



Dell OpenManage™ Server  
Administrator

# Messages Reference Guide

## Notes and Notices

-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer.
-  **NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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# Contents

1	Introduction . . . . .	5
	<b>What's New in this Release</b> . . . . .	5
	<b>Messages Not Described in This Guide</b> . . . . .	5
	<b>Understanding Event Messages</b> . . . . .	6
	Sample Event Message Text . . . . .	7
	<b>Viewing Alerts and Event Messages</b> . . . . .	7
	Viewing Events in Windows 2000 Advanced Server and Windows Server 2003 . . . . .	8
	Viewing Events in Red Hat Enterprise Linux and SUSE Linux Enterprise Server . . . . .	8
	Viewing the Event Information . . . . .	9
	Understanding the Event Description . . . . .	10
2	Event Message Reference . . . . .	13
	<b>Miscellaneous Messages</b> . . . . .	13
	<b>Temperature Sensor Messages</b> . . . . .	15
	<b>Cooling Device Messages</b> . . . . .	18
	<b>Voltage Sensor Messages</b> . . . . .	19
	<b>Current Sensor Messages</b> . . . . .	22
	<b>Chassis Intrusion Messages</b> . . . . .	25
	<b>Redundancy Unit Messages</b> . . . . .	26
	<b>Power Supply Messages</b> . . . . .	29
	<b>Memory Device Messages</b> . . . . .	32
	<b>Fan Enclosure Messages</b> . . . . .	33
	<b>AC Power Cord Messages</b> . . . . .	34
	<b>Hardware Log Sensor Messages</b> . . . . .	35
	<b>Processor Sensor Messages</b> . . . . .	37

	<b>Pluggable Device Messages</b> . . . . .	39
	<b>Battery Sensor Messages</b> . . . . .	40
3	<b>System Event Log Messages for IPMI Systems</b> . . . . .	43
	<b>Temperature Sensor Events</b> . . . . .	43
	<b>Voltage Sensor Events</b> . . . . .	44
	<b>Fan Sensor Events</b> . . . . .	45
	<b>Processor Status Events</b> . . . . .	46
	<b>Power Supply Events</b> . . . . .	47
	<b>Memory ECC Events</b> . . . . .	48
	<b>BMC Watchdog Events</b> . . . . .	48
	<b>Memory Events</b> . . . . .	49
	<b>Hardware Log Sensor Events</b> . . . . .	49
	<b>Drive Events</b> . . . . .	50
	<b>Intrusion Events</b> . . . . .	51
	<b>BIOS Generated System Events</b> . . . . .	52
	<b>R2 Generated System Events</b> . . . . .	55
	<b>Cable Interconnect Events</b> . . . . .	55
	<b>Battery Events</b> . . . . .	55
	<b>Entity Presence Events</b> . . . . .	56
4	<b>Storage Management Message Reference</b> . . . . .	57
	<b>Alert Monitoring and Logging</b> . . . . .	57
	<b>Alert Message Format with Substitution Variables</b> . . . . .	57
	<b>Alert Message Change History</b> . . . . .	60
	<b>Alert Descriptions and Corrective Actions</b> . . . . .	64
	<b>Index</b> . . . . .	135

# Introduction

Dell OpenManage™ Server Administrator produces event messages stored primarily in the operating system or Server Administrator event logs and sometimes in SNMP traps. This document describes the event messages created by Server Administrator version 5.3 or later and displayed in the Server Administrator Alert log.

Server Administrator creates events in response to sensor status changes and other monitored parameters. The Server Administrator event monitor uses these status change events to add descriptive messages to the operating system event log or the Server Administrator Alert log.

Each event message that Server Administrator adds to the Alert log consists of a unique identifier called the event ID for a specific event source category and a descriptive message. The event message includes the severity, cause of the event, and other relevant information, such as the event location and the monitored item's previous state.

Tables provided in this guide list all Server Administrator event IDs in numeric order. Each entry includes the event ID's corresponding description, severity level, and cause. Message text in angle brackets (for example, `<state>`) describes the event-specific information provided by the Server Administrator.

## What's New in this Release

Modifications have been made to the Storage Management Service events. For more information, see "[Alert Message Change History](#)".

## Messages Not Described in This Guide




This guide describes only event messages created by Server Administrator and displayed in the Server Administrator Alert log. For information on other messages produced by your system, consult one of the following sources:

- Your system's *Installation and Troubleshooting Guide*
- Other system documentation
- Operating system documentation
- Application program documentation

## Understanding Event Messages

This section describes the various types of event messages generated by the Server Administrator. When an event occurs on your system, the Server Administrator sends information about one of the following event types to the systems management console:

**Table 1-1. Understanding Event Messages**

Icon	Alert Severity	Component Status
	OK/Normal	An event that describes the successful operation of a unit. The alert is provided for informational purposes and does not indicate an error condition. For example, the alert may indicate the normal start or stop of an operation, such as power supply or a sensor reading returning to normal.
	Warning/Non-critical	An event that is not necessarily significant, but may indicate a possible future problem. For example, a Warning/Non-critical alert may indicate that a component (such as a temperature probe in an enclosure) has crossed a warning threshold.
	Critical/Failure/Error	A significant event that indicates actual or imminent loss of data or loss of function. For example, crossing a failure threshold or a hardware failure such as an array disk.

Server Administrator generates events based on status changes in the following sensors:

- **Temperature Sensor** — Helps protect critical components by alerting the systems management console when temperatures become too high inside a chassis; also monitors a variety of locations in the chassis and in any attached systems.
- **Fan Sensor** — Monitors fans in various locations in the chassis and in any attached systems.
- **Voltage Sensor** — Monitors voltages across critical components in various chassis locations and in any attached systems.
- **Current Sensor** — Monitors the current (or amperage) output from the power supply (or supplies) in the chassis and in any attached systems.
- **Chassis Intrusion Sensor** — Monitors intrusion into the chassis and any attached systems.
- **Redundancy Unit Sensor** — Monitors redundant units (critical units such as fans, AC power cords, or power supplies) within the chassis; also monitors the chassis and any attached systems. For example, redundancy allows a second or *n*th fan to keep the chassis components at a safe temperature when another fan has failed. Redundancy is normal when the intended number of critical components are operating. Redundancy is degraded when a component fails, but others are still operating. Redundancy is lost when there is one less critical redundancy device than required.
- **Power Supply Sensor** — Monitors power supplies in the chassis and in any attached systems.
- **Memory Prefailure Sensor** — Monitors memory modules by counting the number of Error Correction Code (ECC) memory corrections.

- **Fan Enclosure Sensor** — Monitors protective fan enclosures by detecting their removal from and insertion into the system, and by measuring how long a fan enclosure is absent from the chassis. This sensor monitors the chassis and any attached systems.
- **AC Power Cord Sensor** — Monitors the presence of AC power for an AC power cord.
- **Hardware Log Sensor** — Monitors the size of a hardware log.
- **Processor Sensor** — Monitors the processor status in the system.
- **Pluggable Device Sensor** — Monitors the addition, removal, or configuration errors for some pluggable devices, such as memory cards.
- **Battery Sensor** — Monitors the status of one or more batteries in the system.

### Sample Event Message Text

The following example shows the format of the event messages logged by Server Administrator.

```
EventID: 1000
Source: Server Administrator
Category: Instrumentation Service
Type: Information
Date and Time: Mon Oct 21 10:38:00 2002
Computer: <computer name>
Description:
Server Administrator starting
Data: Bytes in Hex
```

## Viewing Alerts and Event Messages

An event log is used to record information about important events.

Server Administrator generates alerts that are added to the operating system event log and to the Server Administrator Alert log. To view these alerts in Server Administrator:

- 1 Select the **System** object in the tree view.
- 2 Select the **Logs** tab.
- 3 Select the **Alert** subtab.

You can also view the event log using your operating system's event viewer. Each operating system's event viewer accesses the applicable operating system event log.

The location of the event log file depends on the operating system you are using.

- In the Microsoft® Windows® 2000 Advanced Server and Windows Server™ 2003 operating systems, messages are logged to the system event log and optionally to a unicode text file, **dcsys32.log** (viewable using Notepad), that is located in the *install\_path\omsa\log* directory. The default *install\_path* is **C:\Program Files\Dell\SysMgt**.
- In the Red Hat® Enterprise Linux and SUSE® Linux Enterprise Server operating system, messages are logged to the system log file. The default name of the system log file is **/var/log/messages**. You can view the messages file using a text editor such as vi or emacs.



**NOTE:** Logging messages to a unicode text file is optional. By default, the feature is disabled. To enable this feature, modify the **Event Manager** section of the **dcemdy32.ini** file as follows:

- In Windows, locate the file at *<install\_path>\dataeng\ini* and set *UnitextLog.enabled=True*. The default *install\_path* is **C:\Program Files\Dell\SysMgt**. Restart the **DSM SA Event Manager** service.
- In Red Hat Enterprise Linux and SUSE Linux Enterprise Server, locate the file at *<install\_path>/dataeng/ini* and set *UnitextLog.enabled=True*. The default *install\_path* is **/opt/dell/srvadmin**. Issue the **"/etc/init.d/dataeng restart"** command to restart the Server Administrator event manager service. This will also restart the Server Administrator data manager and SNMP services.

The following subsections explain how to open the Windows 2000 Advanced Server, Windows Server 2003, and the Red Hat Enterprise Linux and SUSE Linux Enterprise Server event viewers.

### Viewing Events in Windows 2000 Advanced Server and Windows Server 2003

- 1 Click the **Start** button, point to **Settings**, and click **Control Panel**.
- 2 Double-click **Administrative Tools**, and then double-click **Event Viewer**.
- 3 In the **Event Viewer** window, click the **Tree** tab and then click **System Log**.  
The **System Log** window displays a list of recently logged events.
- 4 To view the details of an event, double-click one of the event items.



**NOTE:** You can also look up the **dcsys32.log** file, in the *install\_path\omsa\log* directory, to view the separate event log file. The default *install\_path* is **C:\Program Files\Dell\SysMgt**.

### Viewing Events in Red Hat Enterprise Linux and SUSE Linux Enterprise Server

- 1 Log in as **root**.
- 2 Use a text editor such as vi or emacs to view the file named **/var/log/messages**.

The following example shows the Red Hat Enterprise Linux (and SUSE Linux Enterprise Server) message log, **/var/log/messages**. The text in boldface type indicates the message text.



**NOTE:** These messages are typically displayed as one long line. In the following example, the message is displayed using line breaks to help you see the message text more clearly.



...

Feb 6 14:20:51 server01 Server Administrator: Instrumentation Service  
EventID: 1000

**Server Administrator starting**

Feb 6 14:20:51 server01 Server Administrator: Instrumentation Service  
EventID: 1001

**Server Administrator startup complete**

Feb 6 14:21:21 server01 Server Administrator: Instrumentation Service  
EventID: 1254 **Chassis intrusion detected Sensor location: Main chassis  
intrusion Chassis location: Main System Chassis Previous state was: OK  
(Normal) Chassis intrusion state: Open**

Feb 6 14:21:51 server01 Server Administrator: Instrumentation Service  
EventID: 1252 **Chassis intrusion returned to normal Sensor location: Main  
chassis intrusion Chassis location: Main System Chassis Previous state  
was: Critical (Failed) Chassis intrusion state: Closed**

## Viewing the Event Information

The event log for each operating system contains some or all of the following information:

- **Date** — The date the event occurred.
- **Time** — The local time the event occurred.
- **Type** — A classification of the event severity: Information, Warning, or Error.
- **User** — The name of the user on whose behalf the event occurred.
- **Computer** — The name of the system where the event occurred.
- **Source** — The software that logged the event.
- **Category** — The classification of the event by the event source.
- **Event ID** — The number identifying the particular event type.
- **Description** — A description of the event. The format and contents of the event description vary, depending on the event type.

## Understanding the Event Description

Table 1-2 lists in alphabetical order each line item that may appear in the event description.

**Table 1-2. Event Description Reference**

Description Line Item	Explanation
Action performed was: <i>&lt;Action&gt;</i>	Specifies the action that was performed, for example: Action performed was: Power cycle
Action requested was: <i>&lt;Action&gt;</i>	Specifies the action that was requested, for example: Action requested was: Reboot, shutdown OS first
Additional Details: <i>&lt;Additional details for the event&gt;</i>	Specifies additional details available for the hot plug event, for example: Memory device: DIMM1_A Serial number: FFFF30B1
<i>&lt;Additional power supply status information&gt;</i>	Specifies information pertaining to the event, for example: Power supply input AC is off, Power supply POK (power OK) signal is not normal, Power supply is turned off
Chassis intrusion state: <i>&lt;Intrusion state&gt;</i>	Specifies the chassis intrusion state (open or closed), for example: Chassis intrusion state: Open
Chassis location: <i>&lt;Name of chassis&gt;</i>	Specifies name of the chassis that generated the message, for example: Chassis location: Main System Chassis
Configuration error type: <i>&lt;type of configuration error&gt;</i>	Specifies the type of configuration error that occurred, for example: Configuration error type: Revision mismatch
Current sensor value (in Amps): <i>&lt;Reading&gt;</i>	Specifies the current sensor value in amps, for example: Current sensor value (in Amps): 7.853
Date and time of action: <i>&lt;Date and time&gt;</i>	Specifies the date and time the action was performed, for example: Date and time of action: Sat Jun 12 16:20:33 2004
Device location: <i>&lt;Location in chassis&gt;</i>	Specifies the location of the device in the specified chassis, for example: Device location: Memory Card A
Discrete current state: <i>&lt;State&gt;</i>	Specifies the state of the current sensor, for example: Discrete current state: Good
Discrete temperature state: <i>&lt;State&gt;</i>	Specifies the state of the temperature sensor, for example: Discrete temperature state: Good

**Table 1-2. Event Description Reference (continued)**


Description Line Item	Explanation
Discrete voltage state: <i>&lt;State&gt;</i>	Specifies the state of the voltage sensor, for example: Discrete voltage state: Good
Fan sensor value: <i>&lt;Reading&gt;</i>	Specifies the fan speed in revolutions per minute (RPM) or On/Off, for example: Fan sensor value (in RPM): 2600 Fan sensor value: Off
Log type: <i>&lt;Log type&gt;</i>	Specifies the type of hardware log, for example: Log type: ESM
Memory device bank location: <i>&lt;Bank name in chassis&gt;</i>	Specifies the name of the memory bank in the system that generated the message, for example: Memory device bank location: Bank_1
Memory device location: <i>&lt;Device name in chassis&gt;</i>	Specifies the location of the memory module in the chassis, for example: Memory device location: DIMM_A
Number of devices required for full redundancy: <i>&lt;Number&gt;</i>	Specifies the number of power supply or cooling devices required to achieve full redundancy, for example: Number of devices required for full redundancy: 4
Possible memory module event cause: <i>&lt;list of causes&gt;</i>	Specifies a list of possible causes for the memory module event, for example: Possible memory module event cause: Single bit warning error rate exceeded Single bit error logging disabled
Power Supply type: <i>&lt;type of power supply&gt;</i>	Specifies the type of power supply, for example: Power Supply type: VRM
Previous redundancy state was: <i>&lt;State&gt;</i>	Specifies the status of the previous redundancy message, for example: Previous redundancy state was: Lost
Previous state was: <i>&lt;State&gt;</i>	Specifies the previous state of the sensor, for example: Previous state was: OK (Normal)
Processor sensor status: <i>&lt;status&gt;</i>	Specifies the status of the processor sensor, for example: Processor sensor status: Configuration error

**Table 1-2. Event Description Reference (continued)**

Description Line Item	Explanation
Redundancy unit: <i>&lt;Redundancy location in chassis&gt;</i>	Specifies the location of the redundant power supply or cooling unit in the chassis, for example: Redundancy unit: Fan Enclosure
Sensor location: <i>&lt;Location in chassis&gt;</i>	Specifies the location of the sensor in the specified chassis, for example: Sensor location: CPU1
Temperature sensor value: <i>&lt;Reading&gt;</i>	Specifies the temperature in degrees Celsius, for example: Temperature sensor value (in degrees Celsius): 30
Voltage sensor value (in Volts): <i>&lt;Reading&gt;</i>	Specifies the voltage sensor value in volts, for example: Voltage sensor value (in Volts): 1.693

## Event Message Reference

The following tables lists in numerical order each event ID and its corresponding description, along with its severity and cause.

 **NOTE:** For corrective actions, see the appropriate documentation.

### Miscellaneous Messages

Miscellaneous messages in Table 2-1 indicate that certain alert systems are up and working.

**Table 2-1. Miscellaneous Messages**

Event ID	Description	Severity	Cause
0000	Log was cleared	Information	User cleared the log from Server Administrator.
0001	Log backup created	Information	The log was full, copied to backup, and cleared.
1000	Server Administrator starting	Information	Server Administrator is beginning to initialize.
1001	Server Administrator startup complete	Information	Server Administrator completed its initialization.
1002	A system BIOS update has been scheduled for the next reboot	Information	The user has chosen to update the flash basic input/output system (BIOS).
1003	A previously scheduled system BIOS update has been canceled	Information	The user decides to cancel the flash BIOS update, or an error occurs during the flash.
1004	Thermal shutdown protection has been initiated	Error	This message is generated when a system is configured for thermal shutdown due to an error event. If a temperature sensor reading exceeds the error threshold for which the system is configured, the operating system shuts down and the system powers off. This event may also be initiated on certain systems when a fan enclosure is removed from the system for an extended period of time.

**Table 2-1. Miscellaneous Messages (continued)**

Event ID	Description	Severity	Cause
1005	SMBIOS data is absent	Warning	The system does not contain the required systems management BIOS version 2.2 or higher, or the BIOS is corrupted.
1006	Automatic System Recovery (ASR) action was performed Action performed was: <Action> Date and time of action: <Date and time>	Error	This message is generated when an automatic system recovery action is performed due to a hung operating system. The action performed and the time of action are provided.
1007	User initiated host system control action Action requested was: <Action>	Information	User requested a host system control action to reboot, power off, or power cycle the system. Alternatively the user had indicated protective measures to be initiated in the event of a thermal shutdown.
1008	Systems Management Data Manager Started	Information	Systems Management Data Manager services were started.
1009	Systems Management Data Manager Stopped	Information	Systems Management Data Manager services were stopped.
1011	RCI table is corrupt	Warning	This message is generated when the BIOS Remote Configuration Interface (RCI) table is corrupted or cannot be read by the systems management software.
1012	IPMI Status Interface: <the IPMI interface being used>, <additional information if available and applicable>	Information	This message is generated to indicate the Intelligent Platform Management Interface (IPMI) status of the system. Additional information, when available, includes Baseboard Management Controller (BMC) not present, BMC not responding, System Event Log (SEL) not present, and SEL Data Record (SDR) not present.

## Temperature Sensor Messages

Temperature sensors listed in Table 2-2 help protect critical components by alerting the systems management console when temperatures become too high inside a chassis. The temperature sensor messages use additional variables: sensor location, chassis location, previous state, and temperature sensor value or state.

**Table 2-2. Temperature Sensor Messages**

Event ID	Description	Severity	Cause
1050	<p>Temperature sensor has failed</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Temperature sensor value (in degrees Celsius): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete temperature state: &lt;State&gt;</p>	Information	A temperature sensor on the backplane board, system board, or the carrier in the specified system failed. The sensor location, chassis location, previous state, and temperature sensor value are provided.
1051	<p>Temperature sensor value unknown</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Temperature sensor value (in degrees Celsius): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete temperature state: &lt;State&gt;</p>	Information	A temperature sensor on the backplane board, system board, or drive carrier in the specified system could not obtain a reading. The sensor location, chassis location, previous state, and a nominal temperature sensor value are provided.

**Table 2-2. Temperature Sensor Messages (continued)**

Event ID	Description	Severity	Cause
1052	<p>Temperature sensor returned to a normal value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Temperature sensor value (in degrees Celsius): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete temperature state: &lt;State&gt;</p>	Information	A temperature sensor on the backplane board, system board, or drive carrier in the specified system returned to a valid range after crossing a failure threshold. The sensor location, chassis location, previous state, and temperature sensor value are provided.
1053	<p>Temperature sensor detected a warning value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Temperature sensor value (in degrees Celsius): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete temperature state: &lt;State&gt;</p>	Warning	A temperature sensor on the backplane board, system board, CPU, or drive carrier in the specified system exceeded its warning threshold. The sensor location, chassis location, previous state, and temperature sensor value are provided.



**Table 2-2. Temperature Sensor Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause</b>
1054	<p>Temperature sensor detected a failure value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Temperature sensor value (in degrees Celsius): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete temperature state: &lt;State&gt;</p>	Error	A temperature sensor on the backplane board, system board, or drive carrier in the specified system exceeded its failure threshold. The sensor location, chassis location, previous state, and temperature sensor value are provided.
1055	<p>Temperature sensor detected a non-recoverable value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Temperature sensor value (in degrees Celsius): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete temperature state: &lt;State&gt;</p>	Error	A temperature sensor on the backplane board, system board, or drive carrier in the specified system detected an error from which it cannot recover. The sensor location, chassis location, previous state, and temperature sensor value are provided.

## Cooling Device Messages

Cooling device sensors listed in Table 2-3 monitor how well a fan is functioning. Cooling device messages provide status and warning information for fans in a particular chassis.

**Table 2-3. Cooling Device Messages**

Event ID	Description	Severity	Cause
1100	Fan sensor has failed Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Fan sensor value: <Reading>	Information	A fan sensor in the specified system is not functioning. The sensor location, chassis location, previous state, and fan sensor value are provided.
1101	Fan sensor value unknown Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Fan sensor value: <Reading>	Information	A fan sensor in the specified system could not obtain a reading. The sensor location, chassis location, previous state, and a nominal fan sensor value are provided.
1102	Fan sensor returned to a normal value Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Fan sensor value: <Reading>	Information	A fan sensor reading on the specified system returned to a valid range after crossing a warning threshold. The sensor location, chassis location, previous state, and fan sensor value are provided.
1103	Fan sensor detected a warning value Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Fan sensor value: <Reading>	Warning	A fan sensor reading in the specified system exceeded a warning threshold. The sensor location, chassis location, previous state, and fan sensor value are provided.

