SGI® InfiniteStorage 6120 RAID Command Line User Interface (CLUI) Command Reference

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SGI InfiniteStorage 6120 RAID CLUI Command Reference

Scope

This Command Reference contains the *Command Line User Interface* (CLUI) commands for the *administrator* level access. Commands are listed alphabetically. Description and usage examples are given for each command. The examples given resulted from commands run on an SGI InfiniteStorage 6120.

List of Commands

Definition of Common Terms

This list is maintained to validate the uniqueness of keywords.

Channel – is the data path between storage disk and controller.

Channel-ID – is the object-id of an EnabledClientChannel; there are two channels 0 and 1.

Controller – provides connection of high performance, scalability, and flexibility to the storage enclosures.

Object ID – is a system generated identifier used to “name” an object within the scope of the system.

Processor – is part of the controller that aids data flow to memory.

Sub-System – consists of one or more RAID Processors.

Shortcuts

PHYSICAL_DISKS	PD
VIRTUAL_DISKS	VD
=	Optional, a space is acceptable

NOTE: Input is assumed to be DECIMAL, HEX can be used if preceded by ‘0x’.

RAID CHANNEL

All RAID CHANNEL object commands have a RAID subject and include a CHANNEL=<object-id> object specification.

COMMANDS Description
RAID SHOW CHANNEL =<object-id> [PHYSICAL_DISKS] Displays the physical disks associated with a specified RAID CHANNEL.
RAID SHOW CHANNEL =<object-id> [ALL_ATTRIBUTES] Displays all attributes for the specified RAID CHANNEL.

ATTRIBUTES

None

Usage Guidelines

A wild-card <object-id> (*) may be used in the SHOW command.

Examples

- To display RAID channels using a wild-card <object-id>:

```
RAID$ SHOW CHANNEL *
OID: 0X48000000 INDEX: 0X0000
OID: 0X48000001 INDEX: 0X0001
```

- To show all physical disks associated with the specified RAID channel:

```
RAID$ SHOW CHANNEL 0 PHYSICAL_DISKS
OID: 0X20290029 INDEX: 0X0029
OID: 0X202A002A INDEX: 0X002A
OID: 0X202B002B INDEX: 0X002B
OID: 0X202C002C INDEX: 0X002C
OID: 0X202D002D INDEX: 0X002D
OID: 0X202E002E INDEX: 0X002E
OID: 0X202F002F INDEX: 0X002F
OID: 0X20300030 INDEX: 0X0030
OID: 0X20310031 INDEX: 0X0031
OID: 0X20320032 INDEX: 0X0032
RAID$ SHOW CHANNEL 1 PHYSICAL_DISKS
OID: 0X20290029 INDEX: 0X0029
OID: 0X202A002A INDEX: 0X002A
OID: 0X202B002B INDEX: 0X002B
OID: 0X202C002C INDEX: 0X002C
OID: 0X202D002D INDEX: 0X002D
OID: 0X202E002E INDEX: 0X002E
OID: 0X202F002F INDEX: 0X002F
OID: 0X20300030 INDEX: 0X0030
OID: 0X20310031 INDEX: 0X0031
OID: 0X20320032 INDEX: 0X0032
```

- To display RAID channels using a wild-card <object-id> with ALL parameter:

```
RAID$ SHOW CHANNEL * ALL
OID:                    0X48000000
STATE:                  0X0
FIRMWARE VERSION:       0X0
HARDWARE VERSION:       0X0
HARDWARE MODEL:         0X0
PARENT RP:              0X40000000

OID:                    0X48000001
STATE:                  0X0
FIRMWARE VERSION:       0X0
HARDWARE VERSION:       0X0
HARDWARE MODEL:         0X0
PARENT RP:              0X40000001
```

RAID CONTROLLER

The RAID CONTROLLER object has a RAID subject and includes a CONTROLLER=<object-id> object specification.

COMMANDS Description
RAID SET CONTROLLER=<object-id> <attribute-name>=<value> [<attribute-name>=<value>…] Sets the specified controller name to the associated attributes listed. This command is restricted to manufacturing and field service.
RAID SHOW CONTROLLER=<object-id> [ALL_ATTRIBUTES] Displays all attributes of the specified controller.
RAID SHOW CONTROLLER=<object-id> LOG [ASCEND_ORDER|DESCEND_ORDER] [NEWER|OLDER] [START_SEQUENCE][NUMBER] Displays the event log on the RAID CONTROLLER. NUMBER events are displayed starting at the START_SEQUENCE number. NEWER and OLDER control whether events are displayed that are newer or older than the START_SEQUENCE number and ASCEND_ORDER and DESCEND_ORDER control whether those are displayed in ascending or descending sequence number order. By default, the last 100 events are displayed in ascending order.
RAID UPDATE_FIRMWARE CONTROLLER=<object-id> FILE="<file-specification>" Updates the firmware in the controller.
RAID SHUTDOWN CONTROLLER=<object-id> Performs a shutdown to the controller specified with a confirmation response required.
RAID SHUTDOWN CONTROLLER=<object-id> [FORCE] Performs a shutdown to the controller specified.
RAID SHUTDOWN CONTROLLER=<object-id> [RESTART] Performs a shutdown followed by a restart of the controller specified**.**

ATTRIBUTES

None

Usage Guidelines

A wild-card object-id may be used in the SHOW command.

The keywords LOCAL and REMOTE may be used in place of the RP Controller's <object-id>.

Examples

- To display a RAID controller using a wild-card <object-id>:

```
RAID$ SHOW CONTROLLER *
OID: 0X38000000 INDEX: 0X0000 NAME: A LOCAL PRIMARY
OID: 0X38000001 INDEX: 0X0001 NAME: B REMOTE SECONDARY
```

- To display a RAID controller using a specified <object-id>:

```
RAID$ SHOW CONTROLLER 0X38000000
OID: 0X38000000 INDEX: 0X0000 NAME: 0 LOCAL PRIMARY
```

