netif events

ONTAP EMS reference

NetApp
May 13, 2026

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netif events

netif.autonegfailed events

netif.autoNegFailed

Severity

ERROR

Description

This message occurs when autonegotiation fails and the interface is operating at half-duplex, which might not be the desired mode.

Corrective Action

Verify that autonegotiation is enabled on the switch or device to which the interface is connected. Or, if the desired speed is 10 or 100 Mbps, disable autonegotiation on the interface by setting the mediatype.

Syslog Message

Autonegotiation failed, interface %s operating at %d Mbps half-duplex.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".
speed (INT): Speed used by the interface.

netif.badeeprom events

netif.badEeprom

Severity

EMERGENCY

Description

This message occurs when the network interface has an electronically erasable programmable read-only memory (EEPROM) with a bad cyclic redundancy check (CRC) or media access control (MAC) address.

Corrective Action

Replace the component associated with the network interface (PCIe card or controller motherboard).

Syslog Message

Network interface %s has an EEPROM with a bad CRC or MAC address.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".

netif.badoversizepacket events

netif.badOversizePacket

Severity

ERROR

Description

This message occurs when the network interface card (NIC) receives a bad oversize packet.

Corrective Action

Try a different switch port.

Syslog Message

Bad oversize packet received on network interface %s. Check for NIC receive errors (CRC, runts, fragments). Might indicate a bad switch port.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".

netif.cpreventcompleted events

netif.cprEventCompleted

Severity

INFORMATIONAL

Description

This message occurs when a CPR Event (core PCI resiliency) has completed.

Corrective Action

PCI reset has occurred automatically to correct.

Syslog Message

CPR Event (core PCI resiliency) completed on network interface %s and the count since boot is %d.

Parameters

ifname (STRING): Name of network interface.
count (INT): Number of times a CPR Event (core PCI resiliency) has been completed since boot.

netif.cpreventdetected events

netif.cprEventDetected

Severity

INFORMATIONAL

Description

This message occurs when a CPR Event (core PCI resiliency) is detected.

Corrective Action

PCI reset will occur automatically to correct.

Syslog Message

CPR Event (core PCI resiliency) detected on network interface %s and the count since boot is %d.

Parameters

ifname (STRING): Name of network interface.
count (INT): Number of times CPR Event (core PCI resiliency) has occurred since boot.

netif.cprmaxeventsreached events

netif.cprMaxEventsReached

Severity

ERROR

Description

This message occurs when the maximum number of CPR Events (core PCI resiliency) has occurred since boot.

Corrective Action

Replace the failing hardware.

Syslog Message

Replace hardware — maximum number of CPR Events (core PCI resiliency) since boot has occurred on network interface %s.

Parameters

ifname (STRING): Name of network interface.

netif.eepromreadfailed events

netif.eepromReadFailed

Severity

ERROR

Description

This message occurs when there is a failure in reading the electronically erasable programmable read-only memory (EEPROM) for a network interface. The interface is not initialized.

Corrective Action

Rebooting the system might clear the problem. The problem might be caused by a software bug and should be reported to NetApp technical support.

Syslog Message

Failure in reading EEPROM for network interface %s.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".

netif.ena events

netif.ena.allowance.exceeded

Severity

NOTICE

Description

This message occurs when the network throughput exceeds the bandwidth allowance for the node

Corrective Action

(None).

Syslog Message

"%s" AWS ENA metric "%s" changed from %llu to %llu.

Parameters

ifName (STRING): Name of the network interface
metric (STRING): Only one of the following metrics is displayed at a time. bw_in_allowance_exceeded: The number of packets queued or dropped because the inbound aggregate bandwidth exceeded the maximum for the instance. bw_out_allowance_exceeded: The number of packets queued or dropped because the outbound aggregate bandwidth exceeded the maximum for the instance. pps_allowance_exceeded: The number of packets queued or dropped because the bidirectional Packet-per-second exceeded the maximum for the instance.
oldValue (LONGINT): old ena metric value
newValue (LONGINT): new ena metric value

netif.ena.express.changed

Severity

NOTICE

Description

This message occurs when AWS ENA Express feature is changed for the NIC.

