of the latest or customer key in the FW bin.

ID: DCSG00299060

Headline: PERC11.1 - Dual x8 Support for 16 port Controllers

Description Of Change: Algorithm to report phyerrorcounters for zoned expander

Stage 1 Creation of expander map table
In this stage, Expander map table is created in which information about number of expanders phys, Expander SASAddress and other details are added.

Stage 2 Getting phyerrorcounters based on the expander map information table.
In this stage, Report Phy error log SMP request is issued using the information from the expander map information table to get the Phyerrorcounters.

MR API Support
MR API would add a new support bit(MR_CTRL_INFO.adapterOperations6. supportMfiSmpPortNum) indicating whether the FW supports SASPortNumber as a new input for MFI_FRAME_SMP which can be passed down to FW along with SAS Address.
Two new properties namely MFI_FRAME_SMP.isPortValid and MFI_FRAME_SMP.portNum would be added to MFI_FRAME_SMP to take SASPortNumber as an input from applications.

API
MR_CTRL_INFO.adapterOperations6. supportMfiSmpPortNum Indicates whether FW supports SASPortNumber as part of SMP Passthru request.
MFI_FRAME_SMP.isPortValid SMP Frame field indicating whether port field provided is valid or not.
MFI_FRAME_SMP.portNum - SMP Frame field indicating the port number to be used by FW.

SL API Support
StorCLI uses StoreLIB-MR interface to communicate with controllers/expanders connected to the controller only in VMware environment for MegaRAID controllers.
SL API would introduce a new extended SMP Frame such that applications can send down a new request which includes SASPortNumber to FW.
Applications would send down SL_SMP_PASSTHRU_EXT structure irrespective of controller FW support - MR_CTRL_INFO.adapterOperations6. supportMfiSmpPortNum
Below cases would be covered as part of this
oCase 1 : Controller FW support bit is not set. Applications will issue SL_SMP_PASSTHRU_EXT API by setting sasPortNumber = 0xFF,which would be the same as non-EXT version of SMP Passthru command.
oCase 2 : Controller FW support bit is set. Applications will issue SL_SMP_PASSTHRU_EXT API by setting sasPortNumber=<valid value>.
SL API - SL_SMP_PASSTHRU_EXT

ReleaseOrder ID: *DCSG00315172* <u>Open In CQWeb</u>

Headline: *Unified StorCLI Phase 17 : StorCLI release order version 007.1603.0000.0000*

Release Version: *007.1603.0000.0000*

UCM Project: *SAS35_StorCLI*

Sub UCM Project: *SAS35_StorCLI_7.16_Ph17*

UCM Stream: *SAS35_StorCLI_7.16_Rel*

Release Type: *Pre-Alpha*

State: *Released*

Release Baseline: *SAS35_StorCLI_7.16_Rel_2020-08-07_v7_1603_PH17@\SAS35*

Release Date: *2020-08-07 13:39:24.000000*

Date Generated: *Nov 18, 2020*

Defects Fixed (10):

ID: DCSG00286693

Headline: Enclosure position is showing as - for drive detailed properties on an IT controller

Description Of Change: Updated the enclosure list to not skip the secondary enclosures. so that the drive's enclosure data can be fetched and its respective position is displayed properly.

Issue Description: Enclosure position is showing as - for drive detailed properties on an IT controller

Steps To Reproduce: Enclosure position is showing as - for drive detailed properties on an IT controller

storcli /c0/e7/s1 show all

Drive /c0/e7/s1 Policies/Settings :
=================================
Enclosure position = -
Connected Port Number = 1(path0) 0(path1)
Sequence Number = 0

ID: DCSG00301878

Headline: Handling PBLP component whild displaying Image component versions

Description Of Change: Updated storcli to display the PSOC version, even when the image component name comes from FW aas PBLP

Issue Description: Handling PBLP component whild displaying Image component versions

Steps To Reproduce: Handling PBLP component whild displaying Image component versions

storcli /c0 show all

ID: DCSG00303606

Headline: MR7.16_storcli: VD creation with the remaining drives fails

Description Of Change: Retrieving remaining space size from disk Group and aligning properly with PD blocksize.

Issue Description: VD creation with the remaining drives fails

Steps To Reproduce: ./storcli64 /c0 add vd r0 size=10gb,20gb, remaining drives=251:7

ID: DCSG00307042

Headline: API clarification for large io support

Description Of Change: The description of Large IO feature bits was corrected.

Issue Description: In the comments, the description of the support bits for the Large IO feature is misleading.

Steps To Reproduce: This issue was found by inspection.

ID: DCSG00302030 (Port Of Defect DCSG00299788)

Headline: Storcli "show file" command does not report correct FW version

Description Of Change: For Sea IT, StorCLI will now iterate to the FW header flash offset and display the FW version.

