mlm events

ONTAP EMS reference

NetApp
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mlm.arr.affinity.not.queued

Severity

NOTICE

Description

This message occurs when the current processing of an error event prevents the Asymmetric Logical Unit Access (ALUA) handler from queuing an affinity switch event.

Corrective Action

(None).

Syslog Message

Affinity event %s not queued for LUN %s.

Parameters

event (STRING): Affinity event for asymmetric array.
serialno (STRING): Serial number of the array LUN.

mlm.arr.many.affinity.error

Severity

ERROR

Description

This message occurs when the Asymmetric Logical Unit Access (ALUA) handler encounters too many affinity errors, which might lead to reduced I/O throughput.

Corrective Action

Evaluate the back-end array connectivity for optimal LUN balance across array controllers. Also check for failures reported by the back-end array with regards to ALUA target port group settings. Verify that FlexArray connectivity is done as per best-practice guide.

Syslog Message

Failing cmd %s for LUN %s due to too many affinity errors.

Parameters

cdb (STRING): String containing the opcode byte of the command descriptor block (CDB) that was sent to the device.
serialno (STRING): Serial number of the array LUN.

mlm.array events

mlm.array.aluaSupported

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array. Defines whether the array supports ALUA(asymmetric logical unit access) or not.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

Unsupported array: [Vendor '%s' Product '%s'] ALUA Support for array %s.

Parameters

vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
alua (STRING): Whether the array supports ALUA or not.

mlm.array.apf.cancel

Severity

NOTICE

Description

This message occurs when any one of the path to an Array comes back online when the last path failure to an Array is extended.

Corrective Action

(None).

Syslog Message

Delay on last path to Array '%s' is cancelled as target port: WWNN: %s, WWPN: %s seen from initiator '%s' is up.

Parameters

arrayName (STRING): Name of the Array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.
adapterName (STRING): Name of the Fibre Channel adapter accessing the array target port.

mlm.array.apf.enter

Severity

ALERT

Description

This message occurs when the all-path-fail-delay option for an Array is set to a non-zero value and when last path to an Array goes down. This allows Data ONTAP to suspend I/O operations for a longer period of time before declaring a data access disruption, allowing for I/O operations to resume if any path comes

back online within the specified duration.

Corrective Action

In such cases, you should evaluate the specified device for possible replacement. Sometimes the problem results from the partial failure of a component involved in the Fibre Channel. Common things to check include properly secured cable connections, and crimped or otherwise damaged cables. If the adapter is in use check cabling.

Syslog Message

Last path to Array '%s' target port: WWNN: %s, WWPN: %s seen from initiator '%s' is down. Failing this path will be extended for %d seconds.

Parameters

arrayName (STRING): Name of the Array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.
adapterName (STRING): Name of the Fibre Channel adapter accessing the array target port.
delay (INT): All Path Fail delay in seconds.

mlm.array.apf.exit

Severity

NOTICE

Description

This message occurs when all path to an Array goes down and the Array remains inaccessible even after the extended duration is set by all-path-fail-delay option.

Corrective Action

(None).

Syslog Message

No path to Array '%s' came back online when last path failure is extended to %d seconds.

Parameters

arrayName (STRING): Name of the Array.
delay (INT): All Path Fail delay in seconds.

mlm.array.discovery

Severity

INFORMATIONAL

Description

This message occurs when the system discovers a new array.

Corrective Action

(None).

Syslog Message

A new array (%s) was connected to this node.

Parameters

arrayName (STRING): Name of the array.

mlm.array.inquiryPage80

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

Array LUN %s [S/N '%s' vendor '%s' product '%s'] Inquiry page 80: devtype '%d' page_code '%d' reserved '%d' page_len '%d' data '%s' hex_dump '%s'

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
dev_type (INT): Device type of the array LUN.
page_code (INT): Page code of the array LUN.
reserved (INT): Reserved fields in inquiry page 80.
page_len (INT): Inquiry page 80 length.
data (STRING): Serial number from inquiry page 80.
P_80_hex (STRING): Inquiry page 80 hexadecimal dump.

mlm.array.inquiryPage83

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

[Vendor '%s' Product '%s'] Inquiry page 83: devtype '%d' page_code '%d' reserved '%d' page_len '%d' code_set '%d' association_id '%d' reserved_msb '%d' id_len '%d' hex_dump '%s'.