- To display a LOCAL RAID controller using ALL parameter:

```
RAID$ SHOW CONTROLLER LOCAL ALL

OID:                    0X38000001
FIRMWARE VERSION:
  RELEASE:              1.0.3.3
  SOURCE VERSION:       1877
  FULLY CHECKED IN:     YES
  PRIVATE BUILD:        YES
  BUILD TYPE:           PRODUCTION
  BUILD DATE AND TIME:  2009-03-02-09:49:EST
  BUILDER USERNAME:     COMPILER
  BUILDER HOSTNAME:     EREO-DEBIAN
  BUILD FOR CPU TYPE:   AMD-64-BIT
HARDWARE VERSION:       0X0
STATE:                  RUNNING
LOCAL AP OID:           0X00000000
MEMORY SIZE:            0X0
MAX Q OF S ID:          0X0
UP TIME (SECONDS):      0X3690
LAST EVENT SEQUENCE #:  0X27B
LOG FACILITY MASK:
 ALLOW     GBL        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     JIPC       GROUP FILTER = 0X0000000000000004   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     RT         GROUP FILTER = 0X0000000000000038   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     STATE      GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 DENY      TBD        GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 ALLOW     TAP        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     ASM        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     BD         GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     DUCKE      GROUP FILTER = 0X0000000000000003   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     DUCK       GROUP FILTER = 0X0000000000000001   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     SCSI       GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     FC         GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     DIX        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 DENY      UI         GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 ALLOW     JOI        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     JEX        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 DENY      JEXST      GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 ALLOW     CM         GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     RAID       GROUP FILTER = 0X00000000000000DF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     IOF        GROUP FILTER = 0X0000000000000018   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     AMPD       GROUP FILTER = 0X0000000000000611   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 DENY      PASS       GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 DENY      MADLIB     GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 DENY      MADENG     GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 ALLOW     MADTST     GROUP FILTER = 0X0000000000000006   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 ALLOW     ES         GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL
 DENY      JTSOC      GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 DENY      JTS        GROUP FILTER = 0X0000000000000000   EVENT   INFO   WARNING   ERROR   FATAL
 ALLOW     LOG        GROUP FILTER = 0X00000000000000FF   TRACE   EVENT   DEBUG   INFO   WARNING   ERROR   FATAL

CRASH DUMP ENABLED:     TRUE
LOG DISK ENABLED:       TRUE
RP COUNT:               0X1
RESTART PENDING:        FALSE
NAME:                   B
CONTROLLER:             LOCAL        (SECONDARY)
CONTROLLER ID:          0X0015B2A1214A0000
MIR REASON:             NONE
```

- To display the event log on the RAID CONTROLLER 0 starting at the START_SEQUENCE number in ascending sequence number order.

```
RAID$ SHOW CONTROLLER LOCAL LOG ASCEND
000001 2009-02-05 12:13:31:3387789  G=0 S=0 T=1 RP=0 VP=63
LOG_JOI_BUILD_INFO1    JOI FW VERSION ON PROCESSOR 0X40 = (1.0.3.1-0).
000002 2009-02-05 12:13:31:3387798  G=0 S=0 T=1 RP=0 VP=63
LOG_JOI_BUILD_INFO2    JOI FW WAS BUILT ON JJDEBIAN        AT
2009-02-05-14:17:MST (PRODUCT).
000003 2009-02-05 12:13:52:8320854  G=3 S=1 T=1 RP=0 VP=1
LOG_LOGDISK_ENABLE_RECEIVED_FROM_STATE    LOG RECEIVED FROM STATE
```

- To display the event log on RAID CONTROLLER 1 starting at the START_SEQUENCE number in descending sequence number order.

```
RAID$ SHOW CONTROLLER REMOTE LOG DESCEND
000024 2009-02-11 05:08:48:7027390  G=0 S=0 T=1 RP=0 VP=1                      LOG_JOI_TIME_SET    JOI TIME
 WAS SET BY AN ADMINISTRATOR AT 2009-2-11 5:8:48; NEARBY LOG ENTRIES MAY APPEAR OUT OF TIME ORDER. OFFSET
= 0X1C987C765CD3B2B.
000023 2009-02-06 04:49:20:5069068  G=3 S=1 T=1 RP=0 VP=1  LOG_LOGDISK_ENABLE_RECEIVED_FROM_STATE    LOG
RECEIVED FROM STATE
000022 2009-02-06 04:49:20:4952631  G=0 S=0 T=1 RP=0 VP=1                      LOG_JOI_TIME_SET    JOI TIME
 WAS SET BY AN ADMINISTRATOR AT 2009-2-6 4:49:20; NEARBY LOG ENTRIES MAY APPEAR OUT OF TIME ORDER. OFFSET
= 0X1C987C7A302483D.
```

- To display the event log on the RAID CONTROLLER 1 starting at the specified START_SEQUENCE number in ascending sequence number order.

```
RAID$ SHOW CONTROLLER REMOTE LOG ASCEND START_SEQUENCE 20
000021 2009-02-06 04:49:20:4731906  G=4 S=2 T=1 RP=0 VP=1                      LOG_ST_MIR_STATE  STATE MIR
    STATE    STATE:000A
000022 2009-02-06 04:49:20:4952631  G=0 S=0 T=1 RP=0 VP=1                      LOG_JOI_TIME_SET    JOI TIME
 WAS SET BY AN ADMINISTRATOR AT 2009-2-6 4:49:20; NEARBY LOG ENTRIES MAY APPEAR OUT OF TIME ORDER. OFFSET
= 0X1C987C7A302483D.
000023 2009-02-06 04:49:20:5069068  G=3 S=1 T=1 RP=0 VP=1  LOG_LOGDISK_ENABLE_RECEIVED_FROM_STATE    LOG
RECEIVED FROM STATE
000024 2009-02-11 05:08:48:7027390  G=0 S=0 T=1 RP=0 VP=1                      LOG_JOI_TIME_SET    JOI TIME
 WAS SET BY AN ADMINISTRATOR AT 2009-2-11 5:8:48; NEARBY LOG ENTRIES MAY APPEAR OUT OF TIME ORDER. OFFSET
= 0X1C987C765CD3B2B.
```

RAID JOB

The RAID JOB object corresponds to the Background Job object. All JOB object commands have a RAID subject and include a JOB=<object-id> object specification. There are two types of jobs: INITIALIZE and REBUILD.

COMMANDS Description
RAID PAUSE JOB=<object-id> Pauses the specified RAID JOB.
RESUME JOB=<object-id> Resumes the specified RAID JOB that was previously paused..
SET JOB=<object-id> <attribute-name>=<value> [<attribute-name>=<value>…] Sets a RAID JOB with a specified object ID and assigns it a priority..
RAID SHOW JOB=<object-id> [ALL_ATTRIBUTES] Displays the specified JOB with its associated attributes. Use wildcard (*) to show all jobs in progress. Currently, there are two types of jobs: INITIALIZE or REBUILD

ATTRIBUTES Description
PRIORITY=<priority> Specifies the fraction of the system resources that should be devoted to the background job. The higher its value, the faster the background job will run and the more the background job will impact client IO performance. While Priority is a number between 1 and 99, Priority should not be thought of as a percentage or a mathematical fraction of the available resources. For example, two Background Jobs with Priority=50 will not use 100% of the RP Subsystem's resources. And, the RP Subsystem may or may not limit the number of Background Jobs to keep the total of their Priorities below 100. On creation, the value of this attribute is determined by defaults associated with the Pool in which the Target object resides. The priority is an integer in the range between 1 and 99.