Issue Description: This issue is seen only for Sea IT images. StorCLI is not iterating to the FW header image offset to display the FW version. This is resulting in displaying the CBB version because the CBB is the first header in the FW image.

Steps To Reproduce:

Attached image has Bootloader version 16.250.03.00 and FW version 16.250.01.00.

storcli shows FW version as 16.250.03.00.
It is supposed to show FW's version as 16.250.01.00.

ID: DCSG00306711 (Port Of Defect DCSG00286349)

Headline: Max commands for averaging needs to be removed from DPMstat RA output

Description Of Change: Max commands for averaging was removed from DPMstat RA output

Issue Description: Max commands for averaging needs to be removed from DPMstat RA output

Steps To Reproduce: Max commands for averaging needs to be removed from DPMstat RA output

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ID: DCSG00307355 (Port Of Defect DCSG00307346)

Headline: Coverity fixing bad allocator and resource leaks

Description Of Change: Updated the code adding NULL pointer checks and removed the resource leaks and used proper deallocator functions

Issue Description: Coverity fixing bad allocator and resource leaks

Steps To Reproduce: Run coverity analysis tool and look for resource leaks and add checks for NULL pointer access

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ID: DCSG00309219 (Port Of Defect DCSG00299981)

Headline: Fixing Coverity defects of MR 7.15

Description Of Change: Fixing Coverity defects of MR 7.15

Issue Description: Fixing Coverity defects of MR 7.15

Steps To Reproduce: Not Applicable

ID: DCSG00311222 (Port Of Defect DCSG00286677)

Headline: MR 7.15 StorCLI : Addressing Coverity defects

Description Of Change: Initialized variable, freed memory and added check for valid bit shift.

Issue Description: Addressing Coverity defects

Steps To Reproduce: Run coverity

ID: DCSG00313432 (Port Of Defect DCSG00309398)

Headline: Atlas 4.2: StorCLI lists wrong error message "Failed in standard Inquiry", when user tries to upgrade/downgrade all connected NVMe Drives FW at a time

Description Of Change: When the standard inquiry command fails after Drive FW update, the "overallStat" was not set to non zero. Hence the returned value was reported as success.
Now setting "overallStat" to non zero to reflect the error condition.

Issue Description: Atlas 4.2: StorCLI lists wrong error message "Failed in standard Inquiry", when user tries to upgrade/downgrade all connected NVMe Drives FW at a time

Steps To Reproduce: Issue Drive FW update command as follows,
1) ./storcli64 /cx/ex/sx download src= <drive FW file> mode=E offline activatenow
2) ./storcli64 /cx/ex/sall download src= <drive FW file> mode=E offline activatenow

Enhancements Implemented (9):

ID: DCSG00055878

Headline: Additional FDE type for Ruby SED support

Description Of Change: Add FDE type for Ruby SED support

ID: DCSG00256271

Headline: To add return status MFI_STAT_OK_REBOOT_REQUIRED to MR_DCMD_LD_SET_PROPERTIES in mr.h

Description Of Change: The following return status has been added to the status list for the dcmd:

status: MFI_STAT_OK_REBOOT_REQUIRED
dcmd: MR_DCMD_LD_SET_PROPERTIES

ID: DCSG00257777

Headline: MFI SMP Port Num API changes

Description Of Change: Made API changes needed to support Port number for MFI SMP Commands.

ID: DCSG00264744

Headline: MR7.16 StorCLI: Ruby SED Support

Description Of Change: The following was added,

1) FDE Type = TCG Ruby.
2) Updated enclosure-drive-detailed-schema.json to added FDE Type enum.

ID: DCSG00282676

Headline: MegaAPI: Add API Controller Properties and MFCD for ParityReadCacheBypass (PR: DCSG00237022)

Description Of Change: Add API Controller Properties and MFCD for ParityReadCacheBypass (PR: DCSG00237022)

ID: DCSG00292323

Headline: MR API: reclassify MR_EVT_CTRL_FW_VALID_SNAPDUMP_AVAILABLE as informational

Description Of Change: In MR FW, the following event has been classified as critical; to downgrade it to informational.

MR_EVT_CTRL_FW_VALID_SNAPDUMP_AVAILABLE

ID: DCSG00293141

Headline: MPI 2.6: Header file changes associated with revision 2.6.11

Description Of Change: Made all header changes associated with new proposals and editing updates for the 2.6.11 revision of MPI.

ID: DCSG00301782

Headline: Add support for reporting SPDM Measurement Specification and Hash Algorithm

Description Of Change: Added new properties to display the no of measurement algorithms and measurement specification of each algorithm for controller show all command.

