NetApp

ses events

ONTAP EMS reference

NetApp
November 22, 2024

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ses.access events

ses.access.noEnclServ

Severity

ALERT

Description

This message occurs when Enclosure Services in the storage system cannot establish contact with the enclosure monitoring process in any disk shelf on the channel. Enclosure Services in the storage system tries periodically to reestablish contact with the disk shelf.

Corrective Action

If the error persists for more than an hour, then reboot the controller.

Syslog Message

No Enclosure Services detected through channel %s.

Parameters

channelName (STRING): Name of the adapter port or switch port associated with the error; for example, "7a" or "myswitch:5".

ses.access.noMoreValidPaths

Severity

ALERT

Description

This message occurs when Enclosure Services in the storage system loses access to the enclosure monitoring process in the disk shelf I/O module.

Corrective Action

Enclosure Services in the storage system tries periodically to reestablish contact with the disk shelf. If the error persists for more than an hour, then halt the storage system, power-cycle the disk shelf, and reboot. If the error still persists, then the shelf I/O module might need to be replaced.

Syslog Message

No more valid paths to Enclosure Services in shelf %d on channel %s.

Parameters

shelf (INT): Disk shelf number on the channel with which access has been lost.
channelName (STRING): Name of the adapter port or switch port associated with the shelf; for example, "7a" or "myswitch:5".

ses.access.noShelfSES

Severity

ERROR

Description

This message occurs when Enclosure Services in the storage system cannot establish contact with the Enclosure Services process in the indicated disk shelf. The system tries periodically to reestablish contact with the disk shelf.

Corrective Action

If the error persists for more than an hour, then the disk shelf module must be power-cycled. If the module is a system CPU module (such as IOM6E), or if the system is attached in a single path to the module, then halt the system, reseat the module, and reboot. In a multipath system, remove the shelf module, wait 30 seconds, and then reinsert the module. If the error persists, then replace the shelf module.

Syslog Message

No SCSI-3 Enclosure Services on channel %s shelf %d.

Parameters

channelName (STRING): Name of the adapter port or switch port associated with the error; for example, "7a" or "myswitch:5".
shelf (INT): Disk shelf number on the channel with which contact has been lost.

ses.access.sesUnavailable

Severity

ALERT

Description

This message occurs when Enclosure Services in the storage system cannot establish contact with the enclosure monitoring process in one or more disk shelves on the channel. The system tries periodically to reestablish contact with the disk shelves.

Corrective Action

If the error persists for more than an hour, then reboot the controller.

Syslog Message

Enclosure Services unavailable for one or more shelves on channel %s.

Parameters

channelName (STRING): Name of the adapter port or switch port associated with the error; for example, "7a" or "myswitch:5".

ses.badsharestorageconfigerr events

ses.badShareStorageConfigErr

Severity

EMERGENCY

Description

This message occurs when a disk shelf module that is not supported in a Shared Storage system, such as an LRC module, is detected in a Shared Storage system.

Corrective Action

Replace the unsupported module with one that is supported.

Syslog Message

Disk shelf %d on adapter %s has an unsupported module for a Shared Storage configuration.

Parameters

shelf_num (INT): Disk shelf number the unsupported module is on.
ha_name (STRING): Host adapter on which the disk shelf resides.

ses.bridge events

ses.bridge.fw.getFailWarn

Severity

ERROR

Description

This message occurs when the bridge firmware revision cannot be obtained.

Corrective Action

Check the connection to the bank of Maxtor drives.

Syslog Message

On channel %s, the bridge firmware revision could not be obtained using disk IDs %d-%d.

Parameters

ChannelName (STRING): Name of the adapter or switch port that the system tried to get the revision number of.
DiskID (INT): Starting ID of the bank of Maxtor disks that was used to obtain the bridge firmware.
DiskRange (INT): Number of drives in that bank of Maxtor disks.

ses.bridge.fw.mmErr

Severity

ERROR

Description

This message occurs when the bridge firmware revision is inconsistent.

Corrective Action

Check the firmware revision number and make sure that they are consistent. You might have to update the firmware.

Syslog Message

On channel %s, the bridge firmware revision appears to be inconsistent : %8.8s and %8.8s.

Parameters

ChannelName (STRING): Name of the channel that contains the inconsistent firmware revision.
PrevRev (STRING): Previous firmware revision.
CurRev (STRING): Current firmware revision.

ses.channel events

ses.channel.rescanInitiated

Severity

INFORMATIONAL

Description

This message occurs when a rescan for enclosure services devices is initiated.

Corrective Action

(None).

Syslog Message

Initiating rescan on channel %s.

Parameters

channelName (STRING): Name of the adapter port or switch port being rescanned; for example, "7a" or "myswitch:5".

ses.config events

ses.config.diskStackMaxError

Severity

ERROR

Description

This message occurs when a stack of shelves contains more disk bays than the maximum number that are allowed.

Corrective Action

Remove shelves from the storage stack until the the number of disk bays do not exceed the maximum number.

Syslog Message

There are a total of %d disk bays on shelves attached to channel "%s", which exceeds the maximum number of disk bays (%d).

Parameters

numDiskBays (INT): Number of disk bays on the storage stack.
channelName (STRING): Name of the adapter port or switch port connected to the storage stack associated with the error (for example, "7a" or "myswitch:5").
maxDiskBays (INT): Maximum number of disk bays that are allowed on the storage stack.

ses.config.drivePopError

Severity

ERROR

Description

This message occurs when the channel has more disk drives on it than are allowed. Systems using synchronous mirroring allow more disk drives per channel than other systems.

Corrective Action

If synchronous mirroring is intended to be used, ensure that the license is installed. Otherwise, reduce the number of disk drives on the channel to no more than the maximum allowed.

Syslog Message

Disk drive population is greater than %d in channel %s; this is an illegal configuration. Synchronous mirroring %s is enabled.

Parameters

fcalTenancy (INT): Maximum number of disk drives allowed on this loop.
channelName (STRING): Name of the adapter port or switch port associated with the error; for example, "7a" or "myswitch:5".
isIsNot (STRING): Whether synchronous mirroring is enabled.

ses.config.IllegalEsh270

Severity

EMERGENCY

Description

This message occurs when ONTAP® software detects one or more Embedded Switched Hub (ESH) disk shelf modules in a disk shelf that is attached to a FAS270. This is not a supported configuration.

Corrective Action

Replace the ESH modules with ESH2 modules.

Syslog Message

One or more ESH modules are attached to a FAS270. This is not a supported configuration. Replace the ESH modules with ESH2 modules.

Parameters

(None).

ses.config.shelfMixError

Severity

EMERGENCY

Description

This message occurs when the channel has a mixture of ATA and Fibre Channel disk shelves; this is not a supported configuration.

Corrective Action

Mixed-mode operation of ATA and Fibre Channel disks on the system is only supported on separate loops. Move all Fibre Channel-based disk shelves to one loop and place all Fibre Channel-to-ATA-based disk shelves on another loop.

Syslog Message

Disk shelves present on channel %s are of different drive types; this is not a supported configuration.

Parameters

channelName (STRING): Name of the adapter port or switch port associated with the error; for example, "7a" or "myswitch:5".

ses.config.shelfPopError

Severity

ERROR

Description

This message occurs when the channel has more disk shelves on it than are allowed.

Corrective Action

Reduce the number of disk shelves on the channel to the number specified.

Syslog Message

Disk shelf population on channel %s is %d. Reduce the number of disk shelves on this channel to %d or fewer.

Parameters

channelName (STRING): Name of the adapter port or switch port associated with the error; for example, "7a" or "myswitch:5".
numShelves (INT): Number of disk shelves on the port.
maxShelves (INT): Maximum number of disk shelves on a port.

ses.disk events

ses.disk.configOk

Severity

INFORMATIONAL

Description

This message occurs when there are no longer any drives in a FAS2050 system's slots 20 through 23.

Corrective Action

(None).

Syslog Message

Disk configuration errors have been cleared.

Parameters

(None).

ses.disk.illegalConfigWarn

Severity

ERROR

Description

This message occurs when disk drives are inserted into the bottom row of a FAS2050 storage appliance. Disk drives are not supported in those slots.

Corrective Action

Remove the disk drives.

Syslog Message

Disk drives are inserted into unsupported drive slots in the bottom row of the storage appliance.

Parameters

(None).

ses.download events

ses.download.powerCyclingChannel

Severity

INFORMATIONAL

Description

This message occurs when the power cycling channel event is issued after a disk shelf firmware download to disk shelves that require a power-cycle to activate the new code.

Corrective Action

(None).

Syslog Message

Power cycling channel %s.

Parameters

channelName (STRING): Name of the adapter port or switch port on which the disk shelf is being power-cycled.

ses.download.shelfToReboot

Severity

INFORMATIONAL

Description

This message occurs after the completion of shelf firmware transfer to the DS14-Mk2-AT (R200) disk shelf, at which point the disk shelf requires about another five minutes to transfer the new firmware to its nonvolatile program memory, whereupon it reboots to begin to execute the new firmware. During this

reboot, a Fibre Channel loop reinitialization occurs, temporarily interrupting the loop.

Corrective Action

(None).

Syslog Message

The DS14-Mk2-AT shelves will be rebooted shortly to run the new firmware. The firmware download process should take about three minutes per shelf.

Parameters

(None).

ses.download.suspendIOForPowerCycle

Severity

INFORMATIONAL

Description

This message occurs when the suspending I/O event signals that the storage subsystem is temporarily stopping I/O to disks while one or more disk shelves have their power cycled after a download, if required by the disk shelf design.