Corrective Action

(None).

Syslog Message

AWS ENA Express for "%s" is changed from mode "%s" to "%s".

Parameters

ifName (STRING): Name of the network interface.
oldMode (STRING): ENA Express feature bits (0: off, 1: on with TCP, 2: on with UDP)
newMode (STRING): ENA Express feature bits (0: off, 1: on with TCP, 2: on with UDP)

netif.ena.express.detected

Severity

NOTICE

Description

This message occurs when AWS ENA Express feature is turned on for the NIC.

Corrective Action

(None).

Syslog Message

AWS ENA Express for "%s" is detected: mode "%s".

Parameters

ifName (STRING): Name of the network interface.
mode (STRING): ENA Express feature bits (0: off, 1: on with TCP, 2: on with UDP)

netif.ena.express.disabled

Severity

NOTICE

Description

This message occurs when AWS ENA Express feature is disabled for the NIC.

Corrective Action

(None).

Syslog Message

AWS ENA Express for "%s" is disabled from mode "%s".

Parameters

ifName (STRING): Name of the network interface.
oldMode (STRING): ENA Express feature bits (0: off, 1: on with TCP, 2: on with UDP)

netif.excesslinkinterrupts events

netif.excessLinkInterrupts

Severity

ERROR

Description

This message occurs when excessive link status change interrupts occur on the network interface. One or two events might indicate a momentary glitch on the link, but many events might indicate a bad switch port, cable, or network interface card (NIC).

Corrective Action

Try using a different switch port and cable. If the problem persists, replace the NIC.

Syslog Message

Excessive link status change interrupts occurred on network interface %s.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".

netif.fatal events

netif.fatal.err

Severity

ALERT

Description

This message occurs when the network device’s driver encounters an error from which it cannot recover.

Corrective Action

Replace the network interface card.

Syslog Message

The network device in slot %d encountered fatal error %s.

Parameters

slot (INT): Slot number.
info (STRING): Device specific information

netif.fwhotplugfailed events

netif.fwHotplugFailed

Severity

NOTICE

Description

This message occurs when there is an error while performing a device hotplug after the network interface firmware update is completed. When this happens, the controller reboots to resolve the error.

Corrective Action

(None).

Syslog Message

Hotplug %s slot: %s at PCI: %s failed. The controller will reboot.

Parameters

action (STRING): Insert or remove action of the device hotplug.
slot_num (STRING): Slot number of the network interface card.
location (STRING): PCI location of the network interface.

netif.fwupdatefailed events

netif.fwUpdateFailed

Severity

ERROR

Description

This message occurs when there is an error during a network interface firmware update.

Corrective Action

In very rare cases, a firmware update failure might leave the interface inoperable. If the driver initialization routine subsequently fails and logs a message, the motherboard or card might need to be replaced. For more information or assistance, contact NetApp technical support.

Syslog Message

Firmware update of network interface %s to version %s failed :%s.

Parameters

ifName (STRING): Name of the network interface.
version (STRING): Version of the firmware update.
reason (STRING): Reason for the firmware update failure.

netif.fwupdatestatus events

netif.fwUpdateStatus

Severity

NOTICE

Description

This message occurs to indicate the status of a network interface firmware update.

Corrective Action

(None).

Syslog Message

Firmware update of network interface %s to version %s %s.

Parameters

ifName (STRING): Name of the network interface.
version (STRING): Version of firmware update.
status (STRING): Status of firmware update process (started or completed)

netif.hangdetected events

netif.hangDetected

Severity

ERROR

Description

This message occurs when a network interface driver detects that an interface is hung.

Corrective Action

If hardware is reset and there are no further hangs, no corrective action is required. Otherwise, if the system reports frequent hangs, a core dump is forced, or no action is taken by the driver, contact NetApp technical support.

