# **■** NetApp

# nvram events

ONTAP 9.15.1 EMS reference

NetApp August 29, 2024

This PDF was generated from https://docs.netapp.com/us-en/ontap-ems/nvram-battery-events.html on August 29, 2024. Always check docs.netapp.com for the latest.

# **Table of Contents**

n١	vram events	. 1
	nvram.battery events	. 1
	nvram.excessive events	18
	nvram.flash events	19
	nvram.hw events	20

# nvram events

# nvram.battery events

### nvram.battery.capacity.low.critical

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery capacity is critically low. To prevent data loss, the system will shut down.

### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. The battery charges automatically. If the capacity is not restored automatically within 30 minutes after system power is on, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery capacity is critically low (%s). To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.capacity.low.warn

### Severity

**NOTICE** 

### **Description**

This message occurs when the NVRAM battery capacity is below normal.

#### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. The battery charges automatically. If the capacity is not restored automatically within 30 minutes after system power is on, replace the NVRAM battery within three months. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery capacity is below normal (%s).

#### **Parameters**

reading (STRING): Reading that triggered this message.

# nvram.battery.capacity.normal

### Severity

**INFORMATIONAL** 

### Description

This message occurs when the NVRAM battery capacity is normal.

#### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery capacity is normal.

#### **Parameters**

(None).

### nvram.battery.capacityLow

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery capacity is low. To prevent data loss, the system will schedule a clean chassis shutdown if the problem is not corrected.

#### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. The battery charges automatically. If the capacity is not restored automatically within 30 minutes after system power is on, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery capacity is low (%s).

### **Parameters**

reading (STRING): Reading that triggered this message.

# nvram.battery.chargeFET.normal

### Severity

INFORMATIONAL

### **Description**

This message occurs when the NVRAM battery charge FET is on.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery charge FET is on.

#### **Parameters**

(None).

### nvram.battery.chargeFET.off

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery charge FET is off. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

### **Corrective Action**

Shut down the system and power-cycle the controller. If the charge FET remains off, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery charge FET is off. To prevent data loss, the system will shut down %s.

#### **Parameters**

countdown (STRING): Remaining time before chassis shutdown.

### nvram.battery.charging.nocharge

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery is requesting to be charged but the charger is not charging the battery. To prevent data loss, the system will shut down.

#### **Corrective Action**

Reseat the NVRAM battery connector. If the problem occurs again, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery is requesting to be charged but the charger is not charging the battery. To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

num\_minutes (INT): Number of minutes until the system shuts down.

### nvram.battery.charging.normal

### Severity

INFORMATIONAL

### **Description**

This message occurs when the NVRAM battery charging status is normal.

(None).

### **Syslog Message**

The NVRAM battery charging status is normal.

#### **Parameters**

(None).

### nvram.battery.charging.wrongcharge

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery charger is charging the battery even though the battery is not requesting to be charged. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

#### **Corrective Action**

Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery charger is charging the battery even though the battery is not requesting to be charged. To prevent data loss, the system will shut down %s.

#### **Parameters**

countdown (STRING): Remaining time before chassis shutdown.

# nvram.battery.current.high

#### Severity

**EMERGENCY** 

### Description

This message occurs when the NVRAM battery charging current is critically high. To prevent data loss, the system will shut down.

### **Corrective Action**

Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery current is critically high (%s). To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

reading (STRING): Reading that triggered this message.

**num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.current.high.warn

### Severity

**ERROR** 

### Description

This message occurs when the NVRAM battery charging current is above normal. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

#### **Corrective Action**

Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery current is above normal (%s). To prevent data loss, the system will shut down %s.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **countdown** (STRING): Remaining time before chassis shutdown.

### nvram.battery.current.low

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery detects a short circuit. To prevent data loss, the system will shut down.

#### **Corrective Action**

Contact NetApp technical support for assistance with identification and replacement of the appropriate component.

### Syslog Message

The NVRAM battery has a short circuit (%s). To prevent data loss, the system will shut down in %d minutes.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.current.low.warn

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery is discharging when it should not. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery current is below normal (%s). To prevent data loss, the system will shut down %s.

### **Parameters**

**reading** (STRING): Reading that triggered this message. **countdown** (STRING): Remaining time before chassis shutdown.

### nvram.battery.current.normal

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery current is normal.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery current is normal.

### **Parameters**

(None).

# nvram.battery.dischargeFET.normal

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery discharge FET is on.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery discharge FET is on.

### **Parameters**

(None).

# nvram.battery.dischargeFET.off

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery discharge FET is off. To prevent data loss, the system will shut down.

#### **Corrective Action**

Shut down the system and power-cycle the controller. If the discharge FET remains off, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery discharge FET is off. To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

num\_minutes (INT): Number of minutes until the system shuts down.