Corrective Action

(None).

Syslog Message

Suspending disk I/O prior to shelf power cycle.

Parameters

(None).

ses.drive events

ses.drive.badPlacement

Severity

ALERT

Description

This message occurs when disk drives are placed in locations that do not provide for proper signal integrity. In some older shelf types only, circuitry in the disk drives conditions the signals on their way through the disk shelves. If the disk drives are not in certain locations, the signal might degrade and cause errors. Disk drives must be kept in the proper locations even if one or more disk drives are removed for maintenance reasons.

Corrective Action

If only loop A is used, always keep at least one disk drive in bays 0-2 and at least one disk drive in bays 3-6. If loop B is also used, always keep at least one disk drive in bays 0-2 and at least one disk drive in bays 4-6. The integrity requirement of both loops is satisfied if disk drives are placed as required for loop B. Remember that bays 3 and 4 are used for enclosure services access in XL400/XL500 disk shelves.

Syslog Message

Improper disk drive placement in channel %s disk shelf %d. Loop integrity requires certain disk shelf bays to be populated.

Parameters

ChannelName (STRING): Name of the affected adapter port or switch port loop.
ShelfID (INT): ID of the disk shelf.

ses.drive.missingFromLoopMap

Severity

ALERT

Description

This message occurs when a disk shelf detects a disk but the storage adapter cannot detect the disk. (Note: If the message "ses.drive.possShelfAddr" subsequently appears, follow the corrective actions in that message.)

Corrective Action

Monitor the storage system for approximately 15 minutes. If a "monitor.shelf.accessError.ok" event appears, then the condition has cleared, and no corrective action is needed. If the problem occurs to multiple disks on the same loop or is not resolved in 15 minutes, check the I/O modules at the back of the disk shelves on that loop for errors.

Syslog Message

The following device attached through adapter %s have not taken expected addresses: %s

Parameters

ChannelName (STRING): Channel the disk shelf is on.
DiskList (STRING): List of disks missing from Loop Map.

ses.drive.missingFromSESMap

Severity

ALERT

Description

This message occurs when the storage adapter detects a disk on the Fibre Channel loop or the SAS domain, but enclosure services in the disk shelf does not report a disk with that address. This error indicates that the disk took an address other than what the disk shelf should have provided, or that enclosure services in the disk shelf cannot be contacted for address information. (Note: If the message "ses.drive.possShelfAddr" subsequently appears, follow the corrective actions in that message.) In this condition, the SCSI Enclosure Services (SES) process in the system might be unable to perform certain operations on the disk, such as setting failure LEDs or detecting disk swaps.

Corrective Action

If the disk is not part of an active aggregate or volume, pull out the disk and push it back into the slot to ensure that the disk is in place. If the problem persists, insert a spare disk into the slot. If the problem is then gone, replace the original disk with the spare one. If the problem occurs to multiple disks on the same loop, check the I/O modules at the back of the disk shelves on that loop for errors. SAS domain disk shelves, DS14mk2 AT disk shelves, and SAS/SATA disk shelves do not rely on disk placement for enclosure services, since they have dedicated SES devices.

Syslog Message

On adapter %s, the device(s) with the following IDs are detected but are not reported as present by the shelf which should have supplied the IDs: %s

Parameters

ChannelName (STRING): Channel the disk shelf is on.
LoopIds (STRING): Loop or SCSI/SAS IDs of the missing disks.

ses.drive.PossShelfAddr

Severity

ERROR

Description

This message occurs in conjunction with the messages ses.drive.missingFromSESmap or ses.drive.missingFromLoopMap when there are devices that have apparently taken a wrong address; the adapter shows device addresses that SCSI Enclosure Services (SES) indicates should not exist, and vice versa. This error is not a fatal condition. It means that SES cannot perform certain operations on the affected disk drives, such as setting failure LEDs, because it is not certain which disk shelf the affected disk drive is in.

Corrective Action

If the problem is throughout the disk shelf, replace the disk shelf. If the error is only one disk drive per disk shelf, the drive might have taken an incorrect address at power-on. Arrange to make this disk drive a spare, and then reseat it to cause it to take its address again. If the problem persists, insert a different spare disk drive into the slot. If the error then clears, replace the original disk drive. If the problem still persists, there is a hardware problem with the individual disk bay. Replace the disk shelf.

Syslog Message

Possible actual locations for devices with unexpected addresses: %s.

Parameters

Msg (STRING): Physical locations of disks that do not have expected addresses in the adapter's map of disks.

ses.fw events

ses.fw.emptyFile

Severity

ERROR

Description

This message occurs when a firmware file is found to be empty during a disk shelf firmware update.

Corrective Action

Obtain the correct firmware file from NetApp and place it in the /etc/shelf_fw directory. You can download the firmware file from the NetApp Support Site at http://support.netapp.com.

Syslog Message

Shelf firmware file %s was empty.

Parameters

fileName (STRING): Name of the empty file.

ses.fw.resourceNotAvailable

Severity

ERROR

Description

This message occurs when there is not enough contiguous memory available to download disk shelf firmware.

Corrective Action

Reduce the amount of system activities before performing a manual disk shelf firmware update. If this does not resolve the issue, reboot the system.

Syslog Message

Not enough memory available to download disk shelf firmware %s.

Parameters

fileName (STRING): Name of the firmware file.

ses.giveback events

ses.giveback.restartAfter

Severity

INFORMATIONAL

Description

This message occurs when SCSI Enclosure Services (SES) is restarted after giveback.

Corrective Action

(None).

Syslog Message

Enclosure Services restarting after release of reservations.

Parameters

(None).

ses.giveback.wait

Severity

INFORMATIONAL

Description

This message occurs when SCSI Enclosure Services (SES) information is not available because the system is waiting for giveback.

Corrective Action

(None).

Syslog Message

Enclosure Services will be unavailable while waiting for giveback.

Parameters

(None).

ses.inconsistent events

ses.inconsistent.config

Severity

ALERT

Description

This message occurs when the system detects an inconsistent configuration of shelf-to-channel connections. One or more shelves on the reported channel are connected to a different set of channels (adapter ports or switch ports) than other shelves in the stack.

Corrective Action

Verify that all cables are fully inserted on the storage shelves connected to the channel. Verify that the shelves are cabled so that all shelves in a stack are connected to the same channels.

Syslog Message

Inconsistent configuration detected for shelf connected to adapter %s.

Parameters

channelName (STRING): Name of the adapter port or switch port where shelf connection inconsistencies are found.

ses.loop events

ses.loop.configErr

Severity

ALERT

Description

This message occurs when the system finds a disk shelf with a Loop Resiliency Circuit (LRC) module before a disk shelf with an Electronically Switched Hub (ESH) module in the loop map.

Corrective Action

Reorder the disk shelves so that the LRC disk shelf is found after the ESH disk shelf.

Syslog Message

Unsupported loop configuration for disk shelves attached to channel %s: A %s (ID %d) was found ahead of a %s (ID %d).

Parameters

channelName (STRING): Name of the channel the disk shelves are attached to.
prodChannel1 (STRING): Disk shelf identity (channel, product, and disk shelf number).
shelfId1 (INT): Disk shelf ID of the disk shelf on the unsupported loop.
prodChannel2 (STRING): Disk shelf identity (channel, product, and disk shelf number).
shelfId2 (INT): Disk shelf ID of the disk shelf on the unsupported loop.

ses.loop.configOk

Severity

INFORMATIONAL

Description

This message occurs when an unsupported Fibre Channel loop configuration error is corrected.

Corrective Action

(None).

Syslog Message

Unsupported loop configuration for disk shelves attached to channel %s was corrected.

Parameters

channelName (STRING): Name of the channel on which the unsupported loop configuration error was corrected.

ses.loop.loopMapUnavailable

Severity

INFORMATIONAL

Description

This message occurs when ONTAP® software cannot contact the disk shelf module on a disk shelf and, therefore, cannot resolve the loop map for a disk shelf.

Corrective Action

For Fibre Channel disk shelves, check whether disk drives are connected to slots 0 and 1 of the disk shelf module and that the disk drives are functional. If not, replace the disk drives. For all other disk shelf types, or if the preceding actions do not correct the error for Fiber Channel disk shelves, reseat the disk shelf module and check if the error is corrected. If not, replace the shelf module.

Syslog Message

Loop map unavailable for loop on channel %s. Could not check for unsupported disk shelf configurations.

Parameters

channelName (STRING): Name of the channel on which the loop map was unavailable.

ses.mismatch events

ses.mismatch.fw.version

Severity

ERROR

Description

This message occurs when the two disk shelf modules within the same disk shelf are running different versions of the firmware.

Corrective Action

Download the latest disk shelf firmware to the disk shelf module that is not up-to-date.

Syslog Message

The disk shelf modules on disk shelf %s.%d are running two different firmware versions. Disk shelf module A is running %s, and disk shelf module B is running %s.

Parameters

channelName (STRING): Name of the adapter port or switch port.
shelfID (INT): ID of the disk shelf.
revision_str (STRING): Revision number for disk shelf module A, the top disk shelf module.
revision_str2 (STRING): Revision number for disk shelf module B, the bottom disk shelf module.

ses.multipath events

ses.multipath.notSupported

Severity

NOTICE

Description

This message occurs when the AT-FCX disk shelf module does not support the multipath high-availability (Multipath HA) configuration.

Corrective Action

Replace this disk shelf module with one that supports the high-availability multipath configuration.

Syslog Message

AT-FCX disk shelf module %s on disk shelf %d on channel %s does not support the-high availability multipath configuration. Replace the module with one that supports the-high availability multipath configuration.