Usage Guidelines

A wild-card object-id (*) may be used in the SHOW command.

Examples

- To pause a specified RAID JOB.

```
RAID$ PAUSE JOB 0X28010001
JOB 1 OID=0X28010001 PAUSED WITH STATUS=' SUCCESS' (0X0)

RAID$ SHOW JOB * ALL
  OID:               0X28010001
  TARGET:            0X18370001
  TYPE:              INITIALIZE
  STATUS:            PAUSED
  PRIORITY:          50
  FRACTION COMPLETE:11%
```

- To resume a specified RAID JOB previously paused.

```
RAID$ RESUME JOB 0X28010001
JOB 1 OID=0X28010001 RESUMED WITH STATUS=' SUCCESS' (0X0)

RAID$ SHOW JOB * ALL
```

```
  OID:               0X28010001
  TARGET:            0X18370001
  TYPE:              INITIALIZE
  STATUS:            RUNNING
  PRIORITY:          50
  FRACTION COMPLETE:11%
```

- To display RAID JOBs with wild-card <object id> with ALL parameter.

```
RAID$ SHOW JOB * ALL
  OID:               0X28010001
  TARGET:            0X18370001
  TYPE:              INITIALIZE
  STATUS:            RUNNING
  PRIORITY:          50
  FRACTION COMPLETE:11%
```

RAID PHYSICAL_DISK (PD)

All PHYSICAL_DISK object commands have a RAID subject and include a PHYSICAL_DISK=<object-id> object specification.

COMMANDS Description
RAID ASSIGN PHYSICAL_DISK=<object-id> TO_POOL=<pool_id | spare_pool_id> [SET_SPARE] Assign the Physical Disk to the specified Pool. If SET_SPARE, Physical_Disk is also the spare. Note that the assign command is used to assign a drive to a spare pool or user to manually spare a drive into a pool that has a spare drive.
RAID CLEAR PHYSICAL_DISK=<object-id> FAILED Forces the specified disk's health to GOOD.
RAID LOCATE PHYSICAL_DISK [FAILED] Illuminates the LED on drives and that have failed if specified.
RAID SET PHYSICAL_DISK [FAILED] Forces the specified disk's health to FAILED. If specified disk was a SPARE, then it will no longer be a spare. This command is only used when you are manually sparing a drive into a reduced pool. If issued on a disk that is a member of a pool, the drive will be failed out of that pool.
REPLACE PHYSICAL_DISK=<object-id> NEW_DISK=<object-id> Designates a replacement Physical Disk as part of the manual disk sparing policy. Replace does not change the HealthState of the Physical Disk
RAID SHOW PHYSICAL_DISK=<object-id> [ALL_ATTRIBUTES] Displays all attributes of the specified PHYSICAL_DISK.

ATTRIBUTES

None

Usage Guidelines

A wild-card object-id (*) may be used in the SHOW command.

The alias PD can be used in place of PHYSICAL_DISK.

Examples

- To display the unassigned PHYSICAL DISK that have failed:

```
RAID$ SHOW UNASS PD FAILED
OID: 0X20080009 INDEX: 0X0009
```

- To display all information about the unassigned PHYSICAL DISK that have failed:

```
RAID$ SHOW UNASS PD FAILED ALL
 OID:                0X20080009
 POOL OID:           UNASSIGNED
 CAPACITY:           417792 MBS (0X33000000 BLOCKS)
 RAW CAPACITY:       429247 MBS (0X3465F870 BLOCKS)
 BLOCK SIZE:         512
 ENABLED DISK CH:    0X14  0X11
 DISK SLOT:          1:56
 VENDOR ID:          SEAGATE
 PRODUCT ID:         ST3450856SS
 PRODUCT REVISION:   0004
 SERIAL NUMBER:      3QQ0FDZ700009915W3K9
 HEALTH STATE:       FAILED
 ROTATION SPEED:     15000 RPM
 DEVICE TYPE:        SAS
 MEMBER STATE:       UNASSIGNED
 SPARE:              FALSE
 FAILED:             TRUE
```

```
 UUID:              0X5000C50004D2A8C40
```

- Continuing from the above example, to clear and then display all information about the unassigned PHYSICAL DISK:

```
RAID$ CLEAR PD 0X20080009 FAILED
PHYSICAL_DISK 9 OID=0X20080009 CLEAR ATTRIBUTES STATUS='SUCCESS' (0X0)
RAID$ SHOW PD 0X20080009 ALL
  OID:               0X20080009
  POOL OID:          UNASSIGNED
  CAPACITY:          417792 MBS (0X33000000 BLOCKS)
  RAW CAPACITY:      429247 MBS (0X3465F870 BLOCKS)
  BLOCK SIZE:        512
  ENABLED DISK CH:   0X14  0X11
  DISK SLOT:         1:56
  VENDOR ID:         SEAGATE
  PRODUCT ID:        ST3450856SS
  PRODUCT REVISION:  0004
  SERIAL NUMBER:     3QQ0FDZ700009915W3K9
  HEALTH STATE:      GOOD
  ROTATION SPEED:    15000 RPM
  DEVICE TYPE:       SAS
  MEMBER STATE:      UNASSIGNED
  SPARE:             FALSE
  FAILED:            FALSE
  UUID:              0X5000C50004D2A8C40
```

Note: In the above example that the Failed field indicates false.