**Table 2-3. Cooling Device Messages (continued)**

Event ID	Description	Severity	Cause
1104	<p>Fan sensor detected a failure value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Fan sensor value: &lt;Reading&gt;</p>	Error	A fan sensor in the specified system detected the failure of one or more fans. The sensor location, chassis location, previous state, and fan sensor value are provided.
1105	<p>Fan sensor detected a non-recoverable value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Fan sensor value: &lt;Reading&gt;</p>	Error	A fan sensor detected an error from which it cannot recover. The sensor location, chassis location, previous state, and fan sensor value are provided.

## Voltage Sensor Messages

Voltage sensors listed in Table 2-4 monitor the number of volts across critical components. Voltage sensor messages provide status and warning information for voltage sensors in a particular chassis.

**Table 2-4. Voltage Sensor Messages**

Event ID	Description	Severity	Cause
1150	<p>Voltage sensor has failed</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Voltage sensor value (in Volts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete voltage state: &lt;State&gt;</p>	Information	A voltage sensor in the specified system failed. The sensor location, chassis location, previous state, and voltage sensor value are provided.

**Table 2-4. Voltage Sensor Messages (continued)**

Event ID	Description	Severity	Cause
1151	<p>Voltage sensor value unknown</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Voltage sensor value (in Volts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete voltage state: &lt;State&gt;</p>	Information	A voltage sensor in the specified system could not obtain a reading. The sensor location, chassis location, previous state, and a nominal voltage sensor value are provided.
1152	<p>Voltage sensor returned to a normal value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Voltage sensor value (in Volts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete voltage state: &lt;State&gt;</p>	Information	A voltage sensor in the specified system returned to a valid range after crossing a failure threshold. The sensor location, chassis location, previous state, and voltage sensor value are provided.
1153	<p>Voltage sensor detected a warning value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Voltage sensor value (in Volts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete voltage state: &lt;State&gt;</p>	Warning	A voltage sensor in the specified system exceeded its warning threshold. The sensor location, chassis location, previous state, and voltage sensor value are provided.

**Table 2-4. Voltage Sensor Messages (continued)**

Event ID	Description	Severity	Cause
1154	<p>Voltage sensor detected a failure value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Voltage sensor value (in Volts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete voltage state: &lt;State&gt;</p>	Error	A voltage sensor in the specified system exceeded its failure threshold. The sensor location, chassis location, previous state, and voltage sensor value are provided.
1155	<p>Voltage sensor detected a non-recoverable value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Voltage sensor value (in Volts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete voltage state: &lt;State&gt;</p>	Error	A voltage sensor in the specified system detected an error from which it cannot recover. The sensor location, chassis location, previous state, and voltage sensor value are provided.

## Current Sensor Messages

Current sensors listed in Table 2-5 measure the amount of current (in amperes) that is traversing critical components. Current sensor messages provide status and warning information for current sensors in a particular chassis.

**Table 2-5. Current Sensor Messages**

Event ID	Description	Severity	Cause
1200	<p>Current sensor has failed</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Current sensor value (in Amps): &lt;Reading&gt; OR</p> <p>Current sensor value (in Watts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete current state: &lt;State&gt;</p>	Information	A current sensor in the specified system failed. The sensor location, chassis location, previous state, and current sensor value are provided.
1201	<p>Current sensor value unknown</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Current sensor value (in Amps): &lt;Reading&gt; OR</p> <p>Current sensor value (in Watts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete current state: &lt;State&gt;</p>	Information	A current sensor in the specified system could not obtain a reading. The sensor location, chassis location, previous state, and a nominal current sensor value are provided.

**Table 2-5. Current Sensor Messages (continued)**

Event ID	Description	Severity	Cause
1202	<p>Current sensor returned to a normal value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Current sensor value (in Amps): &lt;Reading&gt; OR</p> <p>Current sensor value (in Watts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete current state: &lt;State&gt;</p>	Information	A current sensor in the specified system returned to a valid range after crossing a failure threshold. The sensor location, chassis location, previous state, and current sensor value are provided.
1203	<p>Current sensor detected a warning value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Current sensor value (in Amps): &lt;Reading&gt; OR</p> <p>Current sensor value (in Watts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete current state: &lt;State&gt;</p>	Warning	A current sensor in the specified system exceeded its warning threshold. The sensor location, chassis location, previous state, and current sensor value are provided.

**Table 2-5. Current Sensor Messages (continued)**

Event ID	Description	Severity	Cause
1204	<p>Current sensor detected a failure value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Current sensor value (in Amps): &lt;Reading&gt; OR</p> <p>Current sensor value (in Watts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete current state: &lt;State&gt;</p>	Error	A current sensor in the specified system exceeded its failure threshold. The sensor location, chassis location, previous state, and current sensor value are provided.
1205	<p>Current sensor detected a non-recoverable value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p><b>If sensor type is not discrete:</b></p> <p>Current sensor value (in Amps): &lt;Reading&gt; OR</p> <p>Current sensor value (in Watts): &lt;Reading&gt;</p> <p><b>If sensor type is discrete:</b></p> <p>Discrete current state: &lt;State&gt;</p>	Error	A current sensor in the specified system detected an error from which it cannot recover. The sensor location, chassis location, previous state, and current sensor value are provided.



## Chassis Intrusion Messages

Chassis intrusion messages listed in Table 2-6 are a security measure. Chassis intrusion means that someone is opening the cover to a system's chassis. Alerts are sent to prevent unauthorized removal of parts from a chassis.

**Table 2-6. Chassis Intrusion Messages**

Event ID	Description	Severity	Cause
1250	Chassis intrusion sensor has failed Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Chassis intrusion state: <Intrusion state>	Information	A chassis intrusion sensor in the specified system failed. The sensor location, chassis location, previous state, and chassis intrusion state are provided.
1251	Chassis intrusion sensor value unknown Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Chassis intrusion state: <Intrusion state>	Information	A chassis intrusion sensor in the specified system could not obtain a reading. The sensor location, chassis location, previous state, and chassis intrusion state are provided.
1252	Chassis intrusion returned to normal Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Chassis intrusion state: <Intrusion state>	Information	A chassis intrusion sensor in the specified system detected that a cover was opened while the system was operating but has since been replaced. The sensor location, chassis location, previous state, and chassis intrusion state are provided.

**Table 2-6. Chassis Intrusion Messages (continued)**

Event ID	Description	Severity	Cause
1253	Chassis intrusion in progress Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Chassis intrusion state: <Intrusion state>	Warning	A chassis intrusion sensor in the specified system detected that a system cover is currently being opened and the system is operating. The sensor location, chassis location, previous state, and chassis intrusion state are provided.
1254	Chassis intrusion detected Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Chassis intrusion state: <Intrusion state>	Error	A chassis intrusion sensor in the specified system detected that the system cover was opened while the system was operating. The sensor location, chassis location, previous state, and chassis intrusion state are provided.
1255	Chassis intrusion sensor detected a non-recoverable value Sensor location: <Location in chassis> Chassis location: <Name of chassis> Previous state was: <State> Chassis intrusion state: <Intrusion state>	Error	A chassis intrusion sensor in the specified system detected an error from which it cannot recover. The sensor location, chassis location, previous state, and chassis intrusion state are provided.

## Redundancy Unit Messages

Redundancy means that a system chassis has more than one of certain critical components. Fans and power supplies, for example, are so important for preventing damage or disruption of a computer system that a chassis may have “extra” fans or power supplies installed. Redundancy allows a second or *n*th fan to keep the chassis components at a safe temperature when the primary fan has failed. Redundancy is normal when the intended number of critical components are operating. Redundancy is degraded when a component fails but others are still operating. Redundancy is lost when the number of components functioning falls below the redundancy threshold. Table 2-7 lists the redundancy unit messages.

The number of devices required for full redundancy is provided as part of the message, when applicable, for the redundancy unit and the platform. For details on redundancy computation, see the respective platform documentation.

**Table 2-7. Redundancy Unit Messages**

Event ID	Description	Severity	Cause
1300	Redundancy sensor has failed Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Information	A redundancy sensor in the specified system failed. The redundancy unit location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.
1301	Redundancy sensor value unknown Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Information	A redundancy sensor in the specified system could not obtain a reading. The redundancy unit location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.
1302	Redundancy not applicable Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Information	A redundancy sensor in the specified system detected that a unit was not redundant. The redundancy location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.
1303	Redundancy is offline Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Information	A redundancy sensor in the specified system detected that a redundant unit is offline. The redundancy unit location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.

**Table 2-7. Redundancy Unit Messages (continued)**

Event ID	Description	Severity	Cause
1304	Redundancy regained Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Information	A redundancy sensor in the specified system detected that a “lost” redundancy device has been reconnected or replaced; full redundancy is in effect. The redundancy unit location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.
1305	Redundancy degraded Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Warning	A redundancy sensor in the specified system detected that one of the components of the redundancy unit has failed but the unit is still redundant. The redundancy unit location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.
1306	Redundancy lost Redundancy unit: <Redundancy location in chassis> Chassis location: <Name of chassis> Previous redundancy state was: <State>	Error	A redundancy sensor in the specified system detected that one of the components in the redundant unit has been disconnected, has failed, or is not present. The redundancy unit location, chassis location, previous redundancy state, and the number of devices required for full redundancy are provided.

## Power Supply Messages

Power supply sensors monitor how well a power supply is functioning. Power supply messages listed in Table 2-8 provide status and warning information for power supplies present in a particular chassis.

**Table 2-8. Power Supply Messages**

Event ID	Description	Severity	Cause
1350	<p>Power supply sensor has failed Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Power Supply type: &lt;type of power supply&gt;</p> <p>&lt;Additional power supply status information&gt;</p> <p><b>If in configuration error state:</b></p> <p>Configuration error type: &lt;type of configuration error&gt;</p>	Information	A power supply sensor in the specified system failed. The sensor location, chassis location, previous state, and additional power supply status information are provided.
1351	<p>Power supply sensor value unknown</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Power Supply type: &lt;type of power supply&gt;</p> <p>&lt;Additional power supply status information&gt;</p> <p><b>If in configuration error state:</b></p> <p>Configuration error type: &lt;type of configuration error&gt;</p>	Information	A power supply sensor in the specified system could not obtain a reading. The sensor location, chassis location, previous state, and additional power supply status information are provided.

**Table 2-8. Power Supply Messages (continued)**


Event ID	Description	Severity	Cause
1352	<p>Power supply returned to normal Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Power Supply type: &lt;type of power supply&gt;</p> <p>&lt;Additional power supply status information&gt;</p> <p><b>If in configuration error state:</b></p> <p>Configuration error type: &lt;type of configuration error&gt;</p>	Information	<p>A power supply has been reconnected or replaced. The sensor location, chassis location, previous state, and additional power supply status information are provided.</p>
1353	<p>Power supply detected a warning Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Power Supply type: &lt;type of power supply&gt;</p> <p>&lt;Additional power supply status information&gt;</p> <p><b>If in configuration error state:</b></p> <p>Configuration error type: &lt;type of configuration error&gt;</p>	Warning	<p>A power supply sensor reading in the specified system exceeded a user-definable warning threshold. The sensor location, chassis location, previous state, and additional power supply status information are provided.</p>


**Table 2-8. Power Supply Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause</b>
1354	<p>Power supply detected a failure</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Power Supply type: &lt;type of power supply&gt;</p> <p>&lt;Additional power supply status information&gt;</p> <p><b>If in configuration error state:</b></p> <p>Configuration error type: &lt;type of configuration error&gt;</p>	Error	A power supply has been disconnected or has failed. The sensor location, chassis location, previous state, and additional power supply status information are provided.
1355	<p>Power supply sensor detected a non-recoverable value</p> <p>Sensor location: &lt;Location in chassis&gt;</p> <p>Chassis location: &lt;Name of chassis&gt;</p> <p>Previous state was: &lt;State&gt;</p> <p>Power Supply type: &lt;type of power supply&gt;</p> <p>&lt;Additional power supply status information&gt;</p> <p><b>If in configuration error state:</b></p> <p>Configuration error type: &lt;type of configuration error&gt;</p>	Error	A power supply sensor in the specified system detected an error from which it cannot recover. The sensor location, chassis location, previous state, and additional power supply status information are provided.

## Memory Device Messages

Memory device messages listed in Table 2-9 provide status and warning information for memory modules present in a particular system. Memory devices determine health status by monitoring the ECC memory correction rate and the type of memory events that have occurred.

 **NOTE:** A critical status does not always indicate a system failure or loss of data. In some instances, the system has exceeded the ECC correction rate. Although the system continues to function, you should perform system maintenance as described in Table 2-9.

 **NOTE:** In Table 2-9, *<status>* can be either *critical* or *non-critical*.

**Table 2-9. Memory Device Messages**

Event ID	Description	Severity	Cause
1403	Memory device status is <i>&lt;status&gt;</i> Memory device location: <i>&lt;location in chassis&gt;</i>  Possible memory module event cause: <i>&lt;list of causes&gt;</i>	Warning	A memory device correction rate exceeded an acceptable value. The memory device status and location are provided.
1404	Memory device status is <i>&lt;status&gt;</i> Memory device location: <i>&lt;location in chassis&gt;</i>  Possible memory module event cause: <i>&lt;list of causes&gt;</i>	Error	A memory device correction rate exceeded an acceptable value, a memory spare bank was activated, or a multibit ECC error occurred. The system continues to function normally (except for a multibit error). Replace the memory module identified in the message during the system's next scheduled maintenance. Clear the memory error on multibit ECC error. The memory device status and location are provided.



## Fan Enclosure Messages

Some systems are equipped with a protective enclosure for fans. Fan enclosure messages listed in Table 2-10 monitor whether foreign objects are present in an enclosure and how long a fan enclosure is missing from a chassis.

**Table 2-10. Fan Enclosure Messages**

Event ID	Description	Severity	Cause
1450	Fan enclosure sensor has failed Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Information	The fan enclosure sensor in the specified system failed. The sensor location and chassis location are provided.
1451	Fan enclosure sensor value unknown Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Information	The fan enclosure sensor in the specified system could not obtain a reading. The sensor location and chassis location are provided.
1452	Fan enclosure inserted into system Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Information	A fan enclosure has been inserted into the specified system. The sensor location and chassis location are provided.
1453	Fan enclosure removed from system Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Warning	A fan enclosure has been removed from the specified system. The sensor location and chassis location are provided.

**Table 2-10. Fan Enclosure Messages (continued)**

Event ID	Description	Severity	Cause
1454	Fan enclosure removed from system for an extended amount of time  Sensor location: <Location in chassis>  Chassis location: <Name of chassis>	Error	A fan enclosure has been removed from the specified system for a user-definable length of time. The sensor location and chassis location are provided.
1455	Fan enclosure sensor detected a non-recoverable value  Sensor location: <Location in chassis>  Chassis location: <Name of chassis>	Error	A fan enclosure sensor in the specified system detected an error from which it cannot recover. The sensor location and chassis location are provided.

## AC Power Cord Messages

AC power cord messages listed in Table 2-11 provide status and warning information for power cords that are part of an AC power switch, if your system supports AC switching.

**Table 2-11. AC Power Cord Messages**

Event ID	Description	Severity	Cause
1500	AC power cord sensor has failed Sensor location: <Location in chassis>  Chassis location: <Name of chassis>	Information	An AC power cord sensor in the specified system failed. The AC power cord status cannot be monitored. The sensor location and chassis location information are provided.
1501	AC power cord is not being monitored  Sensor location: <Location in chassis>  Chassis location: <Name of chassis>	Information	The AC power cord status is not being monitored. This occurs when a system's expected AC power configuration is set to <b>nonredundant</b> . The sensor location and chassis location information are provided.

**Table 2-11. AC Power Cord Messages (continued)**

Event ID	Description	Severity	Cause
1502	AC power has been restored Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Information	An AC power cord that did not have AC power has had the power restored. The sensor location and chassis location information are provided.
1503	AC power has been lost Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Warning	An AC power cord has lost its power, but there is sufficient redundancy to classify this as a warning. The sensor location and chassis location information are provided.
1504	AC power has been lost Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Error	An AC power cord has lost its power, and lack of redundancy requires this to be classified as an error. The sensor location and chassis location information are provided.
1505	AC power has been lost Sensor location: <Location in chassis> Chassis location: <Name of chassis>	Error	An AC power cord sensor in the specified system failed. The AC power cord status cannot be monitored. The sensor location and chassis location information are provided.

## Hardware Log Sensor Messages

Hardware logs provide hardware status messages to systems management software. On certain systems, the hardware log is implemented as a circular queue. When the log becomes full, the oldest status messages are overwritten when new status messages are logged. On some systems, the log is not circular. On these systems, when the log becomes full, subsequent hardware status messages are lost. Hardware log sensor messages listed in Table 2-12 provide status and warning information about the noncircular logs that may fill up, resulting in lost status messages.

**Table 2-12. Hardware Log Sensor Messages**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause</b>
1550	Log monitoring has been disabled Log type: <Log type>	Information	A hardware log sensor in the specified system is disabled. The log type information is provided.
1551	Log status is unknown Log type: <Log type>	Information	A hardware log sensor in the specified system could not obtain a reading. The log type information is provided.
1552	Log size is no longer near or at capacity Log type: <Log type>	Information	The hardware log on the specified system is no longer near or at its capacity, usually as the result of clearing the log. The log type information is provided.
1553	Log size is near or at capacity Log type: <Log type>	Warning	The size of a hardware log on the specified system is near or at the capacity of the hardware log. The log type information is provided.
1554	Log size is full Log type: <Log type>	Error	The size of a hardware log on the specified system is full. The log type information is provided.
1555	Log sensor has failed Log type: <Log type>	Error	A hardware log sensor in the specified system failed. The hardware log status cannot be monitored. The log type information is provided.

# Processor Sensor Messages

Processor sensors monitor how well a processor is functioning. Processor messages listed in Table 2-13 provide status and warning information for processors in a particular chassis.

**Table 2-13. Processor Sensor Messages**

Event ID	Description	Severity	Cause
1600	Processor sensor has failed Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Processor sensor status: <status>	Information	A processor sensor in the specified system is not functioning. The sensor location, chassis location, previous state and processor sensor status are provided.
1601	Processor sensor value unknown Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Processor sensor status: <status>	Information	A processor sensor in the specified system could not obtain a reading. The sensor location, chassis location, previous state and processor sensor status are provided.
1602	Processor sensor returned to a normal value Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Processor sensor status: <status>	Information	A processor sensor in the specified system transitioned back to a normal state. The sensor location, chassis location, previous state and processor sensor status are provided.

**Table 2-13. Processor Sensor Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause</b>
1603	Processor sensor detected a warning value Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Processor sensor status: <status>	Warning	A processor sensor in the specified system is in a throttled state. The sensor location, chassis location, previous state and processor sensor status are provided.
1604	Processor sensor detected a failure value Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Processor sensor status: <status>	Error	A processor sensor in the specified system is disabled, has a configuration error, or experienced a thermal trip. The sensor location, chassis location, previous state and processor sensor status are provided.
1605	Processor sensor detected a non-recoverable value Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Processor sensor status: <status>	Error	A processor sensor in the specified system has failed. The sensor location, chassis location, previous state and processor sensor status are provided.

## Pluggable Device Messages

The pluggable device messages listed in Table 2-14 provide status and error information when some devices, such as memory cards, are added or removed.

**Table 2-14. Pluggable Device Messages**

Event ID	Description	Severity	Cause
1650	<i>&lt;Device plug event type unknown&gt;</i> Device location: <i>&lt;Location in chassis, if available&gt;</i> Chassis location: <i>&lt;Name of chassis, if available&gt;</i> Additional details: <i>&lt;Additional details for the events, if available&gt;</i>	Information	A pluggable device event message of unknown type was received. The device location, chassis location, and additional event details, if available, are provided.
1651	Device added to system Device location: <i>&lt;Location in chassis&gt;</i> Chassis location: <i>&lt;Name of chassis&gt;</i> Additional details: <i>&lt;Additional details for the events&gt;</i>	Information	A device was added in the specified system. The device location, chassis location, and additional event details, if available, are provided.
1652	Device removed from system Device location: <i>&lt;Location in chassis&gt;</i> Chassis location: <i>&lt;Name of chassis&gt;</i> Additional details: <i>&lt;Additional details for the events&gt;</i>	Information	A device was removed from the specified system. The device location, chassis location, and additional event details, if available, are provided.
1653	Device configuration error detected Device location: <i>&lt;Location in chassis&gt;</i> Chassis location: <i>&lt;Name of chassis&gt;</i> Additional details: <i>&lt;Additional details for the events&gt;</i>	Error	A configuration error was detected for a pluggable device in the specified system. The device may have been added to the system incorrectly.

## Battery Sensor Messages

Battery sensors monitor how well a battery is functioning. Battery messages listed in Table 2-15 provide status and warning information for batteries in a particular chassis.