Parameters

shelfSlot (STRING): Slot position the disk shelf module is in, either A for the top slot or B for the bottom slot.
shelfId (INT): Disk shelf identification number of the disk shelf.
channelName (STRING): Name of the channel of the disk shelf.

ses.multipath.ReqError

Severity

ALERT

Description

This message occurs when the system detects that a SAS disk shelf is in a single-path cabling configuration.

Corrective Action

Check for SAS disk shelf enclosures with only a single path by using the 'sasadmin expander_map' command. Physically inspect all SAS cables on the attached storage for secure and correct connection.

Syslog Message

SAS disk shelf detected without a multipath configuration.

Parameters

(None).

ses.psu events

ses.psu.comboError

Severity

ALERT

Description

This message occurs when the power supplies that are installed in a disk shelf are not compatible with each other. Prolonged use of incompatible power supplies can result in failures of power supply units (PSUs).

Corrective Action

Replace one PSU immediately with a compatible model. Use the "storage shelf show -psu-part-number" command to locate all power supplies on the disk shelf, using the part numbers provided in the message as the required command parameter. Consult the NetApp Hardware Universe for compatible part number information.

Syslog Message

Incompatible power supplies were found on disk shelf "%d", serial number: %s, product ID: %s, PSU part numbers: %s, %s.

Parameters

ShelfId (INT): ID of the disk shelf.
serialNumber (STRING): Serial number of the storage shelf enclosure.
ProdId (STRING): Product identification of the shelf.
partNumber1 (STRING): Part number of PSU 1 on the shelf.
partNumber2 (STRING): Part number of PSU 2 on the shelf.

ses.psu.coolingReqError

Severity

ALERT

Description

This message occurs when the installed power supplies are placed so that air flow requirements of the disk shelf are not met. Placement of power supplies and their integrated fans is part of the disk shelf cooling and air flow design.

Corrective Action

Install power supplies in the indicated slots, cable to a power source, and turn them on. If the ses.psu.powerReqError is not presently posted for the system, an existing supply in the shelf can be moved to fill the required slot. A new instance of the error can be ignored while the supply is moved, but it should clear within a few minutes. If it does not, the condition must be corrected.

Syslog Message

Improper power supply placement in channel %s disk shelf %d. Power supplies must be present in power supply bays %s to satisfy air flow requirements.

Parameters

ChannelName (STRING): Name of the affected adapter port or switch port.
ShelfID (INT): ID of the disk shelf.
CoolBays (STRING): PSU bays where PSUs must be installed.

ses.psu.powerReqError

Severity

EMERGENCY

Description

This message occurs when too few power supplies are installed to redundantly satisfy the current-draw requirements of the shelf modules and disk drives in the shelf configuration. The number and type of disk modules and disk drives installed affect the requirements.

Corrective Action

Install the required number of power supplies in the disk shelf. Ensure that they are fully inserted, cabled to a power source, and turned on.

Syslog Message

Not enough power supplies are present in channel %s disk shelf %d to satisfy disk drive and shelf power requirements. The shelf requires %d supplies, but only %d are present.

Parameters

ChannelName (STRING): Name of the affected adapter port or switch port.
ShelfID (INT): ID of the disk shelf.
NumReqd (INT): Number of power supplies required.
NumPresent (INT): Number of PSUs present.

ses.shelf events

ses.shelf.bay.populate

Severity

INFORMATIONAL

Description

This message occurs when one of the drive in bay 1 or 2 is missing.

Corrective Action

(None).

Syslog Message

Disk shelf %s is recommended to have slot 1 and slot 2 populated at all times.

Parameters

shelfName (STRING): Disk shelf name.

ses.shelf.changedId

Severity

ERROR

Description

This message occurs on a SAS disk shelf when the disk shelf ID changed after power is applied to the disk shelf.

Corrective Action

Verify that the disk shelf ID displayed in this message is the same as the disk shelf ID shown on the disk shelf. If they are different and the disk shelf ID displayed in this message is the one you want, reset the disk shelf number to match it. If you want the new disk shelf ID instead of the disk shelf ID displayed in the message, verify that the disk shelf ID you want does not conflict with other disk shelves in the domain. Then power-cycle the disk shelf chassis. You can wait to perform this procedure until your next maintenance window. If the warning persists on both disk shelf modules after you completed the procedure, replace the disk shelf chassis. If it persists on only one disk shelf module, replace the disk shelf module.

Syslog Message

Disk shelf module %d on disk shelf %s.%d indicates that the disk shelf ID has been changed since the disk shelf module was powered on. %s.

Parameters

moduleNumber (INT): Element number of this module: either 1 for Module A or 2 for Module B.
channelName (STRING): Name of the adapter port or switch port associated with the disk shelf; for example, "7a" or "myswitch:5".
shelfNumber (INT): Disk shelf ID reported by the disk shelf before the ID change on the thumbwheel switch.
locationText (STRING): Location of the disk shelf module on the disk shelf.

ses.shelf.ctrlFailErr

Severity

ALERT

Description

This message occurs when SCSI Enclosure Services' (SES) control to a disk shelf fails.

Corrective Action

Check the LEDs on the disk shelf and the disk shelf modules on the back of the disk shelf to see whether there are any abnormalities. If the modules appear to be problematic, replace the applicable module. If the SES target is a disk drive, check to see whether the disk drive failed. If it failed, replace the disk drive.

Syslog Message

Enclosure control failed via %s (disk shelf %d). Alternate path will be used if available.

Parameters

SESTarget (STRING): Address of the SES target for which the SES control failed.
shelfID (INT): Disk shelf ID of the disk shelf that failed.

ses.shelf.disable.block.request

Severity

ALERT

Description

This message is generated when there is a failure while disabling the auto power cycle feature for all shelves that support auto power cycle feature on the system.

Corrective Action

(None).

Syslog Message

Fail while disabling shelf auto power cycle capability during %s (%d).

Parameters

requestOwner (STRING): Name of the requestor who requests to disable the auto power cycle feature.
status (INT): Failure status.

ses.shelf.drawer.min.drives

Severity

INFORMATIONAL

Description

This message occurs when one of the first 4 drives are missing in a drawer.

Corrective Action

Please insert a disk in one of the first 4 bays of the indicated drawer.

Syslog Message

Disk shelf %d, drawer %d, bay %d missing, drawer needs first 4 drives installed.

Parameters

shelfID (INT): Disk shelf ID.
drawerNum (INT): Disk drawer number.

bayNum (INT): Disk bay number.

ses.shelf.drawer.open

Severity

INFORMATIONAL

Description

This message occurs when one of the drawers of a disk shelf has been left open.

Corrective Action

Please close the drawer of the indicated drawer. If a drawer has been left open for an extended period of time, this can affect the cooling of components within the disk shelf.

Syslog Message

Disk shelf %d has drawer %d open.

Parameters

shelfID (INT): Disk shelf ID.
drawerNum (INT): Disk drawer number.

ses.shelf.drwr.phy.rateunkwn

Severity

ALERT

Description

This message occurs when one of the PHY ports of a shelf drawer is reporting an unknown link rate. The PHY port is a physical port in the drawer of the storage shelf that resides on the shelf side. This message indicates an internal error might have occurred in the shelf firmware or software. Communication between the PHY ports and the disk drives in the shelf might have failed or be in degraded states.

Corrective Action

Contact NetApp technical support for assistance.

Syslog Message

Drive shelf "%d", module "%s", drawer "%d", PHY "%d" is reporting an unknown link rate.

Parameters

shelfID (INT): Drive shelf ID.
module (STRING): Drive shelf module.
drawerNum (INT): Shelf drawer number.
phyNum (INT): Shelf drawer PHY number.

ses.shelf.em.ctrlFailErr

Severity

EMERGENCY

Description

This message occurs when SCSI Enclosure Services' (SES) control to the internal disk drives of a system

fails.

Corrective Action

Run the "storage shelf show" command to see whether that disk shelf is still being actively monitored. If the command indicates a failure, there is a hardware failure in the system's internal disk shelf.

Syslog Message

Enclosure control failed via embedded disk shelf %d.

Parameters

shelfID (INT): Disk shelf ID of the embedded disk shelf that failed.

ses.shelf.fw.disrUpdFW

Severity

INFORMATIONAL

Description

This message occurs when a disk shelf firmware update operation causes temporary but noticeable interruption of disk I/O. Current disk shelf firware levels do not support nondisruptive upgrade (NDU).

Corrective Action

(None).

Syslog Message

SCSI Enclosure Services (SES) disk shelf firmware update disrupts disk I/O. The current shelf firmware (product revision level %.4s) does not support nondisruptive upgrade (NDU).

Parameters

ProductRev (STRING): Product revision level.

ses.shelf.fw.disrUpdPath

Severity

INFORMATIONAL

Description

This message occurs when a disk shelf firmware update operation causes temporary but noticeable interruption of disk I/O. Redundant paths to the disk shelf are required for nondisruptive upgrade (NDU).

Corrective Action

(None).

Syslog Message

SCSI Enclosure Services (SES) disk shelf firmware update disrupts disk I/O. Redundant paths to the disk shelf are needed for nondisruptive upgrade (NDU) to be used.

Parameters

(None).

ses.shelf.fw.update.ndu

Severity

INFORMATIONAL

Description

This message occurs when a shelf firmware update is performed using the nondisruptive upgrade (NDU) procedure.

Corrective Action

(None).

Syslog Message

SCSI Enclosure Services (SES) shelf firmware update will be performed using nondisruptive upgrade (NDU).

