shm events

ONTAP EMS reference

NetApp
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Table of Contents

shm events

shm.bypassed events

shm.bypassed.disk.fail

Deprecated

Deprecated as of Data ONTAP 9.3 because bypass code has been removed.

Severity

ERROR

Description

This message occurs when the system recommends that a disk be failed because it has been bypassed.

Corrective Action

(None).

Syslog Message

shm: Disk %s has been recommended for failure due to being bypassed by the shelf.

Parameters

diskName (STRING): Name of the disk.

shm.bypassed.disk.fail.disabled

Deprecated

Deprecated as of Data ONTAP 9.3 because bypass code has been removed.

Severity

ALERT

Description

This message occurs when three or more disks have been bypassed on a port.

Corrective Action

(None).

Syslog Message

shm: Disk bypass check has been disabled due to multiple bypassed disks on host bus adapter %s, shelf %d.

Parameters

hba (STRING): Name of the host bus adapter.
shelf (INT): Shelf ID.

shm.bypassed.disk.fail.enabled

Severity
NOTICE

Description
This message occurs when the bypass disabled state is cleared.

Corrective Action
(None).

Syslog Message
shm: Disk bypass check has been enabled for host bus adapter %s.

Parameters
hba (STRING): Name of the host bus adapter.

shm.disk events

shm.disk.lostWriteError

Severity
ERROR

Description
This message occurs when the system detects a lost write error.

Corrective Action
(None).

Syslog Message
shm: Disk %s has detected and recovered from a lost write error; the system will fail the disk if possible.

Parameters
diskName (STRING): Name of the disk.

shm.fab events

shm.fab.writeError

Severity
NOTICE

Description
This message occurs when an error is received while writing the failure bytes.

Corrective Action
(None).

Syslog Message
shm: Unable to write failure bytes to disk %s due to error %x.

Parameters

diskName (STRING): Name of the disk.
error_code (INTHEX): Error code returned.

shm.fab.writeSenseError

Severity

NOTICE

Description

This message occurs when an error is received while writing the failure bytes.

Corrective Action

(None).

Syslog Message

shm: Unable to write failure bytes to disk %s due to error %x/%x/%x/%x.

Parameters

diskName (STRING): Name of the disk.
sense_key (INTHEX): Actual sense key.
sense_code (INTHEX): Actual sense code.
qualifier (INTHEX): Actual sense code qualifier.
fru_failed (INTHEX): Actual FRU code.

shm.failurebytes events

shm.failureBytes.fullError

Severity

NOTICE

Description

This message occurs when writing the failure byte area returns an error due to being full.

Corrective Action

(None).

Syslog Message

shm: Disk %s failure area has reached capacity; to clear, reload drive firmware.

Parameters

diskName (STRING): Name of the disk.

shm.nvme events

shm.NVME.critical.warning

Severity

ERROR

Description

This message occurs when the NVMe drive returns a critical warning to the health monitor.

Corrective Action

(None).

Syslog Message

Disk %s returned a critical warning 0x%x and will be recommended for failure.

Parameters

disk_name (STRING): Name of the disk.
warning_code (INTHEX): Warning code returned.

shm.pulllogwarning events

shm.pullLogWarning

Severity

NOTICE

Description

This message occurs when the disk dongle requests the system to retrieve the error log.

Corrective Action

(None).

Syslog Message

shm: Disk %s has returned %d warnings and the log will be saved.

Parameters

diskName (STRING): Name of the disk.
count (INT): Count of warnings received.

shm.reformat events

shm.reformat.diskError

Severity

ERROR

Description

This message occurs when the system tries to reformat a disk, but an error is returned.

Corrective Action

(None).

Syslog Message

shm: Unable to format disk %s as it is not supported.

Parameters

diskName (STRING): Name of the disk.

shm.reformat.partnerDisk

Severity

NOTICE

Description

This message occurs when the system detects a drive that started formatting during a sanitization, but did not finish.

Corrective Action

Reboot the partner node to clear the formatting condition. Rerun the original sanitize operation.