ID: DCSG00306898
Headline: Update SIGNIMAGEX to v2.12.00
Description Of Change: Update SIGNIMAGEX to v2.12.00

ReleaseOrder ID: **DCSG00283172**
Headline: **Unified StorCLI Phase 17 : StorCLI release order version 007.1601.0000.0000**
Release Version: **007.1601.0000.0000**
UCM Project: **SAS35_StorCLI**
Sub UCM Project: **SAS35_StorCLI_7.16_Ph17**
UCM Stream: **SAS35_StorCLI_7.16_Rel**
Release Type: **Pre-Alpha**
State: **Released**
Release Baseline: **SAS35_StorCLI_7.16_Rel_2020-07-14_v7_1601_PH17@\SAS35**
Release Date: **2020-07-13 13:40:09.000000**
Date Generated: **Nov 18, 2020**

Defects Fixed (4):

ID: DCSG00266881 (Port Of Defect DCSG00244631)
Headline: Drives connected to IT controller reports Shield Counter
Description Of Change: Drive show all lists property "Shield counter " with value 0. But this property is not applicable for IT controllers.

Fix: The drive information which are not filled by storelib were displayed as "N/A"
Issue Description: Drives connected to IT controller reports Shield Counter
Steps To Reproduce: Drives connected to IT controller reports Shield Counter

storcli /c0/e13/s1 show all

ID: DCSG00266888 (Port Of Defect DCSG00264571)
Headline: On storcli /c0/v1,2,3,4 del if anyone of the vd in the series is not present then all the vd's are not deleted
Description Of Change: root cause: If one of the VD is not present or has OS, it should continue with the next VD given by user, but stopped here

Fix: If deletion of one of the VD fails. Updated the code to add the failure message the detailed status table and continue with the user give volume
Issue Description: On storcli /c0/v1,2,3,4 del if anyone of the vd in the series is not present then all the vd's are not deleted
Steps To Reproduce:
./storcli64 /c0/v237-239 del
CLI Version = 007.1504.0000.0000 June 22, 2020
Operating system = VMkernel 7.0.0
Controller = 0
Status = Failure
Description = None

ID: DCSG00277861 (Port Of Defect DCSG00269017)
Headline: Coverity defects - remove resource leaks, invalid types in function arguments
Description Of Change: Updated the code with initializing the variable, adding NULL pointer checks and removed the resource leaks
Issue Description: Coverity defects - remove resource leaks, invalid types in function arguments
Steps To Reproduce: Run coverity analysis tool and look for resource leaks and add checks for NULL pointer access

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ID: DCSG00282590 (Port Of Defect DCSG00278049)
Headline: MR7.15_storcli: With the latest storcli, VD creation with the remaining drives fails
Description Of Change: Added logic to handle 'remaining' VD size.
Issue Description: VD creation fails when VD size provided as 'remaining'
Steps To Reproduce: storcli64 /c0 add vd r0 size=1gb,2gb, remaining drives=250:0

Enhancements Implemented (5):

ID: DCSG00255109
Headline: MR7.16: StorCLI does not show the SAS Address of the enclosure
Description Of Change: Currently, StorCLI doesnt display Enclosure SAS address as part of enclosure show all command.
With this implementation StorCLI will display SAS address for enclosure connected to MR/IT Aero/Ventura controller.
One new field EnclLogicalID and a new table EnclSasAddress will be displayed for enclosure show all command

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ID: DCSG00282976
Headline: Updating storcli BST scripts to support new VBAS Auto BST procedure
Description Of Change: The VBAS Auto BST process has changed. Earlier a BSTBuild would start the build jobs,
build the binaries, then it would copy all the rel files to the test host. Later our scripts used to test all the storcli variants at a time.

With the new procedure BSTBuild will not build the binaries and it will copy only the checked in rel file to test host. Later our scripts have to identify the copied storcli variant and test the same.
Updating Auto BST scripts to support new VBAS procedure

ID: DCSG00255367
Headline: PERCcli turn off logging by default
Description Of Change: Updated the perccli changes disabling the default logging when perccli is run.
When user places the perccliconf.ini in current execution directory, logging will happen as per the data specified in configuration file.

ID: DCSG00249963
Headline: SMART Polling Improvement - PERC 10
Description Of Change: Updated controller show all with the nwe support bit and current smartpoll interval for directattached
Added 2 new commands to storclif for changing the Smartpoll Interval for Direct attached
   storcli /cx show smartPollDAInterval
   storcli /cx set smartPollDAInterval=val

ID: DCSG00239672
Headline: CLI: Package Stamping Verification During Firmware Update
Description Of Change: On IT controller, when there is a Package version mismatch, storcli displays Package Stamp Mismatch for controller show and show all commands output.

Impacted Commands: PERCCLI /cx show
                  PERCCLI /cx show all