- To display the specified PHYSICAL DISK with its associated attributes using a wild-card <object id> with ALL parameter.

```
RAID$ SHOW PD=* ALL
  OID:               0X20290029
  POOL OID:          0X18370001
  CAPACITY:          942080 MBS (0X73000000 BLOCKS)
  RAW CAPACITY:      953869 MBS (0X74706DB0 BLOCKS)
  BLOCK SIZE:        512
  ENABLED DISK CH:   0X4  0X4
  DISK SLOT:         1:7
  VENDOR ID:         HITACHI
  PRODUCT ID:        HITACHI HUA721010KLA330
  PRODUCT REVISION:  GKAOAB0A
  SERIAL NUMBER:           GTF000PAJBJ7SF
  HEALTH STATE:      GOOD
  ROTATION SPEED:    7200 RPM
  DEVICE TYPE:       SATA
  MEMBER STATE:      NORMAL
  SPARE:             FALSE
  FAILED:            FALSE
  UUID:              0X5000CCA216E16C170
```

- To locate a specified PHYSICAL DISK.

```
RAID$ LOCATE PD=0X002C
PHYSICAL_DISK 44 OID=0X202C002C LOCATED WITH STATUS=' SUCCESS' (0X0)
```

- To display the PHYSICAL DISK using a wild-card <object id>.

```
RAID$ SHOW PD *
OID: 0X20290029 INDEX: 0X0029
OID: 0X202A002A INDEX: 0X002A
OID: 0X202B002B INDEX: 0X002B
OID: 0X202C002C INDEX: 0X002C
OID: 0X202D002D INDEX: 0X002D
OID: 0X202E002E INDEX: 0X002E
OID: 0X202F002F INDEX: 0X002F
OID: 0X20300030 INDEX: 0X0030
OID: 0X20310031 INDEX: 0X0031
OID: 0X20320032 INDEX: 0X0032
```

RAID POOL

A Storage Pool contains Physical Disks whose extents are parts of RAID sets that in turn are used to realize pools.

Important: SGI does not recommend or support the mixing of SAS and SATA drives within the same Storage Pool.

The RAID POOL object represents a Storage Pool. All RAID POOL object commands have a RAID subject and include a POOL=<object-id> object specification.

COMMANDS Description
RAID CLEAR POOL =<object-id> AUTO_WRITE_LOCK|CRITICAL [FORCE] Clears the specified condition of the pool (either auto_write_lock or critical) which allows the user to re-write that block of data, thus clearing a bad block. Optional parameter of FORCE clears the pool without asking questions.
RAID CREATE POOL [CHUNK_SIZE=<value>] [ASSIGN_POLICY=([SAS|SATA])][NUMBER=<n> [PHYSICAL_DISK=<id1>, …, <idn>]] [RAID_LEVEL=RAID5|RAID6|] Create a POOL of a specified CHUNK_SIZE and defines it as either SAS or SATA and a specified physical location and its RAID level as either 5 or 6. The CHUNK_SIZE value is an integer number of KiB. Omission of a member of the ASSIGN_POLICY n-tuple indicates no constraint in that dimension. Default block size is 512 bytes; default chunk size is 128K. Default Assign_Policy is None.
RAID DELETE POOL=<object-id> [FORCE] Deletes the specified RAID POOL. POOL must be emptied before it is deleted. Note: To empty the pool is to remove all VDS that reside in the pool, (not empty physical disks.)
RAID LOCATE POOL=<object-id> Illuminates the LED on drives in the pool specified.
RAID SET POOL=<object-id> <attribute-name>=<value> [<attribute-name>=<value>…] Assigns the listed attributes to the specified pool.
RAID SHOW POOL=<object-id> [VIRTUAL_DISKS] [PHYSICAL_DISKS] [ALL_ATTRIBUTES] Displays the specified RAID POOL with its associated VIRTUAL_DISKS, PHYSICAL_DISKS, and attributes.

ATTRIBUTES Description
ASSIGN_POLICY= [SAS|SATA] >) Defines whether drives should be treated as SAS or SATA. Note that the Omission of a member of the ASSIGN_POLICY n-tuple indicates no constraint in that dimension location of the system.
DISK_TIMEOUT=<timeout> Specifies the timeout to wait between when a powered Physical Disk becomes inaccessible and when a RebuildFull begins. Default value is 10 minutes. The range of values is zero (0) to 240 minutes. If DISK_TIMEOUT is 0 and the disk disappears to the system, the drive will be failed immediately.
SPARE_POOL=<object-id> Specifies the Global Spare Pool . Default value is null.

NAME=”string” Specified by the user to identify (set the name of) the Spare Pool. If there are spaces in the name, the name must be enclosed with quotes (“). To clear a previously entered name, enter an empty string as follows: NAME=””.
REBUILD_FULL_POLICY=<priority> Specifies the policy to be used when a Physical Disk that is associated with the Storage Pool is fully rebuilt. It specifies the Priority for the Background Job that will perform the RebuildFull. Default value specifies a Priority of 80%. Priority is an integer with a range of 1 to 99.
REBUILD_PARTIAL_POLICY=<priority> Specifies the policy to be used when a Physical Disk that is associated with the Storage Pool is partially rebuilt.. It specifies the Priority for the Background Job that will perform the RebuildPartial. Default value specifies a Priority of 90%. Priority is an integer with a range of 1 to 99.
SPARING_POLICY=AUTOMATIC|MANUAL Specifies the policy used to repair failed disks within the Storage Pool. Default is AUTOMATIC

Usage Guidelines

Storage Pools must be explicitly created by the user.

Storage Pools should always be created with drives that are of the same interface type.

A wild-card object-id may be used in the SHOW command.

The alias VD can be used in place of VIRTUAL_DISK.

CRITICAL STATE: If SATAssure is enabled for RAID5 array and one of the drives returns bad data, the VD would be marked as “CRITICAL” since in RAID5, system is not able to correct data. The CRITICAL STATE would indicate a bad block of data. Use the RAID CLEAR POOL CRITICAL command to clear the condition (and the bad block) and allow the user to re-write the data.