Parameters

vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
dev_type (INT): Device type of the array LUN.
page_code (INT): Page code of the array LUN.

reserved (INT): Reserved fields in inquiry page 83.
page_len (INT): Inquiry page 83 length.
code_set (INT): Inquiry page 83 code set.
association_id (INT): Inquiry page 83 association ID.
reserved_msb (INT): Most significant byte of page_len in SPC3 spec.
id_len (INT): Inquiry page 83 ID length.
P_83_hex (STRING): Inquiry page 83 hexadecimal dump.

mlm.array.inquiryStd

Severity
ERROR

Description
This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action
Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message
[S/N '%s' vendor '%s' product '%s'] STD inquiry : devtype '%d' dev_modifier '%d' support_level '%d' dev_mode '%d' revision '%s' hex_dump '%s'

Parameters
serialno (STRING): Serial number of the array LUN.
vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
dev_type (INT): Device type of the array LUN.
dev_modifier (INT): Device modifier of the array LUN.
support_level (INT): Support level.
dev_mode (INT): Development mode.
revision (STRING): Product revision level(product firmware release number).
inquiry_hex (STRING): Inquiry hexadecimal dump.

mlm.array.lun.discovery

Severity
INFORMATIONAL

Description
This message occurs when the system discovers a new array LUN.

Corrective Action
(None).

Syslog Message
New array LUN %s (S/N: %s) was discovered on initiator port %s at array target port WWNN: %s, WWPN: %s.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
adapter (STRING): Name of the initiator port discovering the array LUN.
wwnn (STRING): World Wide Node Name of the array target port exporting the new array LUN.
wwpn (STRING): World Wide Port Name of the array target port exporting the new array LUN.

mlm.array.lun.forceResume

Severity

ERROR

Description

This message occurs when the system is forced to resume I/O to a previously quiesced array LUN path when no other viable non-quiesced paths remain. For arrays with asymmetric logical unit access a forced resume will also happen when there are no other viable non-quiesced paths on the current target port group.

Corrective Action

Verify the configuration and check why array lun is usable through only one path.

Syslog Message

Array LUN '%s' (%s) has had I/O resumed on the path from initiator %s to %s's target port: WWNN: %s, WWPN: %s to ensure LUN access through atleast one path. User settings are preempted.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
adapterName (STRING): Name of the initiator port used to access the array LUN.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.

mlm.array.lun.hiddenDMXVCMDB

Severity

ERROR

Description

This message occurs when the system determines that a Symmetrix LUN is write protected.

Corrective Action

Either write enable the LUN or, if this is the Symmetrix VCMDB control device, consider unmapping the LUN to Data ONTAP.

Syslog Message

Symmetrix LUN (%s, %s) is write protected and will be ignored. This logical unit may be the VCMDB control device.

Parameters

diskName (STRING): Name of the LUN.
serialno (STRING): Serial number of the LUN.

mlm.array.lun.multipleIDs

Severity

ALERT

Description

This message occurs when a logical device (LDEV) on an array has more than one LUN ID.

Corrective Action

Verify the LUN configuration and make sure that the LUN ID is the same on all array target ports.

Syslog Message

Array LUN '%s' (%s): Multiple LUN IDs are associated with the same LDEV on array %s. An LDEV can only have one LUN ID associated with it across all array target ports.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
arrayName (STRING): Name of the array.

mlm.array.lun.OnePath

Severity

ERROR

Description

This message occurs when an array LUN has only one path.

Corrective Action

Verify the configuration and make sure that there are at least two paths to this array LUN.

Syslog Message

Array LUN '%s' is connected using only one path. To avoid the potential for data loss caused by the remaining path's failure, all array LUNs should have at least two paths.

Parameters

diskName (STRING): Name of the array LUN.

mlm.array.lun.PathAdded

Severity

INFORMATIONAL

Description

This message occurs when a new path is added for an array LUN.

Corrective Action

(None).

Syslog Message

Array LUN '%s' (%s) is now connected on initiator port %s through %s's target port: WWNN: %s, WWPN:

%s at LUN ID: %d.

Parameters

    diskName (STRING): Name of the array LUN
    serialno (STRING): Serial number of the array LUN.
    adapterName (STRING): Name of the Fibre Channel adapter used to access the array LUN.
    arrayName (STRING): Name of the array.
    wwnn (STRING): World Wide Node Name of the array target port.
    wwpn (STRING): World Wide Port Name of the array target port.
    LUNID (INT): LUN ID to which a path was added.

mlm.array.lun.PathFO

Severity

    NOTICE

Description

    This message occurs when an array LUN path becomes inaccessible and after a user-configurable delay, a path failover begins if the path remains inaccessible. The delay time can be modified using the "storage array modify -name array_name -path-failover-time delay_time" command.

Corrective Action

    (None).

Syslog Message

    Path via adapter %s and device "%s" to array "%s" is currently offline, but path failover is delayed for %d seconds. After this delay, if the path is back online, I/O will resume on this same path. Otherwise, I/O will fail over to an alternate path.

Parameters

    adapterName (STRING): Name of the adapter involved in the path offline operation.
    deviceName (STRING): Name of the Fibre Channel device.
    arrayName (STRING): Name of the array.
    delay (INT): Path failover delay, in seconds.

mlm.array.lun.PathRemoved

Severity

    INFORMATIONAL

Description

    This message occurs when a path to this array LUN is removed.

Corrective Action

    (None).