**Table 2-15. Battery Sensor Messages**

Event ID	Description	Severity	Cause
1700	Battery sensor has failed <i>Sensor location: &lt;Location in chassis&gt;</i> <i>Chassis location: &lt;Name of chassis&gt;</i> Previous state was: <State> Battery sensor status: <status>	Information	A battery sensor in the specified system is not functioning. The sensor location, chassis location, previous state, and battery sensor status are provided.
1701	Battery sensor value unknown <i>Sensor Location: &lt;Location in chassis&gt;</i> <i>Chassis Location: &lt;Name of chassis&gt;</i> Previous state was: <State> Battery sensor status: <status>	Information	A battery sensor in the specified system could not retrieve a reading. The sensor location, chassis location, previous state, and battery sensor status are provided.
1702	Battery sensor returned to a normal value <i>Sensor Location: &lt;Location in chassis&gt;</i> <i>Chassis Location: &lt;Name of chassis&gt;</i> Previous state was: <State> Battery sensor status: <status>	Information	A battery sensor in the specified system detected that a battery transitioned back to a normal state. The sensor location, chassis location, previous state, and battery sensor status are provided.
1703	Battery sensor detected a warning value <i>Sensor Location: &lt;Location in chassis&gt;</i> <i>Chassis Location: &lt;Name of chassis&gt;</i> Previous state was: <State> Battery sensor status: <status>	Warning	A battery sensor in the specified system detected that a battery is in a predictive failure state. The sensor location, chassis location, previous state, and battery sensor status are provided.




**Table 2-15. Battery Sensor Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause</b>
1704	Battery sensor detected a failure value Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Battery sensor status: <status>	Error	A battery sensor in the specified system detected that a battery has failed. The sensor location, chassis location, previous state, and battery sensor status are provided.
1705	Battery sensor detected a non-recoverable value Sensor Location: <Location in chassis> Chassis Location: <Name of chassis> Previous state was: <State> Battery sensor status: <status>	Error	A battery sensor in the specified system detected that a battery has failed. The sensor location, chassis location, previous state, and battery sensor status are provided.



# System Event Log Messages for IPMI Systems

The following tables list the system event log (SEL) messages, their severity, and cause.

 **NOTE:** For corrective actions, see the appropriate documentation.

## Temperature Sensor Events

The temperature sensor event messages help protect critical components by alerting the systems management console when the temperature rises inside the chassis. These event messages use additional variables, such as sensor location, chassis location, previous state, and temperature sensor value or state.

**Table 3-1. Temperature Sensor Events**

Event Message	Severity	Cause
<p><i>&lt;Sensor Name/Location&gt;</i> temperature sensor detected a failure <i>&lt;Reading&gt;</i> where <i>&lt;Sensor Name/Location&gt;</i> is the entity that this sensor is monitoring. For example, "PROC Temp" or "Planar Temp."</p> <p>Reading is specified in degree Celsius. For example 100 C.</p>	Critical	Temperature of the backplane board, system board, or the carrier in the specified system <i>&lt;Sensor Name/Location&gt;</i> exceeded the critical threshold.
<p><i>&lt;Sensor Name/Location&gt;</i> temperature sensor detected a warning <i>&lt;Reading&gt;</i>.</p>	Warning	Temperature of the backplane board, system board, or the carrier in the specified system <i>&lt;Sensor Name/Location&gt;</i> exceeded the non-critical threshold.
<p><i>&lt;Sensor Name/Location&gt;</i> temperature sensor returned to warning state <i>&lt;Reading&gt;</i>.</p>	Warning	Temperature of the backplane board, system board, or the carrier in the specified system <i>&lt;Sensor Name/Location&gt;</i> returned from critical state to non-critical state.
<p><i>&lt;Sensor Name/Location&gt;</i> temperature sensor returned to normal state <i>&lt;Reading&gt;</i>.</p>	Information	Temperature of the backplane board, system board, or the carrier in the specified system <i>&lt;Sensor Name/Location&gt;</i> returned to normal operating range.

## Voltage Sensor Events

The voltage sensor event messages monitor the number of volts across critical components. These messages provide status and warning information for voltage sensors for a particular chassis.

**Table 3-2. Voltage Sensor Events**

Event Message	Severity	Cause
<p><i>&lt;Sensor Name/Location&gt; voltage sensor detected a failure &lt;Reading&gt; where &lt;Sensor Name/Location&gt; is the entity that this sensor is monitoring.</i></p> <p>Reading is specified in volts. For example, 3.860 V.</p>	Critical	The voltage of the monitored device has exceeded the critical threshold.
<p><i>&lt;Sensor Name/Location&gt; voltage sensor state asserted.</i></p>	Critical	The voltage specified by <i>&lt;Sensor Name/Location&gt;</i> is in critical state.
<p><i>&lt;Sensor Name/Location&gt; voltage sensor state de-asserted.</i></p>	Information	The voltage of a previously reported <i>&lt;Sensor Name/Location&gt;</i> is returned to normal state.
<p><i>&lt;Sensor Name/Location&gt; voltage sensor detected a warning &lt;Reading&gt;.</i></p>	Warning	Voltage of the monitored entity <i>&lt;Sensor Name/Location&gt;</i> exceeded the warning threshold.
<p><i>&lt;Sensor Name/Location&gt; voltage sensor returned to normal &lt;Reading&gt;.</i></p>	Information	The voltage of a previously reported <i>&lt;Sensor Name/Location&gt;</i> is returned to normal state.

## Fan Sensor Events

The cooling device sensors monitor how well a fan is functioning. These messages provide status warning and failure messages for fans for a particular chassis.

**Table 3-3. Fan Sensor Events**

Event Message	Severity	Cause
<p><i>&lt;Sensor Name/Location&gt;</i> Fan sensor detected a failure <i>&lt;Reading&gt;</i> where <i>&lt;Sensor Name/Location&gt;</i> is the entity that this sensor is monitoring. For example "BMC Back Fan" or "BMC Front Fan."</p> <p>Reading is specified in RPM. For example, 100 RPM.</p>	Critical	The speed of the specified <i>&lt;Sensor Name/Location&gt;</i> fan is not sufficient to provide enough cooling to the system.
<p><i>&lt;Sensor Name/Location&gt;</i> Fan sensor returned to normal state <i>&lt;Reading&gt;</i>.</p>	Information	The fan specified by <i>&lt;Sensor Name/Location&gt;</i> has returned to its normal operating speed.
<p><i>&lt;Sensor Name/Location&gt;</i> Fan sensor detected a warning <i>&lt;Reading&gt;</i>.</p>	Warning	The speed of the specified <i>&lt;Sensor Name/Location&gt;</i> fan may not be sufficient to provide enough cooling to the system.
<p><i>&lt;Sensor Name/Location&gt;</i> Fan Redundancy sensor redundancy degraded.</p>	Information	The fan specified by <i>&lt;Sensor Name/Location&gt;</i> may have failed and hence, the redundancy has been degraded.
<p><i>&lt;Sensor Name/Location&gt;</i> Fan Redundancy sensor redundancy lost.</p>	Critical	The fan specified by <i>&lt;Sensor Name/Location&gt;</i> may have failed and hence, the redundancy that was degraded previously has been lost.
<p><i>&lt;Sensor Name/Location&gt;</i> Fan Redundancy sensor redundancy regained</p>	Information	The fan specified by <i>&lt;Sensor Name/Location&gt;</i> may have started functioning again and hence, the redundancy has been regained.

## Processor Status Events

The processor status messages monitor the functionality of the processors in a system. These messages provide processor health and warning information of a system.

**Table 3-4. Processor Status Events**

Event Message	Severity	Cause
<i>&lt;Processor Entity&gt;</i> status processor sensor IERR, where <i>&lt;Processor Entity&gt;</i> is the processor that generated the event. For example, PROC for a single processor system and PROC # for multiprocessor system.	Critical	IERR internal error generated by the <i>&lt;Processor Entity&gt;</i> .
<i>&lt;Processor Entity&gt;</i> status processor sensor Thermal Trip.	Critical	The processor generates this event before it shuts down because of excessive heat caused by lack of cooling or heat synchronization.
<i>&lt;Processor Entity&gt;</i> status processor sensor recovered from IERR.	Information	This event is generated when a processor recovers from the internal error.
<i>&lt;Processor Entity&gt;</i> status processor sensor disabled.	Warning	This event is generated for all processors that are disabled.
<i>&lt;Processor Entity&gt;</i> status processor sensor terminator not present.	Information	This event is generated if the terminator is missing on an empty processor slot.
<i>&lt; Processor Entity&gt;</i> presence was deasserted.	Critical	This event is generated when the system could not detect the processor.
<i>&lt;Processor Entity&gt;</i> presence was asserted.	Information	This event is generated when the earlier processor detection error was corrected.
<i>&lt;Processor Entity&gt;</i> thermal tripped was deasserted.	Information	This event is generated when the processor has recovered from an earlier thermal condition.
<i>&lt;Processor Entity&gt;</i> configuration error was asserted.	Critical	This event is generated when the processor configuration is incorrect.
<i>&lt;Processor Entity&gt;</i> configuration error was deasserted.	Information	This event is generated when the earlier processor configuration error was corrected.
<i>&lt;Processor Entity&gt;</i> throttled was asserted.	Warning	This event is generated when the processor slows down to prevent over heating.
<i>&lt;Processor Entity&gt;</i> throttled was deasserted.	Information	This event is generated when the earlier processor throttled event was corrected.

## Power Supply Events

The power supply sensors monitor the functionality of the power supplies. These messages provide status and warning information for power supplies for a particular system.

**Table 3-5. Power Supply Events**

Event Message	Severity	Cause
<i>&lt;Power Supply Sensor Name&gt;</i> power supply sensor removed.	Critical	This event is generated when the power supply sensor is removed.
<i>&lt;Power Supply Sensor Name&gt;</i> power supply sensor AC recovered.	Information	This event is generated when the power supply has been replaced.
<i>&lt;Power Supply Sensor Name&gt;</i> power supply sensor returned to normal state.	Information	This event is generated when the power supply that failed or removed was replaced and the state has returned to normal.
<i>&lt;Entity Name&gt;</i> PS Redundancy sensor redundancy degraded.	Information	Power supply redundancy is degraded if one of the power supply sources is removed or failed.
<i>&lt;Entity Name&gt;</i> PS Redundancy sensor redundancy lost.	Critical	Power supply redundancy is lost if only one power supply is functional.
<i>&lt;Entity Name&gt;</i> PS Redundancy sensor redundancy regained.	Information	This event is generated if the power supply has been reconnected or replaced.
<i>&lt;Power Supply Sensor Name&gt;</i> predictive failure was asserted	Warning	This event is generated when the power supply is about to fail.
<i>&lt;Power Supply Sensor Name&gt;</i> input lost was asserted	Critical	This event is generated when the power supply is unplugged.
<i>&lt;Power Supply Sensor Name&gt;</i> predictive failure was deasserted	Information	This event is generated when the power supply has recovered from an earlier predictive failure event.
<i>&lt;Power Supply Sensor Name&gt;</i> input lost was deasserted	Information	This event is generated when the power supply is plugged in.

## Memory ECC Events

The memory ECC event messages monitor the memory modules in a system. These messages monitor the ECC memory correction rate and the type of memory events that occurred.

**Table 3-6. Memory ECC Events**

Event Message	Severity	Cause
ECC error correction detected on Bank # DIMM [A/B].	Information	This event is generated when there is a memory error correction on a particular Dual Inline Memory Module (DIMM).
ECC uncorrectable error detected on Bank # [DIMM].	Critical	This event is generated when the chipset is unable to correct the memory errors. Usually, a bank number is provided and DIMM may or may not be identifiable, depending on the error.
Correctable memory error logging disabled.	Critical	This event is generated when the chipset in the ECC error correction rate exceeds a predefined limit.

## BMC Watchdog Events

The BMC watchdog operations are performed when the system hangs or crashes. These messages monitor the status and occurrence of these events in a system.

**Table 3-7. BMC Watchdog Events**

Event Message	Severity	Cause
BMC OS Watchdog timer expired.	Information	This event is generated when the BMC watchdog timer expires and no action is set.
BMC OS Watchdog performed system reboot.	Critical	This event is generated when the BMC watchdog detects that the system has crashed (timer expired because no response was received from Host) and the action is set to reboot.
BMC OS Watchdog performed system power off.	Critical	This event is generated when the BMC watchdog detects that the system has crashed (timer expired because no response was received from Host) and the action is set to power off.
BMC OS Watchdog performed system power cycle.	Critical	This event is generated when the BMC watchdog detects that the system has crashed (timer expired because no response was received from Host) and the action is set to power cycle.



## Memory Events

The memory modules can be configured in different ways in particular systems. These messages monitor the status, warning, and configuration information about the memory modules in the system.

**Table 3-8. Memory Events**

Event Message	Severity	Cause
Memory RAID redundancy degraded.	Information	This event is generated when there is a memory failure in a RAID-configured memory configuration.
Memory RAID redundancy lost.	Critical	This event is generated when redundancy is lost in a RAID-configured memory configuration.
Memory RAID redundancy regained	Information	This event is generated when the redundancy lost or degraded earlier is regained in a RAID-configured memory configuration.
Memory Mirrored redundancy degraded.	Information	This event is generated when there is a memory failure in a mirrored memory configuration.
Memory Mirrored redundancy lost.	Critical	This event is generated when redundancy is lost in a mirrored memory configuration.
Memory Mirrored redundancy regained.	Information	This event is generated when the redundancy lost or degraded earlier is regained in a mirrored memory configuration.
Memory Spared redundancy degraded.	Information	This event is generated when there is a memory failure in a spared memory configuration.
Memory Spared redundancy lost.	Critical	This event is generated when redundancy is lost in a spared memory configuration.
Memory Spared redundancy regained.	Information	This event is generated when the redundancy lost or degraded earlier is regained in a spared memory configuration.

## Hardware Log Sensor Events

The hardware logs provide hardware status messages to the system management software. On particular systems, the subsequent hardware messages are not displayed when the log is full. These messages provide status and warning messages when the logs are full.

**Table 3-9. Hardware Log Sensor Events**

Event Message	Severity	Cause
Log full detected.	Critical	This event is generated when the SEL device detects that only one entry can be added to the SEL before it is full.
Log cleared.	Information	This event is generated when the SEL is cleared.

## Drive Events

The drive event messages monitor the health of the drives in a system. These events are generated when there is a fault in the drives indicated.

**Table 3-10. Drive Events**

Event Message	Severity	Cause
Drive <Drive #> asserted fault state.	Critical	This event is generated when the specified drive in the array is faulty.
Drive <Drive #> de-asserted fault state.	Information	This event is generated when the specified drive recovers from a faulty condition.
Drive <Drive #> drive presence was asserted	Informational	This event is generated when the drive is installed.
Drive <Drive #> predictive failure was asserted	Warning	This event is generated when the drive is about to fail.
Drive <Drive #> predictive failure was deasserted	Informational	This event is generated when the drive from earlier predictive failure is corrected.
Drive <Drive #> hot spare was asserted	Warning	This event is generated when the drive is placed in a hot spare.
Drive <Drive #> hot spare was deasserted	Informational	This event is generated when the drive is taken out of hot spare.
Drive <Drive #> consistency check in progress was asserted	Warning	This event is generated when the drive is placed in consistency check.
Drive <Drive #> consistency check in progress was deasserted	Informational	This event is generated when the consistency check of the drive is completed.
Drive <Drive #> in critical array was asserted	Critical	This event is generated when the drive is placed in critical array.
Drive <Drive #> in critical array was deasserted	Informational	This event is generated when the drive is removed from critical array.
Drive <Drive #> in failed array was asserted	Critical	This event is generated when the drive is placed in the fail array.

**Table 3-10. Drive Events (continued)**

Event Message	Severity	Cause
Drive <Drive #> in failed array was deasserted	Informational	This event is generated when the drive is removed from the fail array.
Drive <Drive #> rebuild in progress was asserted	Informational	This event is generated when the drive is rebuilding.
Drive <Drive #> rebuild aborted was asserted	Warning	This event is generated when the drive rebuilding process is aborted.

## Intrusion Events

The chassis intrusion messages are a security measure. Chassis intrusion alerts are generated when the system's chassis is opened. Alerts are sent to prevent unauthorized removal of parts from the chassis.

**Table 3-11. Intrusion Events**

Event Message	Severity	Cause
<Intrusion sensor Name> sensor detected an intrusion.	Critical	This event is generated when the intrusion sensor detects an intrusion.
<Intrusion sensor Name> sensor returned to normal state.	Information	This event is generated when the earlier intrusion has been corrected.
<Intrusion sensor Name> sensor intrusion was asserted while system was ON	Critical	This event is generated when the intrusion sensor detects an intrusion while the system is on.
<Intrusion sensor Name> sensor intrusion was asserted while system was OFF	Critical	This event is generated when the intrusion sensor detects an intrusion while the system is off.

## BIOS Generated System Events

The BIOS generated messages monitor the health and functionality of the chipsets, I/O channels, and other BIOS-related functions. These system events are generated by the BIOS.

**Table 3-12. BIOS Generated System Events**

Event Message	Severity	Cause
System Event I/O channel chk.	Critical	This event is generated when a critical interrupt is generated in the I/O Channel.
System Event PCI Parity Err.	Critical	This event is generated when a parity error is detected on the PCI bus.
System Event Chipset Err.	Critical	This event is generated when a chip error is detected.
System Event PCI System Err.	Information	This event indicates historical data, and is generated when the system has crashed and recovered.
System Event PCI Fatal Err.	Critical	This error is generated when a fatal error is detected on the PCI bus.
System Event PCIE Fatal Err.	Critical	This error is generated when a fatal error is detected on the PCIE bus.
POST Err POST fatal error #<number>	Critical	This event is generated when an error accrues during system boot. See the system documentation for more information on the error code.
Memory Spared redundancy lost	Critical	This event is generated when memory spare is no longer redundant.
Memory Mirrored redundancy lost	Critical	This event is generated when memory mirroring is no longer redundant.
Memory RAID redundancy lost	Critical	This event is generated when memory RAID is no longer redundant.
Err Reg Pointer OEM Diagnostic data event was asserted	Information	This event is generated when an OEM event accrues.
System Board PFault Fail Safe state asserted	Critical	This event is generated when the system board voltages are not at normal levels.
System Board PFault Fail Safe state deasserted	Information	This event is generated when earlier PFault Fail Safe system voltages returns to a normal level.
Memory Add (BANK# DIMM#) presence was asserted	Information	This event is generated when memory is added to the system.

**Table 3-12. BIOS Generated System Events (continued)**

<b>Event Message</b>	<b>Severity</b>	<b>Cause</b>
Memory Removed (BANK# DIMM#) presence was asserted	Information	This event is generated when memory is removed from the system.
Memory Cfg Err configuration error (BANK# DIMM#) was asserted	Critical	This event is generated when memory configuration is incorrect for the system.
Mem Redun Gain redundancy regained	Information	This event is generated when memory redundancy is regained.
Mem ECC Warning transition to non-critical from OK	Warning	This event is generated when correctable ECC errors have increased from a normal rate.
Mem ECC Warning transition to critical from less severe	Critical	This event is generated when correctable ECC errors reach a critical rate.
Mem CRC Err transition to non-recoverable	Critical	This event is generated when CRC errors enter a non-recoverable state.
Mem Fatal SB CRC uncorrectable ECC was asserted	Critical	This event is generated when CRC errors occur while storing to memory.
Mem Fatal NB CRC uncorrectable ECC was asserted	Critical	This event is generated when CRC errors occur while removing from memory.
Mem Overtemp critical over temperature was asserted	Critical	This event is generated when system memory reaches critical temperature.
USB Over-current transition to non-recoverable	Critical	This event is generated when the USB exceeds a predefined current level.
Hdwr version err hardware incompatibility (BMC Firmware and CPU mismatch) was asserted	Critical	This event is generated when there is a mismatch between the BMC firmware and the processor in use or vice versa.

**Table 3-12. BIOS Generated System Events (continued)**

<b>Event Message</b>	<b>Severity</b>	<b>Cause</b>
Hdwr version err hardware incompatibility (BMC Firmware and CPU mismatch) was deasserted	Information	This event is generated when the earlier mismatch between the BMC firmware and the processor is corrected.
Hdwr version err hardware incompatibility (BMC Firmware and other mismatch) was asserted	Critical	This event is generated when there is a mismatch between the BMC firmware and the processor in use or vice versa.
Hdwr version err hardware incompatibility (BMC Firmware and CPU mismatch) was deasserted	Information	This event is generated when an earlier hardware mismatch is corrected.
SBE Log Disabled correctable memory error logging disabled was asserted	Critical	This event is generated when the ECC single bit error rate is exceeded.
CPU Protocol Err transition to non-recoverable	Critical	This event is generated when the processor protocol enters a non-recoverable state.
CPU Bus PERR transition to non-recoverable	Critical	This event is generated when the processor bus PERR enters a non-recoverable state.
CPU Init Err transition to non-recoverable	Critical	This event is generated when the processor initialization enters a non-recoverable state.
CPU Machine Chk transition to non-recoverable	Critical	This event is generated when the processor machine check enters a non-recoverable state.
Logging Disabled all event logging disabled was asserted	Critical	This event is generated when all event logging is disabled.
Unknown system event sensor unknown system hardware failure was asserted	Critical	This event is generated when an unknown hardware failure is detected.

## R2 Generated System Events

**Table 3-13. R2 Generated Events**

Description	Severity	Cause
System Event: OS stop event OS graceful shutdown detected	Information	The OS was shutdown/restarted normally.
OEM Event data record (after OS graceful shutdown/restart event)	Information	Comment string accompanying an OS shutdown/restart.
System Event: OS stop event runtime critical stop	Critical	The OS encountered a critical error and was stopped abnormally.
OEM Event data record (after OS bugcheck event)	Information	OS bugcheck code and parameters.

## Cable Interconnect Events

The cable interconnect messages are used for detecting errors in the hardware cabling.

**Table 3-14. Cable Interconnect Events**

Description	Severity	Cause
<Cable sensor Name/Location> Configuration error was asserted.	Critical	This event is generated when the cable is not connected or is incorrectly connected.
<Cable sensor Name/Location> Connection was asserted.	Information	This event is generated when the earlier cable connection error was corrected.