Examples

- To create a POOL with a specified raid level of RAID6, chunk size of 256 kb and 10 drives.

```
RAID$ CREATE POOL RAID_LEVEL=RAID6 CHUNK=256KB NUMBER=10
POOL 0 OID=0X18330000 CREATE STATUS=' SUCCESS' (0X0)
       (CAN SHORTEN)
RAID$ CREATE POOL RAID=RAID6 CHUNK=256K NUMBER=10
```

- To delete a specified POOL (0).

```
RAID$ DELETE POOL=0
ARE YOU SURE YOU WANT TO DELETE POOL 0X0 [YES]?
POOL 0 OID=0X18330000 DELETION STATUS=' SUCCESS' (0X0)


RAID$ SHOW POOL *
NO POOLS SUBSIST
```

- Note: you cannot use wild-card <object-id> to delete any or all POOLs.

```
RAID$ DELETE POOL *
WILDCARD NOT ALLOWED, PLEASE BE SPECIFIC:
VALUE DESCRIPTION FOR 'POOL':
   POOL <OBJECT-ID>
                    PROVIDE AN OBJECT IDENTIFIER
```

- To locate a specified RAID POOL:

```
RAID$ LOCATE POOL 1
```

```
POOL 1 OID=0X18370001 LOCATED WITH STATUS=' SUCCESS' (0X0)
```

- To set a RAID SET POOL with a specified object ID and assigns it the specified name.

```
RAID$ SET POOL=1 NAME=POOL-1
POOL 1 OID=0X18370001 ATTRIBUTES SET WITH STATUS=' SUCCESS' (0X0)
RAID$ SHOW POOL *
OID: 0X18370001 INDEX: 0X0001 NAME: POOL-1
```

- To display the specified RAID POOL with its associated attributes.

```
RAID$ SHOW POOL * ALL
  OID:                    0X18370001
  TYPE:                   STORAGE
  NAME:                   POOL-1
  CHUNK SIZE:             256KB (0X200 BLOCKS)
  BLOCK SIZE:             0X200
  RAID TYPE:              RAID6
  FREE RAID6 CAPACITY:    0 MBS
  TOTAL CAPACITY:         9420800 MBS
  UUID:                   0X00
  GLOBAL SPARE POOL:      UNASSIGNED
  DISKTIMEOUT(FRT):       10 MINUTES
  INIT POLICY:            NO IO PERMITTED
  INIT PRIORITY:          50%
  FULL REBUILD PRIORITY:         80%
  FRACTIONAL REBUILD PRIORITY:   90%
  SPARING POLICY:         AUTOMATIC
  ASSIGN POLICY:
    DEVICE TYPE:          NA
    ROTATION SPEED:       NA
    RAW CAPACITY:         NA
  SATASSURE:              FALSE
  IO ROUTING:             TRUE
  WBC:                    TRUE
  MWBC:                   FALSE
  INITIALIZING:           FALSE
  REBUILDING:             FALSE
  PAUSED:                 FALSE
  AUTOWRITELOCK:          FALSE
  CRITICAL:              FALSE
  CURRENT HOME:           0X0015B2A122A20000  0X00000000
  FUTURE HOME:            0XFFFFFFFFFFFFFFFF  0X00000000
  PREFERRED HOME:         0XFFFFFFFFFFFFFFFF  0X00000000
  BKGDJOB OID:            INACTIVE
  TOTAL PHY DISKS         10
  STATE:                  NORMAL
  MEMBER SIZE:            942080 MB
    PID     STATE     UUID
    0X0029  NORM      0X5000CCA216E16C17
    0X002A  NORM      0X5000CCA216F3146F
    0X002B  NORM      0X5000CCA216EF4B6D
    0X002C  NORM      0X5000CCA216F27743
    0X002D  NORM      0X5000CCA216E15A80
    0X002E  NORM      0X5000CCA216F27771
    0X002F  NORM      0X5000CCA216F336E9
    0X0030  NORM      0X5000CCA216E169D4
    0X0031  NORM      0X5000CCA216E159FD
    0X0032  NORM      0X5000CCA216E1A8DF
```

- To display a list of the specified RAID POOL with its associated PHYSICAL_DISKS.

```
RAID$ SHOW POOL 1 PHYSICAL_DISKS
OID: 0X20290029 INDEX: 0X0029
OID: 0X202A002A INDEX: 0X002A
OID: 0X202B002B INDEX: 0X002B
OID: 0X202C002C INDEX: 0X002C
OID: 0X202D002D INDEX: 0X002D
OID: 0X202E002E INDEX: 0X002E
OID: 0X202F002F INDEX: 0X002F
OID: 0X20300030 INDEX: 0X0030
OID: 0X20310031 INDEX: 0X0031
OID: 0X20320032 INDEX: 0X0032
```

- To display a list of the specified RAID POOL with its associated VIRTUAL_DISKS.

```
RAID$ SHOW POOL 1 VIRTUAL_DISKS
OID: 0X88390002 INDEX: 0X0002 NAME: 88390002
```

RAID PROCESSOR

All RAID PROCESSOR object commands have a RAID subject and include a PROCESSOR =<object-id> object specification.

COMMANDS Description
RAID SHOW PROCESSOR =<object-id> [ALL_ATTRIBUTES] Displays all attributes for the specified RAID PROCESSOR.
RAID SHOW PROCESSOR =<object-id> [CHANNELS] Displays the channels for the specified RAID PROCESSOR.

ATTRIBUTES

None.

Usage Guidelines

A wild-card <object-id> (*) may be used in the SHOW command.

Examples

- To display the attributes of a specified RAID PROCESSOR 0:

```
RAID$ SHOW PROCESSOR 0
OID: 0X40000000 INDEX: 0X0000 NAME: 00000000
```

- To display all attributes of the specified RAID PROCESSOR 0:

```
RAID$ SHOW PROCESSOR 0 ALL
OID:                    0X40000000
NAME:                   0
PARENT RP CONTROLLER:   0X38000000
```

RAID SPARE_POOL

A Global Spare Pool contains Physical Disks that can be used as spare disks in one or more Storage Pools.

All RAID SPARE_POOL object commands have a RAID subject and include a SPARE_POOL=<object-id> object specification.

COMMANDS Description
RAID CREATE SPARE POOL Creates a SPARE_POOL.
RAID DELETE SPARE_POOL=<object-id> [FORCE] Deletes the specified RAID SPARE_POOL.
RAID LOCATE SPARE_POOL=<object-id> Illuminates the LED on the disk in the slot.
RAID SET SPARE_POOL=<object-id> <attribute-name>=<value> [<attribute-name>=<value>…] Assigns the listed attributes to the specified pool.
RAID SHOW SPARE_POOL=<object-id> [ALL_ATTRIBUTES] Displays the attributes of a specified RAID SPARE_POOL.
RAID SHOW SPARE_POOL=<object-id> [PHYSICAL_DISKS] Displays the physical disks associated with the specified RAID SPARE_POOL.

ATTRIBUTES Description
DISK_TIMEOUT=<timeout> Specifies the timeout to wait between when a powered Physical Disk becomes inaccessible and when a RebuildFull begins. Default value is 10 minutes. The range of values is zero (0) to 240 minutes. If DISK_TIMEOUT is 0 and the disk disappears to the system, the drive will be failed immediately.
SPARE_POOL=<object-id> Specifies the Global Spare Pool . Default value is null.
NAME=”string” Specified by the user to identify the Spare Pool. If there are spaces in the name, the name must be enclosed with quotes (“).