Syslog Message

    Array LUN '%s' (%s) is no longer available on initiator port %s through %s's target port: WWNN: %s, WWPN: %s.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
adapterName (STRING): Name of the Fibre Channel adapter used to access the array LUN.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.

mlm.array.lun.quiesced

Severity

INFORMATIONAL

Description

This message occurs when I/O is quiesced on an array LUN.

Corrective Action

(None).

Syslog Message

Array LUN '%s' (%s) has had I/O quiesced on the path from initiator %s to %s's target port: WWNN: %s, WWPN: %s.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
adapterName (STRING): Name of the Fibre Channel adapter used to access the array LUN.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.

mlm.array.lun.removed

Severity

NOTICE

Description

This message occurs when the last path to an array LUN is removed.

Corrective Action

(None).

Syslog Message

Array LUN '%s' (%s) is no longer being presented to this node.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.

mlm.array.lun.resumed

Severity

INFORMATIONAL

Description

This message occurs when I/O is resumed on an array LUN that was quiesced.

Corrective Action

(None).

Syslog Message

Array LUN '%s' (%s) has had I/O resumed on the path from initiator %s to %s's target port: WWNN: %s, WWPN: %s.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
adapterName (STRING): Name of the Fibre Channel adapter used to access the array LUN.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.

mlm.array.lun.type.control

Severity

ERROR

Description

This message occurs when the array LUN is a control LUN on the array. A control LUN cannot be used as a data LUN.

Corrective Action

Disable or mask off control LUNs.

Syslog Message

Array LUN '%s' is a control LUN and is not usable for data storage. Disable it or mask it off.

Parameters

diskName (STRING): Name of the array LUN.

mlm.array.mixedFailoverMode

Severity

ALERT

Description

This message occurs when Data ONTAP® determines that the set of paths to a storage device is configured with more than one failover mode policy.

Corrective Action

Reconfigure the storage array so that each target port reports the same failover mode policy. When the reconfiguration is complete, reboot the system node that detected the error.

Syslog Message

Fibre Channel host bus adapter %s detects that storage array %s reports a failover mode policy (%s) on target port WWNN: %s, WWPN: %s that doesn't match the policy (%s) currently in effect. The failover mode policy must be consistent on each path presented.

Parameters

adapterName (STRING): Name of the Fibre Channel adapter detecting the failover mode conflict.
arrayName (STRING): Name of the array.
policy1 (STRING): Inconsistent failover mode policy detected.
wwnn (STRING): World Wide Node Name of the array target port reporting the inconsistent failover mode policy.
wwpn (STRING): World Wide Port Name of the array target port reporting the inconsistent failover mode policy.
policy2 (STRING): Failover mode policy currently in effect.

mlm.array.ndu.complete

Severity

INFORMATIONAL

Description

This message occurs when you set the is-upgrade-pending flag status for the array to "false".

Corrective Action

(None).

Syslog Message

Array '%s' has the is-upgrade-pending flag status set to "false".

Parameters

arrayName (STRING): Name of the array.

mlm.array.ndu.doneTgtPort

Severity

INFORMATIONAL

Description

This message occurs when you set the is-upgrade-pending flag status for the array to "false". This message is logged for every array target port seen by the initiators from this node.

Corrective Action

(None).

Syslog Message

Array '%s' has the is-upgrade-pending flag status set to "false" for the path from initiator '%s' to the target port: WWNN: %s, WWPN: %s.

Parameters

arrayName (STRING): Name of the array.
adapterName (STRING): Name of the Fibre Channel adapter accessing the array target port.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.

mlm.array.ndu.pending

Severity

INFORMATIONAL

Description

This message occurs when you set the is-upgrade-pending flag status to "true" for a specific array, to indicate that the array will undergo a firmware upgrade in the near future. After the upgrade is complete, you must manually set the is-upgrade-pending flag status back to "false" to maintain optimal path failover detection.

Corrective Action

(None).

Syslog Message

Array '%s' has its is-upgrade-pending flag status set to "true". Path failover performance will be degraded during the array firmware upgrade. After the upgrade is complete, set the is-upgrade-pending flag status for this array to "false".

Parameters

arrayName (STRING): Name of the array.

mlm.array.ndu.pendingTgtPort

Severity

INFORMATIONAL

Description

This message occurs when you set the is-upgrade-pending flag status for the array to "true". This message is logged for every array target port seen by the initiators from this node.

Corrective Action

(None).

Syslog Message

Array '%s' has the is-upgrade-pending flag status set to "true" for the path from initiator %s to the target port: WWNN: %s, WWPN: %s.

Parameters

arrayName (STRING): Name of the array.
adapterName (STRING): Name of the Fibre Channel adapter accessing the array target port.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.

mlm.array.ndu.portsDown

Severity

NOTICE

Description

This message occurs when the array target port does not come back online after 80 seconds. This message is logged for every array target port seen by the initiators of this node that does not come back online after the array firmware upgrade.

Corrective Action

(None).

