



esh events

ONTAP 9.15.1 EMS reference

NetApp
August 29, 2024

Table of Contents

- esh events 1
 - esh.async events 1
 - esh.auto events 1
 - esh.bypass events 2
 - esh.element events 3
 - esh.init events 4
 - esh.module events 4
 - esh.pctl events 4
 - esh.speed events 6
 - esh.term events 7
 - esh.unable events 7
 - esh.unexpected events 7
 - esh.xfer events 8

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.

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.