### nvram.battery.endOfLife.high

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery-cycle count indicates that the battery has reached its anticipated life expectancy.

### **Corrective Action**

Replace the NVRAM battery in the next three months.

### Syslog Message

The NVRAM battery has reached its anticipated life expectancy.

### **Parameters**

(None).

# nvram.battery.endOfLife.normal

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery-cycle count indicates that the battery is well below its anticipated life expectancy.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery is well below its anticipated life expectancy.

#### **Parameters**

(None).

### nvram.battery.fault

### Severity

**EMERGENCY** 

### Description

This message occurs when the NVRAM battery is reporting a fatal fault condition. To prevent data loss, the system will shut down.

#### **Corrective Action**

Correct any environmental problems, such as chassis over-temperature. If the battery still reports a fatal fault, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery is reporting a fatal fault condition. To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

num minutes (INT): Number of minutes until the system shuts down.

### nvram.battery.fault.cleared

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery internal fault condition has been cleared.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery internal fault condition has been cleared.

### **Parameters**

(None).

### nvram.battery.fault.warn

### Severity

**NOTICE** 

### **Description**

This message occurs when the NVRAM battery is reporting a non-fatal fault condition.

#### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. If the condition persists, replace the NVRAM battery in the next three months.

### Syslog Message

The NVRAM battery is reporting a non-fatal fault condition.

### **Parameters**

(None).

### nvram.battery.fcc.low

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery full-charge capacity is low. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

### **Corrective Action**

Use the "sysconfig -M" command in 7-Mode or the "run local sysconfig -M" command in clustered Data ONTAP® to get the battery manufacturer date. If the battery is newer than three years old, correct any chronic environmental problems, such as chassis over-temperature. Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery full-charge capacity is low (%s). To prevent data loss, the system will shut down %s.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **countdown** (STRING): Remaining time before chassis shutdown.

# nvram.battery.fcc.low.critical

### **Deprecated**

Deprecated as of version 9.2.0 to address the EMS ID length violation.

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery full-charge capacity is critically low. To prevent data loss, the system will shut down.

#### **Corrective Action**

Use the "sysconfig -M" command in 7-Mode or the "run local sysconfig -M" command in clustered Data ONTAP® to get the battery manufacturer date. If the battery is newer than three years old, correct any chronic environmental problems, such as chassis over-temperature. Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

#### **Syslog Message**

The NVRAM battery full-charge capacity is critically low (%s). To prevent data loss, the system will shut down in %d minutes.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.fcc.low.warn

### Severity

**NOTICE** 

### **Description**

This message occurs when the NVRAM battery full-charge capacity is below normal.

### **Corrective Action**

Replace the NVRAM battery in the next three months. Use the "sysconfig -M" command in 7-Mode or the "run local sysconfig -M" command in clustered Data ONTAP® to get the battery manufacturer date. If the battery is newer than three years old, correct any chronic environmental problems, such as chassis overtemperature.

### **Syslog Message**

The NVRAM battery full-charge capacity is below normal (%s).

### **Parameters**

reading (STRING): Reading that triggered this message.

### nvram.battery.fcc.normal

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery full-charge capacity is normal.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery full-charge capacity is normal.

### **Parameters**

(None).

# nvram.battery.fccLowCrit

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery full-charge capacity is critically low. To prevent data loss, the system will shut down.

Use the "system node run -node local sysconfig -M" command to obtain the battery manufacturing date. If the battery is over three years old, replacement might be necessary. Contact NetApp technical support for troubleshooting assistance.

### **Syslog Message**

The NVRAM battery full-charge capacity is critically low (%s). To prevent data loss, the system will shut down in %d minutes.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.fcmto.warn

### Severity

**NOTICE** 

### **Description**

This message occurs when the NVRAM battery fast-charge timeout expires. The battery will not be charged until this condition is corrected.

### **Corrective Action**

Shut down the controller and power cycle it from the Service Processor (SP) command line interface (CLI) with the "system power cycle" command. The fast-charge timeout will be reset after the power cycle.

### **Syslog Message**

The NVRAM battery has reached a charging timeout fault. The battery charger will not turn on again until the contoller has been power cycled. Low capacity warning messages begin in %s weeks.

#### **Parameters**

num\_weeks (STRING): Number of weeks before low capacity warning messages begin.

### nvram.battery.not.present

#### Severity

**EMERGENCY** 

### **Description**

This message occurs when the presence of the NVRAM battery cannot be detected. To prevent data loss, the system will shut down.

### **Corrective Action**

While the system is shut down, ensure that the NVRAM battery is present. If the NVRAM battery is already present, ensure that the connector is seated properly. Power on the system. If this does not correct the problem, replace the NVRAM battery. If the system still does not detect the battery, contact NetApp technical support.