Syslog Message

Array '%s' target port: WWNN: %s, WWPN: %s seen from initiator '%s' is down.

Parameters

arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.
adapterName (STRING): Name of the Fibre Channel adapter accessing the array target port.

mlm.array.ndu.portsOffline

Severity

INFORMATIONAL

Description

This message occurs when all array ports for a specific array go offline while the array has its is-upgrade-pending flag status set to "true".

Corrective Action

(None).

Syslog Message

Array '%s' has target ports changed to offline state while its is-upgrade-pending status flag is set to "true".

Parameters

arrayName (STRING): Name of the array.

mlm.array.ndu.portsOnline

Severity

INFORMATIONAL

Description

This message occurs when the first array target port is detected back online after a firmware upgrade where the array is marked with the is-upgrade-pending flag status set to "true".

Corrective Action

(None).

Syslog Message

Array '%s' has target ports changed to online state during a firmware upgrade.

Parameters

arrayName (STRING): Name of the array.

mlm.array.ndu.stillPending

Severity

ERROR

Description

This message occurs once every 60 minutes while the is-upgrade-pending flag status is set to "true" on an array. You should set the is-upgrade-pending flag status to "false" after the array firmware upgrade is complete to avoid path failover performance issues.

Corrective Action

After the array firmware upgrade is complete, set the is-upgrade-pending flag status for the array to "false".

Syslog Message

Array '%s' has the is-upgrade-pending flag status set to "true". After the array's firmware update is complete, set the is-upgrade-pending flag status for this array to "false".

Parameters

arrayName (STRING): Name of the array.

mlm.array.path.autoQuiesced

Severity

NOTICE

Description

This message occurs when the path to the array is quiesced,auto path quiesce happens when the number of path failures reached path_failure count in the given duration(in mins).

Corrective Action

(None).

Syslog Message

Path from initiator %s to array %s target_port:WWNN:%s,WWPN:%s has quiesced as path-failure has reached %d in %d mins duration.

Parameters

adapterName (STRING): Name of the Fibre Channel adapter used to access the path.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.
path_failure (INT): Number of failures occured in the specified path.
duration (INT): Duration in minutes to monitor the path failures.

mlm.array.path.discovery

Severity

INFORMATIONAL

Description

This message occurs when the system discovers a new path to an array.

Corrective Action

(None).

Syslog Message

A new path was discovered: initiator port %s is now connected to array %s's target port: WWNN: %s, WWPN: %s. There are %d array LUNs visible on this target port.

Parameters

adapter (STRING): Initiator port on which a new path to the array was discovered.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's newly discovered target port.
wwpn (STRING): World Wide Port Name of the array's newly discovered target port.
count (INT): Number of array LUNs visible on this target port.

mlm.array.path.forceResume

Severity

NOTICE

Description

This message occurs when the path to the array is resumed forcefully when no other path except the quiesced path available for I/O in the node.

Corrective Action

(None).

Syslog Message

Path from initiator %s to array %s target_port:WWNN:%s,WWPN:%s has resumed forcefully as it is the last available path for the I/O. User settings are preempted.

Parameters

adapterName (STRING): Name of the Fibre Channel adapter used to access the path.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.

mlm.array.path.quiesced

Severity

INFORMATIONAL

Description

This message occurs when the path to the array is quiesced when user request the particular path to be quiesced.

Corrective Action

(None).

Syslog Message

Path from initiator %s to array %s target_port:WWNN:%s,WWPN:%s has quiesced.

Parameters

adapterName (STRING): Name of the Fibre Channel adapter used to access the path.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.

mlm.array.path.resumed

Severity

INFORMATIONAL

Description

This message occurs when the path to the array is resumed.

Corrective Action

(None).

Syslog Message

Path from initiator %s to array %s target_port:WWNN:%s,WWPN:%s has resumed.

Parameters

adapterName (STRING): Name of the Fibre Channel adapter used to access the path.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port.
wwpn (STRING): World Wide Port Name of the array's target port.

mlm.array.port.discovery

Severity

INFORMATIONAL

Description

This message occurs when the system discovers a new target port for an array.

Corrective Action

(None).

Syslog Message

A new array target port was discovered on array %s: WWNN: %s, WWPN: %s.

Parameters

arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the new array target port.
wwpn (STRING): World Wide Port Name of the new array target port.

mlm.array.portDuplicateID

Severity

ALERT

Description

This message occurs when more than one logical device (LDEV) has the same LUN ID on the same array. The error is set on these logical devices and these devices will not function until the error is resolved.

Corrective Action

Ensure that each LDEV has a different LUN ID.

Syslog Message

%s: %d appears more than once on %s's target port: WWNN: %s, WWPN: %s. LUN ID reuse on an array target port is not supported, even in different host groups.

Parameters

diskName (STRING): Name of the array LUN.
lunid (INT): LUN ID that represents more than one LDEV.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port that is presenting this LUN ID.
wwpn (STRING): World Wide Port Name of the array's target port that is presenting this LUN ID.

mlm.array.portEmpty.direct

Severity

INFORMATIONAL

Description

This message occurs when a host group on an array is empty.

