



## **esh events**

### **ONTAP EMS reference**

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# esh events

## esh.async events

### esh.async.error

#### Severity

ERROR

#### Description

This message occurs when there is an error allocating memory for an asynchronous message during disk shelf discovery processing.

#### Corrective Action

If the error occurs upon addition of a disk shelf to a running system, disconnect the shelf and reattach it. If the error occurs during boot, reboot the controller.

#### Syslog Message

Could not allocate memory for an asynchronous message.

#### Parameters

(None).

## esh.auto events

### esh.auto.term.error

#### Severity

ERROR

#### Description

This message occurs when there is an error in autotermination. Major causes of this include: 1) Last disk shelf in the loop has the termination switch set improperly. 2) Communication is lost to some number of disk shelves in the loop due to an incorrect speed setting for DS14mk2 disk shelves, a bad cable connection, or unavailable power.

#### Corrective Action

Use the 'fcstat device\_map' command to verify that all disk shelves in the loop are still accessible. If the disk shelf reporting the autotermination event is not the last disk shelf in the loop, a problem exists with some number of disk shelves in the loop. Check the speed, power, and cabling of all disk shelves in the loop after the disk shelf reporting the autotermination.

#### Syslog Message

AUTO TERMINATION ERROR: TERM switch set improperly on ESH %s on channels %s disk shelf ID %d.

#### Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

# esh.bypass events

## esh.bypass.err.disk

### Severity

ERROR

### Description

This message occurs when there is a disk bypass event. It indicates that a disk is bypassed by the embedded switched hub (ESH) due to one of the following reasons: Manually bypassed; Transmitter fault; LIP F8; Data timeout; Receiver loss of signal; Comma loss of signal; Loop test before insert failure; Redundant port configuration; Exceeded stall threshold; Exceeded word error threshold; Exceeded CRC error threshold; or Exceeded clock delta error threshold.

### Corrective Action

Replace the bypassed disk.

### Syslog Message

Disk %s%son channels %s disk shelf ID %d %s%s%s.

### Parameters

**diskID** (STRING): Disk that is being bypassed.

**disk\_data** (STRING): disk data includes vendor name, model, firmware revision and the serial number of the disabled disk. If won't be able to access the disk then this field will be blank.

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**bay** (STRING): Bay in which the disk is installed.

**reason** (STRING): Reason the disk was bypassed.

## esh.bypass.host.port

### Severity

ALERT

### Description

This message occurs when there is a host port bypass event. It indicates that a host port is bypassed by the embedded switched hub (ESH) due to one of the following reasons: Manually bypassed; Transmitter fault; LIP F8; Data timeout; Receiver loss of signal; Comma loss of signal; Loop test before insert failure; Redundant port configuration; Exceeded stall threshold; Exceeded word error threshold; Exceeded CRC error threshold; or Exceeded clock delta error threshold.

### Corrective Action

Replace the disk shelf module to which the concerned host port belongs.

### Syslog Message

%s on channels %s disk shelf ID %d %s%s.

### Parameters

**portID** (STRING): Host port that is being bypassed.

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**reason** (STRING): Reason the host port was bypassed.

## esh.element events

### esh.element.fault

#### Severity

ERROR

#### Description

This message occurs when the filer cannot communicate with the ESH module.

#### Corrective Action

Check the cabling to the disk shelf. Verify that the SCSI Enclosure Services (SES) disk drives (0-1) are properly inserted. Check the status LED on the disk shelf, making sure that the fault LEDs are not lit. Clear any fault condition, if possible. Refer to the quick reference card beneath the disk shelf for information about the meanings of the LEDs.

#### Syslog Message

State of ESH module %s is %s on channels %s disk shelf id %d

#### Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**state** (STRING): Current state of ESH Module.

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

### esh.element.xport.error

#### Severity

ERROR

#### Description

This message occurs when there is a transport error.

#### Corrective Action

Check the cabling to the disk shelf. Verify that the SCSI Enclosure Services (SES) disk drives (0-1) are properly inserted. Check the status LED on the disk shelf, making sure that the fault LEDs are not lit. Clear any fault condition, if possible. Refer to the quick reference card beneath the disk shelf for information about the meanings of the LEDs.

#### Syslog Message

ESH %s XPORT ERROR on channels %s disk shelf ID %d.

#### Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

## esh.init events

### esh.init.error

#### Severity

ERROR

#### Description

This message occurs when the system cannot allocate memory for a required service. The controller might not have sufficient memory to run the operating system, or installed memory is not functioning properly.