Syslog Message

shm: Disk %s on the partner has possibly not completed format. To reformat the disk, the partner must be rebooted.

Parameters

diskName (STRING): Name of the disk.

shm.reformat.startMsg

Severity

NOTICE

Description

This message occurs when the system has begun to reformat a disk that was not completed during sanitization.

Corrective Action

(None).

Syslog Message

shm: Disk %s is being reformatted due to an error during disk sanitize.

Parameters

diskName (STRING): Name of the disk.

shm.threshold events

shm.threshold.agrsvlOCount

Deprecated

This event is removed as it is a test message not intended for customers.

Severity

NOTICE

Description

This message occurs when the system detects a disk that exceeds the threshold count of high aggressive IO latencies.

Corrective Action

(None).

Syslog Message

Disk %s has exceeded %d IOs which have latencies greater than the threshold.

Parameters

disk_name (STRING): Name of the disk.
agrsv_IO_count (INT): Count of aggressive timeout IOs.

shm.threshold.allMediaErrors

Severity

ERROR

Description

This message occurs when the system detect more than 25 medium and/or recovered errors in a 10-minute window.

Corrective Action

(None).

Syslog Message

shm: Disk %s has crossed the combination media error threshold in a 10 minute window.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.checksumErrors

Severity

ERROR

Description

This message occurs when a disk exceeds the threshold of checksum errors on the same block.

Corrective Action

(None).

Syslog Message

shm: Disk %s has exceeded the threshold for checksum errors on the same block; the system will fail the disk.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.consecutiveAborts

Severity

ERROR

Description

This message occurs when a disk exceeds the threshold of consecutive abort errors on one drive.

Corrective Action

(None).

Syslog Message

shm: Disk %s has exceeded the threshold of %d consecutive abort errors; the system will fail the disk if possible.

Parameters

diskName (STRING): Name of the disk.
count (INT): Count of errors.

shm.threshold.consecutiveTimeouts

Severity

ERROR

Description

This message occurs when a disk exceeds the threshold of consecutive timeouts on one drive.

Corrective Action

(None).

Syslog Message

shm: Disk %s has exceeded the threshold of %d consecutive timeouts; the system will fail the disk if possible.

Parameters

diskName (STRING): Name of the disk.
count (INT): Count of errors.

shm.threshold.disk.pcycle

Severity

ERROR

Description

This message occurs when a disk exceeds the threshold of power-cycle error recovery tries.

Corrective Action

(None).

Syslog Message

shm: Disk %s has exceeded the threshold for power-cycle error recovery events; the system will fail the disk if possible.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.highIOLatency

Severity

ERROR

Description

This message occurs when the system detects a disk that has an average IO latency during the current window that is significantly greater than all other drives of the same class.

Corrective Action

(None).

Syslog Message

Disk %s exceeds the average IO latency threshold and will be recommended for failure.

Parameters

disk_name (STRING): Name of the disk.

shm.threshold.lipStormReset

Severity

ERROR

Description

This message occurs when the system detects more than one instance of a disk resetting itself because of a large number of Loop Initialization Procedure requests (a LIP storm). The disk will be failed.

Corrective Action

Replace the disk.

Syslog Message

shm: The system has detected more than one LIP storm reset on disk %s.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.mediaErrorsLba

Severity

ERROR

Description

This message occurs when the system detects more than three media (recovered or medium) errors on the same block.

Corrective Action

(None).

Syslog Message

shm: Disk %s has had multiple media errors on sector %llu.

Parameters

diskName (STRING): Name of the disk.
block_num (LONGINT): Block number.

shm.threshold.mediaErrorsReassign

Severity

ERROR

Description

This message occurs when the system detects more than three medium and/or recovered errors in a 10-minute window on the same disk sector. The bad sector will be reassigned.

Corrective Action

(None).

Syslog Message

shm: Disk %s has had multiple media errors on the same sector in the last 10 minutes, and is reassigning the sector.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.mediumErrors

Severity

ERROR

Description

This message occurs when the system detects more than 25 medium errors in a 10-minute window.

Corrective Action

(None).