## Battery Events

**Table 3-15. Battery Events**

Description	Severity	Cause
<Battery sensor Name/Location> Failed was asserted	Critical	This event is generated when the sensor detects a failed or missing battery.
<Battery sensor Name/Location> Failed was deasserted	Information	This event is generated when the earlier failed battery was corrected.
<Battery sensor Name/Location> is low was asserted	Warning	This event is generated when the sensor detects a low battery condition.
<Battery sensor Name/Location> is low was deasserted	Information	This event is generated when the earlier low battery condition was corrected.

## Entity Presence Events

The entity presence messages are used for detecting different hardware devices.

**Table 3-16. Entity Presence Events**

Description	Severity	Cause
<Device Name> presence was asserted	Information	This event is generated when the device was detected.
<Device Name> absent was asserted	Critical	This event is generated when the device was not detected.



# Storage Management Message Reference

The Dell OpenManage™ Server Administrator Storage Management's alert or event management features let you monitor the health of storage resources such as controllers, enclosures, physical disks, and virtual disks.

## Alert Monitoring and Logging

The Storage Management Service performs alert monitoring and logging. By default, the Storage Management Service starts when the managed system starts up. If you stop the Storage Management Service, the alert monitoring and logging stops. Alert monitoring does the following:

- Updates the status of the storage object that generated the alert.
- Propagates the storage object's status to all the related higher objects in the storage hierarchy. For example, the status of a lower-level object will be propagated up to the status displayed on the Health tab for the top-level storage object.
- Logs an alert in the Alert log and the operating system (OS) application log.
- Sends an SNMP trap if the operating system's SNMP service is installed and enabled.



**NOTE:** Dell OpenManage Server Administrator Storage Management does not log alerts regarding the data I/O path. These alerts are logged by the respective RAID drivers in the system alert log.

See the *Storage Management Online Help* and the *Dell OpenManage Server Administrator Storage Management User's Guide* for updated information.

## Alert Message Format with Substitution Variables

When you view an alert in the Server Administrator alert log, the alert identifies the specific components such as the controller name or the virtual disk name to which the alert applies. In an actual operating environment, a storage system can have many combinations of controllers and disks as well as user-defined names for virtual disks and other components. Because each environment is unique in its storage configuration and user-defined names, an accurate alert message requires that the Storage Management Service be able to insert the environment-specific names of storage components into an alert message.


This environment-specific information is inserted after the alert message text as shown for alert 2127 in Table 4-1.

For other alerts, the alert message text is constructed from information passed directly from the controller (or another storage component) to the Alert Log. In these cases, the variable information is represented with a % (percent sign) in the Storage Management documentation. An example of such an alert is shown for alert 2334 in Table 4-1.


**Table 4-1. Alert Message Format**

Alert ID	Message Text Displayed in the Storage Management Service Documentation	Message Text Displayed in the Alert Log with Variable Information Supplied
2127	Background Initialization started	Background Initialization started: Virtual Disk 3 (Virtual Disk 3) Controller 1 (PERC 5/E Adapter)
2334	Controller event log %	Controller event log: Current capacity of the battery is above threshold.: Controller 1 (PERC 5/E Adapter)


The variables required to complete the message vary depending on the type of storage object and whether the storage object is in a SCSI or SAS configuration. The following table identifies the possible variables used to identify each storage object.

 **NOTE:** Some alert messages relating to an enclosure or an enclosure component, such as a fan or EMM, are generated by the controller when the enclosure or enclosure component ID cannot be determined.

**Table 4-2. Message Format with Variables for Each Storage Object**

Storage Object	Message Variables
	<b>A, B, C and X, Y, Z in the following examples are variables representing the storage object name or number.</b>
Controller	Message Format: Controller A (Name) Message Format: Controller A Example: 2326 A foreign configuration has been detected.: Controller 1 (PERC 5/E Adapter)  <b>NOTE:</b> The controller name is not always displayed.
Battery	Message Format: Battery X Controller A Example: 2174 The controller battery has been removed: Battery 0 Controller 1
SCSI Physical Disk	Message Format: Physical Disk X:Y Controller A, Connector B Example: 2049 Physical disk removed: Physical Disk 0:14 Controller 1, Connector 0
SAS Physical Disk	Message Format: Physical Disk X:Y:Z Controller A, Connector B Example: 2049 Physical disk removed: Physical Disk 0:0:14 Controller 1, Connector 0

**Table 4-2. Message Format with Variables for Each Storage Object (continued)**

Storage Object	Message Variables
Virtual Disk	Message Format: Virtual Disk X (Name) Controller A (Name)
	Message Format: Virtual Disk X Controller A
	Example: 2057 Virtual disk degraded: Virtual Disk 11 (Virtual Disk 11) Controller 1 (PERC 5/E Adapter)
 <b>NOTE:</b> The virtual disk and controller names are not always displayed.	Enclosure: Message Format: Enclosure X:Y Controller A, Connector B
	Example: 2112 Enclosure shutdown: Enclosure 0:2 Controller 1, Connector 0
	SCSI Power Supply Message Format: Power Supply X Controller A, Connector B, Target ID C where "C" is the SCSI ID number of the enclosure management module (EMM) managing the power supply. Example: 2122 Redundancy degraded: Power Supply 1, Controller 1, Connector 0, Target ID 6
SAS Power Supply Message Format: Power Supply X Controller A, Connector B, Enclosure C Example: 2312 A power supply in the enclosure has an AC failure.: Power Supply 1, Controller 1, Connector 0, Enclosure 2	
SCSI Temperature Probe Message Format: Temperature Probe X Controller A, Connector B, Target ID C where "C" is the SCSI ID number of the EMM managing the temperature probe. Example: 2101 Temperature dropped below the minimum warning threshold: Temperature Probe 1, Controller 1, Connector 0, Target ID 6	
SAS Temperature Probe Message Format: Temperature Probe X Controller A, Connector B, Enclosure C Example: 2101 Temperature dropped below the minimum warning threshold: Temperature Probe 1, Controller 1, Connector 0, Enclosure 2	
SCSI Fan Message Format: Fan X Controller A, Connector B, Target ID C where "C" is the SCSI ID number of the EMM managing the fan. Example: 2121 Device returned to normal: Fan 1, Controller 1, Connector 0, Target ID 6	
SAS Fan Message Format: Fan X Controller A, Connector B, Enclosure C Example: 2121 Device returned to normal: Fan 1, Controller 1, Connector 0, Enclosure 2	
SCSI EMM Message Format: EMM X Controller A, Connector B, Target ID C where "C" is the SCSI ID number of the EMM. Example: 2121 Device returned to normal: EMM 1, Controller 1, Connector 0, Target ID 6	

**Table 4-2. Message Format with Variables for Each Storage Object (continued)**

Storage Object	Message Variables
	<b>A, B, C and X, Y, Z in the following examples are variables representing the storage object name or number.</b>
SAS EMM	Message Format: EMM X Controller A, Connector B, Enclosure C Example: 2121 Device returned to normal: EMM 1, Controller 1, Connector 0, Enclosure 2

## Alert Message Change History

The following table describes changes made to the Storage Management alerts from the previous release of Storage Management to the current release.

**Table 4-3. Alert Message Change History**

Alert Message Change History		
Storage Management 2.3		Comments
Product Versions to which Changes Apply	Storage Management 2.3 Server Administrator 3.2 Dell OpenManage™ 5.3	
New Alerts	2369	
Modified Alerts	2095	Added SNMP traps 751 and 851.
	2294	Removed SNMP traps 752, 802, 852, 902, 952, 1002, 1052, 1102, 1152, and 1202. Added SNMP trap 851.
	2295	Removed SNMP traps 754, 804, 904, 954, 1004, 1054, 1104, 1154, and 1204. Remaining SNMP trap is 854.
Obsolete Alerts	2317	
	2363	
Documentation Changes	Documentation updated to indicate related alerts and Local Response Agent (LRA) alerts.	
	2095	Changed documentation for cause.

**Table 4-3. Alert Message Change History**

<b>Alert Message Change History</b>		
	2305	<p>Changed documentation for cause and corrective action.</p> <p>Changed SNMP trap number to 903. This change only made in the <i>Dell OpenManage Server Administrator Messages Reference Guide</i> to reflect existing Storage Management online help.</p>
	2312	<p>Changed documentation for corrective action in the Storage Management online help. The <i>Dell OpenManage Server Administrator Messages Reference Guide</i> already has updated corrective action.</p>
	2367	<p>Changed documentation for cause and corrective action.</p>
<b>Storage Management 2.2</b>		<b>Comments</b>
<b>Product Versions to which Changes Apply</b>	Storage Management 2.2 Server Administrator 3.2 Dell OpenManage™ 5.2	
<b>Reduction of unnecessary alert generation</b>	Enhancements to Storage Management avoid numerous redundant or inappropriate alerts posted to the Alert Log after an unexpected system shutdown.	In previous versions of Storage Management, an unexpected system shutdown may have caused the controller to repost a large number of alerts to the Alert Log when restarting the system.
<b>Modified Alerts</b>	2095	Severity changed to Informational. SNMP trap changed to 901.
	2153	Severity changed to Informational. SNMP trap changed to 851.
	2188	Severity changed to Informational. SNMP trap changed to 1151.
	2192	Changed documentation for cause and corrective action.
	2202	Severity changed to Informational. SNMP trap changed to 901.
	2204	Severity changed to Informational. SNMP trap changed to 901.
	2205	Severity changed to Informational. SNMP trap changed to 901.

**Table 4-3. Alert Message Change History**

<b>Alert Message Change History</b>		
	2266	SNMP traps changed to 751, 801, 851, 901, 951, 1001, 1051, 1101, 1151, 1201.
	2272	Severity changed to Critical. SNMP trap changed to 904. Changed corrective action information in the documentation.
	2273	Changed alert message text and documentation for cause and corrective action.
	2279	Changed alert message text.
	2299	Changed corrective action information in the documentation.
	2305	Changed severity to Warning. Changed SNMP trap number to 903.
	2331	Changed severity to Informational. Changed SNMP trap number to 901.
	2367	Changed severity to Warning. Changed SNMP trap number to 903.
<b>Obsolete Alerts</b>	2333	
	2354	2354 replaced by 2368.
	2355	
	2365	
	2370	
<b>Documentation Changes</b>	Severity for alert 2163 changed from Ok/Normal to Critical/Failure/Error.	Documentation change only made in the <i>Dell OpenManage Server Administrator Messages Reference Guide</i> to reflect the severity displayed in the Server Administrator Alert Log and documented in the Storage Management online help.
	Severity for alert 2318 changed from Critical/Failure/Error to Warning/Non-critical.	Documentation change only made in the <i>Dell OpenManage Server Administrator Messages Reference Guide</i> to reflect the severity displayed in the Server Administrator Alert Log and documented in the Storage Management online help.
	Removed alert 2344. Replaced by alert 2070.	Documentation change only made in the <i>Dell OpenManage Server Administrator Messages Reference Guide</i> to reflect existing Storage Management online help.

**Table 4-3. Alert Message Change History**

<b>Alert Message Change History</b>		
<b>Storage Management 2.1</b>		<b>Comments</b>
	Removed alert 2345. Replaced by alert 2079.	Documentation change only made in the <i>Dell OpenManage Server Administrator Messages Reference Guide</i> to reflect existing Storage Management online help.
<b>Product Versions to which Changes Apply</b>	Storage Management 2.1 Server Administrator 2.4 Dell OpenManage™ 5.1	
<b>New Alerts</b>	2062 (see note) 2173 2195 2196 2212 2213 2214 2215 2260 (see note) 2370 2371	The alert numbers for the new alerts 2062–2260 were previously unassigned. Alert numbers 2370 and 2371 are new. <b>NOTE:</b> Alerts 2062 and 2260 were previously undocumented in the Storage Management online help, <i>Dell OpenManage Server Administrator Storage Management User's Guide</i> , and the <i>Dell OpenManage Server Administrator Messages Reference Guide</i> .
<b>Modified Alerts</b>	2049, 2050, 2051, 2052, 2065, 2074, 2080, 2083, 2089, 2092, 2141, 2158, 2249, 2251, 2252, 2255, 2269, 2270, 2274, 2303, 2305, 2309, 2361, 2362, 2363	The term “array disk” has been changed to “physical disk” throughout Storage Management. This change affects the message text of the modified alerts.
<b>Obsolete Alerts</b>	2160 2161	2160 replaced by 2195. 2161 replaced by 2196.
<b>Documentation Changes</b>	Documentation updated to indicate clear alert status. Reference to SNMP trap variables removed. Corresponding Array Manager event numbers removed (see comments).	Starting with Dell OpenManage 5.0, Array Manager is no longer an installable option. If you have an Array Manager installation and wish to see how the Array Manager events correspond to the Storage Management alerts, refer to the product documentation prior to Storage Management 2.1 or Dell OpenManage 5.1.

## Alert Descriptions and Corrective Actions

The following sections describe alerts generated by the RAID or SCSI controllers supported by Storage Management. The alerts are displayed in the Server Administrator Alert subtab or through Windows Event Viewer. These alerts can also be forwarded as SNMP traps to other applications.

SNMP traps are generated for the alerts listed in the following sections. These traps are included in the Dell OpenManage Server Administrator Storage Management management information base (MIB). The SNMP traps for these alerts use all of the SNMP trap variables. For more information on SNMP support and the MIB, see the *SNMP Reference Guide*.

To locate an alert, scroll through the following table to find the alert number displayed on the Server Administrator Alert tab or search this file for the alert message text or number. See "Understanding Event Messages" for more information on severity levels.

For more information regarding alert descriptions and the appropriate corrective actions, see the online help.

**Table 4-4. Storage Management Messages**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2048	Device failed	Critical/ Failure/ Error	<p>Cause: A storage component such as a physical disk or an enclosure has failed. The failed component may have been identified by the controller while performing a task such as a rescan or a check consistency.</p> <p>Action: Replace the failed component. You can identify which disk has failed by locating the disk that has a red "X" for its status. Perform a rescan after replacing the disk.</p>	<p>Clear Alert Number: 2121.</p> <p>Related Alert Number: 2095, 2201, 2203</p> <p>LRA Number: 2051, 2061, 2071, 2081, 2091, 2101</p>	<p>754</p> <p>804</p> <p>854</p> <p>904</p> <p>954</p> <p>1004</p> <p>1054</p> <p>1104</p> <p>1154</p> <p>1204</p>



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2049	Physical disk removed	Warning / Non-critical	<p>Cause: A physical disk has been removed from the disk group. This alert can also be caused by loose or defective cables or by problems with the enclosure.</p> <p>Action: If a physical disk was removed from the disk group, either replace the disk or restore the original disk. On some controllers, a removed disk has a red "X" for its status. On other controllers, a removed disk may have an <code>Offline</code> status or is not displayed on the user interface. Perform a rescan after replacing or restoring the disk. If a disk has not been removed from the disk group, then check for problems with the cables. See the online help for more information on checking the cables. Make sure that the enclosure is powered on. If the problem persists, check the enclosure documentation for further diagnostic information.</p>	<p><b>Clear Alert Number:</b> 2052.</p> <p><b>Related Alert Number:</b> 2054, 2057, 2056, 2076, 2079, 2081, 2083, 2129, 2202, 2204, 2270, 2292, 2299, 2369</p> <p><b>LRA Number:</b> 2070</p>	903
2050	Physical disk offline	Warning / Non-critical	<p>Cause: A physical disk in the disk group is offline. A user may have manually put the physical disk offline.</p> <p>Action: Perform a rescan. You can also select the offline disk and perform a <b>Make Online</b> operation.</p>	<p><b>Clear Alert Number:</b> 2158.</p> <p><b>Related Alert Number:</b> 2099, 2196</p> <p><b>LRA Number:</b> 2070</p>	903

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2051	Physical disk degraded	Warning / Non-critical	<p>Cause: A physical disk has reported an error condition and may be degraded. The physical disk may have reported the error condition in response to a consistency check or other operation.</p> <p>Action: Replace the degraded physical disk. You can identify which disk is degraded by locating the disk that has a red "X" for its status. Perform a rescan after replacing the disk.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2070</p> <p>LRA Number: None.</p>	903
2052	Physical disk inserted	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2065, 2305, 2367</p> <p>LRA Number: None.</p>	901
2053	Virtual disk created	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1201
2054	Virtual disk deleted	Warning / Non-critical	<p>Cause: A virtual disk has been deleted. "Performing a Reset Configuration" may detect that a virtual disk has been deleted and generate this alert.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2080</p>	1203
2055	Virtual disk configuration changed	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2056	Virtual disk failed	Critical / Failure / Error	<p>Cause: One or more physical disks included in the virtual disk have failed. If the virtual disk is non-redundant (does not use mirrored or parity data), then the failure of a single physical disk can cause the virtual disk to fail. If the virtual disk is redundant, then more physical disks have failed than can be rebuilt using mirrored or parity information.</p> <p>Action: Create a new virtual disk and restore from a backup.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2048, 2049, 2050, 2076, 2079, 2081, 2129, 2346</p> <p><b>LRA Number:</b> 2081</p>	1204

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2057	Virtual disk degraded	Warning / Non-critical	<p>Cause 1: This alert message occurs when a physical disk included in a redundant virtual disk fails. Because the virtual disk is redundant (uses mirrored or parity information) and only one physical disk has failed, the virtual disk can be rebuilt.</p> <p>Action 1: Configure a hot spare for the virtual disk if one is not already configured. Rebuild the virtual disk. When using an Expandable RAID Controller (PERC) PERC 3/SC, 3/DCL, 3/DC, 3/QC, 4/SC, 4/DC, 4e/DC, 4/Di, CERC ATA100/4ch, PERC 5/E, PERC 5/i or a Serial Attache SCSI (SAS) 5/iR controller, rebuild the virtual disk by first configuring a hot spare for the disk, and then initiating a write operation to the disk. The write operation will initiate a rebuild of the disk.</p> <p>Cause 2: A physical disk in the disk group has been removed.</p> <p>Action 2: If a physical disk was removed from the disk group, either replace the disk or restore the original disk. You can identify which disk has been removed by locating the disk that has a red “X” for its status. Perform a rescan after replacing the disk.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2048, 2049, 2050, 2076, 2079, 2081, 2123, 2129, 2346</p> <p><b>LRA Number:</b> 2080</p>	1203
2058	Virtual disk check consistency started	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> 2085.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2059	Virtual disk format started	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> 2086.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2061	Virtual disk initialization started	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> 2088. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2062	Physical disk initialization started	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	<b>Clear Alert Number:</b> 2089. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	901
2063	Virtual disk reconfiguration started	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> 2090. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2064	Virtual disk rebuild started	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> 2091. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2065	Physical disk rebuild started	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> 2092. <b>Related Alert Number:</b> 2099, 2121, 2196 <b>LRA Number:</b> None.	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2067	Virtual disk check consistency cancelled	Ok / Normal	<p>Cause: The check consistency operation cancelled because a physical disk in the array has failed or because a user cancelled the check consistency operation.</p> <p>Action: If the physical disk failed, then replace the physical disk. You can identify which disk failed by locating the disk that has a red “X” for its status. Perform a rescan after replacing the disk. When performing a consistency check, be aware that the consistency check can take a long time. The time it takes depends on the size of the physical disk or the virtual disk.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2070	Virtual disk initialization cancelled	Ok / Normal	<p>Cause: The virtual disk initialization cancelled because a physical disk included in the virtual disk has failed or because a user cancelled the virtual disk initialization.</p> <p>Action: If a physical disk failed, then replace the physical disk. You can identify which disk has failed by locating the disk that has a red “X” for its status. Perform a rescan after replacing the disk. Restart the format physical disk operation. Restart the virtual disk initialization.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2074	Physical disk rebuild cancelled	Ok / Normal	<p>Cause: A user has cancelled the rebuild operation.</p> <p>Action: Restart the rebuild operation.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2076	Virtual disk check consistency failed	Critical / Failure / Error	<p>Cause: A physical disk included in the virtual disk failed or there is an error in the parity information. A failed physical disk can cause errors in parity information.</p> <p>Action: Replace the failed physical disk. You can identify which disk has failed by locating the disk that has a red "X" for its status. Rebuild the physical disk. When finished, restart the check consistency operation.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2081</p>	1204
2077	Virtual disk format failed.	Critical / Failure / Error	<p>Cause: A physical disk included in the virtual disk failed.</p> <p>Action: Replace the failed physical disk. You can identify which physical disk has failed by locating the disk that has a red "X" for its status. Rebuild the physical disk. When finished, restart the virtual disk format operation.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2081</p>	1204
2079	Virtual disk initialization failed	Critical / Failure / Error	<p>Cause: A physical disk included in the virtual disk has failed or a user has cancelled the initialization.</p> <p>Action: If a physical disk has failed, then replace the physical disk.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2081</p>	1204
2080	Physical disk initialize failed	Critical / Failure / Error	<p>Cause: The physical disk has failed or is corrupt.</p> <p>Action: Replace the failed or corrupt disk. You can identify a disk that has failed by locating the disk that has a red "X" for its status. Restart the initialization.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904