Parameters

(None).

ses.shelf.fw.update.pfu.nrdnt

Severity

INFORMATIONAL

Description

This message occurs when a shelf firmware update is performed using the Package Firmware Update (PFU) process because redundant paths to the shelf are not present.

Corrective Action

(None).

Syslog Message

SCSI Enclosure Services (SES) shelf firmware update will be performed using Package Firmware Update (PFU) because redundant paths are not present.

Parameters

(None).

ses.shelf.IdBasedAddr

Severity

ERROR

Description

This message occurs on a serial attached SCSI (SAS) disk shelf when the SAS address of the devices are based on the disk shelf ID instead of the disk shelf backplane serial number. This indicates problems communicating with the disk shelf backplane.

Corrective Action

Reseat the master disk shelf module as indicated by the output of the "storage shelf show" command. If the problem persists, reseat the slave disk shelf module. If the problem persists, find the new master disk shelf module, and replace it. If the problem persists, replace the other disk shelf module. If the problem persists,

replace the disk shelf enclosure.

Syslog Message

Disk shelf module %d on disk shelf %s.%d indicates that its SAS addresses are based on the disk shelf ID, instead of on the disk shelf backplane serial number. %s.

Parameters

moduleNumber (INT): Element number of this module: either 1 for Module A or 2 for Module B.
channelName (STRING): Name of the adapter port or switch port associated with the disk shelf; for example, "7a" or "myswitch:5".
shelfNumber (INT): Disk shelf ID.
locationText (STRING): Location of the disk shelf module on the disk shelf.

ses.shelf.invalNum

Severity

ERROR

Description

This message occurs when ONTAP® software detects that an SAS disk shelf connected to the system has an invalid disk shelf number.

Corrective Action

Power-cycle the disk shelf. If the problem persists, replace the disk shelf modules. If the problem still persists, replace the disk shelf.

Syslog Message

A disk shelf on adapter %s has an invalid disk shelf number of %d. %s.

Parameters

channelName (STRING): Name of the channel the disk shelf is on that is reporting an error.
shelfNumber (INT): Invalid Disk shelf ID.
softId (STRING): String indicating whether a soft disk shelf number is assigned to the disk shelf.

ses.shelf.maxExceeded

Severity

ERROR

Description

This message occurs when more disk shelves are attached than the controller can monitor. The controller cannot detect or identify abnormal conditions in excess shelves, nor can it download firmware to unmonitored shelves. The reported device address is one instance of a device in an unmonitored disk shelf. There might be multiple unmonitored shelves.

Corrective Action

Consult system documentation for the maximum number of supported disk shelves, which might be lower than the number reported here. Reduce the number of attached disk shelves to no more than the documented number. Consolidating disk drives into sparsely populated shelves and removing excess shelves is one way to reduce shelf count.

Syslog Message

More than %d disk shelves are attached. Shelf containing %s and possibly other shelves are not monitored.

Parameters

max_enclosures (INT): Maximum number of disk shelves this system can monitor and control.
device (STRING): Address of the device.

ses.shelf.mmErr

Severity

ALERT

Description

This message occurs when a disk shelf is not supported by the platform it was booted on.

Corrective Action

Check whether the current version of ONTAP® software supports the disk shelf. If not, install an ONTAP version that supports the disk shelf. If the disk shelf is supported, the error might be cleared by hourly attempts by ONTAP to establish proper contact with the disk shelf.

Syslog Message

SCSI Enclosure Services (SES) device accessed by %s (product revision level [%.4s]) (enclosure vendor ID [%.8s]) (enclosure product ID [%.16s]) is not supported on this platform.

Parameters

DeviceName (STRING): Address of the unqualified Enclosure Services device.
ProductRev (STRING): Product revision level.
EnclosureVendorID (STRING): Enclosure Vendor Identification.
EnclosureProductID (STRING): Enclosure Product Identification.

ses.shelf.OSmmErr

Severity

ALERT

Description

This message occurs when there are incompatible ONTAP® software versions in a Shared Storage configuration that would cause SCSI Enclosure Services (SES) not to function properly.

Corrective Action

Update the system that has an earlier ONTAP version to match the one that has the latest ONTAP version.

Syslog Message

Incompatible versions of ONTAP are running on the different systems in a Shared Storage Configuration.

Parameters

(None).

ses.shelf.powercycle.done

Severity

INFORMATIONAL

Description

This message occurs when a disk shelf power-cycle finishes.

Corrective Action

(None).

Syslog Message

Disk shelf power-cycled; resuming disk I/O.

Parameters

(None).

ses.shelf.powercycle.start

Severity

INFORMATIONAL

Description

This message occurs when a disk shelf is power-cycled and SCSI Enclosure Services (SES) needs to wait for it to finish.

Corrective Action

(None).

Syslog Message

Waiting for disk shelf power-cycle to be complete.

Parameters

(None).

ses.shelf.RAS.suggestion

Severity

INFORMATIONAL

Description

This event is generated when various different supported combinations of ESHx type storage controller I/O modules are used in the various different ESHx type storage enclosures. Though this could be a supported configuration, to make the best of the power cycle features it is recommended to keep the FC loops as homogenous as possible.

Corrective Action

For best practices, use only the ESH4 controller modules in the DS14-Mk4-FC enclosures.

Syslog Message

ses.shelf.RAS.suggestion INFO Channel %s, Mixing %s I/O modules is fully supported on a FC loop. However, for improved reliability migration to homogeneous ESH4 configurations is recommended.

Parameters

    channelName (STRING): Name of the adapter port or switch port of the disk shelf.
    supportedControllerModules (STRING): ESHx enclosure modules, ESH/ESH2/ESH4

ses.shelf.reset.auto.fail

Severity

    ERROR

Description

    This event is generated when the automated power cycle attempt in the shelf enclosure - identified by the channel.shelf_id - had failed. The trigger condition for the automated reset is also reported.

Corrective Action

    Try the 'storage power_cycle shelf' on the same shelf. If it still fails, please refer to the "Trouble Shooting Section" of the NDR documentation.

Syslog Message

    %s disk shelf %s.%d [%s] failed to perform an automatic reset (0x%x)

Parameters

    shelfType (STRING): Shelf enclosure type, DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.
    channelName (STRING): Name of the adapter port or switch port of the disk shelf that was attempted to be power cycled.
    shelfId (INT): ID of the disk shelf that was attempted to be power cycled.
    serialNumber (STRING): Serial number of the storage shelf enclosure.
    triggerCondition (INT): Trigger reason for the automated reset, as reported by the shelf enclosure.

ses.shelf.reset.auto.good

Severity

    INFORMATIONAL

Description

    This event is generated when the automated power cycle attempt in the shelf enclosure - identified by the channel.shelf_id - had succeeded. The trigger for the automated reset is also reported.

Corrective Action

    (None).

Syslog Message

    %s disk shelf %s.%d [%s] has recovered from an automatic reset (0x%x)

Parameters

    shelfType (STRING): Shelf enclosure type, DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.
    channelName (STRING): Name of the adapter port or switch port of the disk shelf that was power cycled.
    shelfId (INT): ID of the disk shelf that was power cycled.
    serialNumber (STRING): Serial number of the storage shelf enclosure.
    triggerCondition (INT): Trigger reason for the automated reset, as reported by the shelf enclosure.

ses.shelf.reset.capability

Severity

INFORMATIONAL

Description

This event is generated when the periodic storage enclosure services monitor detects some of the DS14-Mk4-FC,DS14-Mk2-FC and DS14-Mk2-AT storage enclosures are not being upgraded to the correct requirements, to avail the enhanced power cycle features. This is just an informational message only, not an error. The idea is to make the admin follow the suggested best practices, so that the Filer could make use of the advanced features provided.

Corrective Action

Check the power supply unit information on all the DS14-Mk4-FC, DS14-Mk2-FC and the DS14-Mk2-AT shelf enclosure modules by executing the 'environment shelf' command. Plan to replace the power supply units that are not "Type:HRE capable".

Syslog Message

Some %s disk shelves on this system are capable of automatic power reset, but some do not have appropriate firmware or PSU model. For improved system RAS, consider upgrading shelves to have this capability. The environ shelf command shows this feature's status.

Parameters

shelfType (STRING): Shelf enclosure type, DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.

ses.shelf.reset.request

Severity

INFORMATIONAL

Description

This event is generated when the command 'storage power_cycle shelf start' is successfully sent to the shelf - identified by the channel.shelf_id, and is of type DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.

Corrective Action

(None).

Syslog Message

Reset requested on %s disk shelf %s.%d [%s].

Parameters

shelfType (STRING): Shelf enclosure type, DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.
channelName (STRING): Name of the adapter port or switch port of the disk shelf to be power cycled.
shelfId (INT): ID of the disk shelf that is to be power cycled.
serialNumber (STRING): Serial number of the storage shelf enclosure.

ses.shelf.reset.request.fail

Severity

ERROR

Description

This event is generated when the command 'storage power_cycle shelf start' sent to the shelf enclosure - identified by the channel.shelf_id - could not power cycle the shelf enclosure successfully.

Corrective Action

Try the 'storage power_cycle shelf start' on the same shelf again. If it still fails, please refer to the "Trouble Shooting Section" of the NDR documentation.

Syslog Message

%s disk shelf %s.%d [%s] failed to reset when requested.

Parameters

shelfType (STRING): Shelf enclosure type, DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.
channelName (STRING): Name of the adapter port or switch port of the disk shelf that was attempted to be power cycled.
shelfId (INT): ID of the disk shelf that was attempted to be power cycled.
serialNumber (STRING): Serial number of the storage shelf enclosure.

ses.shelf.reset.request.good

Severity

INFORMATIONAL

Description

This event is generated when the command 'storage power_cycle shelf start' sent to the shelf - identified by the channel.shelf_id, and is of type DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT - has successfully recovered.