Syslog Message

shm: Disk %s has crossed the medium error threshold in a 10 minute window.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.mediumErrors7days

Severity

ERROR

Description

This message occurs when the system detects more than 100 medium errors in a seven-day window.

Corrective Action

(None).

Syslog Message

shm: Disk %s has crossed the medium error threshold in a seven-day window.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.ratedLife

Severity

NOTICE

Description

This message occurs when the rated life used by a solid state drive (SSD) exceeds 90%. When an SSD reaches 100% of rated life, it might not be able to retain data while powered off for long periods of time.

Corrective Action

The number of weeks of rated life remaining indicated for each SSD is an estimate based on past usage. If the SSD is expected to remain in service beyond the estimated remaining time, initiate planning for SSD replacement when the rated life reaches 100%. Use the "storage disk show -ssd-wear" command to monitor the current rated life used by your SSDs.

Syslog Message

shm: There are %d drives that have consumed at least 90 percent of their rated life: %s.

Parameters

count (INT): Count of drives that have exceeded the threshold.
disk_names (STRING): Name, percentage of rated life and estimated remaining time before reaching 100% rated life of each SSD that has exceeded the threshold.

shm.threshold.ratedLife2

Severity

ERROR

Description

This message occurs when the rated life used by a solid state drive (SSD) exceeds 95%. When an SSD reaches 100% of rated life, it might not be able to retain data while powered off for long periods of time.

Corrective Action

The number of weeks of rated life remaining indicated for each SSD is an estimate based on past usage. If the SSD is expected to remain in service beyond the estimated remaining time, initiate planning for SSD

replacement when the rated life reaches 100%. Use the "storage disk show -ssd-wear" command to monitor the current rated life used by your SSDs.

Syslog Message

shm: There are %d drives that have consumed at least 95 percent of their rated life: %s.

Parameters

count (INT): Count of drives that have exceeded the threshold.
disk_names (STRING): Name, percentage of rated life and estimated remaining time before reaching 100% rated life of each SSD that has exceeded the threshold.

shm.threshold.ratedLifeMax

Severity

ALERT

Description

This message occurs when the rated life used value exceeds 100% on a solid state drive (SSD). When an SSD reaches 100% of rated life, it might not be able to retain data while powered off for long periods of time.

Corrective Action

Replace the SSDs that have reached the end of their rated life.

Syslog Message

shm: There are %d drives that have reached the end of their rated life: %s

Parameters

count (INT): Count of drives that have exceeded the threshold.
disk_names (STRING): Name and percentage of rated life of each SSD that has exceeded the threshold.

shm.threshold.recoveredErrors

Severity

ERROR

Description

This message occurs when the system detects more than 25 recovered errors in a 10-minute window.

Corrective Action

(None).

Syslog Message

shm: Disk %s has crossed the recovered error threshold in a 10 minute window.

Parameters

diskName (STRING): Name of the disk.

shm.threshold.sensekey

Severity

ERROR

Description

This message occurs when a disk exceeds the threshold of a particular sense key error.

Corrective Action

(None).

Syslog Message

shm: Disk %s has exceeded the threshold for sense key %d errors; the system will fail the disk if possible.

Parameters

diskName (STRING): Name of the disk.
senseKey (INT): Sense key value.

shm.threshold.spareBlocksConsumed

Severity

NOTICE

Description

This message occurs when the spare blocks consumed value exceeds the first threshold on an SSD drive.

Corrective Action

(None).

Syslog Message

shm: There are %d disks that have consumed at least 60 percent of their use-based internal spare capacity. The affected disks are: %s.

Parameters

count (INT): Count of disks which have exceeded the threshold.
disk_names (STRING): Names of the disk drives.

shm.threshold.spareBlocksConsumedMax

Severity

NOTICE

Description

This message occurs when the spare blocks consumed value exceeds the second threshold on an SSD drive.

Corrective Action

(None).

Syslog Message

shm: There are %d disks that have consumed at least 80 percent of their use-based internal spare capacity. The affected disks are: %s.

Parameters

count (INT): Count of disks which have exceeded the second threshold.
disk_names (STRING): Names of the disk drives.

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