#### Corrective Action

Contact NetApp technical support.

#### Syslog Message

Could not allocate memory for ESH globals.

#### Parameters

(None).

## esh.module events

### esh.module.multiprob

#### Severity

ERROR

#### Description

This message occurs when the ESH might have failed because it is reporting multiple problems.

#### Corrective Action

Replace the ESH module if the reported multiple problems are not valid.

#### Syslog Message

channels %s disk shelf ID %d %s%s.

#### Parameters

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**reason** (STRING): Reason the message is being sent.

## esh.pctl events

## esh.pctl.bpCPLDFailed

### Severity

ERROR

### Description

This message occurs when a 'power control' command cannot be performed on the specified disk device because the backplane CPLD (Complex Programmable Logic Device) is not operational.

### Corrective Action

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

### Syslog Message

Cannot execute a 'power control' command on disk %d [%s:%s:%s] serial number [%s] in disk shelf %d on channel %s. Backplane CPLD (Complex Programmable Logic Device) in the disk shelf is not operational.

### Parameters

**loopID** (INT): Loop ID of the disk for which the 'power control' command failed.

**vendor** (STRING): Vendor name of the disk.

**model** (STRING): Model name of the disk.

**fwrev** (STRING): Firmware revision of the disk.

**serno** (STRING): Serial number of the disk.

**shelfID** (INT): Disk shelf ID of the disk shelf that reported an error.

**channelName** (STRING): Name of the Fibre Channel adapter port.

## esh.pctl.connFailed

### Severity

ERROR

### Description

This message occurs when a 'power control' command cannot be performed on the specified disk device because the CPLD (Complex Programmable Logic Device) serial link on the specified module has a problem.

### Corrective Action

Replace the specified I/O module.

### Syslog Message

Cannot execute a 'power control' command on disk %d [%s:%s:%s] serial number [%s] in disk shelf %d on channel %s. The CPLD (Complex Programmable Logic Device) serial link on I/O module %s has a problem.

### Parameters

**loopID** (INT): Loop ID of the disk for which the 'power control' command failed.

**vendor** (STRING): Vendor name of the disk.

**model** (STRING): Model name of the disk.

**fwrev** (STRING): Firmware revision of the disk.

**serno** (STRING): Serial number of the disk.

**shelfID** (INT): Disk shelf ID of the disk shelf that reported an error.

**channelName** (STRING): Name of the Fibre Channel adapter port.

**module** (STRING): Name of the module with a bad CPLD serial link.

## esh.pctl.modCPLDFailed

### Severity

ERROR

### Description

This message occurs when a 'power control' command cannot be performed on the specified disk device because the CPLD (Complex Programmable Logic Device) on an I/O module is not operational.

### Corrective Action

Replace the specified I/O module.

### Syslog Message

Cannot execute a 'power control' command on disk %d [%s:%s:%s] serial number [%s] in disk shelf %d on channel %s. The CPLD (Complex Programmable Logic Device) on I/O module %s is not operational.

### Parameters

**loopID** (INT): Loop ID of the disk for which the 'power control' command failed.

**vendor** (STRING): Vendor name of the disk.

**model** (STRING): Model name of the disk.

**fwrev** (STRING): Firmware revision of the disk.

**serno** (STRING): Serial number of the disk.

**shelfID** (INT): Disk shelf ID of the disk shelf that reported an error.

**channelName** (STRING): Name of the Fibre Channel adapter port.

**module** (STRING): I/O module with the failed CPLD.

## esh.speed events

### esh.speed.error

#### Severity

ERROR

#### Description

This message occurs when there is an error in the link speed of the disk shelves that are attached to the node. Major causes of this include: 1) Last disk shelf in the loop has the termination switch set improperly. 2) Communication is lost to some number of disk shelves in the loop due to an incorrect speed setting for DS14mk2 disk shelves, a bad cable connection, or unavailable power.

#### Corrective Action

Use the 'fcstat device\_map' command to verify that all disk shelves in the loop are still accessible. Check the speed, power, and cabling of all disk shelves in the loop after the disk shelf reporting the autotermination.

#### Syslog Message

Disk shelf previously connected to the OUT port of ESH %s on channels %s disk shelf ID %d is now inaccessible. (Check cables, speed selection.)

#### Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED



if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

## esh.term events

### esh.term.error

#### Severity

ERROR

#### Description

This message occurs when there is an error related to loop termination.

#### Corrective Action

Set the termination switch to the OFF position on the ESH module that is reporting the error.