#### Syslog Message

The presence of NVRAM battery cannot be detected. To prevent data loss, the system will shut down in %d minutes.

#### **Parameters**

num\_minutes (INT): Number of minutes until the system shuts down.

### nvram.battery.pack.invalid

### Severity

**ERROR** 

### **Description**

This message occurs when an unsupported NVRAM battery pack is installed in the system. To prevent data loss, the system initiates a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

### **Corrective Action**

Shut down the system and replace the NVRAM battery with a correct battery pack.

### **Syslog Message**

The incorrect NVRAM battery is installed. Expected part number is %s. To prevent data loss, the system will shut down in %d minutes.

#### **Parameters**

```
partnum (STRING): Valid battery part number.
num minutes (INT): Number of minutes until the system shuts down.
```

### nvram.battery.pack.valid

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when a valid NVRAM battery pack is now present and readable.

### **Corrective Action**

(None).

### **Syslog Message**

A valid NVRAM battery pack is present.

### **Parameters**

(None).

# nvram.battery.packInvalidHrs

### Severity

**EMERGENCY** 

### **Description**

This message occurs when an unsupported NVRAM battery pack is installed in the system. To prevent data loss, the system initiates a clean shutdown if the problem is not corrected.

Shut down the system and replace the NVRAM battery with the correct battery pack.

### **Syslog Message**

The incorrect NVRAM battery is installed. Expected part number is "%s". To prevent data loss, the system shuts down %s.

#### **Parameters**

partnum (STRING): Valid battery part number.
remaining\_time (STRING): Number of hours until the system shuts down.

### nvram.battery.power.fault

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery is not receiving power. To prevent data loss, the system will shut down.

#### **Corrective Action**

Ensure that the NVRAM battery connector is seated properly. Boot up the system. If the NVRAM battery is still not receiving power, replace the NVRAM battery. If the problem persists, contact NetApp technical support.

### Syslog Message

The NVRAM battery is not receiving power. To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

num\_minutes (INT): Number of minutes until the system shuts down.

### nvram.battery.power.normal

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery power is normal.

#### **Corrective Action**

(None).

### Syslog Message

The NVRAM battery power is normal.

#### **Parameters**

(None).

# nvram.battery.sensor.unreadable

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery state cannot be determined because the sensor cannot be read. To prevent data loss, the system will shut down.

#### **Corrective Action**

Ensure that the NVRAM battery connector is seated properly. Power on the system. If the problem is not corrected, replace the NVRAM battery. If the sensor still cannot be read, contact NetApp technical support.

### Syslog Message

The NVRAM battery state cannot be determined because the "%s" sensor cannot be read. To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

**sensor\_name** (STRING): Sensor name. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.temp.high

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery temperature is critically high. To prevent data loss, the system will shut down.

### **Corrective Action**

Correct any environmental issues, such as a high ambient temperature. If the NVRAM battery temperature is still above normal, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery temperature is critically high (%s). To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

# nvram.battery.temp.high.warn

### Severity

**NOTICE** 

### **Description**

This message occurs when the NVRAM battery temperature is above normal. Battery life will be severely compromised.

Correct any environmental issues, such as a high ambient temperature. If the NVRAM battery temperature is still above normal, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery temperature is above normal (%s).

#### **Parameters**

reading (STRING): Reading that triggered this message.

### nvram.battery.temp.low

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery is too cold. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

### **Corrective Action**

If the system is excessively cold, allow it to warm gradually. If the NVRAM battery temperature is still too low, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery is too cold (%s). To prevent data loss, the system will shut down %s.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **countdown** (STRING): Remaining time before chassis shutdown.

### nvram.battery.temp.low.warn

### Severity

**NOTICE** 

### Description

This message occurs when the NVRAM battery temperature is below normal.

#### **Corrective Action**

Allow the system to warm gradually. If the NVRAM battery temperature is still low, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### **Syslog Message**

The NVRAM battery temperature is below normal (%s).

#### **Parameters**

reading (STRING): Reading that triggered this message.

### nvram.battery.temp.normal

### Severity

**INFORMATIONAL** 

### Description

This message occurs when the NVRAM battery temperature is normal.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery temperature is normal.

### **Parameters**

(None).

### nvram.battery.unreadHrs

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery state cannot be determined because the sensor is unreadable. If this issue is not resolved within the specified time, the system shuts down to prevent data loss.

### **Corrective Action**

Ensure that the NVRAM battery connector is seated properly. If the problem is not corrected, replace the NVRAM battery. If the sensor is still not readable, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery state cannot be determined because the "%s" sensor is unreadable. To prevent data loss, the system shuts down %s.