**Table 4-4. Storage Management Messages (continued)**


<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2081	Virtual disk reconfiguration failed	Critical / Failure / Error	<p>Cause: A physical disk included in the virtual disk has failed or is corrupt. A user may also have cancelled the reconfiguration.</p> <p>Action: Replace the failed or corrupt disk. You can identify a disk that has failed by locating the disk that has a red "X" for its status.</p> <p>If the physical disk is part of a redundant array, then rebuild the physical disk. When finished, restart the reconfiguration.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2081</p>	1204
2082	Virtual disk rebuild failed	Critical / Failure / Error	<p>Cause: A physical disk included in the virtual disk has failed or is corrupt. A user may also have cancelled the rebuild.</p> <p>Action: Replace the failed or corrupt disk. You can identify a disk that has failed by locating the disk that has a red "X" for its status. Restart the virtual disk rebuild.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2048</p> <p><b>LRA Number:</b> 2081</p>	1204
2083	Physical disk rebuild failed	Critical / Failure / Error	<p>Cause: A physical disk included in the virtual disk has failed or is corrupt. A user may also have cancelled the rebuild.</p> <p>Action: Replace the failed or corrupt disk. You can identify a disk that has failed by locating the disk that has a red "X" for its status. Rebuild the virtual disk rebuild.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904
2085	Virtual disk check consistency completed	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> Alert 2085 is a clear alert for alert 2058.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2086	Virtual disk format completed	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2086 is a clear alert for alert 2059. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2088	Virtual disk initialization completed	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2088 is a clear alert for alerts 2061 and 2136. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2089	Physical disk initialize completed	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2089 is a clear alert for alert 2062. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	901
2090	Virtual disk reconfiguration completed	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2090 is a clear alert for alert 2063. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2091	Virtual disk rebuild completed	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2091 is a clear alert for alert 2064. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2092	Physical disk rebuild completed	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2092 is a clear alert for alert 2065. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	901

**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2094	Predictive Failure reported.	Warning / Non-critical	<p>Cause: The physical disk is predicted to fail. Many physical disks contain Self Monitoring Analysis and Reporting Technology (SMART). When enabled, SMART monitors the health of the disk based on indications such as the number of write operations that have been performed on the disk.</p> <p>Action: Replace the physical disk. Even though the disk may not have failed yet, it is strongly recommended that you replace the disk.</p> <p>If this disk is part of a redundant virtual disk, perform the <b>Offline</b> task on the disk; replace the disk; and then assign a hot spare and the rebuild will start automatically.</p> <p>If this disk is a hot spare, then unassign the hot spare; perform the <b>Prepare to Remove</b> task on the disk; replace the disk; and assign the new disk as a hot spare.</p> <p> <b>NOTICE:</b> If this disk is part of a nonredundant disk, back up your data immediately. If the disk fails, you will not be able to recover the data.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2070</p>	903
2095	SCSI sense data.	Ok / Normal	<p>Cause: A SCSI device experienced an error, but may have recovered.</p> <p>Action: None.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2273</p> <p>LRA Number: None.</p>	751, 851, 901
2098	Global hot spare assigned	Ok / Normal	<p>Cause: A user has assigned a physical disk as a global hot spare. This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2277</p> <p>LRA Number: None.</p>	901



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2099	Global hot spare unassigned	Ok / Normal	Cause: A user has unassigned a physical disk as a global hot spare. This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	901
2100	Temperature exceeded the maximum warning threshold	Warning / Non-critical	Cause: The physical disk enclosure is too hot. A variety of factors can cause the excessive temperature. For example, a fan may have failed, the thermostat may be set too high, or the room temperature may be too hot. Action: Check for factors that may cause overheating. For example, verify that the enclosure fan is working. You should also check the thermostat settings and examine whether the enclosure is located near a heat source. Make sure the enclosure has enough ventilation and that the room temperature is not too hot. See the physical disk enclosure documentation for more diagnostic information.	<b>Clear Alert Number:</b> 2353. <b>Related Alert Number:</b> 2112 <b>LRA Number:</b> 2090	1053
2101	Temperature dropped below the minimum warning threshold	Warning / Non-critical	Cause: The physical disk enclosure is too cool. Action: Check if the thermostat setting is too low and if the room temperature is too cool.	<b>Clear Alert Number:</b> 2353. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2090	1053


**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2102	Temperature exceeded the maximum failure threshold	Critical / Failure / Error	<p>Cause: The physical disk enclosure is too hot. A variety of factors can cause the excessive temperature. For example, a fan may have failed, the thermostat may be set too high, or the room temperature may be too hot.</p> <p>Action: Check for factors that may cause overheating. For example, verify that the enclosure fan is working. You should also check the thermostat settings and examine whether the enclosure is located near a heat source. Make sure the enclosure has enough ventilation and that the room temperature is not too hot. See the physical disk enclosure documentation for more diagnostic information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2091</p>	1054
2103	Temperature dropped below the minimum failure threshold	Critical / Failure / Error	<p>Cause: The physical disk enclosure is too cool.</p> <p>Action: Check if the thermostat setting is too low and if the room temperature is too cool.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2112</p> <p><b>LRA Number:</b> 2091</p>	1054
2104	Controller battery is reconditioning	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> 2105.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1151
2105	Controller battery recondition is completed	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> Alert 2105 is a clear alert for alert 2104.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1151

**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2106	Smart FPT exceeded	Warning / Non-critical	<p>Cause: A disk on the specified controller has received a SMART alert (predictive failure) indicating that the disk is likely to fail in the near future.</p> <p>Action: Replace the disk that has received the SMART alert. If the physical disk is a member of a non-redundant virtual disk, then back up the data before replacing the disk.</p> <p> <b>NOTICE:</b> Removing a physical disk that is included in a non-redundant virtual disk will cause the virtual disk to fail and may cause data loss.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2070</p>	903
2107	Smart configuration change	Critical / Failure / Error	<p>Cause: A disk has received a SMART alert (predictive failure) after a configuration change. The disk is likely to fail in the near future.</p> <p>Action: Replace the disk that has received the SMART alert. If the physical disk is a member of a non-redundant virtual disk, then back up the data before replacing the disk.</p> <p> <b>NOTICE:</b> Removing a physical disk that is included in a non-redundant virtual disk will cause the virtual disk to fail and may cause data loss.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2071</p>	904


**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2108	Smart warning	Warning / Non-critical	<p data-bbox="468 343 829 427">Cause: A disk has received a SMART alert (predictive failure). The disk is likely to fail in the near future.</p> <p data-bbox="468 444 829 586">Action: Replace the disk that has received the SMART alert. If the physical disk is a member of a non-redundant virtual disk, then back up the data before replacing the disk.</p> <p data-bbox="472 595 829 748">  <b>NOTICE:</b> Removing a physical disk that is included in a non-redundant virtual disk will cause the virtual disk to fail and may cause data loss.                 </p>	<p data-bbox="848 343 1122 366">Clear Alert Number: None.</p> <p data-bbox="848 383 1143 406">Related Alert Number: None.</p> <p data-bbox="848 423 1043 446">LRA Number: 2070</p>	903

**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2109	SMART warning temperature	Warning / Non-critical	<p data-bbox="515 343 882 482">Cause: A disk has reached an unacceptable temperature and received a SMART alert (predictive failure). The disk is likely to fail in the near future.</p> <p data-bbox="515 499 882 1025">Action 1: Determine why the physical disk has reached an unacceptable temperature. A variety of factors can cause the excessive temperature. For example, a fan may have failed, the thermostat may be set too high, or the room temperature may be too hot or cold. Verify that the fans in the server or enclosure are working. If the physical disk is in an enclosure, you should check the thermostat settings and examine whether the enclosure is located near a heat source. Make sure the enclosure has enough ventilation and that the room temperature is not too hot. See the physical disk enclosure documentation for more diagnostic information.</p> <p data-bbox="515 1043 882 1211">Action 2: If you cannot identify why the disk has reached an unacceptable temperature, then replace the disk. If the physical disk is a member of a non-redundant virtual disk, then back up the data before replacing the disk.</p> <p data-bbox="515 1229 882 1374"><b>➡ NOTICE:</b> Removing a physical disk that is included in a non-redundant virtual disk will cause the virtual disk to fail and may cause data loss.</p>	<p data-bbox="896 343 1168 366">Clear Alert Number: None.</p> <p data-bbox="896 383 1190 406">Related Alert Number: None.</p> <p data-bbox="896 423 1090 446">LRA Number: 2070</p>	903

**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2110	SMART warning degraded	Warning / Non-critical	<p>Cause: A disk is degraded and has received a SMART alert (predictive failure). The disk is likely to fail in the near future.</p> <p>Action: Replace the disk that has received the SMART alert. If the physical disk is a member of a non-redundant virtual disk, then back up the data before replacing the disk.</p> <p> <b>NOTICE:</b> Removing a physical disk that is included in a non-redundant virtual disk will cause the virtual disk to fail and may cause data loss.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2070</p>	903
2111	Failure prediction threshold exceeded due to test - No action needed	Warning / Non-critical	<p>Cause: A disk has received a SMART alert (predictive failure) due to test conditions.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2070</p>	903
2112	Enclosure was shut down	Critical / Failure / Error	<p>Cause: The physical disk enclosure is either hotter or cooler than the maximum or minimum allowable temperature range.</p> <p>Action: Check for factors that may cause overheating or excessive cooling. For example, verify that the enclosure fan is working. You should also check the thermostat settings and examine whether the enclosure is located near a heat source. Make sure the enclosure has enough ventilation and that the room temperature is not too hot or too cold. See the enclosure documentation for more diagnostic information.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2091</p>	854



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2114	A consistency check on a virtual disk has been paused (suspended)	Ok / Normal	<p>Cause: The check consistency operation on a virtual disk was paused by a user.</p> <p>Action: To resume the check consistency operation, right-click the virtual disk in the tree view and select <b>Resume Check Consistency</b>.</p>	<p><b>Clear Alert Number:</b> 2115.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2115	A consistency check on a virtual disk has been resumed	Ok / Normal	<p>Cause: This alert is for informational purposes. The check consistency operation on a virtual disk has resumed processing after being paused by a user.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> Alert 2115 is a clear alert for alert 2114.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2116	A virtual disk and its mirror have been split	Ok / Normal	<p>Cause: This alert is for informational purposes. A user has caused a mirrored virtual disk to be split. When a virtual disk is mirrored, its data is copied to another virtual disk in order to maintain redundancy. After being split, both virtual disks retain a copy of the data, although because the mirror is no longer intact, updates to the data are no longer copied to the mirror.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2117	A mirrored virtual disk has been unmirrored	Ok / Normal	<p>Cause: This alert is for informational purposes. A user has caused a mirrored virtual disk to be unmirrored. When a virtual disk is mirrored, its data is copied to another virtual disk in order to maintain redundancy. After being unmirrored, the disk formerly used as the mirror returns to being a physical disk and becomes available for inclusion in another virtual disk.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2118	Change write policy	Ok / Normal	Cause: This alert is for informational purposes. A user has changed the write policy for a virtual disk. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2120	Enclosure firmware mismatch	Warning / Non-critical	Cause: The firmware on the EMM is not the same version. It is required that both modules have the same version of the firmware. This alert may be caused when a user attempts to insert an EMM module that has a different firmware version than an existing module. Action: Download the same version of the firmware to both EMM modules.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2090	853
2121	Device returned to normal	Ok / Normal	Cause: This alert is for informational purposes. A device that was previously in an error state has returned to a normal state. For example, if an enclosure became too hot and subsequently cooled down, then you may receive this alert. Action: None	<b>Clear Alert Status:</b> Alert 2121 is a clear alert for alert 2048. <b>Related Alert Number:</b> 2050, 2065, 2158 <b>LRA Number:</b> None.	752 802 852 902 952 1002 1052 1102 1152 1202



**Table 4-4. Storage Management Messages (*continued*)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2122	Redundancy degraded	Warning / Non-critical	<p data-bbox="515 343 882 395">Cause: One or more of the enclosure components has failed.</p> <p data-bbox="515 413 882 552">For example, a fan or power supply may have failed. Although the enclosure is currently operational, the failure of additional components could cause the enclosure to fail.</p> <p data-bbox="515 569 882 769">Action: Identify and replace the failed component. To identify the failed component, select the enclosure in the tree view and click the Health subtab. Any failed component will be identified with a red "X" on the enclosure's Health subtab.</p> <p data-bbox="515 786 882 951">Alternatively, you can select the Storage object and click the Health subtab. The controller status displayed on the Health subtab indicates whether a controller has a failed or degraded component.</p> <p data-bbox="515 968 882 1076">See the enclosure documentation for information on replacing enclosure components and for other diagnostic information.</p>	<p data-bbox="896 343 1143 366">Clear Alert Status: 2124.</p> <p data-bbox="896 383 1176 406">Related Alert Number: 2048</p> <p data-bbox="896 423 1090 446">LRA Number: 2090</p>	1305

**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2123	Redundancy lost	Warning / Non-critical	<p data-bbox="468 343 829 748">Cause: A virtual disk or an enclosure has lost data redundancy. In the case of a virtual disk, one or more physical disks included in the virtual disk have failed. Due to the failed physical disk or disks, the virtual disk is no longer maintaining redundant (mirrored or parity) data. The failure of an additional physical disk will result in lost data. In the case of an enclosure, more than one enclosure component has failed. For example, the enclosure may have suffered the loss of all fans or all power supplies.</p> <p data-bbox="468 765 829 1229">Action: Identify and replace the failed components. To identify the failed component, select the Storage object and click the Health subtab. The controller status displayed on the Health subtab indicates whether a controller has a failed or degraded component. Click the controller that displays a Warning or Failed status. This action displays the controller Health subtab which displays the status of the individual controller components. Continue clicking the components with a Warning or Health status until you identify the failed component.</p> <p data-bbox="468 1246 829 1390">See the online help for more information. See the enclosure documentation for information on replacing enclosure components and for other diagnostic information.</p>	<p data-bbox="848 343 1115 366"><b>Clear Alert Number:</b> 2124.</p> <p data-bbox="848 383 1136 435"><b>Related Alert Number:</b> 2048, 2049, 2057</p> <p data-bbox="848 453 1100 475"><b>LRA Number:</b> 2080, 2090</p>	1306

**Table 4-4. Storage Management Messages (continued)**

Event ID	Description	Severity	Cause and Action	Related Alert Information	SNMP Trap Numbers
2124	Redundancy normal	Ok / Normal	<p>Cause: This alert is for informational purposes. Data redundancy has been restored to a virtual disk or an enclosure that previously suffered a loss of redundancy.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> Alert 2124 is a clear alert for alerts 2122 and 2123.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1304
2126	SCSI sense sector reassign	Warning / Non-critical	<p>Cause: A sector of the physical disk is corrupted and data cannot be maintained on this portion of the disk. This alert is for informational purposes.</p> <p> <b>NOTICE:</b> Any data residing on the corrupt portion of the disk may be lost and you may need to restore your data from backup.</p> <p>Action: If the physical disk is part of a nonredundant virtual disk, then back up the data and replace the physical disk.</p> <p> <b>NOTICE:</b> Removing a physical disk that is included in a nonredundant virtual disk will cause the virtual disk to fail and may cause data loss.</p> <p>If the disk is part of a redundant virtual disk, then any data residing on the corrupt portion of the disk will be reallocated elsewhere in the virtual disk.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	903
2127	Background initialization (BGI) started	Ok / Normal	<p>Cause: BGI of a virtual disk has started. This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> 2130.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2128	BGI cancelled	Ok / Normal	Cause: BGI of a virtual disk has been cancelled. A user or the firmware may have stopped BGI. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2129	BGI failed	Critical / Failure / Error	Cause: BGI of a virtual disk has failed. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> 2340 <b>LRA Number:</b> 2081	1204
2130	BGI completed	Ok / Normal	Cause: BGI of a virtual disk has completed. This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> Alert 2130 is a clear alert for alert 2127. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2131	Firmware version mismatch	Warning / Non-critical	Cause: The firmware on the controller is not a supported version. Action: Install a supported version of the firmware. If you do not have a supported version of the firmware available, it can be downloaded from the Dell support site at <a href="http://support.dell.com">support.dell.com</a> . If you do not have a supported version of the firmware available, check with your support provider for information on how to obtain the most current firmware.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2060	753

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2132	Driver version mismatch	Warning / Non-critical	<p>Cause: The controller driver is not a supported version.</p> <p>Action: Install a supported version of the driver. If you do not have a supported driver version available, it can be downloaded from the Dell support site at <a href="http://support.dell.com">support.dell.com</a>. If you do not have a supported version of the driver available, check with your support provider for information on how to obtain the most current driver.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2060</p>	753
2135	Array Manager is installed on the system	Warning / Non-critical	<p>Cause: Storage Management has been installed on a system that has an Array Manager installation.</p> <p>Action: Installing Storage Management and Array Manager on the same system is not a supported configuration. Uninstall either Storage Management or Array Manager.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2050</p>	103
2136	Virtual disk initialization	Ok / Normal	<p>Cause: This alert is for informational purposes. Virtual disk initialization is in progress.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> 2088.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2137	Communication timeout	Warning / Non-critical	<p>Cause: The controller is unable to communicate with an enclosure. There are several reasons why communication may be lost. For example, there may be a bad or loose cable. An unusual amount of I/O may also interrupt communication with the enclosure. In addition, communication loss may be caused by software, hardware, or firmware problems, bad or failed power supplies, and enclosure shutdown.</p> <p>When viewed in the Alert Log, the description for this event displays several variables. These variables are: Controller and enclosure names, type of communication problem, return code, and SCSI status.</p> <p>Action: Check for problems with the cables. See the online help for more information on checking the cables. You should also check to see if the enclosure has degraded or failed components. To do so, select the enclosure object in the tree view and click the <b>Health</b> subtab. The Health subtab displays the status of the enclosure components. Verify that the controller has supported driver and firmware versions installed and that the EMMs are each running the same version of supported firmware.</p>	<p><b>Clear Alert Number:</b> 2162.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2090</p>	853
2138	Enclosure alarm enabled	Ok / Normal	<p>Cause: This alert is for informational purposes. A user has enabled the enclosure alarm.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	851



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2139	Enclosure alarm disabled	Ok / Normal	Cause: A user has disabled the enclosure alarm. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	851
2140	Dead disk segments restored	Ok / Normal	Cause: This alert is for informational purposes. Disk space that was formerly “dead” or inaccessible to a redundant virtual disk has been restored. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1201
2141	Physical disk dead segments recovered	Ok / Normal	Cause: This alert is for informational purposes. Portions of the physical disk were formerly inaccessible. The disk space from these dead segments has been recovered and is now usable. Any data residing on these dead segments has been lost. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901
2142	Controller rebuild rate has changed	Ok / Normal	Cause: This alert is for informational purposes. A user has changed the controller rebuild rate. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2143	Controller alarm enabled	Ok / Normal	Cause: This alert is for informational purposes. A user has enabled the controller alarm. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2144	Controller alarm disabled	Ok / Normal	Cause: This alert is for informational purposes. A user has disabled the controller alarm. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2145	Controller battery low	Warning / Non-critical	Cause: The controller battery charge is low.  Action: Recondition the battery. See the online help for more information	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2100	1153
2146	Bad block replacement error	Warning / Non-critical	Cause: A portion of a physical disk is damaged.  Action: See the <i>Dell OpenManage Server Administrator Storage Management</i> online help or the <i>Dell OpenManage Server Administrator Storage Management User's Guide</i> for more information.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2060	753
2147	Bad block sense error	Warning / Non-critical	Cause: A portion of a physical disk is damaged.  Action: See the <i>Dell OpenManage Server Administrator Storage Management</i> online help for more information.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2060	753
2148	Bad block medium error	Warning / Non-critical	Cause: A portion of a physical disk is damaged.  Action: See the <i>Dell OpenManage Server Administrator Storage Management</i> online help for more information.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2060	753
2149	Bad block extended sense error	Warning / Non-critical	Cause: A portion of a physical disk is damaged.  Action: See the <i>Dell OpenManage Server Administrator Storage Management</i> online help for more information.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2060	753
2150	Bad block extended medium error	Warning / Non-critical	Cause: A portion of a physical disk is damaged.  Action: See the <i>Dell OpenManage Server Administrator Storage Management</i> online help for more information.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2060	753

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2151	Asset tag changed	Ok / Normal	Cause: This alert is for informational purposes. A user has changed the enclosure asset tag. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	851
2152	Asset name changed	Ok / Normal	Cause: This alert is for informational purposes. A user has changed the enclosure asset name. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	851
2153	Service tag changed	Ok / Normal	Cause: An enclosure service tag was changed. In most circumstances, this service tag should only be changed by Dell™ support or your service provider. Action: Ensure that the tag was changed under authorized circumstances.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	851
2154	Maximum temperature probe warning threshold value changed	Ok / Normal	Cause: This alert is for informational purposes. A user has changed the value for the maximum temperature probe warning threshold. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1051
2155	Minimum temperature probe warning threshold value changed	Ok / Normal	Cause: This alert is for informational purposes. A user has changed the value for the minimum temperature probe warning threshold. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1051
2156	Controller alarm has been tested	Ok / Normal	Cause: This alert is for informational purposes. The controller alarm test has run successfully. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	751

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2157	Controller configuration has been reset	Ok / Normal	<p>Cause: This alert is for informational purposes. A user has reset the controller configuration. See the online help for more information.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751
2158	Physical disk online	Ok / Normal	<p>Cause: This alert is for informational purposes. An offline physical disk has been made online.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> Alert 2158 is a clear alert for alert 2050.</p> <p><b>Related Alert Number:</b> 2048, 2050, 2065, 2099, 2121, 2196, 2201, 2203</p> <p><b>LRA Number:</b> None.</p>	901
2159	Virtual disk renamed	Ok / Normal	<p>Cause: This alert is for informational purposes. A user has renamed a virtual disk.</p> <p>When renaming a virtual disk on a PERC 3/SC, 3/DCL, 3/DC, 3/QC, 4/SC, 4/DC, 4e/DC, 4/Di, CERC ATA100/4ch, PERC 5/E, PERC 5/i or SAS 5/iR controller, this alert displays the new virtual disk name.</p> <p>On the PERC 3/SC, 3/DCL, 3/DC, 3/QC, 4/SC, 4/DC, 4e/DC, 4/Di, 4/IM, 4e/Si, 4e/Di, and CERC ATA 100/4ch controllers, this alert displays the original virtual disk name.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2162	Communication regained	Ok / Normal	<p>Cause: This alert is for informational purposes. Communication with an enclosure has been restored.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> Alert 2162 is a clear alert for alerts 2137 and 2292.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	851