Usage Guidelines

Global Spare Pools must be explicitly created with management directives. On creation, the value of the DISK_TIMEOUT is set to 10 minutes.

Each Storage Pool has an attribute that designates its Global Spare Pool that must be designated by the user.

Mixing SAS and SATA drives within the same Spare Pool is not recommended. For maximum performance, spare pools should be created using drives with the same characteristics (such as SAS/SATA, capacity, and RPM) that are within the Storage Pool(s) that they will be designated to spare.

A wild-card object-id may be used in the SHOW command.

Examples

- To create a Spare Pool:

```
RAID$ CREATE SPARE
SPARE POOL 8 OID=0X1E910008 CREATE STATUS='SUCCESS' (0X0)
RAID$ SHOW SPARE 8 ALL
 OID:               0X1E910008
 TYPE:              GLOBAL SPARE
 NAME:              1E910008
 BLOCK SIZE:        0X200
 DISKTIMEOUT(FRT): 10 MINUTES
 TOTAL CAPACITY:    0 MBS
 UUID:              0X00
 TOTAL PHY DISKS    0
```

- To set RAID SET SPARE_POOL (8); note the DiskTimeout Value compared with the create spare output:

```
RAID$ SET SPARE 8 DISK=20
SPARE POOL 8 OID=0X1E910008 ATTRIBUTES SET WITH STATUS='SUCCESS' (0X0)
RAID$ SHOW SPARE 8 ALL
  OID:               0X1E910008
  TYPE:              GLOBAL SPARE
  NAME:              1E910008
  BLOCK SIZE:        0X200
  DISKTIMEOUT(FRT): 20 MINUTES
  TOTAL CAPACITY:    0 MBS
  UUID:              0X00
  TOTAL PHY DISKS    0
```

- To assign PD to the spare and then display them:

```
RAID$ ASSIGN PD 0X268F005E TO_POOL 8
PHYSICAL_DISK 94 OID=0X268F005E ASSIGNED  TO POOL 8 OID=0X1E910008
STATUS='SUCCESS' (0X0)
       [COMMENT: NOW ISSUE THE SHOW SPARE_POOL=8 PD]
RAID$ SHOW SPARE 8 PD
OID: 0X268F005E INDEX: 0X005E
RAID$ SHOW SPARE 8 PD ALL
  OID:               0X268F005E
  POOL OID:          0X1E910008
  CAPACITY:          417792 MBS (0X33000000 BLOCKS)
  RAW CAPACITY:      429247 MBS (0X3465F870 BLOCKS)
  BLOCK SIZE:        512
  ENABLED DISK CH:   0X11  0X14
  DISK SLOT:         1:59
  VENDOR ID:         SEAGATE
  PRODUCT ID:        ST3450856SS
  PRODUCT REVISION: 0004
  SERIAL NUMBER:     3QQ069M0000099171WCU
  HEALTH STATE:      GOOD
  ROTATION SPEED:    15000 RPM
  DEVICE TYPE:       SAS
  MEMBER STATE:      NORMAL
  SPARE:             TRUE
  FAILED:            FALSE
  UUID:              0X5000C50004D4D0880
```

RAID SUBSYSTEM

All RAID commands begin with the subject, RAID. All RAID SUBSYSTEM object commands have a RAID subject and include a SUBSYSTEM object specification with no object-id.

COMMANDS Description
RAID CLEAR SUBSYSTEM MIR_STATE [UID=<value>] Resolves the MIR (Manual Intervention Required) state. Note: The Manual Intervention Required (MIR) conditions are: MIR_JIS_DISCOVERY_IN_PROG, MIR_OTHER_JIS_DISCOVERY_IN_PROG, MIR_NO_BACKEND_DRIVES, MIR_NO_CONFIG, MIR_NO_QUORUM, MIR_NOT_LAST_CONTROLLER, MIR_MULTIPLE_JIS, MIR_DUAL_NO_AGREE, MIR_CONFIG_MISMATCH, MIR_NO_LOAD_CONFIG. Refer to the SGI InfiniteStorage 6120 RAID User's Guide (007-5533-00x) for more information.
RAID CLEAR SUBSYSTEM CONFIGURATION Clears the current configuration of the subsystem.
RAID SET SUBSYSTEM <attribute-name>=<value> [<attribute-name>=<value>…] Assigns the listed attributes to the specified subsystem.
RAID SET SUBSYSTEM DATE_AND_TIME=(<year>:<month>:<day>:<hour>:<minute>:<second>) Sets the current date and time of the controllers.
RAID SHOW SUBSYSTEM [ALL_ATTRIBUTES] Displays all attributes of the subsystem.
RAID SHUTDOWN SUBSYSTEM Shuts down the subsystem.
RAID SHUTDOWN SUBSYSTEM [RESTART] Performs a shutdown followed by a restart of the system**.**

ATTRIBUTES Description
DST= (<hours> :< minutes>) DaylightSavingsTime offset, in minutes that is added to DateAndTime and TimeZone to correct for daylight savings time at the location of the system.
LICENSE_KEY="string" Sets and activates feature license(s) on the controller units, using a license key that is generated on the SGI licensing site. Notes: This command must be run on the primary controller to complete the license activation process and enable usage of optional software features like RAID 6 and SATAssure. License key generation requires that you have your feature license number, JBOD enclosure serial number and controller id information. Key generation is finalized on the following link: **http://www.sgi.com/support/licensing/special.html**
LOCATE_DWELL_TIME=<integer> This is the time in seconds that locate beacons within the RAID Subsystem remain on until they are automatically turned off. Default value is 120 seconds. Valid values are between 0 and 65535 seconds.

NAME=”string” Specified by the user to identify the subsystem**.** If there are spaces in the name, the name must be enclosed with quotes (“).
TIME_ZONE= (<hours> :< minutes>) The Time Zone in which this system is located expresses as an offset relative to GMT. Default value is taken from the underlying operating system or ZERO if there is no underlying operating system.