#### Syslog Message

FORCED TERMINATION ERROR: TERM switch set improperly on ESH %s on channels %s disk shelf ID %d. The disk shelf connected to the OUT port of this ESH module is inaccessible.

#### Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

## esh.unable events

### esh.unable.add.shelf

#### Severity

ERROR

#### Description

This message occurs when a disk shelf cannot be added due to a memory allocation failure during disk shelf discovery processing.

#### Corrective Action

If the error occurs upon addition of a disk shelf to a running system, disconnect the shelf and reattach it. If the error occurs during boot, reboot the controller.

#### Syslog Message

Could not perform disk shelf add because of memory allocation failure (%s).

#### Parameters

**name** (STRING): Where in the disk shelf add path the error occurred.

## esh.unexpected events

## esh.unexpected.status

### Severity

ALERT

### Description

This message occurs when a disk shelf reports an unknown status.

### Corrective Action

Ensure that the shelf module firmware and ONTAP® software are compatible versions. Find firmware versions at the NetApp technical support web site.

### Syslog Message

Unexpected ESH status of: %d.

### Parameters

**status** (INT): Unexpected/unknown status code that was received.

## esh.xfer.events

### esh.xfer.element.fault

### Severity

ERROR

### Description

This message occurs when an element is unreachable during an I/O request. It might be due to a transient condition in loop connectivity.

### Corrective Action

Check the cabling to the disk shelf. Verify that the SCSI Enclosure Services (SES) disk drives (0-1) are properly inserted. Check the status LED on the disk shelf, making sure that the fault LEDs are not lit. Clear any fault condition, if possible. Refer to the quick reference card beneath the disk shelf for information about the meanings of the LEDs.

### Syslog Message

I/O failure on ESH module %s on channels %s disk shelf id %d, status is %s.

### Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

**state** (STRING): State of ESH module.

### esh.xfer.not.sent

### Severity

ERROR

## Description

This message occurs when an I/O transfer cannot be sent. It might be due to a transient condition in loop connectivity.

## Corrective Action

Check the cabling to the disk shelf. Verify that the SCSI Enclosure Services (SES) disk drives (0-1) are properly inserted. Check the status LED on the disk shelf, making sure that the fault LEDs are not lit. Clear any fault condition, if possible. Refer to the quick reference card beneath the disk shelf for information about the meanings of the LEDs.

## Syslog Message

ESH %s I/O failure NOT\_SENT channels %s disk shelf ID %d.

## Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

## esh.xfer.pctl.error

### Severity

ERROR

### Description

This message occurs when an error is encountered while sending a disk 'power control' command to SCSI Enclosure Services (SES).

### Corrective Action

Check the cabling to the disk shelf. Verify that the SES disk drives in slots 0 and 1 are properly seated. Check the status LEDs on the disk shelf and make sure that the fault LEDs are not lit. Clear any fault condition, if possible. See the quick reference cards beneath the fault disk shelf for information about interpreting the LEDs.

### Syslog Message

Error sending disk 'power control' command to SCSI Enclosure Services (SES) in disk shelf %d on channel %s.

### Parameters

**shelfID** (INT): Disk shelf ID of the disk shelf that reported an error.

**channelName** (STRING): Name of the Fibre Channel adapter port.

## esh.xfer.unknown.error

### Severity

ERROR

### Description

This message occurs when there is an unknown error during an I/O request.

## Corrective Action

Contact NetApp technical support.

## Syslog Message

ESH %s I/O failure UNKNOWN: %d channels %s disk shelf ID %d.

## Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**status** (INT): Error status code.

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

## esh.xfer.xport.error

### Severity

ERROR

### Description

This message occurs when there is a transport error during an I/O request. It might be due to a transient condition in loop connectivity.

### Corrective Action

Check the cabling to the disk shelf. Verify that the SCSI Enclosure Services (SES) disk drives (0-1) are properly inserted. Check the status LED on the disk shelf, making sure that the fault LEDs are not lit. Clear any fault condition, if possible. Refer to the quick reference card beneath the disk shelf for information about the meanings of the LEDs.

## Syslog Message

ESH %s I/O failure TRANSPORT\_ERROR channels %s disk shelf ID %d.

## Parameters

**element** (STRING): ESH module designator (A is the upper module, B is the lower module).

**channels** (STRING): Channels that have the error if local, PARTNER for high-availability partner, UNUSED if unconnected.

**shelfID** (INT): Disk shelf ID (1-7) of the disk shelf reporting the error.

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