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2163	Rebuild completed with errors	Critical / Failure / Error	<p>Cause: This alert is documented in the Storage Management online help.</p> <p>Action: See the online help for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904
2164	See the Readme file for a list of validated controller driver versions	Ok / Normal	<p>Cause: This alert is for informational purposes. Storage Management is unable to determine whether the system has the minimum required versions of the RAID controller drivers.</p> <p>Action: See the Readme file for driver and firmware requirements. In particular, if Storage Management experiences performance problems, you should verify that you have the minimum supported versions of the drivers and firmware installed.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	101
2165	The RAID controller firmware and driver validation was not performed. The configuration file cannot be opened.	Warning / Non-critical	<p>Cause: Storage Management is unable to determine whether the system has the minimum required versions of the RAID controller firmware and drivers. This situation may occur for a variety of reasons. For example, the installation directory path to the configuration file may not be correct. The configuration file may also have been removed or renamed.</p> <p>Action: Reinstall Storage Management</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2060</p>	753

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2166	The RAID controller firmware and driver validation was not performed. The configuration file is out of date or corrupted.	Warning / Non-critical	<p>Cause: Storage Management is unable to determine whether the system has the minimum required versions of the RAID controller firmware and drivers. This situation has occurred because a configuration file is unreadable or missing data. The configuration file may be corrupted.</p> <p>Action: Reinstall Storage Management.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2060</p>	753
2167	The current kernel version and the non-RAID SCSI driver version are older than the minimum required levels. See readme.txt for a list of validated kernel and driver versions.	Warning / Non-critical	<p>Cause: The version of the kernel and the driver do not meet the minimum requirements. Storage Management may not be able to display the storage or perform storage management functions until you have updated the system to meet the minimum requirements.</p> <p>Action: See the Readme file for a list of validated kernel and driver versions. Update the system to meet the minimum requirements and then reinstall Storage Management.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2050</p>	103
2168	The non-RAID SCSI driver version is older than the minimum required level. See readme.txt for the validated driver version.	Warning / Non-critical	<p>Cause: The version of the driver does not meet the minimum requirements. Storage Management may not be able to display the storage or perform storage management functions until you have updated the system to meet the minimum requirements.</p> <p>Action: See the Readme file for the validated driver version. Update the system to meet the minimum requirements and then reinstall Storage Management.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2050</p>	103

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2169	The controller battery needs to be replaced.	Critical / Failure / Error	<p>Cause: The controller battery cannot recharge. The battery may be old or it may have been already recharged the maximum number of times. In addition, the battery charger may not be working.</p> <p>Action: Replace the battery pack.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2118</p> <p>LRA Number: 2101</p>	1154
2170	The controller battery charge level is normal.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1151
2171	The controller battery temperature is above normal.	Warning / Non-critical	<p>Cause: The battery may be recharging, the room temperature may be too hot, or the fan in the system may be degraded or failed.</p> <p>Action: If this alert was generated due to a battery recharge, the situation will correct when the recharge is complete. You should also check if the room temperature is normal and that the system components are functioning properly.</p>	<p>Clear Alert Number: 2172.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2100</p>	1153
2172	The controller battery temperature is normal.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Status: Alert 2172 is a clear alert for alert 2171.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1151

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2173	Unsupported configuration detected. The SCSI rate of the enclosure management modules (EMMs) is not the same. EMM0 %1 EMM1 %2	Warning / Non-critical	<p>Cause: The EMMs in the enclosure have a different SCSI rate. This is an unsupported configuration. All EMMs in the enclosure should have the same SCSI rate. The % (percent sign) indicates a substitution variable. The text for this substitution variable is displayed with the alert in the Alert Log and can vary depending on the situation.</p> <p>Action: The EMMs in the enclosure have a different SCSI rate. This is an unsupported configuration. All EMMs in the enclosure should have the same SCSI rate.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2090</p>	853
2174	The controller battery has been removed.	Warning / Non-critical	<p>Cause: The controller cannot communicate with the battery, the battery may be removed, or the contact point between the controller and the battery may be burnt or corroded.</p> <p>Action: Replace the battery if it has been removed. If the contact point between the battery and the controller is burnt or corroded, you will need to replace either the battery or the controller, or both. See the hardware documentation for information on how to safely access, remove, and replace the battery.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2188, 2318</p> <p>LRA Number: 2100</p>	1153
2175	The controller battery has been replaced.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1151



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2176	The controller battery Learn cycle has started.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> 2177. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1151
2177	The controller battery Learn cycle has completed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2177 is a clear alert for alert 2176. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1151
2178	The controller battery Learn cycle has timed out.	Warning / Non-critical	Cause: The controller battery must be fully charged before the Learn cycle can begin. The battery may be unable to maintain a full charge causing the Learn cycle to timeout. Additionally, the battery must be able to maintain cached data for a specified period of time in the event of a power loss. For example, some batteries maintain cached data for 24 hours. If the battery is unable to maintain cached data for the required period of time, then the Learn cycle will timeout. Action: Replace the battery pack as the battery is unable to maintain a full charge.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2100	1153
2179	The controller battery Learn cycle has been postponed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1151

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2180	The controller battery Learn cycle will start in %1 days.	Ok / Normal	Cause: This alert is for informational purposes. The %1 indicates a substitution variable. The text for this substitution variable is displayed with the alert in the Alert Log and can vary depending on the situation.  Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1151
2181	The controller battery Learn cycle will start in %1 hours.	Ok / Normal	Cause: This alert is for informational purposes. The %1 indicates a substitution variable. The text for this substitution variable is displayed with the alert in the Alert Log and can vary depending on the situation.  Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1151
2182	An invalid SAS configuration has been detected.	Critical / Failure / Error	Cause: The controller and attached enclosures are not cabled correctly.  Action: See the hardware documentation for information on correct cabling configurations.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2061	754
2186	The controller cache has been discarded.	Warning / Non-critical	Cause: The controller has flushed the cache and any data in the cache has been lost. This may happen if the system has memory or battery problems that cause the controller to distrust the cache. Although user data may have been lost, this alert does not always indicate that relevant or user data has been lost.  Action: Verify that the battery and memory are functioning properly.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2060	753
2187	Single-bit ECC error limit exceeded.	Warning / Non-critical	Cause: The system memory is malfunctioning.  Action: Replace the battery pack.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2060	753

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2188	The controller write policy has been changed to Write Through.	Ok / Normal	<p>Cause: The controller battery is unable to maintain cached data for the required period of time. For example, if the required period of time is 24 hours, the battery is unable to maintain cached data for 24 hours. It is normal to receive this alert during the battery Learn cycle as the Learn cycle discharges the battery before recharging it. When discharged, the battery cannot maintain cached data.</p> <p>Action: Check the health of the battery. If the battery is weak, replace the battery pack.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1151
2189	The controller write policy has been changed to Write Back.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1151
2191	Multiple enclosures are attached to the controller. This is an unsupported configuration.	Critical / Failure / Error	<p>Cause: Many enclosures are attached to the controller port. When the enclosure limit is exceeded, the controller loses contact with all enclosures attached to the port.</p> <p>Action: Remove the last enclosure. You must remove the enclosure that has been added last and is causing the enclosure limit to exceed.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2211</p> <p><b>LRA Number:</b> 2091</p>	854

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2192	The virtual disk Check Consistency has made corrections and completed.	Ok / Normal	<p>Cause: This alert is for informational purposes. The virtual disk Check Consistency has identified errors and made corrections. For example, the Check Consistency may have encountered a bad disk block and remapped the disk block to restore data consistency.</p> <p>Action: This alert is for informational purposes only and no additional action is required. As a precaution, monitor the Alert Log for other errors related to this virtual disk. If problems persist, contact Dell Technical Support.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1203
2193	The virtual disk reconfiguration has resumed.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1201
2194	The virtual disk Read policy has changed.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1201
2195	Dedicated hot spare assigned. Physical disk %1	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p>Clear Alert Number: 2196.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1201
2196	Dedicated hot spare unassigned. Physical disk %1	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p>Clear Alert Status: Alert 2196 is a clear alert for alert 2195.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2199	The virtual disk cache policy has changed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1201
2201	A global hot spare failed.	Warning / Non-critical	Cause: The controller is not able to communicate with a disk that is assigned as a dedicated hot spare. The disk may have been removed. There may also be a bad or loose cable. Action: Check if the disk is healthy and that it has not been removed. Check the cables. If necessary, replace the disk and reassign the hot spare.	Clear Alert Number: None. Related Alert Number: 2048 LRA Number: 2070	903
2202	A global hot spare has been removed.	Ok / Normal	Cause: The controller is unable to communicate with a disk that is assigned as a global hot spare. The disk may have been removed. There may also be a bad or loose cable. Action: Check if the disk is healthy and that it has not been removed. Check the cables. If necessary, replace the disk and reassign the hot spare.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901
2203	A dedicated hot spare failed.	Warning / Non-critical	Cause: The controller is unable to communicate with a disk that is assigned as a dedicated hot spare. The disk may have failed or been removed. There may also be a bad or loose cable. Action: Check if the disk is healthy and that it has not been removed. Check the cables. If necessary, replace the disk and reassign the hot spare.	Clear Alert Number: None. Related Alert Number: 2048 LRA Number: 2070	903

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2204	A dedicated hot spare has been removed.	Ok / Normal	<p>Cause: The controller is unable to communicate with a disk that is assigned as a dedicated hot spare. The disk may have been removed. There may also be a bad or loose cable.</p> <p>Action: Check if the disk is healthy and that it has not been removed. Check the cables. If necessary, replace the disk and reassign the hot spare.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901
2205	A dedicated hot spare has been automatically unassigned.	Ok / Normal	<p>Cause: The hot spare is no longer required because the virtual disk it was assigned to has been deleted.</p> <p>Action: None.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2098, 2161, 2196</p> <p><b>LRA Number:</b> None.</p>	901
2206	The only hot spare available is a SATA disk. SATA disks cannot replace SAS disks.	Warning / Non-critical	<p>Cause: The only physical disk available to be assigned as a hot spare is using SATA technology. The physical disks in the virtual disk are using SAS technology. Because of this difference in technology, the hot spare cannot rebuild data if one of the physical disks in the virtual disk fails.</p> <p>Action: Add a SAS disk that is large enough to be used as the hot spare and assign the new disk as a hot spare.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2070</p>	903

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2207	The only hot spare available is a SAS disk. SAS disks cannot replace SATA disks.	Warning / Non-critical	<p>Cause: The only physical disk available to be assigned as a hot spare is using SAS technology. The physical disks in the virtual disk are using SATA technology. Because of this difference in technology, the hot spare cannot rebuild data if one of the physical disks in the virtual disk fails.</p> <p>Action: Add a SATA disk that is large enough to be used as the hot spare and assign the new disk as a hot spare.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2070</p>	903
2211	The physical disk is not supported.	Warning / Non-critical	<p>Cause: The physical disk may not have a supported version of the firmware or the disk may not be supported by Dell.</p> <p>Action: If the disk is supported by Dell, update the firmware to a supported version. If the disk is not supported by Dell, replace the disk with one that is supported.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2070</p>	903
2212	The controller battery temperature is above normal.	OK/Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1151
2213	Recharge count maximum exceeded	Warning / Non-critical	<p>Cause: The battery has been recharged more times than the battery recharge limit allows.</p> <p>Action: Replace the battery pack.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2100</p>	1153
2214	Battery charge in progress	OK/Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1151

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2215	Battery charge process interrupted	OK/Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1151
2232	The controller alarm is silenced.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2233	The background initialization (BGI) rate has changed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2234	The Patrol Read rate has changed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2235	The Check Consistency rate has changed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2237	A controller rescan has been initiated.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	None	751
2238	The controller debug log file has been exported.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2239	A foreign configuration has been cleared.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2240	A foreign configuration has been imported.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2241	The Patrol Read mode has changed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2242	The Patrol Read has started.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: 2243. Related Alert Number: None. LRA Number: None.	751
2243	The Patrol Read has stopped.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Status: Alert 2243 is a clear alert for alert 2242. Related Alert Number: None. LRA Number: None.	751
2244	A virtual disk blink has been initiated.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1201
2245	A virtual disk blink has ceased.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1201

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2246	The controller battery is degraded.	Warning / Non-critical	Cause: The controller battery charge is weak.  Action: As the charge weakens, the charger should automatically recharge the battery. If the battery has reached its recharge limit, replace the battery pack. Monitor the battery to make sure that it recharges successfully. If the battery does not recharge, replace the battery pack.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2100	1153
2247	The controller battery is charging.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	Clear Alert Number: 2358. Related Alert Number: None. LRA Number: None.	1151
2248	The controller battery is executing a Learn cycle.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1151
2249	The physical disk Clear operation has started.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901
2251	The physical disk blink has initiated.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901
2252	The physical disk blink has ceased.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2254	The Clear operation has cancelled.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901
2255	The physical disk has been started.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: 2048, 2050, 2065, 2099, 2121, 2196, 2201, 2203 LRA Number: None.	901
2259	An enclosure blink operation has initiated.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: 2260. Related Alert Number: None. LRA Number: None.	851
2260	An enclosure blink has ceased	OK/Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	851
2261	A global rescan has initiated.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	None	101
2262	SMART thermal shutdown is enabled.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	101
2263	SMART thermal shutdown is disabled.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	101

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2264	A device is missing.	Warning / Non-critical	<p>Cause: The controller cannot communicate with a device. The device may be removed. There may also be a bad or loose cable.</p> <p>Action: Check if the device is in and not removed. If it is in, check the cables. You should also check the connection to the controller battery and the battery health. A battery with a weak or depleted charge may cause this alert.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2050, 2060, 2070, 2080, 2090, 2100</p>	<p>753</p> <p>803</p> <p>853</p> <p>903</p> <p>953</p> <p>1003</p> <p>1053</p> <p>1103</p> <p>1153</p> <p>1203</p>
2265	A device is in an unknown state.	Warning / Non-critical	<p>Cause: The controller cannot communicate with a device. The state of the device cannot be determined. There may be a bad or loose cable. The system may also be experiencing problems with the application programming interface (API). There could also be a problem with the driver or firmware.</p> <p>Action: Check the cables. Check if the controller has a supported version of the driver and firmware. You can download the most current version of the driver and firmware from <a href="http://support.dell.com">support.dell.com</a>. Rebooting the system may also resolve this problem.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2048, 2050</p> <p><b>LRA Number:</b> 2050, 2060, 2070, 2080, 2090, 2100</p>	<p>753</p> <p>803</p> <p>853</p> <p>903</p> <p>953</p> <p>1003</p> <p>1053</p> <p>1103</p> <p>1153</p> <p>1203</p>
2266	Controller log file entry: %1	Ok / Normal	<p>Cause: This alert is for informational purposes. The %1 indicates a substitution variable. The text for this substitution variable is generated by the controller and is displayed with the alert in the Alert Log. This text can vary depending on the situation.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	<p>751, 801, 851, 901, 951, 1001, 1051, 1101, 1151, 1201</p>

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2267	The controller reconstruct rate has changed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2268	%1, Storage Management has lost communication with the controller. An immediate reboot is strongly recommended to avoid further problems. If the reboot does not restore communication, then contact technical support for more information.	Critical / Failure / Error	Cause: Storage Management has lost communication with a controller. This may occur if the controller driver or firmware is experiencing a problem. The %1 indicates a substitution variable. The text for this substitution variable is displayed with the alert in the Alert Log and can vary depending on the situation. Action: Reboot the system. If the problem is not resolved, contact technical support. See your system documentation for information about contacting technical support by using telephone, fax, and Internet services.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2051	104
2269	The physical disk Clear operation has completed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2270	The physical disk Clear operation failed.	Critical / Failure / Error	<p>Cause: A Clear task was being performed on a physical disk but the task was interrupted and did not complete successfully. The controller may have lost communication with the disk. The disk may have been removed or the cables may be loose or defective.</p> <p>Action: Verify that the disk is present and not in a Failed state. Make sure the cables are attached securely. See the online help for more information on checking the cables. Restart the Clear task.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904
2271	The Patrol Read corrected a media error.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901
2272	Patrol Read found an uncorrectable media error.	Critical / Failure / Error	<p>Cause: The Patrol Read task has encountered an error that cannot be corrected. There may be a bad disk block that cannot be remapped.</p> <p>Action: Back up your data. If you are able to back up the data successfully, then fully initialize the disk and then restore from back up.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2273	A block on the physical disk has been punctured by the controller.	Critical / Failure / Error	<p>Cause: The controller encountered an unrecoverable medium error when attempting to read a block on the physical disk and marked that block as invalid. If the controller encountered the unrecoverable medium error on a source physical disk during a rebuild or reconfigure operation, it will also puncture the corresponding block on the target physical disk. The invalid block will be cleared on a write operation.</p> <p>Action: Back up your data. If you are able to back up the data successfully, then fully initialize the disk and then restore from back up.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904
2274	The physical disk rebuild has resumed.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901
2276	The dedicated hot spare is too small.	Warning / Non-critical	<p>Cause: The dedicated hot spare is not large enough to protect all virtual disks that reside on the disk group.</p> <p>Action: Assign a larger disk as the dedicated hot spare.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2070</p>	903
2277	The global hot spare is too small.	Warning / Non-critical	<p>Cause: The global hot spare is not large enough to protect all virtual disks that reside on the controller.</p> <p>Action: Assign a larger disk as the global hot spare.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2070</p>	903

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2278	The controller battery charge level is below a normal threshold.	Ok / Normal	<p>Cause: The battery is discharging. A battery discharge is a normal activity during the battery Learn cycle. Before completing, the battery Learn cycle recharges the battery. You should receive alert 2179 when the recharge occurs.</p> <p>Action: Check if the battery Learn cycle is in progress. Alert 2176 indicates that the battery Learn cycle has initiated. The battery also displays the Learn state while the Learn cycle is in progress. If a Learn cycle is not in progress, replace the battery pack.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2199</p> <p><b>LRA Number:</b> None.</p>	1154
2279	The controller battery charge level is operating within normal limits.	Ok / Normal	<p>Cause: This alert is provided for informational purposes. This alert indicates that the battery is recharging during the battery Learn cycle.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1151
2280	A disk media error has been corrected.	Ok / Normal	<p>Cause: A disk media error was detected while the controller was completing a background task. A bad disk block was identified. The disk block has been remapped.</p> <p>Action: Consider replacing the disk. If you receive this alert frequently, be sure to replace the disk. You should also routinely back up your data.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1201
2281	Virtual disk has inconsistent data.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2127</p> <p><b>LRA Number:</b> None.</p>	1201



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2282	Hot spare SMART polling failed.	Critical / Failure / Error	<p>Cause: The controller firmware attempted a SMART polling on the hot spare but was unable to complete it. The controller has lost communication with the hot spare.</p> <p>Action: Check the health of the disk assigned as a hot spare. You may need to replace the disk and reassign the hot spare. Make sure the cables are attached securely. See the Cables Attached Correctly section in the <i>Dell OpenManage Server Administrator Storage Management User's Guide</i> for more information on checking the cables.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2071</p>	904
2283	A redundant path is broken.	Warning / Non-critical	<p>Cause: The controller has two connectors that are connected to the same enclosure. The communication path on one connector has lost connection with the enclosure. The communication path on the other connector is reporting this loss.</p> <p>Action: Make sure the cables are attached securely. Make sure both EMMs are healthy.</p>	<p><b>Clear Alert Number:</b> 2284.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2070</p>	903
2284	A redundant path has been restored.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Status:</b> Alert 2284 is a clear alert for alert 2283.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901
2285	A disk media error was corrected during recovery.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2286	A Learn cycle start is pending while the battery charges.	Ok/Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	1151
2287	The Patrol Read is paused.	Ok/Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: 2288. Related Alert Number: None. LRA Number: None.	751
2288	The patrol read has resumed.	Ok/Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Status: Alert 2288 is a clear alert for alert 2287. Related Alert Number: None. LRA Number: None.	751
2289	Multi-bit ECC error.	Critical/ Failure/ Error	Cause: An error involving multiple bits has been encountered during a read or write operation. The error correction algorithm recalculates parity data during read and write operations. If an error involves only a single bit, it may be possible for the error correction algorithm to correct the error and maintain parity data. An error involving multiple bits, however, usually indicates data loss. In some cases, if the multi-bit error occurs during a read operation, the data on the disk may be correct/valid. If the multi-bit error occurs during a write operation, data loss has occurred.  Action: Replace the dual in-line memory module (DIMM). The DIMM is a part of the controller battery pack. See your hardware documentation for information on replacing the DIMM. You may need to restore data from backup.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2061	754

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2290	Single-bit ECC error.	Warning / Non-critical	Cause: An error involving a single bit has been encountered during a read or write operation. The error correction algorithm has corrected this error.  Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2060	753
2291	An EMM has been discovered.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	851
2292	Communication with the enclosure has been lost.	Critical / Failure / Error	Cause: The controller has lost communication with an EMM. The cables may be loose or defective.  Action: Make sure the cables are attached securely. Reboot the system.	<b>Clear Alert Number:</b> 2162. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2091	854
2293	The EMM has failed.	Critical / Failure / Error	Cause: The failure may be caused by a loss of power to the EMM. The EMM self test may also have identified a failure. There could also be a firmware problem or a multi-bit error.  Action: Replace the EMM. See the hardware documentation for information on replacing the EMM.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2091	854
2294	A device has been inserted.	Ok / Normal	Cause: This alert is for informational purposes.  Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	851
2295	A device has been removed.	Critical / Failure / Error	Cause: A device has been removed and the system is no longer functioning in optimal condition.  Action: Replace the device.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2091	854