Corrective Action

(None).

Syslog Message

%s disk shelf %s.%d [%s] has recovered from a requested reset.

Parameters

shelfType (STRING): Shelf enclosure type, DS14-Mk4-FC, DS14-Mk2-FC or DS14-Mk2-AT.
channelName (STRING): Name of the adapter port or switch port of the disk shelf that was power cycled.
shelfId (INT): ID of the disk shelf that was power cycled.
serialNumber (STRING): Serial number of the storage shelf enclosure.

ses.shelf.reset.unsup.drives

Severity

ERROR

Description

This message occurs when Nondisruptive Recovery (NDR) functionality is disabled due to the presence of Parallel ATA (PATA) disk drives on the disk loop.

Corrective Action

Replace all X266_MTOMC320PSX or X262_MCALY250PSX disk drives and then turn on the automatic reset capability.

Syslog Message

NDR functionality is disabled due to the presence of X266_MTOMC320PSX or X262_MCALY250PSX disk drives on the disk loop.

Parameters

(None).

ses.shelf.sameNumReassign

Severity

ERROR

Description

This message occurs when ONTAP® software detects more than one SAS shelf connected to the same adapter has the same disk shelf number.

Corrective Action

Change the disk shelf number on the disk shelf to one that does not conflict with other disk shelves attached to the same adapter. Then halt the system and reboot the disk shelf.

Syslog Message

Multiple disk shelves with disk shelf number %d are found on channel %s. Disk shelf with serial number %s has been assigned the soft disk shelf number of %d.

Parameters

prevId (INT): Conflicting disk shelf number.
channelName (STRING): Name of the channel the disk shelf is on that is reporting an error.
serialNum (STRING): Serial number of the disk shelf that is being assigned the soft ID.
softId (INT): Newly assigned soft disk shelf number.

ses.shelf.unsupportAllowErr

Severity

ALERT

Description

This message occurs when a disk shelf is not supported by ONTAP® software. ONTAP will continue to use the disk shelf, but environmental monitoring of the disk shelf is not possible.

Corrective Action

Check whether the current version of ONTAP supports this disk shelf. If not, install an appropriate version. If ONTAP does support this disk shelf, this error might be cleared on hourly attempts by ONTAP to establish proper contact with the disk shelf.

Syslog Message

Unsupported disk shelf found on channel %s.

Parameters

ChannelName (STRING): Name of the channel that contains the disk shelf.

ses.shelf.unsupportedErr

Severity

ALERT

Description

This message occurs when a disk shelf is not supported by ONTAP® software.

Corrective Action

Check whether the current version of ONTAP supports this disk shelf. If not, install an appropriate version.

Syslog Message

Unsupported disk shelf found. Taking channel %s offline.

Parameters

ChannelName (STRING): Name of the channel that contains the disk shelf. This channel will be taken offline.

ses.status events

ses.status.ACPError

Severity

ALERT

Description

This message occurs when a failure has been detected in ACP processor that provides alternate control path capability.

Corrective Action

Replace the module. In some disk shelf types, this function is integrated into the SAS interface modules.

Syslog Message

%s ACP Processor error for %s %d: %s %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.ACPInfo

Severity

INFORMATIONAL

Description

This message occurs when a problem previously reported about the ACP Processor has been corrected or when other information about the ACP Processor that does not necessarily require customer action is

reported.

Corrective Action

(None).

Syslog Message

%s ACP Processor information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
infoMsg (STRING): Generic SES information.

ses.status.ACPWarn

Severity

ERROR

Description

This message occurs when a non-fatal condition has been detected in the ACP Processor that provides alternate control path capability.

Corrective Action

Replace the module. In some disk shelf types, this function is integrated into the SAS interface modules.

Syslog Message

%s ACP Processor warning for %s %d: %s. %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
warningMsg (STRING): Generic SES Warning.
warningText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.ATFCXError

Severity

ALERT

Description

This message occurs when the reporting disk shelf detects an error in the indicated AT-FCX module. The module might not be able to perform I/O to disks within the disk shelf.

Corrective Action

Verify that the AT-FCX module is fully seated and secured. If the problem persists, replace the AT-FCX module.

Syslog Message

%s error for %s SES controller module %s: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SES type descriptor text for this AT-FCX module.
module (STRING): Module A is the upper module in the enclosure on the back side. Module B is the lower module in the enclosure on the back side.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the exact warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.ATFCXInfo

Severity

INFORMATIONAL

Description

This message occurs when a previously reported error in the AT-FCX module is corrected, or the system reports other information that does not necessarily require customer action.

Corrective Action

(None).

Syslog Message

%s information for %s SES controller module %s: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SES type descriptor text for this element.
module (STRING): Module A is the upper module in the enclosure on the back side. Module B is the lower module in the enclosure on the back side.
infoMsg (STRING): Generic SES information.

ses.status.battery.error

Severity

ERROR

Description

This message occurs when a storage shelf reports a generic "battery error detected" error. The error could be due to an inability to read the A/D convertor or because the intermodule connections are down.

Corrective Action

If the intermodule connection is down on one or both of the PCIe Switch Modules (PSMs), bring the intermodule connection up (by rebooting the affected module). If the intermodule connection is up on both of the PSMs (there are no errors on both PSMs), replace the coin cell battery. If the issue persists, a module might need to be replaced. Contact NetApp technical support.

Syslog Message

%s battery failure error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the battery.
batteryNumber (INT): SES element number of the battery.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the error.
locationText (STRING): Location of the element on the storage shelf.

ses.status.battery.info

Severity

NOTICE

Description

This message occurs when a condition that was previously reported about a storage shelf battery has been corrected or when other information about the battery that might not require customer action is reported.

Corrective Action

(None).

Syslog Message

%s battery information for %s %d: %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the battery.
batteryNumber (INT): SES element number of the battery.
infoMsg (STRING): Generic SES information.

ses.status.battery.missing

Severity

ERROR

Description

This message occurs when a storage shelf reports that a battery is not installed.

Corrective Action

Install the battery. If the problem persists, contact NetApp technical support.

Syslog Message

%s battery warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the battery.
batteryNumber (INT): SES element number of the battery.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the battery on the storage shelf.

ses.status.battery.threshErr

Severity

ALERT

Description

This message occurs when the element threshold of a battery on a storage shelf is outside the threshold limits.

Corrective Action

Install a new battery. If the problem persists, this indicate a hardware failure. Contact NetApp technical support.

Syslog Message

%s battery failure error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the battery.
batteryNumber (INT): SES element number of the failing battery.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact description of the error.
locationText (STRING): Location of the battery on the storage shelf.

ses.status.bootDv.error

Severity

ERROR

Description

This message occurs when a storage shelf reports a boot device SMART error on a PCIe Switch Module (PSM)

Corrective Action

Replace the boot device. If the issue persists, contact NetApp technical support.

Syslog Message

%s boot device failure for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the boot device.
bootDvNumber (INT): SES element number of the boot device.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the error.
locationText (STRING): Location of the boot device on the storage shelf.

ses.status.bootDv.info

Severity

NOTICE

Description

This message occurs when a condition that was previously reported about a storage shelf boot device has been corrected or when other information about the boot device that might not require customer action is reported.

Corrective Action

(None).

Syslog Message

%s boot device notification for %s %d: %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the boot device.
bootDvNumber (INT): SES element number of the boot device.
infoMsg (STRING): Generic SES information.

ses.status.bootDv.missing

Severity

ERROR

Description

This message occurs when the PCIe Switch Module (PSM) of a storage shelf reports that a partner PSM boot device is not installed.

Corrective Action

Install the boot device on the partner PSM. If the problem persists, contact NetApp technical support.

Syslog Message

%s partner %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the boot device.
bootDvNumber (INT): SES element number of the boot device.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the error.
locationText (STRING): Location of the boot device on the storage shelf.

ses.status.connectorInfo

Severity

INFORMATIONAL

Description

This message occurs when a problem previously reported about the SAS connector has been corrected.

Corrective Action

(None).

%s SAS connector information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
infoMsg (STRING): Generic SES information.

ses.status.connectorWarn

Severity

ERROR

Description

This message occurs when a non-fatal condition has been detected in communication with the SAS connector or its EEPROM. This error does not necessarily mean that the data path through the connector is faulty.

Corrective Action

Ensure that the connector is completely installed. If the error persists, replace the cable first, then the disk shelf I/O module.

Syslog Message

%s SAS connector warning for %s %d: %s. %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
warningMsg (STRING): Generic SES Warning.
warningText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.currentError

Severity

ERROR

Description

This message occurs when a critical condition is detected in the indicated disk shelf current sensor. The disk shelf might be able to continue operation.

Corrective Action

Verify that the PSU and the AC line are supplying power. Monitor the power grid for abnormalities. If all seems to be normal, replace the PSU. If the problem persists, contact NetApp technical support.

Syslog Message

%s current error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this power supply.
psNumber (INT): SES element number of the power supply.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the exact warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.currentInfo

Severity

INFORMATIONAL

Description

This message occurs when an error or warning condition previously reported by or about the disk shelf current sensor is corrected, or the system reports other information about the current in the disk shelf that does not necessarily require customer action.

Corrective Action

(None).

Syslog Message

%s current information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this sensor.
sensorNumber (INT): SES element number of the reporting sensor.
infoMsg (STRING): Generic SES information.

ses.status.currentWarning

Severity

ERROR

Description

This message occurs when a warning condition is detected in the indicated disk shelf current sensor. The disk shelf might be able to continue operation.