Corrective Action

(None).

Syslog Message

Fibre Channel host bus adapter %s reports no LUNs presented by storage array %s, target port WWNN: %s WWPN: %s.

Parameters

adapterName (STRING): Name of the initiator port detecting the empty host group.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.

mlm.array.portEmpty.switch

Severity

INFORMATIONAL

Description

This message occurs when a host group on an array is empty.

Corrective Action

(None).

Syslog Message

Fibre Channel host bus adapter %s reports no LUNs presented by storage array %s, target port WWNN: %s WWPN: %s, switch:port %s.

Parameters

adapterName (STRING): Name of the initiator port detecting the empty host group.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.
switchPort (STRING): Name of the switch and port connected to the storage array.

mlm.array.portMixedAddress

Severity

EMERGENCY

Description

This message occurs when a back-end array is set to Volume Set Addressing mode on one port but not on another. This results in LUN IDs that do not match in value or format. The error is set on these logical devices and these devices will not function until the error is resolved.

Corrective Action

Consult the back-end array documentation to disable Volume Set Addressing mode on all ports.

Syslog Message

Array %s is using inconsistent LUN addressing schemes. Check LUN addressing settings on port WWNN: %s, WWPN %s.

Parameters

arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array's target port that is reporting Volume Set Addressing Enabled.
wwpn (STRING): World Wide Port Name of the array's target port that is reporting Volume Set Addressing Enabled.

mlm.array.portOneController

Severity

ERROR

Description

This message occurs when all paths for an array LUN are connected to the same controller on the array. This configuration results in a single point of failure at the array.

Corrective Action

Reconfigure your back-end SAN so that array LUNs are presented from controllers in different fault domains on the target array.

Syslog Message

All paths for array LUN %s are connected to the same controller on array %s. This configuration is a single point of failure. Ensure that array LUNs are accessible through controllers in different fault domains.

Parameters

diskName (STRING): Name of the array LUN.
arrayName (STRING): Name of the array.

mlm.array.prCapabilities

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

[Vendor '%s' Product '%s'] PR_CAP : sip_c : %x, atp_c : %x, res_c : %x, ptpl_c : %x.

Parameters

vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
sip_c (INTHEX): Specify initiator ports capable bit.
atp_c (INTHEX): All target ports capable bit.
res_c (INTHEX): Reserved bit.
ptpl_c (INTHEX): Persist through power loss capable bit.

mlm.array.prReadReservation

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

[Vendor '%s' Product '%s'] Data_key : '0x%llx' Reservation : generation '%u' length '%u' resv_key '0x%llx' scope_address '%u' scope_type '0x%x' extent_len '%d' hex_dump '%s'.

Parameters

vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
resv_key (LONGINTHEX): SCSI persistent reservation key.

generation (INT): SCSI persistent reserve data generation value.
len (INT): SCSI persistent reserve data header generation length.
read_in_resv_key (LONGINTHEX): SCSI persistent reserve data reservation key.
scope_address (INT): SCSI persistent reserve data scope address.
scope_type (INTHEX): SCSI persistent reserve data scope.
extent_length (INT): SCSI persistent reserve data extent length.
pr_reservation_hex (STRING): SCSI persistent reservation hexadecimal dump.

mlm.array.reportluns

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

Unsupported array: [Vendor '%s' Product '%s'] Report LUNs: lun_count '%d' reserved field '%d'.

Parameters

vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
lun_count (INT): Total number of LUNs visible.
reserved (INT): Report luns reserved field.

mlm.array.rptpgs

Severity

ERROR

Description

This message occurs when the system detects an array LUN from an unsupported array.

Corrective Action

Detach the unsupported array. See the NetApp Support Site Interoperability Matrix Tool for further information about supported arrays.

Syslog Message

Unsupported array: [Vendor '%s' Product '%s'] ASS : %d , Access flag : %d.

Parameters

vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.
aas (INT): Asymmetric Access State.
flags (INT): Access state flags.

mlm.array.setPortTPQD

Severity

INFORMATIONAL

Description

This message occurs when you set the target port queue depth for a specific target port of an array.

Corrective Action

(None).

Syslog Message

Array '%s' target port: WWNN: %s, WWPN: %s has a target port queue depth value set to %d.

Parameters

arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name of the array target port.
wwpn (STRING): World Wide Port Name of the array target port.
tpqd (INT): Target port queue depth value set for the specified target port of an array.

mlm.array.setTPQD

Severity

INFORMATIONAL

Description

This message occurs when you set the target port queue depth for an array.

Corrective Action

(None).

Syslog Message

Target ports on the array '%s' have a target port queue depth value set to %d.

Parameters

arrayName (STRING): Name of the array.
tpqd (INT): Target port queue depth value set for the target ports of the array.

mlm.array.unknown

Severity

ERROR

Description

This message occurs when an array LUN is detected from an unknown array that is not supported in this version of Data ONTAP®.