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2296	An EMM has been inserted.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	951
2297	An EMM has been removed.	Critical / Failure / Error	Cause: An EMM has been removed. Action: Replace the EMM. See the hardware documentation for information on replacing the EMM.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2091	954
2298	There is a bad sensor on an enclosure.	Warning / Non-critical	Cause: The enclosure has a bad sensor. The enclosure sensors monitor the fan speeds, temperature probes, etc. Action: See the hardware documentation for more information.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2090	853
2299	Bad PHY %1	Critical / Failure / Error	Cause: There is a problem with a physical connection or PHY. The %1 indicates a substitution variable. The text for this substitution variable is displayed with the alert in the Alert Log and can vary depending on the situation. Action: Contact Dell technical support.	Clear Alert Number: None. Related Alert Number: None. LRA Number: 2091	854

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2300	The enclosure is unstable.	Critical / Failure / Error	<p>Cause: The controller is not receiving a consistent response from the enclosure. There could be a firmware problem or an invalid cabling configuration. If the cables are too long, they will degrade the signal.</p> <p>Action: Power down all enclosures attached to the system and reboot the system. If the problem persists, upgrade the firmware to the latest supported version. You can download the most current version of the driver and firmware from <a href="http://support.dell.com">support.dell.com</a>. Make sure the cable configuration is valid. See the hardware documentation for valid cabling configurations.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2091</p>	854
2301	The enclosure has a hardware error.	Critical / Failure / Error	<p>Cause: The enclosure or an enclosure component is in a Failed or Degraded state.</p> <p>Action: Check the health of the enclosure and its components. Replace any hardware that is in a Failed state. See the hardware documentation for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2091</p>	854
2302	The enclosure is not responding.	Critical / Failure / Error	<p>Cause: The enclosure or an enclosure component is in a Failed or Degraded state.</p> <p>Action: Check the health of the enclosure and its components. Replace any hardware that is in a Failed state. See the hardware documentation for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2091</p>	854

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2303	The enclosure cannot support both SAS and SATA physical disks. Physical disks may be disabled.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	851
2304	An attempt to hot plug an EMM has been detected. This type of hot plug is not supported.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	Clear Alert Number: None. Related Alert Number: 2211 LRA Number: None.	751
2305	The physical disk is too small to be used for a rebuild.	Warning / Non-critical	Cause: The physical disk is too small to rebuild the data. Action: Remove the physical disk and insert a new physical disk that is the same size or larger than the disk that is being rebuilt. The new physical disk must also use the same technology (for example, SAS or SATA) as the disk being rebuilt. If the rebuild does not start automatically after you have inserted a suitable physical disk, then run the Rebuild task. See the Replacing a Failed Disk section in the <i>Dell OpenManage Server Administrator Storage Management User's Guide</i> for more information.	Clear Alert Number: None. Related Alert Number: 2326 LRA Number: 2070	903

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2306	Bad block table is 80% full.	Warning / Non-critical	<p>Cause: The bad block table is used for remapping bad disk blocks. This table fills, as bad disk blocks are remapped. When the table is full, bad disk blocks can no longer be remapped, and disk errors can no longer be corrected. At this point, data loss can occur. The bad block table is now 80% full.</p> <p>Action: Back up your data. Replace the disk generating this alert and restore from back up.</p>	<p><b>Clear Alert Number:</b> None.  <b>Related Alert Number:</b> 2307  <b>LRA Number:</b> 2070</p>	903
2307	Bad block table is full. Unable to log block %1	Critical / Failure / Error	<p>Cause: The bad block table is used for remapping bad disk blocks. This table fills, as bad disk blocks are remapped. When the table is full, bad disk blocks can no longer be remapped and disk errors can no longer be corrected. At this point, data loss can occur. The %1 indicates a substitution variable. The text for this substitution variable is displayed with the alert in the Alert Log and can vary depending on the situation.</p> <p>Action: Replace the disk generating this alert. If necessary, restore your data from backup.</p>	<p><b>Clear Alert Number:</b> None.  <b>Related Alert Number:</b> 2048  <b>LRA Number:</b> 2071</p>	904
2309	A physical disk is incompatible.	Warning / Non-critical	<p>Cause: You have attempted to replace a disk with another disk that is using an incompatible technology. For example, you may have replaced one side of a mirror with a SAS disk when the other side of the mirror is using SATA technology.</p> <p>Action: See the hardware documentation for information on replacing disks.</p>	<p><b>Clear Alert Number:</b> None.  <b>Related Alert Number:</b> None.  <b>LRA Number:</b> 2070</p>	903

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2310	A virtual disk is permanently degraded.	Critical / Failure / Error	<p>Cause: A redundant virtual disk has lost redundancy. This may occur when the virtual disk suffers the failure of multiple physical disks. In this case, both the source physical disk and the target disk with redundant data have failed. A rebuild is not possible because there is no redundancy.</p> <p>Action: Replace the failed disks and restore from backup.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2081</p>	1204
2311	The firmware on the EMMs is not the same version. EMM0 %1 EMM1 %2	Warning / Non-critical	<p>Cause: The firmware on the EMM modules is not the same version. It is required that both modules have the same version of the firmware. This alert may be caused if you attempt to insert an EMM module that has a different firmware version than an existing module. The %1 and %2 indicate a substitution variable. The text for these substitution variables is displayed with the alert in the Alert Log and can vary depending on the situation.</p> <p>Action: Upgrade to the same version of the firmware on both EMM modules.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2090</p>	853
2312	A power supply in the enclosure has an AC failure.	Warning / Non-critical	<p>Cause: The power supply has an AC failure.</p> <p>Action: Replace the power supply.</p>	<p><b>Clear Alert Number:</b> 2325.</p> <p><b>Related Alert Number:</b> 2122, 2324.</p> <p><b>LRA Number:</b> 2090</p>	1003
2313	A power supply in the enclosure has a DC failure.	Warning / Non-critical	<p>Cause: The power supply has a DC failure.</p> <p>Action: Replace the power supply.</p>	<p><b>Clear Alert Number:</b> 2323.</p> <p><b>Related Alert Number:</b> 2122, 2322.</p> <p><b>LRA Number:</b> 2090</p>	1003



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2314	The initialization sequence of SAS components failed during system startup. SAS management and monitoring is not possible.	Critical / Failure / Error	<p>Cause: Storage Management is unable to monitor or manage SAS devices.</p> <p>Action: Reboot the system. If problem persists, make sure you have supported versions of the drivers and firmware. Also, you may need to reinstall Storage Management or Server Administrator because of some missing installation components.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2051</p>	104
2315	Diagnostic message %1	Ok / Normal	<p>Cause: This alert is for informational purposes. The %1 indicates a substitution variable. The text for this substitution variable is generated by the utility that ran the diagnostics and is displayed with the alert in the Alert Log. This text can vary depending on the situation.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751
2316	Diagnostic message %1	Critical / Failure / Error	<p>Cause: A diagnostics test failed. The %1 indicates a substitution variable. The text for this substitution variable is generated by the utility that ran the diagnostics and is displayed with the alert in the Alert Log. This text can vary depending on the situation.</p> <p>Action: See the documentation for the utility that ran the diagnostics for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2061</p>	754
2318	Problems with the battery or the battery charger have been detected. The battery health is poor.	Warning / Non-critical	<p>Cause: The battery or the battery charger is not functioning properly.</p> <p>Action: Replace the battery pack.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2188</p> <p><b>LRA Number:</b> 2100</p>	1154

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2319	Single-bit ECC error. The DIMM is degrading.	Warning / Non-critical	<p>Cause: The DIMM is beginning to malfunction.</p> <p>Action: Replace the DIMM to avoid data loss or data corruption. The DIMM is a part of the controller battery pack. See your hardware documentation for information on replacing the DIMM.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2320</p> <p>LRA Number: 2060</p>	753
2320	Single-bit ECC error. The DIMM is critically degraded.	Critical / Failure / Error	<p>Cause: The DIMM is malfunctioning. Data loss or data corruption may be imminent.</p> <p>Action: Replace the DIMM immediately to avoid data loss or data corruption. The DIMM is a part of the controller battery pack. See your hardware documentation for information on replacing the DIMM.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2321</p> <p>LRA Number: 2061</p>	754
2321	Single-bit ECC error. The DIMM is critically degraded. There will be no further reporting.	Critical / Failure / Error	<p>Cause: The DIMM is malfunctioning. Data loss or data corruption is imminent. The DIMM must be replaced immediately. No further alerts will be generated.</p> <p>Action: Replace the DIMM immediately. The DIMM is a part of the controller battery pack. See your hardware documentation for information on replacing the DIMM.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2061</p>	754
2322	The DC power supply is switched off.	Critical / Failure / Error	<p>Cause: The power supply unit is switched off. Either a user switched off the power supply unit or it is defective.</p> <p>Action: Check if the power switch is turned off. If it is turned off, turn it on. If the problem persists, check if the power cord is attached and functional. If the problem is still not corrected or if the power switch is already turned on, replace the power supply unit.</p>	<p>Clear Alert Number: 2323.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2091</p>	1004

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2323	The power supply is switched on.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2323 is a clear alert for alerts 2313 and 2322. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1001
2324	The AC power supply cable has been removed.	Critical / Failure / Error	Cause: The power cable may be pulled out or removed. The power cable may also have overheated and become warped and nonfunctional. Action: Replace the power cable.	<b>Clear Alert Number:</b> 2325. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2091	1004
2325	The power supply cable has been inserted.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Status:</b> Alert 2325 is a clear alert for alerts 2324 and 2312. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1001
2326	A foreign configuration has been detected.	Ok / Normal	Cause: This alert is for informational purposes. The controller has physical disks that were moved from another controller. These physical disks contain virtual disks that were created on the other controller. See the Import Foreign Configuration and Clear Foreign Configuration section in the <i>Dell OpenManage Server Administrator Storage Management User's Guide</i> for more information. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	751

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2327	The NVRAM has corrupted data. The controller is reinitializing the NVRAM.	Warning / Non-critical	<p>Cause: The NVRAM has corrupted data. This may occur after a power surge, a battery failure, or for other reasons. The controller is reinitializing the NVRAM.</p> <p>Action: None. The controller is taking the required corrective action. If this alert is generated often (such as during each reboot), replace the controller.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: 2266</p> <p>LRA Number: 2060</p>	753
2328	The NVRAM has corrupt data.	Warning / Non-critical	<p>Cause: The NVRAM has corrupt data. The controller is unable to correct the situation.</p> <p>Action: Replace the controller.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2060</p>	753
2329	SAS port report: %1	Warning / Non-critical	<p>Cause: The text for this alert is generated by the controller and can vary depending on the situation. The %1 indicates a substitution variable. The text for this substitution variable is generated by the controller and is displayed with the alert in the Alert Log. This text can vary depending on the situation.</p> <p>Action: Make sure the cables are attached securely. If the problem persists, replace the cable with a valid cable according to SAS specifications. If the problem still persists, you may need to replace some devices such as the controller or EMM. See the hardware documentation for more information.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2060</p>	753

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2330	SAS port report: %1	Ok / Normal	<p>Cause: This alert is for informational purposes. The %1 indicates a substitution variable. The text for this substitution variable is generated by the controller and is displayed with the alert in the Alert Log. This text can vary depending on the situation.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751
2331	A bad disk block has been reassigned.	Ok / Normal	<p>Cause: The disk has a bad block. Data has been readdressed to another disk block and no data loss has occurred.</p> <p>Action: Monitor the disk for other alerts or indications of poor health. For example, you may receive alert 2306. Replace the disk if you suspect there is a problem.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	901
2332	A controller hot plug has been detected.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751
2334	Controller event log: %1	Ok / Normal	<p>Cause: This alert is for informational purposes. The %1 indicates a substitution variable. The text for this substitution variable is generated by the controller and is displayed with the alert in the Alert Log. This text is from events in the controller event log that were generated while Storage Management was not running. This text can vary depending on the situation.</p> <p>Action: None</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2335	Controller event log: %1	Warning / Non-critical	<p>Cause: The %1 indicates a substitution variable. The text for this substitution variable is generated by the controller and is displayed with the alert in the Alert Log. This text is from events in the controller event log that were generated while Storage Management was not running. This text can vary depending on the situation.</p> <p>Action: If there is a problem, review the controller event log and the Server Administrator Alert Log for significant events or alerts that may assist in diagnosing the problem. Check the health of the storage components. See the hardware documentation for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2060</p>	753
2336	Controller event log: %1	Critical / Failure / Error	<p>Cause: The %1 indicates a substitution variable. The text for this substitution variable is generated by the controller and is displayed with the alert in the Alert Log. This text is from events in the controller event log that were generated while Storage Management was not running. This text can vary depending on the situation.</p> <p>Action: See the hardware documentation for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2061</p>	754

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2337	The controller is unable to recover cached data from the battery backup unit (BBU).	Critical / Failure / Error	<p>Cause: The controller was unable to recover data from the cache.</p> <p>Action: Check if the battery is charged and in good health. When the battery charge is unacceptably low, it cannot maintain cached data. Check if the battery has reached its recharge limit. The battery may need to be recharged or replaced.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2101</p>	1154
2338	The controller has recovered cached data from the BBU.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	1151
2339	The factory default settings have been restored.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: None.</p>	751
2340	The BGI completed with uncorrectable errors.	Critical / Failure / Error	<p>Cause: The BGI task encountered errors that cannot be corrected. The virtual disk contains physical disks that have unusable disk space or disk errors that cannot be corrected.</p> <p>Action: Replace the physical disk that contains the disk errors. Review other alert messages to identify the physical disk that has errors. If the virtual disk is redundant, you can replace the physical disk and continue using the virtual disk. If the virtual disk is non-redundant, you may need to recreate the virtual disk after replacing the physical disk. After replacing the physical disk, run Check Consistency to check the data.</p>	<p>Clear Alert Number: None.</p> <p>Related Alert Number: None.</p> <p>LRA Number: 2081</p>	1204

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2341	The Check Consistency made corrections and completed.	Ok / Normal	Cause: This alert is for informational purposes. Action: None	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> None.	1201
2342	The Check Consistency found inconsistent parity data. Data redundancy may be lost.	Warning / Non-critical	Cause: The data on a source disk and the redundant data on a target disk is inconsistent. Action: Restart the Check Consistency task. If you receive this alert again, check the health of the physical disks included in the virtual disk. Review the alert messages for significant alerts related to the physical disks. If you suspect that a physical disk has a problem, replace it and restore from backup.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> 2341, 2343 <b>LRA Number:</b> 2080	1203
2343	The Check Consistency logging of inconsistent parity data is disabled.	Warning / Non-critical	Cause: The Check Consistency can no longer report errors in the parity data. Action: See the hardware documentation for more information.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> None. <b>LRA Number:</b> 2080	1203
2346	Error occurred: %1	Warning / Non-critical	Cause: A physical device may have an error. The %1 indicates a substitution variable. The text for this substitution variable is generated by the firmware and is displayed with the alert in the Alert Log. This text can vary depending on the situation. Action: Verify the health of attached devices. Review the Alert Log for significant events. Run the PHY integrity diagnostic tests. You may need to replace faulty hardware. Make sure the cables are attached securely. See the hardware documentation for more information.	<b>Clear Alert Number:</b> None. <b>Related Alert Number:</b> 2048, 2050, 2056, 2057, 2076, 2079, 2081, 2083, 2095, 2129, 2201, 2203, 2270, 2282, 2369 <b>LRA Number:</b> 2070	903



**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2347	The rebuild failed due to errors on the source physical disk.	Critical / Failure / Error	Cause: You are attempting to rebuild data that resides on a defective disk. Action: Replace the source disk and restore from backup.	Clear Alert Number: None. Related Alert Number: 2195, 2346 LRA Number: 2071	904
2348	The rebuild failed due to errors on the target physical disk.	Critical / Failure / Error	Cause: You are attempting to rebuild data on a disk that is defective. Action: Replace the target disk. If a rebuild does not automatically start after replacing the disk, initiate the Rebuild task. You may need to assign the new disk as a hot spare to initiate the rebuild.	Clear Alert Number: None. Related Alert Number: 2195, 2346 LRA Number: 2071	904
2349	A bad disk block could not be reassigned during a write operation.	Critical / Failure / Error	Cause: A write operation could not complete because the disk contains bad disk blocks that could not be reassigned. Data loss may have occurred and data redundancy may also be lost. Action: Replace the disk.	Clear Alert Number: None. Related Alert Number: 2346 LRA Number: 2071	904
2350	There was an unrecoverable disk media error during the rebuild.	Critical / Failure / Error	Cause: The rebuild encountered an unrecoverable disk media error. Action: Replace the disk.	Clear Alert Number: None. Related Alert Number: 2095, 2273 LRA Number: 2071	904
2351	A physical disk is marked as missing.	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: 2352. Related Alert Number: None. LRA Number: None.	901
2352	A physical disk that was marked as missing has been replaced.	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Status: Alert 2352 is a clear alert for alert 2351. Related Alert Number: None. LRA Number: None.	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2353	The enclosure temperature has returned to normal.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p><b>Clear Alert Status:</b> Alert 2353 is a clear alert for alerts 2100 and 2101.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	851
2356	SAS SMP communications error %1.	Critical / Failure / Error	<p>Cause: The %1 indicates a substitution variable. The text for this substitution variable is generated by the firmware and is displayed with the alert in the Alert Log. This text can vary depending on the situation. The reference to SMP in this text refers to SAS Management Protocol.</p> <p>Action: There may be a SAS topology error. See the hardware documentation for information on correct SAS topology configurations. There may be problems with the cables such as a loose connection or an invalid cabling configuration. See the hardware documentation for information on correct cabling configurations. Check if the firmware is a supported version.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2061</p>	754

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2357	SAS expander error: %1	Critical / Failure / Error	<p>Cause: The %1 indicates a substitution variable. The text for this substitution variable is generated by the firmware and is displayed with the alert in the Alert Log. This text can vary depending on the situation.</p> <p>Action: There may be a problem with the enclosure. Check the health of the enclosure and its components, by selecting the enclosure object in the tree view. The Health subtab displays a red "X" or yellow exclamation point for enclosure components that are failed or degraded. See the enclosure documentation for more information.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2061</p>	754
2358	The battery charge cycle is complete.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	1151
2359	The physical disk is not certified.	Warning / Non-critical	<p>Cause: The physical disk does not comply with the standards set by Dell and is not supported.</p> <p>Action: Replace the physical disk with a physical disk that is supported.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> 2070</p>	903
2360	A user has discarded data from the controller cache.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2361	Physical disk(s) that are part of a virtual disk have been removed while the system was shut down. This removal was discovered during system start-up.	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2362	Physical disk(s) have been removed from a virtual disk. The virtual disk will be in Failed state during the next system reboot.	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2364	All virtual disks are missing from the controller. This situation was discovered during system start-up.	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	751
2366	Dedicated spare imported as global due to missing arrays	Ok / Normal	Cause: This alert is for informational purposes. Action: None.	Clear Alert Number: None. Related Alert Number: None. LRA Number: None.	901

**Table 4-4. Storage Management Messages (continued)**

<b>Event ID</b>	<b>Description</b>	<b>Severity</b>	<b>Cause and Action</b>	<b>Related Alert Information</b>	<b>SNMP Trap Numbers</b>
2367	Rebuild not possible as SAS/SATA is not supported in the same virtual disk.	Warning / Non-critical	<p>Cause: The physical disk is using an incompatible technology.</p> <p>Action: All physical disks in the virtual disk must use the same technology. You cannot use both SAS and SATA physical disks in the same virtual disk. Remove the physical disk and insert a new physical disk that uses the correct technology. If the rebuild does not start automatically after you have inserted a suitable physical disk, then run the Rebuild task.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2326</p> <p><b>LRA Number:</b> 2070</p>	903
2368	The SCSI Enclosure Processor (SEP) has been rebooted as part of the firmware download operation and will be unavailable until the operation completes.	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> 2049, 2052, 2162, 2292</p> <p><b>LRA Number:</b> None.</p>	851
2369	Virtual Disk Redundancy has been degraded.	Ok / Normal	<p>Cause: A physical disk in a RAID 6 virtual disk has either failed or been removed.</p> <p>Action: Replace the missing or failed physical disk.</p>	<p><b>Clear Alert Number:</b> 2121.</p> <p><b>Related Alert Number:</b> 2048, 2049, 2050, 2076, 2346</p> <p><b>LRA Number:</b> None.</p>	1201
2371	Attempted import of Unsupported Virtual Disk type RAID%1	Ok / Normal	<p>Cause: This alert is for informational purposes.</p> <p>Action: None.</p>	<p><b>Clear Alert Number:</b> None.</p> <p><b>Related Alert Number:</b> None.</p> <p><b>LRA Number:</b> None.</p>	751



# Index

## Symbols

	1052, 16	1254, 26
%1, Storage Management has lost communication with this RAID controller and attached storage. An immediate reboot is strongly recommended to avoid further problems. If the reboot does not restore communication, there may be a hardware failure., 109	1053, 16 1054, 17 1055, 17 1100, 18 1101, 18 1102, 18 1103, 18 1104, 19 1105, 19 1150, 19 1151, 20 1152, 20 1153, 20 1154, 21 1155, 21 1200, 22 1201, 22 1202, 23 1203, 23 1204, 24 1205, 24 1250, 25 1251, 25 1252, 25 1253, 26	1255, 26 1300, 27 1301, 27 1302, 27 1303, 27 1304, 28 1305, 28 1306, 28 1350, 29 1351, 29 1352, 30 1353, 30 1354, 31 1355, 31 1403, 32 1404, 32 1450, 33 1451, 33 1452, 33 1453, 33 1454, 34 1455, 34 1500, 34 1501, 34 1502, 35