### **Parameters**

**sensor\_name** (STRING): Sensor name. **remaining\_time** (STRING): Remaining time before chassis shutdown.

# nvram.battery.voltage.high

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery voltage is critically high. To prevent data loss, the system will shut down.

### **Corrective Action**

Replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery voltage is critically high (%s). To prevent data loss, the system will shut down in %d minutes.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.voltage.high.warn

### Severity

**ERROR** 

### Description

This message occurs when the NVRAM battery voltage is above normal. To prevent data loss, the system will initiate a clean chassis shutdown if the problem is not corrected within 24 hours of first detection.

### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. If the NVRAM battery voltage is still above normal, replace the NVRAM battery. If the problem returns or persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery voltage is above normal (%s). To prevent data loss, the system will shut down %s.

#### **Parameters**

**reading** (STRING): Reading that triggered this message. **countdown** (STRING): Remaining time before chassis shutdown.

# nvram.battery.voltage.low

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the NVRAM battery voltage is critically low. To prevent data loss, the system will shut down.

### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. If the NVRAM battery voltage is still critically low, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery voltage is critically low (%s). To prevent data loss, the system will shut down in %d minutes.

### **Parameters**

**reading** (STRING): Reading that triggered this message. **num\_minutes** (INT): Number of minutes until the system shuts down.

### nvram.battery.voltage.normal

### Severity

**INFORMATIONAL** 

### **Description**

This message occurs when the NVRAM battery voltage is normal.

### **Corrective Action**

(None).

### **Syslog Message**

The NVRAM battery voltage is normal.

### **Parameters**

(None).

# nvram.battery.voltageLowWarn

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM battery voltage is below normal. To prevent data loss, the system will schedule a clean chassis shutdown if the problem is not corrected.

### **Corrective Action**

Correct any environmental problems, such as chassis over- temperature. If the NVRAM battery voltage is still below normal 30 minutes after environmental problems have been corrected, replace the NVRAM battery. If the problem persists, replace the FRU (field-replaceable unit) NVRAM card or PCM, where the battery is located.

### Syslog Message

The NVRAM battery voltage is below normal (%s).

### **Parameters**

reading (STRING): Reading that triggered this message.

# nvram.excessive events

### nvram.excessive.cecc.errs

### Severity

**ALERT** 

### **Description**

This message occurs when excessive correctable error-correcting code (ECC) memory errors are reported by the NVRAM complex.

Use the "system environment sensors show -hidden true" cluster shell command to view the current "NV Correctable ECC count" and "NV Correctable ECC rate" values. Contact NetApp technical support for further assistance.

### **Syslog Message**

Excessive correctable ECC errors in the NVRAM card.

### **Parameters**

(None).

### nvram.excessive.sbit.ecc.errs

### **Deprecated**

Deprecated as of version 9.2.0 to address the EMS ID length violation.

### Severity

**ALERT** 

### **Description**

This event is issued to report excessive singlebit ECC errors.

### **Corrective Action**

(None).

### **Syslog Message**

Excessive singlebit ECC errors in the NVRAM card

#### **Parameters**

(None).

# nvram.flash events

# nvram.flash.spare.low

### Severity

**ALERT** 

### **Description**

This message occurs periodically when the capacity of the NVRAM flash memory spare blocks is low, before it becomes critically low. This issue typically indicates that the NVRAM hardware is approaching the end of its service life and should be replaced soon.

### **Corrective Action**

Contact NetApp technical support for replacement assistance.

### **Syslog Message**

NVRAM flash memory spare capacity is low: %s.

#### **Parameters**

**problem** (STRING): Information about the NVRAM flash memory spare blocks whose capacity is low and about its condition.

# nvram.hw events

### nvram.hw.degraded

### Severity

**ERROR** 

### **Description**

This message occurs when the NVRAM hardware is degraded.

### **Corrective Action**

Contact NetApp technical support for replacement assistance.

### **Syslog Message**

NVRAM hardware is degraded: %s.

### **Parameters**

reasonText (STRING): Reason the NVRAM hardware is degraded.

### nvram.hw.initFail

### Severity

**EMERGENCY** 

### **Description**

This message occurs when the Data ONTAP® NVRAM hardware fails to initialize.

### **Corrective Action**

Typically, this type of error is unexpected and indicates that the NVRAM hardware is failing and should be replaced. Contact NetApp technical support for assistance with the replacement.

### **Syslog Message**

NVRAM hardware initialization failed: %s.

#### **Parameters**

error (STRING): Description of the error.

### nvram.hw.normal

### Severity

NOTICE

### **Description**

This message occurs when the NVRAM hardware is operating normally.

(None).

# **Syslog Message**

NVRAM hardware is operating normally.

# **Parameters**

(None).

### 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 <a href="http://www.netapp.com/TM">http://www.netapp.com/TM</a> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.