Corrective Action

Remove the array from the system.

Syslog Message

Array LUN %s [S/N '%s' vendor '%s' product '%s'] is unknown and is not supported in this version of Data ONTAP.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.

mlm.array.unsupported

Severity

NOTICE

Description

This message occurs when an array LUN is detected from an unsupported array.

Corrective Action

(None).

Syslog Message

Array LUN %s [S/N '%s' vendor '%s' product '%s'] is not supported in this version of Data ONTAP.

Parameters

diskName (STRING): Name of the array LUN.
serialno (STRING): Serial number of the array LUN.
vendor (STRING): Vendor ID of the array LUN.
product (STRING): Product ID of the array LUN.

mlm.arraylun events

mlm.arrayLUN.limit.exceeded

Severity

ALERT

Description

This message occurs when Data ONTAP® cannot install one or more discovered array LUNs since the disk device count is at full capacity.

Corrective Action

If possible, remove an existing disk or array LUN so that array LUN installation can proceed. If the failure persists, contact NetApp technical support.

Syslog Message

Unable to install one or more array LUNs [vendor '%s' product '%s'] discovered on initiator port %s, array target port WWNN: %s, WWPN: %s. The disk device limit (%d) has been reached.

Parameters

>   **vendor** (STRING): Vendor ID of the storage array.
>   **product** (STRING): Product ID of the storage array.
>   **adapter** (STRING): Name of the initiator port discovering the array LUN(s).
>   **wwnn** (STRING): World Wide Node Name of the array target port exporting the array LUN(s).
>   **wwpn** (STRING): World Wide Port Name of the array target port exporting the array LUN(s).
>   **limit** (INT): Disk device maximum count.

mlm.bad events

mlm.bad.topology.data

Severity

>   ERROR

Description

>   This message occurs when a device reports invalid data for "REPORT LUNS" command. The invalid data may include one or more instances of duplicate LUN IDs and/or the "list length value" from the "REPORT LUNS" command may not match the amount of data received.

Corrective Action

>   Repair or replace the faulty hardware associated with the wwnn and wwpn

Syslog Message

>   The device with wwnn %s and wwpn %s is reporting inconsistent "REPORT LUNS" data.

Parameters

>   **wwnn** (STRING): World Wide Node Name(wwnn) of the Device.
>   **wwpn** (STRING): World Wide Port Name(wwpn) of the Device.

mlm.excessive events

mlm.excessive.TPlatency

Severity

>   NOTICE

Description

>   This message occurs when ONTAP® detects that the average SCSI I/O command latency on the target port of the array exceeds the set threshold. This message indicates a degradation of I/O throughput for the target port of the array.

Corrective Action

>   Reduce the I/O load on the device, increase the number of array target ports available for I/O, and/or alleviate the cause for the excessive latency on the device.

Syslog Message

>   Average latency of %dus on target port %s, has exceeded %dus

Parameters

avg_latency (INT): Current average latency of commands for the array target port in microseconds.
wwpn (STRING): World Wide Port Name of the array target port on which the excessive latency was detected.
threshold (INT): Threshold value for excessive average latency in microseconds.

mlm.non events

mlm.non.optimized.TPusage

Severity

ERROR

Description

This message occurs when Data ONTAP® detects non-optimized usage of an array's target port. This message indicates degradation of I/O throughput for the indicated array's target port and the cause should be corrected.

Corrective Action

Increase the target port queue depth for the array's target port and/or increase the number of array target ports available for I/O to alleviate the SCSI I/O command load for the array's target port. For example, to increase the maximum allowed I/O commands for an array's target port, the following command can be run: storage array port modify -name ARRAY_NAME_1 -wwnn 50014380025d1500 -wwpn 50014380025d1508 -max-queue-depth 750

Syslog Message

Detected non-optimized usage of a array's target port. WWPN: %s, average service time: %dus, average latency: %dus

Parameters

wwpn (STRING): World Wide Port Name of the array's target port which the non-optimized usage was detected on.
avg_service (INT): Current average service time of I/O commands for the array's target port in microseconds.
avg_latency (INT): Current average latency of I/O commands for the array's target port in microseconds.

mlm.prregistration events

mlm.PRregistration.failed

Severity

ERROR

Description

This message occurs when the registration of a SCSI persistent reservation key fails. A number of conditions can cause this SCSI command to fail and most are transitory in nature. If there is not a subsequent EMS_mlm_PRregistration_succeeded message, it is indicative of a persistent hardware fault.

Corrective Action

A SCSI persistent registration failure normally indicates an error at the device during execution of the requested command. Such cases are often the result of an intermittent device hardware that is

automatically handled by the Data ONTAP® drivers through retries. In cases of repeated events, the specified device should be evaluated for proper operation and possible repair or replacement.