Corrective Action

Verify that the PSU and the AC line are supplying power. Monitor the power grid for abnormalities. If all seems to be normal, replace the PSU. If the problem persists, contact NetApp technical support.

Syslog Message

%s current warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this power supply.
psNumber (INT): SES element number of the power supply.
errorMsg (STRING): generic SES error.
errorText (STRING): Description of the exact warning.

locationText (STRING): Location of the module on the shelf.

ses.status.dimm.error

Severity

ERROR

Description

This message occurs when a storage shelf reports a generic "DIMM error detected" error on a PCIe Switch Module (PSM). The error could be because intermodule connections are down.

Corrective Action

If the intermodule connection is down on one or both of the PCIe Switch Modules (PSMs), bring the intermodule connection up (by rebooting the affected module). If the intermodule connection is up on both of the PSMs (there are no errors on both PSMs), replace the DIMM. If the issue persists, a module might need to be replaced. Contact NetApp technical support.

Syslog Message

%s DIMM failure for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the DIMM.
dimmNumber (INT): SES element number of the DIMM.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the error.
locationText (STRING): Location of the DIMM on the storage shelf.

ses.status.dimm.info

Severity

NOTICE

Description

This message occurs when a condition that was previously reported about a storage shelf DIMM has been corrected or when other information about the DIMM that might not require customer action is reported.

Corrective Action

(None).

Syslog Message

%s DIMM notification for %s %d: %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the DIMM.
dimmNumber (INT): SES element number of the DIMM.
infoMsg (STRING): Generic SES information.

ses.status.dimm.missing

Severity

ERROR

Description

This message occurs when the PCIe Switch Module (PSM) of a storage shelf reports that a DIMM is not installed.

Corrective Action

Install the DIMM. If the problem persists, contact NetApp technical support.

Syslog Message

%s %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the DIMM.
dimmNumber (INT): SES element number of the DIMM.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the error.
locationText (STRING): Location of the DIMM on the storage shelf.

ses.status.dimm.threshErr

Severity

ALERT

Description

This message occurs when the element threshold of a DIMM is outside the threshold limits in the indicated PCIe Switch Module (PSM) of a storage shelf.

Corrective Action

Install a new DIMM. If the problem persists, this indicates a hardware failure. Contact NetApp technical support.

Syslog Message

%s DIMM threshold failure error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the DIMM.
dimmNumber (INT): SES element number of the failing DIMM.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the error.
locationText (STRING): Location of the DIMM on the storage shelf.

ses.status.displayInfo

Severity

INFORMATIONAL

Description

This message occurs when a previous condition in the display panel has been corrected.

Corrective Action

(None).

Syslog Message

%s display information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this display panel.
displayNumber (INT): SES element number of this display panel.
infoMsg (STRING): Generic SES information.

ses.status.displayWarning

Severity

ERROR

Description

This message occurs when the enclosure services module has detected a warning condition for the disk shelf display panel. The disk shelf might be unable to provide correct addresses to its disks.

Corrective Action

If possible, verify that the connection between the disk shelf and the display is secure. Verify that the Enclosure Services module or modules are fully seated; replacing them might solve the problem. If the problem persists, the Enclosure Services module that detected the warning condition might be faulty. If the problem persists after the module or modules are replaced, replace the disk shelf. If the problem persists, contact NetApp technical support for assistance.

Syslog Message

%s display warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this display panel.
displayNumber (INT): SES element number of the this display panel.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.driveError

Severity

ERROR

Description

This message occurs when a critical condition has been detected for the disk drive in the shelf. The drive might fail.

Corrective Action

Make sure that the drive is not running on a degraded volume. If it is, then add as many spares as necessary into the system, up to the specifed level. After the volume is no longer in degraded mode, replace the drive that is failing.

Syslog Message

Error on drive %d on %s shelf %s.%d%s.

Parameters

driveNumber (INT): SES element number of the failing drive.
shelfType (STRING): Type of the disk shelf that is experiencing the problem.
channel (STRING): Channel the shelf is on.
shelfNumber (INT): Number of the disk shelf the drive is on.
ErrorText (STRING): Exact error description.

ses.status.driveOk

Severity

INFORMATIONAL

Description

This message occurs when a disk drive that was previously experiencing problem returns to normal operation.

Corrective Action

(None).

Syslog Message

The error on drive %d on %s shelf %s.%d has been corrected.

Parameters

driveNumber (INT): SES element number of the drive.
shelfType (STRING): Type of the disk shelf that contains the drive.
channel (STRING): Channel the shelf is on.
shelfNumber (INT): Number of the disk shelf the drive is on.

ses.status.driveWarning

Severity

ERROR

Description

This message occurs when a non-critical condition has been detected for the disk drive in the shelf. The drive might fail.

Corrective Action

Make sure that the drive is not running on a degraded volume. If it is, then add as many spares as necessary into the system, up to the specified level. After the volume is no longer in degraded mode, replace the drive that is failing.

Syslog Message

Error on drive %d on %s shelf %s.%d%s.

Parameters

driveNumber (INT): SES element number of the failing drive.
shelfType (STRING): Type of the disk shelf that is experiencing the problem.
channel (STRING): Channel the shelf is on.
shelfNumber (INT): Number of the disk shelf the drive is on.
warningText (STRING): Exact warning description.

ses.status.electronicsError

Severity

ALERT

Description

This message occurs when a failure is detected in a module that provides disk enclosure services monitoring capability.

Corrective Action

Replace the shelf module.

Syslog Message

%s environmental monitoring error for %s %d: %s %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.electronicsInfo

Severity

INFORMATIONAL

Description

This message occurs when a problem previously reported about the disk shelf enclosure services electronics has been corrected or when other information about the enclosure electronics that does not necessarily require customer action is reported.

Corrective Action

(None).

Syslog Message

%s environmental monitoring information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).

typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this element.
electrNumber (INT): SES element number of this element.
infoMsg (STRING): Generic SES information.

ses.status.electronicsWarn

Severity

ERROR

Description

This message occurs when a non-fatal condition is detected in a module that provides disk enclosure services monitoring capability.

Corrective Action

Replace the module. In most disk shelf types, this function is integrated into the FC, SCSI, or SAS interface modules.

Syslog Message

%s environmental monitoring warning for %s %d: %s. %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
warningMsg (STRING): Generic SES Warning.
warningText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.enclError

Severity

EMERGENCY

Description

This message occurs when a failure is detected in the disk enclosure (shelf) internal hardware.

Corrective Action

Contact NetApp technical support for assistance with shelf or shelf midplane replacement.

Syslog Message

%s environmental monitoring error for %s %d: %s %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this element.
electrNumber (INT): SES element number of this element.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the failed component on the disk shelf.

ses.status.enclInfo

Severity

INFORMATIONAL

Description

This message occurs when a problem previously reported about the disk shelf hardware has been corrected.

Corrective Action

(None).

Syslog Message

%s disk inclosure information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this element.
electrNumber (INT): SES element number of this element.
infoMsg (STRING): Generic SES information.

ses.status.enclWarn

Severity

ERROR

Description

This message occurs when an error condition is present in the disk shelf that causes the shelf fault LED to be lit, including faults in shelf components or disks marked as failed by ONTAP® software.

Corrective Action

Correct error conditions in the disk shelf. Check that the power supplies are in the proper locations, that there are the required number of them, and that they are powered on. Remove failed disk drives. If multiple shelf modules are expected, install a missing module, and ensure that the firmware revisions are at the same level, preferably the latest revision available. If the error persists, contact NetApp technical support for assistance.

Syslog Message

%s disk enclosure warning for %s %d: %s. %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
warningMsg (STRING): Generic SES Warning.
warningText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.etherConn.info

Severity

NOTICE

Description

This message occurs when a problem previously reported about a PCIe switch module (PSM) port's Ethernet connector has been corrected.

Corrective Action

(None).

Syslog Message

%s Ethernet connector information for port %s: %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
connName (STRING): SES element name of this Ethernet connector.
infoMsg (STRING): Generic SES information.

ses.status.etherConn.warn

Severity

ERROR

Description

This message occurs when a non-fatal condition has been detected in communication with a PCIe switch module (PSM) port's external Ethernet connector or its EEPROM. This error does not necessarily mean that the data path through the connector is faulty.

Corrective Action

Verify that the Ethernet cable or transceiver is correctly installed. If the error persists, replace the cable. If necessary,replace the PSM.

Syslog Message

%s Ethernet connector warning for port %s: %s. %s %s.

Parameters

prodChannel (STRING): Storage shelf identity (channel, product, and shelf number).
connName (STRING): SES element name of this Ethernet connector.
warningMsg (STRING): Generic SES warning.
warningText (STRING): Warning text.
locationText (STRING): Location of the module on the storage shelf.

ses.status.fanError

Severity

EMERGENCY

Description

This message occurs when the indicated disk shelf cooling fan or fan module has failed, and the shelf or its components are not receiving required cooling airflow.

Corrective Action

Verify that the fan module is fully seated and secured (the fan is integrated into the power supply module in some disk shelves). If the problem persists, replace the fan module. If the problem still persists, contact NetApp technical support for assistance.

Syslog Message

%s cooling fan error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this fan.
fanNumber (INT): SES element number of this fan.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the error.
locationText (STRING): Location of the module on the disk shelf.

ses.status.fanInfo

Severity

INFORMATIONAL

Description

This message occurs when a condition previously reported about the disk shelf cooling fan or fan module has been corrected or when other information about the fans that does not necessarily require customer action is reported.