Syslog Message

Network interface %s hung (%s). %s. Driver: %s.

Parameters

ifName (STRING): Name of the network interface: for example, "e4a".
hangType (STRING): Type of hang. For example, "transmit", "PCIe RcvMstAbt".
recoveryAction (STRING): Action, if any, that will be taken by the driver to recover. For example, "Resetting to recover" or "Forcing panic for core dump" (for root cause analysis).
driver (STRING): Driver name.

netif.hn events

netif.hn.setDataPathFailure

Severity

ERROR

Description

This message occurs when Hyper-V virtual NIC fails to switch the data path from a Physical Function (PF) vPort to a Virtual Function (VF) vPort or vice-versa when accelerated networking is enabled on the virtual NIC. When the data path switch fails, the traffic might or might not continue to flow through existing path. If no traffic flows, then it can result in a complete outage on the LIFs hosted by the virtual NIC.

Corrective Action

Redeploy the CVO instance on another host machine. If the problem persists, contact NetApp technical support.

Syslog Message

%s: Failed to set data path to %s. Error: %d.

Parameters

ifName (STRING): Name of the network interface.
path (STRING): Data path: synthetic (via PF) or virtual (via VF).
error (INT): Failure to set data path.

netif.hv events

netif.hv.heartbeatFail

Severity

ERROR

Description

This message occurs when the heartbeat between hypervisor and the guest virtual machine (VM) fails. There is no functional impact but the resource health in the Azure portal for this VM shows as unavailable. The heartbeat is restored after reboot of the VM or detach and attach of heartbeat device.

Corrective Action

Reboot the Cloud Volumes ONTAP (CVO) instance or run the following two commands from BSD systemshell using diagnostic privilege: sudo devctl disable hvheartbeat0 sudo devctl enable hvheartbeat0 If the problem persists, contact NetApp technical support.

Syslog Message

Failed to respond to heartbeat message from the hypervisor.

Parameters

(None).

netif.init events

netif.init.failed

Severity

ALERT

Description

This message occurs when initialization of a network interface failed due to an unexpected software error.

Corrective Action

Contact NetApp technical support.

Syslog Message

Initialization of network interface %s failed due to unexpected software error %s:%d.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".
module (STRING): Name of the software module or driver.
error (INT): Module-specific error code.

netif.linkdown events

netif.linkDown

Severity

INFORMATIONAL

Description

This message occurs when a network link goes down or the interface is not operational when first configured up.

Corrective Action

If the message describes the link as "down," check the cabling and switch port configuration. If the message states "controller initialization failure", report this to NetApp technical support.

Syslog Message

%s %s: Link %s.

Parameters

lanType (STRING): Local area network (LAN) type.
ifName (STRING): Name of the network interface.
status (STRING): Brief information about the problem.

netif.linkerrors events

netif.linkErrors

Severity

ERROR

Description

This message occurs when the driver detects an excessive link error rate. Link errors are cyclic redundancy checks (CRC), runt frames, fragment, jabber, and alignment errors. Use the 'ifstat' command to display counts.

Corrective Action

Verify that the cable is securely connected at both ends. Verify that both devices are configured the same with respect to autonegotiation, speed, and duplex. If the problem persists, there might be bad hardware at one end, or a bad cable or connector.

Syslog Message

Excessive link errors on network interface %s. Might indicate a bad cable, switch port, or NIC, or that a cable connector is not fully inserted in a socket. On a 10/100 port, might indicate a duplex mismatch.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".

netif.linkinfo events

netif.linkInfo

Severity

INFORMATIONAL

Description

This message occurs when a network interface is reset by the software or is configured down by the administrator.

Corrective Action

(None).

Syslog Message

%s %s: Link %s.