Syslog Message

A SCSI persistent registration command failed on device %s on initiator port %s, target port World Wide Node Name %s, target port World Wide Port Name %s with a ha status of 0x%x, target status of 0x%x, sense key of 0x%x, additional sense code of 0x%x, additional sense code qualifier of 0x%x.

Parameters

device_name (STRING): Electrical path name of the device on which the error occurred.
ha_name (STRING): Name of the initiator port.
wwnn (STRING): World Wide Node Name of the target port.
wwpn (STRING): World Wide Port Name of the target port.
ha_status (INTHEX): Integer value of the hardware adapter status for the failed command.
target_status (INTHEX): Integer value of the target status for the failed command.
sense_key (INTHEX): Integer value of the sense key for the failed command.
asc (INTHEX): Integer value of the additional sense code for the failed command.
asq (INTHEX): Integer value of the additional sense code qualifier for the failed command.

mlm.PRregistration.succeeded

Severity

INFORMATIONAL

Description

This message occurs when a successful registration of a SCSI persistent reservation key occurs that had previously failed.

Corrective Action

(None).

Syslog Message

A SCSI persistent reservation command succeeded on device %s on initiator port %s, target port World Wide Node Name %s, target port World Wide Port Name %s where it had previously failed.

Parameters

device_name (STRING): Electrical path name of the device on which the registration succeeded.
ha_name (STRING): Name of the initiator port.
wwnn (STRING): World Wide Node Name of the target port.
wwpn (STRING): World Wide Port Name of the target port.

mlm.scsi events

mlm.SCSI.supportLvl.bad

Severity

ALERT

Description

This message occurs when an array target port contains SCSI INQUIRY data with an incorrect support level. To prevent a possible data corruption scenario, the target port is not used.

Corrective Action

Verify that the SPC-2 bit in the array's host group is set.

Syslog Message

The target port containing SCSI INQUIRY DATA %s:%s with a (WWPN) of %s, has an incorrect SCSI support level; it will not be available.

Parameters

vendorId (STRING): Vendor ID from the SCSI INQUIRY data.
productId (STRING): Product ID from the SCSI INQUIRY data.
wwpn (STRING): World Wide Port Name (WWPN) of the target port that has the incorrect SCSI support level.

mlm.SCSI.supportLvl.good

Severity

NOTICE

Description

This message occurs when an array target port that previously contained SCSI INQUIRY data with an incorrect support level has been corrected.

Corrective Action

(None).

Syslog Message

The target port containing SCSI INQUIRY DATA %s:%s with a (WWPN) of %s, now has a correct SCSI support level.

Parameters

vendorId (STRING): Vendor ID from the SCSI INQUIRY data.
productId (STRING): Product ID from the SCSI INQUIRY data.
wwpn (STRING): World Wide Port Name (WWPN) of the target port that now has the correct SCSI support level.

mlm.tapemc events

mlm.tapemc.lun.discovery

Severity

INFORMATIONAL

Description

This message occurs when the system discovers a new tape or media changer logical unit (Tape/MC LUN) reported by a tape library.

Corrective Action

(None).

Syslog Message

New %s LUN %s (S/N: %s) was discovered on initiator port %s at tape library target port WWNN: %s, WWPN: %s.

Parameters

deviceType (STRING): Type of LUN device.
deviceName (STRING): Name of the Tape/MC LUN.
serialno (STRING): Serial number of the LUN.
adapterName (STRING): Name of the initiator port discovering the LUN.
wwnn (STRING): World Wide Node Name(WWNN) of the library target port exporting the new LUN.
wwpn (STRING): World Wide Port Name(WWPN) of the library target port exporting the new LUN.

mlm.tapemc.lun.noInit

Severity

ERROR

Description

This message occurs when the initialization sequence for a tape or media changer logical unit (LUN) fails.

Corrective Action

An expected LUN might be missing from the configuration. Information about the path to the LUN might be unknown but the product information in the log may help identify the missing LUN. Check the device LUN configuration settings.

Syslog Message

%s device %sL%d failed LUN initialization sequence at phase %s.

Parameters

deviceType (STRING): Type of LUN device.
deviceName (STRING): Name of the device on which the LUN initialization fails.
lunid (INT): LUN ID of the device on which LUN initialization fails.
lunInitPhase (STRING): Failing LUN initialization phase.

mlm.tapemc.lun.PathAdded

Severity

INFORMATIONAL

Description

This message occurs when a new path is added for a tape or media changer logical unit (Tape/MC LUN).

Corrective Action

(None).

Syslog Message

%s LUN '%s' (S/N: %s) is now connected on initiator port %s through %s's target port: WWNN: %s, WWPN: %s at LUN ID: %d.