Corrective Action

(None).

Syslog Message

%s cooling fan information for %s %d: %s.

Parameters

prodChannel (STRING): Shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this fan.
fanNumber (INT): SES element number of this fan.
infoMsg (STRING): Generic SES information.

ses.status.fanWarning

Severity

NOTICE

Description

This message occurs when a disk shelf cooling fan is not operating to specification, or a component of a fan module has stopped functioning. The disk shelf components continue to receive cooling airflow but might eventually reach temperatures that are out of specification.

Corrective Action

Verify that the fan or fan module is fully seated and secured (fans are integrated into the power supply module in some shelves). If the problem persists, replace the fan module. If the problem still persists, contact NetApp technical support for assistance.

Syslog Message

%s cooling fan warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this fan.
fanNumber (INT): SES element number of this fan.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.inputPowerError

Severity

ALERT

Description

This message occurs when the system detects a failure in the Input Power Monitor. The Input Power Monitor monitors power to the Power Supply Units (PSU).

Corrective Action

Check that the PSU is receiving sufficient power from an AC source.

Syslog Message

%s Input Power Monitor error for %s %d: %s %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the error.
locationText (STRING): Location of the PSU on the disk shelf.

ses.status.inputPowerInfo

Severity

INFORMATIONAL

Description

This message occurs when a previously reported Input Power Monitor problem of a disk shelf is corrected, or when the system is reporting information about the Input Power Monitor that does not necessarily require customer action.

Corrective Action

(None).

Syslog Message

%s Input Power Monitor information for %s %d: %s.

Parameters

> **prodChannel** (STRING): Disk shelf identity (channel, product, and shelf number).
> **typeText** (STRING): SES type descriptor text for this element.
> **electrNumber** (INT): SES element number of this element.
> **infoMsg** (STRING): Generic SES information.

ses.status.inputPowerWarn

Severity

> ERROR

Description

> This message occurs when the system detects a non-fatal condition in the Input Power Monitor of a disk shelf. The Input Power Monitor monitors power to the Power Supply Units (PSU).

Corrective Action

> Check that the PSU is receiving sufficient power from an AC source.

Syslog Message

> %s Input Power Monitor warning for %s %d: %s. %s %s.

Parameters

> **prodChannel** (STRING): Disk shelf identity (channel, product, and shelf number).
> **typeText** (STRING): SES type descriptor text for this element.
> **electrNumber** (INT): SES element number of this element.
> **warningMsg** (STRING): Generic SES warning.
> **warningText** (STRING): Exact wording of the warning.
> **locationText** (STRING): Location of the PSU on the disk shelf.

ses.status.ModuleError

Severity

> ALERT

Description

> This message occurs when the reporting disk shelf has detected an error in the indicated disk shelf module.

Corrective Action

> Verify that the shelf module is fully seated and secure. If the problem persists, replace the disk shelf module.

Syslog Message

> %s %s error for %s %d: %s%s. %s.

Parameters

> **prodChannel** (STRING): Disk shelf identity (channel, product, and shelf number).
> **moduleType** (STRING): Type of this module.
> **typeText** (STRING): SES type descriptor text for this module.
> **ModuleNumber** (INT): Element number of this module: either 1 for Module A or 2 for Module B.
> **errorMsg** (STRING): Generic SES error.
> **errorText** (STRING): Exact wording of the warning.
> **locationText** (STRING): Location of the module on the disk shelf.

ses.status.ModuleInfo

Severity

INFORMATIONAL

Description

This message occurs when a previously reported error in the shelf module has been corrected or when other information that does not necessarily require customer action is reported.

Corrective Action

(None).

Syslog Message

%s %s information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
moduleType (STRING): Type of this module.
typeText (STRING): SES type descriptor text for this module.
ModuleNumber (INT): Element number of this module: either 1 for Module A or 2 for Module B.
infoMsg (STRING): Generic SES information.

ses.status.ModuleWarn

Severity

ALERT

Description

This message occurs when the reporting disk shelf detects a warning condition in the indicated disk shelf module.

Corrective Action

Verify that the shelf module is fully seated and secure. If the problem persists, replace the disk shelf module.

Syslog Message

%s %s warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
moduleType (STRING): Type of this module.
typeText (STRING): SES type descriptor text for this module.
moduleNumber (INT): Element number of this module: either 1 for Module A or 2 for Module B.
warningMsg (STRING): Generic SES warning.
warnText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.powerCrestError

Severity

ALERT

Description

This message occurs when the system detects a failure in the Power Crest Factor Monitor for a disk shelf PSU. The Power Crest Factor Monitor will detect issues with the disk shelf power supply unit (PSU).

Corrective Action

If an abnormal power crest factor is indicated, replace the corresponding PSU.

Syslog Message

%s Power Crest Factor Monitor error for %s %d: %s %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the PSU on the disk shelf.

ses.status.powerCrestInfo

Severity

INFORMATIONAL

Description

This message occurs when a previously reported Power Crest Factor Monitor problem of a disk shelf is corrected, or when the system is reporting information about the Power Crest Factor Monitor that does not necessarily require customer action.

Corrective Action

(None).

Syslog Message

%s Power Crest Factor Monitor information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
infoMsg (STRING): Generic SES information.

ses.status.powerCrestWarn

Severity

ERROR

Description

This message occurs when the system detects a non-fatal condition in the Power Crest Factor Monitor of a power supply unit (PSU) of a disk shelf.

Corrective Action

Replace the PSU of the disk shelf.

Syslog Message

%s Power Crest Factor Monitor warning for %s %d: %s. %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
warningMsg (STRING): Generic SES warning.
warningText (STRING): Exact wording of the warning.
locationText (STRING): Location of the PSU on the disk shelf.

ses.status.procCplxError

Severity

ALERT

Description

This message occurs when the system detects a failure in the Processor Complex. The Processor Complex is the set of electronic hardware, including the CPU, memory, and so on, that runs ONTAP® software.

Corrective Action

If insufficient power or abnormal voltage is indicated, check the power supply configuration; otherwise, replace the module. In some disk shelf types, this function is integrated into the SAS interface modules.

Syslog Message

%s Processor Complex error for %s %d: %s %s %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this element.
electrNumber (INT): SES element number of this element.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.procCplxInfo

Severity

INFORMATIONAL

Description

This message occurs when a previously reported Processor Complex problem is corrected, or when the system is reporting information about the Processor Complex that does not necessarily require customer action. The Processor Complex is the set of electronic hardware, including the CPU, memory, and so on, that runs ONTAP® software.

Corrective Action

(None).

Syslog Message

%s Processor Complex information for %s %d: %s.

Parameters

> **prodChannel** (STRING): Disk shelf identity (channel, product, and shelf number).
> **typeText** (STRING): SES type descriptor text for this element.
> **electrNumber** (INT): SES element number of this element.
> **infoMsg** (STRING): Generic SES information.

ses.status.procCplxWarn

Severity

> ERROR

Description

> This message occurs when the system detects a non-fatal condition in the Processor Complex. The Processor Complex is the set of electronic hardware, including the CPU, memory, and so on, that runs ONTAP® software.

Corrective Action

> Replace the module. In some disk shelf types, this function is integrated into the SAS interface modules.

Syslog Message

> %s Processor Complex warning for %s %d: %s. %s %s.

Parameters

> **prodChannel** (STRING): Disk shelf identity (channel, product, and shelf number).
> **typeText** (STRING): SES type descriptor text for this element.
> **electrNumber** (INT): SES element number of this element.
> **warningMsg** (STRING): Generic SES warning.
> **warningText** (STRING): Exact wording of the warning.
> **locationText** (STRING): Location of the module on the disk shelf.

ses.status.psError

Severity

> ALERT

Description

> This message occurs when a critical condition is detected in the indicated storage shelf power supply. The power supply might fail.

Corrective Action

> Verify that input power to the shelf is working correctly. If separate events of this type are reported simultaneously, then the common power distribution point might be at fault. Make sure that the shelf power cords are fully inserted and secured, the supply is fully seated and secured, and the supply is switched on. Verify that power supply fans, if any, are functioning. If the problem persists, replace the power supply. If the problem still persists, contact NetApp technical support.

Syslog Message

> %s power error for %s %d: %s%s. %s.

Parameters

> **prodChannel** (STRING): Disk shelf identity (channel, product, and shelf number).
> **typeText** (STRING): SES type descriptor text for this power supply.

psNumber (INT): SES element number of the failing power supply.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact description of the error.
locationText (STRING): Location of the module on the disk shelf.

ses.status.psInfo

Severity

INFORMATIONAL

Description

This message occurs when a condition previously reported about the disk shelf power supply has been corrected or when other information about the power supply that does not necessarily require customer action is reported.

Corrective Action

(None).

Syslog Message

%s power supply information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this supply.
psNumber (INT): SES element number of the reporting supply.
infoMsg (STRING): Generic SES information.

ses.status.psWarning

Severity

ERROR

Description

This message occurs when a warning condition has been detected in the indicated storage shelf power supply. The power supply might be able to continue operation.

Corrective Action

Verify that the disk shelf is receiving power. If separate events of this type are reported simultaneously, then the common power distribution point might be at fault. Make sure that the disk shelf power cords are fully inserted and secured, the supply is fully seated and secured, and the supply is switched on. If the problem persists, replace the power supply. If the problem still persists, contact NetApp technical support.

Syslog Message

%s power warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this supply.
psNumber (INT): SES element number of the erring supply.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.shelfCount.info

Severity

NOTICE

Description

This message occurs when the shelf count changes due to shelf removal, insertion or the controller was rebooted.