Parameters

lanType (STRING): Local area network (LAN) type.
ifName (STRING): Name of the network interface.
info (STRING): Brief description of the event.

netif.linkup events

netif.linkUp

Severity

INFORMATIONAL

Description

This message occurs when the state of a network link changes to "up".

Corrective Action

(None).

Syslog Message

%s %s: Link %s.

Parameters

lanType (STRING): Local area network (LAN) type.
ifName (STRING): Name of the network interface.
status (STRING): Status of the link, "up".

netif.nicnotsupported events

netif.nicNotSupported

Severity

ERROR

Description

This message occurs when the installed network interface card (NIC) version is not supported.

Corrective Action

Replace the NIC with one purchased from NetApp.

Syslog Message

The NIC in slot %d is not supported. The %s is not supported.

Parameters

slot (INT): Slot number of the NIC.
reason (STRING): Specific reason the NIC is not supported.

netif.overtemperror events

netif.overTempError

Severity

EMERGENCY

Description

This message occurs when a network port is too hot or a sensor has malfunctioned. Depending on how the port is deployed, the failure may disrupt user data access, node access or cluster communication.

Corrective Action

Ensure adequate cooling and ventilation is available. If that does not resolve the issue, replace the failed card.

Syslog Message

Network port %s is over temperature.

Parameters

ifName (STRING): Name of the network port: for example, "e4a".

netif.phynotread events

netif.phyNotRead

Severity

ERROR

Description

This message occurs when the system cannot read identification information from the physical layer (PHY) of a network interface. This might be caused by a software bug or hung hardware, and the link might not come up.

Corrective Action

If the link does not come up, power-cycle (not just reboot) the system. If the link still does not come up, replace the motherboard or network interface card, depending on the location of the interface.

Syslog Message

Cannot read PHY for network interface %s, status mask=0x%llx.

Parameters

ifName (STRING): Name of the network interface, for example, "e8a".
statusMask (LONGINTHEX): Technical information about the event for Data ONTAP® developers.

netif.phyoperationfailed events

netif.phyOperationFailed

Severity

ERROR

Description

This message occurs when there is a failure in reading or writing the physical layer (PHY) of a network interface.

Corrective Action

This might be caused by a software bug. If there are problems with the interface after seeing this message, replace the component associated with the network interface (PCIe card or controller motherboard). If the problem persistis, contact NetApp technical support.

Syslog Message

Failure in reading or writing PHY for network interface %s. Driver=%s, error=%d, regaddr=0x%x, command=0x%x, status=0x%x.

Parameters

ifName (STRING): Name of the network interface; for example, "e2a".
driver (STRING): Driver name.
error (INT): Error code.
regaddr (INTHEX): PHY register address.
command (INTHEX): PHY command.
status (INTHEX): PHY status.

netif.phyread events

netif.phyRead

Severity

ERROR

Description

This message occurs when there is a failure in reading the physical layer (PHY) of a network interface.

Corrective Action

This might be caused by a software bug. If there are problems with the interface after seeing this message, contact NetApp technical support.

Syslog Message

Failure in reading PHY for network interface %s.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".

netif.ratelimitthreshold events

netif.rateLimitThreshold

Severity

ERROR

Description

This message occurs when the protocol rate threshold is reached on a network interface.

Corrective Action

Fix the faulty network configuration or incorrect setup that enables a sudden spike in broadcast packets to bring down the node. If you still want a high ARP rate threshold, use the "bootarg.arp.ratelimit.threshold" boot argument to set that threshold.

Syslog Message

High rate limit on network interface %s for broadcast protocol %s being detected: %d pkts/sec.

Parameters

ifName (STRING): Name of the network interface that reached the protocol rate threshold.
protocol (STRING): Name of the broadcast protocol that overloaded the network.
packetRate (INT): Observed incoming packet rate per second on the interface.

netif.sfpeventerrorcode events

netif.sfpEventErrorCode

Severity

ERROR

Description

This message occurs when the installed Small Form-factor Pluggable (SFP+ or QSFP+) module is either not supported or faulty.