Examples

- To resolve the MIR (Manual Intervention Required) state:

```
RAID$ CLEAR SUBSYSTEM MIR
RAID SUBSYSTEM MIR_STATE CLEARED STATUS=' SUCCESS' (0X0)
```

- To change the locate dwell time from 130 to 30 seconds.

```
RAID$ SET SUBSYSTEM LOCATE_DWELL_TIME=30
SUBSYSTEM ATTRIBUTES SET STATUS=' SUCCESS' (0X0)
```

- To set the current date and time of the controllers.

```
RAID$ SET SUBSYSTEM DATE_AND_TIME=2009:02:11:11:38:00
SUBSYSTEM ATTRIBUTES SET STATUS=' SUCCESS' (0X0)
```

- To display all attributes of the subsystem.

```
RAID$ SHOW SUBSYSTEM ALL
RP SUBSYSTEM NAME:
UID:                    0X0000000000000000
SUBSYSTEM TIME:         WED FEB 11 11:38:38  2009
TIME ZONE:              0 MINUTES
DST OFFSET:             0 MINUTES
LOCATE DWELL TIME:      30 SECONDS
MIRROR SYNCH:           NA
```

- Shuts down the subsystem (RAID firmware) but not the underlying Linux file system:

```
RAID$ SHUTDOWN SUBSYSTEM
RAID SUBSYSTEM SHUTTING DOWN WITH STATUS=' SUCCESS' (0X0)
```

RAID UNASSIGNED_POOL

NOTE: There is only one Unassigned Disk Pool and it cannot be created or deleted.

The Unassigned Disk Pool contains both newly discovered Physical Disks and those that have:

- NOT been assigned to another Pool and
- FAILED and/or have been automatically replaced per sparing policy.

All RAID UNASSIGNED_POOL object commands have a RAID subject and include an UNASSIGNED_POOL object specification with no object-id.

COMMANDS Description
RAID SHOW UNASSIGNED_POOL [FAILED] Displays any UNASSIGNED_PHYSICAL_DISKS and those that have failed
RAID LOCATE UNASSIGNED_POOL [FAILED] Illuminates the LED on drives that are unassigned and that have failed if specified.
RAID SHOW UNASSIGNED_POOL [ALL_ATTRIBUTES] Displays all attributes of the UNASSIGNED_POOL.
RAID SHOW UNASSIGNED_POOL [PHYSICAL_DISKS] Displays a list of the currently unassigned physical disks.

ATTRIBUTES

None

Usage Guidelines

A wild-card object-id (*) may be used in the SHOW command.

EXAMPLE

- To display all unassigned physical disks:

```
RAID$ SHOW UNASSIGNED -ALL
  OID:               0X1800FFFF
  TYPE:              UNASSIGNED
  CAPACITY:          51257344 MBS
  FAILED CAPACITY:   0 MBS
  TOTAL PHY DISKS    87
```

RAID VIRTUAL_DISK (VD)

The RAID VIRTUAL_DISK object represents a partition of a pool, where VD is an alias for VIRTUAL_DISK. All VIRTUAL_DISK object commands have a RAID subject and include a VIRTUAL_DISK=<object-id> object specification.

COMMANDS Description
RAID CREATE VIRTUAL_DISK CAPACITY=<INTEGER> POOL=<object-id> Creates a RAID VIRTUAL_DISK with the specified capacity. CAPACITY is an integer number in multiples of 8 GB. Therefore, a CAPACITY=28 results in a VD that is 32 GB in size.
RAID CREATE VIRTUAL_DISK CAPACITY=MAXIMUM POOL =<object-id> Creates a RAID VIRTUAL_DISK with all available storage within the POOL with a specified object ID and at a specified RAID level.
RAID DELETE VIRTUAL_DISK =<object-id> [FORCE] Deletes the specified VIRTUAL_DISK.
RAID SHOW VIRTUAL_DISK =<object-id> [ALL_ATTRIBUTES] Displays all attributes of the specified RAID VIRTUAL_DISK.
RAID SET VIRTUAL_DISK=<object-id> <attribute-name>=<value> [<attribute-name>=<value>…] Assigns the listed attributes to the specified VIRTUAL_DISK.

ATTRIBUTES Description
NAME=”string” Specified by the user to identify the VD**.** If there are spaces in the name, the name must be enclosed with quotes (“).

Usage Guidelines

A wild-card object-id may be used in the SHOW command.

The alias VD can be used in place of VIRTUAL_DISK.

Examples

- To create a RAID VIRTUAL_DISK with all available storage within the POOL with a specified object ID:

```
RAID$ CREATE VIRTUAL_DISK POOL=0 CAPACITY=MAX
VIRTUAL_DISK 0 OID=0X88350000 CREATION STATUS=' SUCCESS' (0X0)
```

- To delete a specified RAID VIRTUAL_DISK:

```
RAID$ DELETE VD=0
ARE YOU SURE YOU WANT TO DELETE VIRTUAL_DISK 0X0 [YES]?
VIRTUAL_DISK 0 OID=0X88350000 DELETION STATUS=' SUCCESS' (0X0)
RAID$ SHOW VD *
NO VIRTUAL_DISKS SUBSIST
```

- To display a list of the specified RAID VIRTUAL_DISK (2) using the ALL parameter:

```
RAID$ SHOW VD=2 ALL
  OID:                0X88390002
  NAME:               88390002
  POOL OID:           0X18370001
  CAPACITY:           7503872 MBS
  OFFSET:             0X0
  STATE:              READY
  RAIDLEVEL:          RAID6
  IO ROUTING:         TRUE
  WBC:                TRUE
  MWBC:               FALSE
  INITIALIZING:       FALSE
  PAUSED:             FALSE
  AUTOWRITELOCK:      FALSE
  CRITICAL:          FALSE
  PRESENT HOME ONLY:FALSE
  CURRENT HOME:       0X0015B2A122A20000  0X00000000
  FUTURE HOME:        0XFFFFFFFFFFFFFFFF  0X00000000
  PREFERRED HOME:     0XFFFFFFFFFFFFFFFF  0X00000000
  BKGDJOB OID:        INACTIVE
  UUID:               60000000000000000000000288390002
```

- To set a RAID CHANNEL with a specified object ID (2) and assign it the specified name (vd2):

```
RAID$ SET VD=2 NAME=VD2
VIRTUAL_DISK 2 OID=0X88390002 SET ATTRIBUTES STATUS=' SUCCESS' (0X0)
RAID$ SHOW VD=2 ALL
  OID:                0X88390002
  NAME:               VD2
  POOL OID:           0X18370001
  CAPACITY:           7503872 MBS
  OFFSET:             0X0
  STATE:              READY
  RAIDLEVEL:          RAID6
  IO ROUTING:         TRUE
  WBC:                TRUE
  MWBC:               FALSE
  INITIALIZING:       FALSE
  PAUSED:             FALSE
  AUTOWRITELOCK:      FALSE
  CRITICAL:          FALSE
  PRESENT HOME ONLY:FALSE
  CURRENT HOME:       0X0015B2A122A20000  0X00000000
  FUTURE HOME:        0XFFFFFFFFFFFFFFFF  0X00000000
  PREFERRED HOME:     0XFFFFFFFFFFFFFFFF  0X00000000
  BKGDJOB OID:        INACTIVE
  UUID:               60000000000000000000000288390002
```

UI CLI

All UI commands begin with the subject, UI. All UI CLI object commands have a UI subject and include a CLI object specification with no <object-id>.