Corrective Action

(None).

Syslog Message

The new shelf count is %d, the old shelf count was %d.

Parameters

currentShelfCount (INT): New shelf count.
oldShelfCount (INT): Previous shelf count.

ses.status.temperatureError

Severity

ERROR

Description

This message occurs when the indicated disk shelf temperature sensor reports a temperature that exceeds the specifications for the disk shelf or its components.

Corrective Action

Verify that the ambient temperature where the shelf is installed is within NetApp equipment specifications using the "storage shelf show" command and that airflow clearances are maintained. If the same disk shelf also reports fan or fan module failures, correct that problem now. If the problem is reported by the ambient temperature sensor (located on the operator panel), verify that the connection between the disk shelf and the panel is secure, if possible. If the problem persists, and if the shelf has multiple temperature sensors of which only one exhibits the problem, replace the module that contains the sensor that reports the error. If problem still persists, contact NetApp technical support for assistance. The temperature thresholds for each shelf can be displayed by using the "storage shelf show" command. command.

Syslog Message

%s temperature error for %s %d: %s%s. Current temperature: %s C (%s F). %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this sensor.
thermNumber (INT): SES element number of this sensor.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the error.
currentCTemp (STRING): Temperature reported by the sensor, in Celsius, if available.
currentFTemp (STRING): Temperature reported by the sensor, in Fahrenheit, if available.
locationText (STRING): Location of the module on the disk shelf.

ses.status.temperatureInfo

Severity

INFORMATIONAL

Description

This message occurs when an error or warning condition previously reported by or about the disk shelf temperature sensor has been corrected or when other information about the temperature in the disk shelf that does not necessarily require customer action is reported.

Corrective Action

(None).

Syslog Message

%s temperature information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this sensor.
thermNumber (INT): SES element number of this sensor.
infoMsg (STRING): Generic SES information.

ses.status.temperatureWarning

Severity

ALERT

Description

This message occurs when the indicated disk shelf temperature sensor reports a temperature that is close to exceeding the specifications for the disk shelf or its components.

Corrective Action

Verify that the ambient temperature where the disk shelf is installed is within NetApp equipment specifications by using the "storage shelf show" command, and that airflow clearances are maintained. If this disk shelf also reports fan or fan module errors or warnings, correct those problems now. If the problem persists, and the shelf has multiple temperature sensors of which only one exhibits the problem, replace the module that contains the sensor. If the problem persists, contact NetApp technical support for assistance. The temperature thresholds for each shelf can also be displayed by using the "storage shelf show" command.

Syslog Message

%s temperature warning for %s %d: %s%s. Current temperature: %s C (%s F). %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this sensor.
thermNumber (INT): SES element number of this sensor.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
currentCTemp (STRING): Temperature reported by the sensor, in Celsius, if available.
currentFTemp (STRING): Temperature reported by the sensor, in Fahrenheit, if available.
locationText (STRING): Location of the module on the disk shelf.

ses.status.upsError

Severity

ALERT

Description

This message occurs when the disk shelf has detected a failure in the uninterruptible power supply (UPS) attached to it. This might occur, for example, if power to the UPS has been lost.

Corrective Action

Restore power to the UPS. Verify that the connection from the UPS to the disk shelf is in place and secured, and that the UPS is enabled. If the problem persists, contact NetApp technical support.

Syslog Message

%s uninterruptible power error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this UPS
upsNumber (INT): SES element number of the UPS
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the error.
locationText (STRING): Location of the module on the disk shelf.

ses.status.upsInfo

Severity

INFORMATIONAL

Description

This message occurs when a condition previously reported about the uninterruptible power supply (UPS) attached to the disk shelf has been corrected or when other information about the UPS that does not necessarily require customer action is reported.

Corrective Action

(None).

Syslog Message

%s uninterruptible power information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this UPS.
upsNumber (INT): SES element number of the reporting UPS.
infoMsg (STRING): Generic SES information.

ses.status.upsWarning

Severity

ALERT

Description

This message occurs when the disk shelf has detected a warning condition in the uninterruptible power supply (UPS) attached to it. This might occur, for example, if power to the UPS has been lost.

Corrective Action

Restore power to the UPS. Verify that the connection from the UPS to the disk shelf is attached and secured, and that the UPS is enabled. If the problem persists, contact NetApp technical support.

Syslog Message

%s uninterruptible power warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and shelf number).
typeText (STRING): SES type descriptor text for this UPS.
upsNumber (INT): SES element number of the UPS.
errorMsg (STRING): Generic SES error.
errorText (STRING): Exact wording of the warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.volError

Severity

EMERGENCY

Description

This message occurs when a critical condition is detected in the indicated disk shelf voltage sensor. The disk shelf might be able to continue operation.

Corrective Action

Verify that the power supply unit (PSU) and the AC line are supplying power. Monitor the power grid for abnormalities. If all seems to be normal, replace the PSU. If the problem persists, contact technical support.

Syslog Message

%s voltage error for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this power supply.
psNumber (INT): SES element number of the power supply.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the exact warning.
locationText (STRING): Location of the module on the disk shelf.

ses.status.volInfo

Severity

INFORMATIONAL

Description

This message occurs when an error or warning condition previously reported by or about the disk shelf voltage sensor is corrected, or the system reports other information about the voltage in the disk shelf that does not necessarily require customer action.

Corrective Action

(None).

Syslog Message

%s voltage information for %s %d: %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for this sensor.
sensorNumber (INT): SES element number of the reporting sensor.
infoMsg (STRING): Generic SES information.

ses.status.volWarning

Severity

ERROR

Description

This message occurs when a warning condition is detected in the indicated disk shelf voltage sensor. The shelf might be able to continue operation.

Corrective Action

Verify that the power supply and the AC line are supplying power. Monitor the power grid for abnormalities. If all seems to be normal, replace the power supply. If the problem persists, contact NetApp technical support.

Syslog Message

%s voltage warning for %s %d: %s%s. %s.

Parameters

prodChannel (STRING): Disk shelf identity (channel, product, and disk shelf number).
typeText (STRING): SCSI Enclosure Services (SES) type descriptor text for the power supply.
psNumber (INT): SES element number of the power supply.
errorMsg (STRING): Generic SES error.
errorText (STRING): Description of the exact warning.
locationText (STRING): Location of the module on the disk shelf.

ses.system events

ses.system.em.mmErr

Severity

EMERGENCY

Description

This message occurs when ONTAP® software does not support internal disk drives in this platform.

Corrective Action

Check with NetApp technical support whether the combination of this platform type with internal disks is sopported on a later version of ONTAP. If so, upgrade to the appropriate ONTAP version.

Disk shelf %d containing a %.8s system with internal drives (product ID %.16s) is not a supported combination.

Parameters

ShelfID (INT): ID of the disk shelf.
VendorID (STRING): Vendor ID of the disk shelf.
ProductID (STRING): Product ID of the disk shelf.

ses.unsupported events

ses.unsupported.shelf.psu

Severity

EMERGENCY

Description

This message occurs when a disk shelf has one unsupported power supply unit installed in it. The unsupported power fits correctly in the shelf, but its functional characteristics are incompatible with the supported power supply.

Corrective Action

Replace all unsupported power supplies immediately. Use the "storage shelf show -psu-part-number" command to locate all unsupported power supplies on the disk shelf, using the part number provided in the message as the required command parameter. Contact NetApp technical support for assistance and part number for replacement power supplies.

Syslog Message

Part number %s not supported on Product ID %s. %s: power supply %d. %s.

Parameters

partNumber (STRING): Part number of the unsupported power supply.
ProdId (STRING): Product identification of the shelf with the unsupported power supply.
prodChannel (STRING): Disk shelf identity (channel and shelf number).
psNumber (INT): SES element number of the failing power supply.
locationText (STRING): Location of the unsupported power supply on the disk shelf.

ses.unsupported.shelf.psus

Severity

ERROR

Description

This message occurs when a shelf has one or more unsupported power supplies installed in it. The unsupported power fits correctly in the shelf, but its functional characteristics are incompatible with the supported power supply.

Corrective Action

Replace all unsupported power supplies immediately. Use the "storage shelf show -fields psu-part-number" command to and locate all unsupported power supplies on the disk shelf. Unsupported power supplies can be identified by the part number provided in the message. Contact NetApp technical support for assistance

and part number for replacement power supplies.

Syslog Message

Part number %s not supported on Product ID %s. %s: %d unsupported power supplies.

Parameters

partNumber (STRING): Part number of the unsupported power supply.
ProdId (STRING): Product identification of the shelf with unsupported power supply.
prodChannel (STRING): Disk shelf identity (channel and shelf number).
psCount (INT): Number of unsupported power supplies on the shelf.

ses.unsupported.shelves.psus

Severity

EMERGENCY

Description

This message occurs when two or more shelves have unsupported power supply installed in it. The unsupported power fits correctly in the shelf, but its functional characteristics are incompatible with the supported power supply.

Corrective Action

Replace all unsupported power supplies immediately. Use the "storage shelf show -fields psu-part-number" command to locate all unsupported power supplies on the disk shelf. Unsupported power supplies can be identified by the part number provided in the message. Contact NetApp technical support for assistance and part number for replacement power supplies.

Syslog Message

Part number %s not supported on Product ID %s. %s and other shelves: %d unsupported power supplies.

Parameters

partNumber (STRING): Part number of the unsupported power supply.
ProdId (STRING): Product identification of the shelf with unsupported power supply.
prodChannel (STRING): Disk shelf identity (channel and shelf number).
psCount (INT): Number of unsupported power supplies on the shelf.