Parameters

deviceType (STRING): Type of LUN device.

deviceName (STRING): Name of the Tape/MC LUN.
serialno (STRING): Serial number of the LUN.
adapterName (STRING): Name of the adapter used to access the LUN.
libraryName (STRING): Name of the library.
wwnn (STRING): World Wide Node Name(WWNN) of the library target port.
wwpn (STRING): World Wide Port Name(WWPN) of the library target port.
LUNID (INT): LUN ID to which a path was added.

mlm.tapemc.lun.PathRemoved

Severity

INFORMATIONAL

Description

This message occurs when a path to this tape or media changer logical unit (Tape/MC LUN) is removed.

Corrective Action

(None).

Syslog Message

The %s LUN '%s' (S/N: %s) is no longer available on initiator port %s through %s's target port: WWNN: %s, WWPN: %s.

Parameters

deviceType (STRING): Type of LUN device.
deviceName (STRING): Name of the Tape/MC LUN.
serialno (STRING): Serial number of the LUN.
adapterName (STRING): Name of the adapter used to access the LUN.
libraryName (STRING): Name of the library.
wwnn (STRING): World Wide Node Name(WWNN) of the library target port.
wwpn (STRING): World Wide Port Name(WWPN) of the library target port.

mlm.tapemc.lun.removed

Severity

NOTICE

Description

This message occurs when the last path to a tape or media changer logical unit (Tape/MC LUN) is removed.

Corrective Action

(None).

Syslog Message

The %s LUN '%s' (S/N: %s) is no longer visible to this node.

Parameters

deviceType (STRING): Type of LUN device.
deviceName (STRING): Name of the Tape/MC LUN.
serialno (STRING): Serial number of the LUN.

mlm.tapemc.path.discovery

Severity

INFORMATIONAL

Description

This message occurs when the system discovers a new tape or media changer logical unit (Tape/MC LUN) path.

Corrective Action

(None).

Syslog Message

A new Tape/MC path was discovered: initiator port %s is now connected to tape library %s's target port: WWNN: %s, WWPN: %s. There are %d LUNs visible on this target port.

Parameters

adapterName (STRING): Name of the initiator port discovering the Tape/MC LUN.
libraryName (STRING): Name of the tape library.
wwnn (STRING): World Wide Node Name(WWNN) of the library target port exporting the new LUN.
wwpn (STRING): World Wide Port Name(WWPN) of the library target port exporting the new LUN.
count (INT): Number of LUNs visible on this port.

mlm.tpqd events

mlm.TPQD.TPutilization

Severity

ERROR

Description

This message occurs when Data ONTAP® has lowered the number of I/O commands that are allowed to be active by at least 25 percent for an array's target port. This message indicates degradation of I/O throughput for the indicated array's target port and the cause should be corrected.

Corrective Action

Analyze the EMS logs for EMS_fci_device_timeout, EMS_scsi_cmd_adapterResources or EMS_scsi_cmd_targetStatus indicating of "Busy" or "Queue Full" events associated to the array's target port and correct any hardware faults. Reduce the shared load on the device and/or reduce the maximum allowed I/O commands for the array's target port. For example, to reduce the maximum allowed I/O commands for an array's target port, the following command can be run: storage array port modify -name ARRAY_NAME_1 -wwnn 50014380025d1500 -wwpn 50014380025d1508 -max-queue-depth 256

Syslog Message

Array target port of %s has had its dynamic target port queue depth lowered to %d which is 25%% or lower of its maximum allowed value of %d.

Parameters

wwpn (STRING): World Wide Port Name of the array's target port which has its queue depth decreased by 25% or more.
current_qdepth (INT): Current number of allowed active I/O commands for the array's target port.
max_qdepth (INT): Maximum allowed value of the array's target port queue depth.

mlm.vmdisk events

mlm.vmdisk.discovery

Severity

INFORMATIONAL

Description

This message occurs when the system discovers a new virtual disk in a virtual machine (VM).

Corrective Action

(None).

Syslog Message

A new virtual disk with virtual device ID %d was discovered on initiator port %s on array %s with target port WWNN %s and WWPN: %s.

Parameters

VirtualDeviceID (INT): Virtual device ID of the virtual disk.
adapterName (STRING): Name of the initiator port discovering the virtual disk.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name (WWNN) of the array target port exporting the new virtual disk.
wwpn (STRING): World Wide Port Name (WWPN) of the array target port exporting the new virtual disk.

mlm.vmdisk.PathAdded

Severity

INFORMATIONAL

Description

This message occurs when a new path is added for a virtual disk in a virtual machine (VM).

Corrective Action

(None).

Syslog Message

Virtual disk '%s' (%s) is now connected on initiator port %s through %s's target port: WWNN: %s, WWPN: %s at virtual device ID: %d.

Parameters

diskName (STRING): Name of the virtual disk
serialno (STRING): Serial number of the virtual disk.
adapterName (STRING): Name of the initiator port discovering the virtual disk path.
arrayName (STRING): Name of the array.
wwnn (STRING): World Wide Node Name (WWNN) of the array target port.
wwpn (STRING): World Wide Port Name (WWPN) of the array target port.
VirtualDeviceID (INT): Virtual device ID of the virtual disk.