COMMANDS Description
UI SET CLI DEFAULT_SUBJECT=RAID Sets the default command subject to RAID for the session. This is the DEFAULT setting. The default command subject is pre-pended to each command and echoed in the command prompt.
UI SET CLI DEFAULT_SUBJECT=UI Sets the default command subject to UI for the session. The default command subject is pre-pended to each command and echoed in the command prompt.
UI SET CLI DEFAULT_SUBJECT=NONE Clears the CLI default command subject for the session.
UI SET CLI –PROVIDE_FEEDBACK=[TRUE] Default. When TRUE, each command provides feedback, even upon successful completion.
UI SET CLI –PROVIDE_FEEDBACK=[FALSE] When FALSE, commands return successful completion silently.
UI SHOW CLI= SHOW all instances of the CLUI Server. Indicate which CLUI Server is this instance.

ATTRIBUTES

None

Usage Guidelines

By default, the CLI default command subject is set to RAID, so that the user is saved from having to enter the keyword RAID on every RAID command. The CLI shall return an error if the user attempts to set the default command subject to an invalid subject.

The user may override the CLI default command subject on one command by specifying the full command. However, if the command does not have a valid subject then the error message may report an unrecognized verb keyword.

Examples

- To set the default command subject to RAID from UI for the session:

```
RAID$ UI SET CLI DEFAULT_SUBJECT=RAID
CLI DEFAULT SUBJECT HAS BEEN SET TO RAID WITH STATUS=' SUCCESS' (0X0)
UI$ SET CLI DEFAULT_SUBJECT=RAID
```

- To set the default command subject to UI for the session:

```
RAID$ UI SET CLI DEFAULT_SUBJECT=UI
CLI DEFAULT SUBJECT HAS BEEN SET TO UI WITH STATUS=' SUCCESS' (0X0)
UI$ SET CLI DEFAULT_SUBJECT=RAID
CLI DEFAULT SUBJECT HAS BEEN SET TO RAID WITH STATUS=' SUCCESS' (0X0)
```

- To clear the CLUI default command subject for the session:

```
RAID$ UI SET CLI DEFAULT_SUBJECT=NONE
CLI DEFAULT SUBJECT HAS BEEN SET TO NONE WITH STATUS=' SUCCESS' (0X0)
$
```

- To receive feedback, even upon successful completion of command:

```
RAID$ UI SET CLI PROVIDE_FEEDBACK=TRUE
CLI FEEDBACK MODE HAS BEEN SET TO ON WITH STATUS=' SUCCESS' (0X0)
```

- To silence feedback:

```
RAID$ UI CLI SET PROVIDE_FEEDBACK=FALSE
RAID$ UI CLI SET VERB_OBJECT
RAID$ SHOW POOL *
OID: 0X18370001 INDEX: 0X0001 NAME: POOL-1
RAID$ UI SET CLI PROVIDE_FEEDBACK=TRUE
CLI FEEDBACK MODE HAS BEEN SET TO ON WITH STATUS=' SUCCESS' (0X0)
RAID$ UI SET CLI OBJECT_VERB
CLI COMMAND LINE STRUCTURE HAS BEEN SET TO OBJECT-VERB WITH STATUS=' SUCCESS' (0X0)
```

- To display the mode, the default subject, OID, and the CLI version of this instance of the CLUI Server.

```
RAID$ UI SHOW CLI ALL
           CLI VERSION : 0.9
    CLI STRUCTURE MODE : VERB-OBJECT
   CLI DEFAULT SUBJECT : RAID
CLI MINIMUM MATCH MODE : OFF
 CLI FEEDBACK SENTENCE : ON
```

UI CONTROLLER NETWORK_INTERFACE

All UI commands begin with the subject, UI. All UI CLI object commands have a UI subject and include a CLI object specification with no <object-id>.

COMMANDS Description
UI SHOW NETWORK_INTERFACE=(<controller-id>,<network-id>) [ALL_ATTRIBUTES] Displays attributes, such as IP ADDRESS, for the specified Network Interfaces.
UI SET NETWORK_INTERFACE= (<controller-id>, <network-id>) <attribute-name>=<value> [<attribute-name>=<value>…] Sets the network-interface to a specified controller-id and a network id and assigns values to the listed attributes, for example, IP_ADDRESS.
UI TEST NETWORK_INTERFACE=(<controller-id>,<network-id>) PING=(<ip-address>) Pings the specified ip-address from the specified NETWORK_INTERFACE.

ATTRIBUTES Description
IP_ADDRESS=<ip-address> Refers to the IP Address of the system in the format aaa.bbb.ccc.ddd
IP_GATEWAY=<ip-address> Refers to the current gateway in the network routing table as applied to the internet address in the format aaa.bbb.ccc.ddd
IP_MASK=<ip-mask> The netmask address of the system in the format aaa.bbb.ccc.ddd

Usage Guidelines

Wild-card object-IDs may be used in the SHOW command.

The UI CONTROLLER may have one or more NETWORK_INTERFACEs.

The UI CONTROLLER NETWORK_INTERFACE commands support the configuration and testing of these NETWORK_INTERFACEs.

Examples

- To display a list of the Network Interfaces with their associated controller IDs and object ID values.

```
RAID$ UI SHOW NETWORK_INTERFACE *
NETWORK DEVICE ID 0
    ADDRESS 10.32.31.218
    NETMASK 255.255.240.0
    GATEWAY 10.32.16.2
```

- To set the network-interface to a specified controller-id and a network id and assigns values to the listed attributes:

```
RAID$ UI SET NETWORK_INTERFACE 0 0 IP_ADDRESS=192.168.0.10 IP_MASK=255.255.255.0  IP_GATEWAY=192.168.01
NETWORK DEVICE ID 0
    ADDRESS 192.168.0.10
    NETMASK 255.255.255.0
    GATEWAY 192.168.0.1
```