## Numerics

0001, 13		
1000, 13		
1001, 13		
1002, 13		
1003, 13		
1004, 13		
1005, 14		
1006, 14		
1007, 14		
1008, 14		
1009, 14		
1011, 14		
1012, 14		
1050, 15		
1051, 15		

1503, 35	2053, 66	2095, 74
1504, 35	2054, 66	2098, 74
1505, 35	2055, 66	2099, 75
1550, 36	2056, 67	2100, 75
1551, 36	2057, 68	2101, 75
1552, 36	2058, 68	2102, 76
1553, 36	2059, 68	2103, 76
1554, 36	2061, 69	2104, 76
1555, 36	2062, 69	2105, 76
1600, 37	2063, 69	2106, 77
1601, 37	2064, 69	2107, 77
1602, 37	2065, 69	2108, 78
1603, 38	2067, 70	2109, 79
1604, 38	2070, 70	2110, 80
1605, 38	2074, 70	2111, 80
1650, 39	2076, 71	2112, 80
1651, 39	2077, 71	2114, 81
1652, 39	2079, 71	2115, 81
1653, 39	2080, 71	2116, 81
1700, 40	2081, 72	2117, 81
1701, 40	2082, 72	2118, 82
1702, 40	2083, 72	2120, 82
1703, 40	2085, 72	2121, 82
1704, 41	2086, 73	2122, 83
1705, 41	2088, 73	2123, 84
2048, 64	2089, 73	2124, 85
2049, 65	2090, 73	2126, 85
2050, 65	2091, 73	2127, 85
2051, 66	2092, 73	2128, 86
2052, 66	2094, 74	2129, 86



2130, 86	2164, 93	2202, 101
2131, 86	2165, 93	2203, 101
2132, 87	2166, 94	2204, 102
2135, 87	2167, 94	2205, 102
2136, 87	2168, 94	2206, 102
2137, 88	2169, 95	2207, 103
2138, 88	2170, 95	2211, 103
2139, 89	2171, 95	2212, 103
2140, 89	2173, 96	2213, 103
2141, 89	2174, 96	2214, 103
2142, 89	2175, 96	2215, 104
2143, 89	2176, 97	2232, 104
2144, 89	2177, 97	2233, 104
2145, 90	2178, 97	2234, 104
2146, 90	2179, 97	2235, 104
2147, 90	2180, 98	2237, 104
2148, 90	2181, 98	2238, 104
2149, 90	2182, 98	2239, 104
2150, 90	2186, 98	2240, 105
2151, 91	2187, 98	2241, 105
2152, 91	2188, 99	2242, 105
2153, 91	2189, 99	2243, 105
2154, 91	2191, 99	2244, 105
2155, 91	2192, 100	2245, 105
2156, 91	2193, 100	2246, 106
2157, 92	2194, 100	2247, 106
2158, 92	2195, 100	2248, 106
2159, 92	2196, 100	2249, 106
2162, 92	2199, 101	2251, 106
2163, 93	2201, 101	2252, 106

2254, 107	2288, 114	2320, 122
2255, 107	2289, 114	2321, 122
2259, 107	2290, 115	2322, 122
2260, 107	2291, 115	2323, 123
2261, 107	2292, 115	2324, 123
2262, 107	2293, 115	2325, 123
2263, 107	2294, 115	2326, 123
2264, 108	2295, 115	2327, 124
2265, 108	2296, 116	2328, 124
2266, 108	2297, 116	2329, 124
2267, 109	2298, 116	2330, 125
2268, 109	2299, 116	2331, 125
2269, 109	2300, 117	2332, 125
2270, 110	2301, 117	2334, 125
2271, 110	2302, 117	2335, 126
2272, 110	2303, 117-118	2336, 126
2273, 111	2304, 118	2337, 127
2274, 111	2305, 118	2338, 127
2276, 111	2306, 119	2339, 127
2277, 111	2307, 119	2340, 127
2278, 112	2309, 119	2341, 128
2279, 112	2310, 120	2342, 128
2280, 112	2311, 120	2343, 128
2281, 112	2312, 120	2346, 128
2282, 113	2313, 120	2347, 129
2283, 113	2314, 121	2348, 129
2284, 113	2315, 121	2349, 129
2285, 113	2316, 121	2350, 129
2286, 114	2318, 121	2351, 129
2287, 114	2319, 122	2352, 129

2353, 130  
2356, 130  
2357, 131  
2358, 131  
2359, 131  
2360, 131  
2361, 132  
2362, 132  
2364, 132  
2366, 132  
2367, 133  
2368, 133  
2369, 133  
2371, 133

## **A**

- A bad disk block could not be reassigned during a write operation., 129
- A bad disk block has been reassigned., 125
- A block on the physical disk has been punctured by the controller., 111
- A consistency check on a virtual disk has been paused (suspended), 81
- A consistency check on a virtual disk has been resumed, 81
- A controller hot plug has been detected., 125
- A controller rescan has been initiated., 104
- A dedicated hot spare failed., 101
- A dedicated hot spare has been automatically unassigned., 102
- A dedicated hot spare has been removed., 102
- A device has been inserted., 115
- A device has been removed., 115
- A device is in an unknown state., 108
- A device is missing., 108
- A disk media error has been corrected., 112
- A disk media error was corrected during recovery., 113
- A foreign configuration has been cleared., 104
- A foreign configuration has been detected., 123
- A foreign configuration has been imported., 105
- A global hot spare failed., 101
- A global hot spare has been removed., 101
- A global rescan has initiated., 107
- A Learn cycle start is pending while the battery charges., 114
- A mirrored virtual disk has been unmirrored, 81
- A physical disk is incompatible., 119
- A physical disk is marked as missing., 129
- A physical disk that was marked as missing has been replaced., 129
- A power supply in the enclosure has a DC failure., 120
- A power supply in the enclosure has an AC failure., 120
- A previously scheduled system BIOS update has been canceled, 13
- A redundant path has been restored., 113
- A redundant path is broken., 113
- A system BIOS update has been scheduled for the next reboot, 13
- A user has discarded data from the controller cache., 131
- A virtual disk and its mirror have been split, 81
- A virtual disk blink has been initiated., 105
- A virtual disk blink has ceased., 105
- A virtual disk is permanently degraded., 120

- AC power cord is not being monitored, 34
  - AC power cord messages, 34
  - AC power cord sensor, 7
  - AC power cord sensor has failed, 34, 50
  - AC power has been lost, 35
  - AC power has been restored, 35
  - All virtual disks are missing from the controller. This situation was discovered during system start-up., 132
  - An attempt to hot plug an EMM has been detected. This type of hot plug is not supported., 118
  - An EMM has been discovered., 115
  - An EMM has been inserted., 116
  - An EMM has been removed., 116
  - An enclosure blink has ceased, 107
  - An enclosure blink operation has initiated., 107
  - An invalid SAS configuration has been detected., 98
  - Array Manager is installed on the system, 87
  - Asset name changed, 91
  - Asset tag changed, 91
  - Automatic System Recovery (ASR) action was performed, 14
- B**
- Background initialization cancelled, 86
  - Background initialization completed, 86
  - Background initialization failed, 86
  - Background initialization started, 85
  - Bad block extended medium error, 90
  - Bad block extended sense error, 90
  - Bad block medium error, 90
  - Bad block replacement error, 90
  - Bad block sense error, 90
  - Bad block table is 80% full., 119
  - Bad block table is full. Unable to log block %1, 119
  - Bad PHY %1, 116
  - Battery charge in progress, 103
  - Battery charge process interrupted, 104
  - battery messages, 55
  - BIOS Generated System Events, 52
- C**
- bios generated system messages, 52
  - BMC Watchdog Events, 48
  - BMC watchdog messages, 48
  - cable interconnect messages, 55
  - Change write policy, 82
  - Chassis intrusion detected, 26, 47
  - Chassis intrusion in progress, 26, 47
  - chassis intrusion messages, 25
  - Chassis intrusion returned to normal, 25
  - chassis intrusion sensor, 6
  - Chassis intrusion sensor detected a non-recoverable value, 26, 47
  - Chassis intrusion sensor has failed, 25
  - Chassis intrusion sensor value unknown, 25, 47
  - Communication regained, 92
  - Communication timeout, 88
  - Communication with the enclosure has been lost., 115
  - Controller alarm disabled, 89
  - Controller alarm enabled, 89
  - Controller alarm has been tested, 91

- Controller battery is reconditioning, 76
- Controller battery low, 90
- Controller battery recondition is completed, 76
- Controller configuration has been reset, 92
- Controller event log %1, 125-126
- Controller log file entry %1, 108
- Controller rebuild rate has changed, 89
- cooling device messages, 18
- current sensor, 6
- Current sensor detected a failure value, 24
- Current sensor detected a non-recoverable value, 24
- Current sensor detected a warning value, 23
- Current sensor has failed, 22, 46
- current sensor messages, 22
- Current sensor returned to a normal value, 23, 46
- Current sensor value unknown, 22

## D

- Dead disk segments restored, 89

- Dedicated hot spare assigned. Physical disk %1, 100
- Dedicated hot spare unassigned. Physical disk %1, 100
- Dedicated spare imported as global due to missing arrays, 132
- Device failed, 64
- Device returned to normal, 82
- Diagnostic message %1, 121
- Drive Events, 50
- Driver version mismatch, 87
- drives messages, 50

## E

- Enclosure alarm disabled, 89
- Enclosure alarm enabled, 88
- Enclosure firmware mismatch, 82
- Enclosure was shut down, 80
- entity presence messages, 56
- Error occurred %1, 128
- event description reference, 10

## F

- Failure prediction threshold exceeded due to test, 80
- Fan enclosure inserted into system, 33

- fan enclosure messages, 33
- Fan enclosure removed from system, 33
- Fan enclosure removed from system for an extended amount of time, 34
- fan enclosure sensor, 7
- Fan enclosure sensor detected a non-recoverable value, 34
- Fan enclosure sensor has failed, 33
- Fan enclosure sensor value unknown, 33
- fan sensor, 6
- Fan sensor detected a failure value, 19
- Fan sensor detected a non-recoverable value, 19
- Fan sensor detected a warning value, 18
- Fan Sensor Events, 45
- Fan sensor has failed, 18, 44
- fan sensor messages, 45
- Fan sensor returned to a normal value, 18
- Fan sensor value unknown, 18, 44
- Firmware version mismatch, 86

## G

- Global hot spare assigned, 74

Global hot spare  
unassigned, 75

## H

hardware log sensor, 7

Hardware Log Sensor  
Events, 49

hardware log sensor  
messages, 49

Hot spare SMART polling  
failed., 113

## I

Intrusion Events, 51

intrusion messages, 51

## L

Log backup created, 13

Log monitoring has been  
disabled, 36, 51

Log size is near or at  
capacity, 36

Log size returned to a normal  
level, 36

Log status is unknown, 36, 51

Log was cleared, 13

## M

Maximum temperature probe  
warning threshold value  
changed, 91

Memory device ECC  
Correctable error count  
crossed a warning  
threshold, 32

Memory device ECC  
Correctable error count  
sensor crossed a failure  
threshold, 32

memory device messages, 32

Memory device monitoring  
has been disabled, 32

Memory ECC Events, 48

memory ecc messages, 48

Memory Events, 49

memory modules  
messages, 49

memory prefailure sensor, 6

messages

AC power cord, 34, 50

battery, 55

battery sensor, 40

bios generated system, 52

BMC watchdog, 48

cable interconnect, 55

chassis intrusion, 25

cooling device, 18

current sensor, 22

drives, 50

entity presence, 56

fan enclosure, 33

fan sensor, 45

hardware log sensor, 49

intrusion, 51

memory device, 32

memory ecc, 48

memory modules, 49

miscellaneous, 13

pluggable device, 39, 52

power supply, 29, 47

processor sensor, 37

processor status, 46

r2 generated system, 55

redundancy unit, 26

storage management, 64

temperature sensor, 15, 43

voltage sensor, 19, 44

Minimum temperature probe  
warning threshold value  
changed, 91

Multi-bit ECC error., 114

Multiple enclosures are  
attached to the controller.  
This is an unsupported  
configuration., 99

## P

Patrol Read found an  
uncorrectable media  
error., 110

Physical disk dead segments  
recovered, 89

Physical disk degraded, 66

Physical disk initialization  
started, 69

Physical disk initialize  
completed, 73

Physical disk initialize failed, 71

Physical disk inserted, 66

Physical disk offline, 65

Physical disk online, 92

Physical disk rebuild cancelled, 70

Physical disk rebuild completed, 73

Physical disk rebuild failed, 72

Physical disk rebuild started, 69

Physical disk removed, 65

Physical disk(s) have been removed from a virtual disk. The virtual disk will be in Failed state during the next system reboot., 132

Physical disk(s) that are part of a virtual disk have been removed while the system was shut down. This removal was discovered during system start-up., 132

pluggable device sensor, 7

Power supply detected a failure, 31

Power supply detected a warning, 30, 48

Power Supply Events, 47

power supply messages, 29, 47

Power supply returned to normal, 30, 48

power supply sensor, 6

Power supply sensor detected a non-recoverable value, 31

Power supply sensor has failed, 29

Power supply sensor value unknown, 29

Predictive Failure reported, 74

Problems with the battery or the battery charger have been detected. The battery health is poor., 121

processor sensor, 7

Processor sensor detected a failure value, 38, 52

Processor sensor detected a non-recoverable value, 38

Processor sensor detected a warning value, 38, 52

Processor sensor has failed, 37, 52

Processor sensor returned to a normal state, 37, 52

Processor sensor value unknown, 37, 52

Processor Status Events, 46

processor status messages, 46

## **R**

r2 generated system messages, 55

Rebuild completed with errors, 93

Rebuild not possible as SAS/SATA is not supported in the same virtual disk., 133

Recharge count maximum exceeded, 103

Redundancy degraded, 28, 83

Redundancy is offline, 27

Redundancy lost, 28, 84

Redundancy normal, 85

Redundancy not applicable, 27, 48

Redundancy regained, 28

Redundancy sensor has failed, 27

Redundancy sensor value unknown, 27, 48

redundancy unit messages, 26

redundancy unit sensor, 6

## **S**

SAS expander error %1, 131

SAS port report %1, 124-125

SAS SMP communications error %1., 130

- SCSI sense data, 74
- SCSI sense sector reassign, 85
- See the Readme file for a list of validated controller driver versions, 93
- sensor
  - AC power cord, 7
  - chassis intrusion, 6
  - current, 6
  - fan, 6
  - fan enclosure, 7
  - hardware log, 7
  - memory prefailure, 6
  - power supply, 6
  - processor, 7, 37
  - redundancy unit, 6
  - temperature, 6
  - voltage, 6
- Server Administrator starting, 13
- Server Administrator startup complete, 13
- Service tag changed, 91
- Single-bit ECC error limit exceeded., 98
- Single-bit ECC error., 115
- Single-bit ECC error. The DIMM is critically degraded., 122
- Single-bit ECC error. The DIMM is critically degraded. There will be no further reporting., 122
- Single-bit ECC error. The DIMM is degrading., 122

- Smart configuration change, 77
- Smart FPT exceeded, 77
- SMART thermal shutdown is disabled., 107
- SMART thermal shutdown is enabled., 107
- Smart warning, 78
- Smart warning degraded, 80
- Smart warning temperature, 79
- SMBIOS data is absent, 14
- System Event Log Messages, 43
- system management data manager started, 14
- system management data manager stopped, 14

**T**

- Temperature dropped below the minimum failure threshold, 76
- Temperature dropped below the minimum warning threshold, 75
- Temperature exceeded the maximum failure threshold, 76
- Temperature exceeded the maximum warning threshold, 75
- temperature sensor, 6

- Temperature sensor detected a failure value, 17
- Temperature sensor detected a non-recoverable value, 17
- Temperature sensor detected a warning value, 16
- Temperature Sensor Events, 43
- Temperature sensor has failed, 15, 43
- temperature sensor messages, 15, 43
- Temperature sensor returned to a normal value, 16, 43
- Temperature sensor value unknown, 15, 43
- The AC power supply cable has been removed., 123
- The background initialization (BGI) rate has changed., 104
- The battery charge cycle is complete., 131
- The BGI completed with uncorrectable errors., 127
- The Check Consistency found inconsistent parity data. Data redundancy may be lost., 128
- The Check Consistency logging of inconsistent parity data is disabled., 128



- The Check Consistency made corrections and completed., 128
- The Check Consistency rate has changed., 104
- The Clear operation has cancelled., 107
- The controller alarm is silenced., 104
- The controller battery charge level is below a normal threshold., 112
- The controller battery charge level is normal., 95
- The controller battery charge level is operating within normal limits., 112
- The controller battery has been removed., 96
- The controller battery has been replaced., 96
- The controller battery is charging., 106
- The controller battery is degraded., 106
- The controller battery is executing a Learn cycle., 106
- The controller battery Learn cycle has been postponed., 97
- The controller battery Learn cycle has completed., 97
- The controller battery Learn cycle has started., 97
- The controller battery Learn cycle has timed out., 97
- The controller battery Learn cycle will start in % days., 98
- The controller battery needs to be replaced., 95
- The controller battery temperature is above normal., 95
- The controller battery temperature is above normal., 103
- The controller battery temperature is normal., 95
- The controller cache has been discarded., 98
- The controller debug log file has been exported., 104
- The controller has recovered cached data from the BBU., 127
- The controller is unable to recover cached data from the battery backup unit (BBU)., 127
- The controller reconstruct rate has changed., 109
- The controller write policy has been changed to Write Back., 99
- The controller write policy has been changed to Write Through., 99
- The current kernel version and the non-RAID SCSI driver version are older than the minimum required levels. See the Readme file for a list of validated kernel and driver versions., 94
- The DC power supply is switched off., 122
- The dedicated hot spare is too small., 111
- The EMM has failed., 115
- The enclosure cannot support both SAS and SATA physical disks. Physical disks may be disabled., 118
- The enclosure has a hardware error., 117
- The enclosure is not responding., 117
- The enclosure is unstable., 117
- The enclosure temperature has returned to normal., 130
- The factory default settings have been restored., 127
- The firmware on the EMMs is not the same version. EMM0 %1 EMM1 %2, 120
- The global hot spare is too small., 111
- The initialization sequence of SAS components failed during system startup.

- SAS management and monitoring is not possible., 121
- The non-RAID SCSI driver version is older than the minimum required level. See the Readme file for the validated driver version., 94
- The NVRAM has corrupt data., 124
- The NVRAM has corrupted data. The controller is reinitializing the NVRAM., 124
- The only hot spare available is a SAS disk. SAS disks cannot replace SATA disks., 103
- The only hot spare available is a SATA disk. SATA disks cannot replace SAS disks., 102
- The Patrol Read corrected a media error., 110
- The patrol read has resumed., 114
- The Patrol Read has started., 105
- The Patrol Read has stopped., 105
- The Patrol Read is paused., 114
- The Patrol Read mode has changed., 105
- The Patrol Read rate has changed., 104
- The physical disk blink has ceased., 106
- The physical disk blink has initiated., 106
- The physical disk Clear operation failed., 110
- The physical disk Clear operation has completed., 109
- The physical disk Clear operation has started., 106
- The physical disk has been started., 107
- The physical disk is not certified., 131
- The physical disk is not supported., 103
- The physical disk is too small to be used for a rebuild., 118
- The physical disk rebuild has resumed., 111
- The power supply cable has been inserted., 123
- The power supply is switched on., 123
- The RAID controller firmware and driver validation was not performed. The configuration file cannot be opened., 93
- The RAID controller firmware and driver validation was not performed. The configuration file is out of date or corrupted., 94
- The rebuild failed due to errors on the source physical disk., 129
- The rebuild failed due to errors on the target physical disk., 129
- The SCSI Enclosure Processor (SEP) has been rebooted as part of the firmware download operation and will be unavailable until the operation completes., 133
- The virtual disk cache policy has changed., 101
- The virtual disk Check Consistency has made corrections and completed., 100
- The virtual disk Read policy has changed., 100
- The virtual disk reconfiguration has resumed., 100
- There is a bad sensor on an enclosure., 116
- There was an unrecoverable disk media error during the rebuild., 129
- Thermal shutdown protection has been initiated, 13

## U

understanding

event description, 10

Unsupported configuration detected. The SCSI rate of the enclosure management modules (EMMs) is not the same. EMM0 %1 EMM1 %2, 96

User initiated host system reset, 14

## V

viewing

event information, 9

event messages, 7

events in Red Hat Linux, 8

events in SUSE Linux

Enterprise Server, 8

events in Windows 2000, 8

Virtual disk check consistency cancelled, 70

Virtual disk check consistency completed, 72

Virtual disk check consistency failed, 71

Virtual disk check consistency started, 68

Virtual disk configuration changed, 66

Virtual disk created, 66

Virtual disk degraded, 68

Virtual disk deleted, 66

Virtual disk failed, 67

Virtual disk format changed, 71

Virtual disk format completed, 73

Virtual disk format started, 68

Virtual disk has inconsistent data., 112

Virtual disk initialization, 87

Virtual disk initialization cancelled, 70

Virtual disk initialization completed, 73

Virtual disk initialization failed, 71

Virtual disk initialization started, 69

Virtual disk rebuild completed, 73

Virtual disk rebuild failed, 72

Virtual disk rebuild started, 69

Virtual disk reconfiguration completed, 73

Virtual disk reconfiguration failed, 72

Virtual disk reconfiguration started, 69

Virtual Disk Redundancy has been degraded., 133

Virtual disk renamed, 92

voltage sensor, 6

Voltage sensor detected a failure value, 21, 45

Voltage sensor detected a non-recoverable value, 21

Voltage sensor detected a warning value, 20

Voltage Sensor Events, 44

Voltage sensor has failed, 19, 45

voltage sensor messages, 19, 44

Voltage sensor returned to a normal value, 20

Voltage sensor value unknown, 20, 45