Corrective Action

The cable could be unsupported or faulty. Replace the cable and check the switch port configuration for errors.

Syslog Message

Unsupported or faulty transceiver or cable in port %s. Error :%s.

Parameters

ifName (STRING): Name of the network interface.
error_string (STRING): module event error string.

netif.sfpnotsupported events

netif.sfpNotSupported

Severity

ERROR

Description

This message occurs when the installed Small Form-factor Pluggable (SFP+ or QSFP+) module is not supported.

Corrective Action

Replace the SFP+ or QSFP+ module with one purchased from NetApp for this interface.

Syslog Message

The SFP+ or QSFP+ module (%s %s) installed in %s is not supported with this network interface.

Parameters

sfpVendor (STRING): SFP+ or QSFP+ vendor name.
sfpPn (STRING): SFP+ or QSFP+ part number.
ifName (STRING): Name of the network interface; for example, "e2a".

netif.speeddowngraded events

netif.speedDowngraded

Severity

ERROR

Description

This message occurs when the interface is operating at a lower speed than expected.

Corrective Action

The physical connection may be faulty. Replace the cable and check the switch port configuration for errors.

Syslog Message

Interface %s operating at %d Mbps. This might occur due to faulty cable, faulty switch hardware, or faulty switch software.

Parameters

ifName (STRING): Name of the network interface.
speed (INT): Speed used by the interface.

netif.speednotsupported events

netif.speedNotSupported

Severity

ERROR

Description

This message occurs when a network interface autonegotiates to an unsupported speed.

Corrective Action

Connect to 1 or 10 gigabits per second (Gbps) switch port.

Syslog Message

Autonegotiation on network interface %s resolved to speed %d. This speed is not supported.

Parameters

ifname (STRING): Name of network interface.
speed (INT): Speed in megabits per second (Mbps).

netif.tcp events

netif.tcp.conn.bad.checksum

Severity

ERROR

Description

This message occurs when a bad checksum is detected in the incoming TCP packets.

Corrective Action

If experiencing network issues, corrupted TCP packets might be an issue. Check the network components along the path of TCP connection.

Syslog Message

TCP packet with bad checksum detected on port %s. The packet arrived on connection with source address %s and destination_address %s.

Parameters

local_port (STRING): Ethernet port where the TCP bad checksum packets were detected.
source_address (STRING): Source IP address of the connection.
destination_address (STRING): Destination IP address of the connection.

netif.toomanynics events

netif.tooManyNics

Severity

ERROR

Description

This message occurs when a network interface was not initialized because the number of interfaces of this type exceeds the maximum supported.

Corrective Action

Remove a network interface card (NIC).

Syslog Message

Network interface %s was not initialized because the number of interfaces of this type exceeds the maximum (%d) supported.

Parameters

ifName (STRING): Name of the network interface; for example, "e8a".
maxIf (INT): Maximum number of interfaces of this type that is supported.

netif.uncoreccerror events

netif.uncorEccError

Severity

EMERGENCY

Description

This message occurs when the network interface controller reports an unrecoverable ECC error.

Corrective Action

Reboot the controller. If the problem persists, replace the component associated with the network interface (PCIe card or controller motherboard). If the problem persists, contact NetApp technical support.

Syslog Message

Unrecoverable ECC error on network interface %s.

Parameters

ifName (STRING): Name of the network interface; for example, "e4a".

netif.unknownswrequest events

netif.unknownSwRequest

Severity

ERROR

Description

This message occurs when a network driver does not recognize a request from another software module, possibly because the request is invalid.

Corrective Action

Power-cycle the controller; a reboot is not sufficient. If the problem persists, contact NetApp technical support.

Syslog Message

Software module %s was passed unknown %s %d for %s.

Parameters

driver (STRING): Driver module reporting the error.
object (STRING): Name of the requested object.
value (INT): Value that is not recognized.

ifName (STRING): Name of the network interface.

Copyright information

Trademark information