E-Series

E5700 and E2800 System Monitoring Guide

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doccomments@netapp.com

NetApp®

Contents

Deciding whether to use this guide

This guide is intended for hardware installers, system administrators, and operators who are monitoring E-Series E2800 or E5700 storage arrays. The guide contains a list and description of the LED indicators for all E2800, E5700, and EF570 storage array components, as well as a critical events reference that can be helpful in diagnosing issues and resolving problems.

This guide does not provide conceptual background or information about how to install and configure SANtricity Storage Manager software. Refer to the appropriate SANtricity documentation to learn how to install and configure the storage management software.

Related information

NetApp E-Series Systems Documentation Center
Installation and Setup Instructions for the E5724, EF570, E2812, or E2824 Controller Shelves
Installation and Setup Instructions for the E5760 and E2860 Controller Shelves

Understanding the controller LEDs and displays

You can monitor the state of the hardware by using the LEDs and displays on the hardware and the Recovery Guru in SANtricity System Manager. You can track events related to the operation of your storage array through the event log.

You can find LEDs on the following components:

- E5700 controllers
- E2800 controllers
- Drives
- Operator display panels on the controller shelf and drive shelves
- Power-fan canisters (12-drive and 24-drive shelves)
- Power canisters and fan canisters (60-drive shelves)
- I/O modules (IOMs)

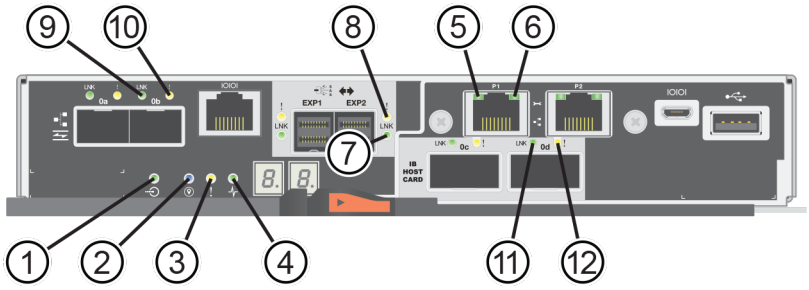
In addition to LEDs, each controller has a seven-segment display, which indicates the operational status of the controller.

LEDs on the E5700 controller

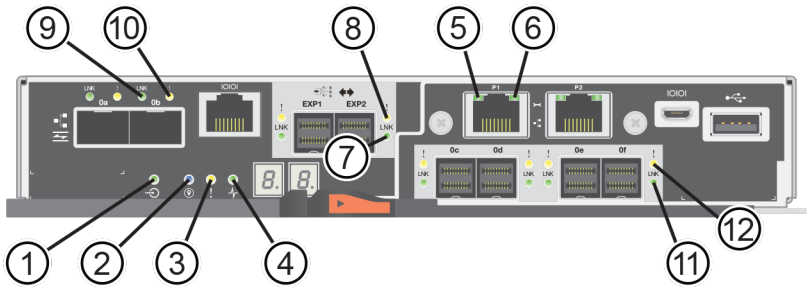
The back of the E5700 controller includes LEDs that indicate when the controller is active, when the controller needs attention, when there is Ethernet activity, and so on.

The following examples show the LEDs on each of the available E5700 controllers with host interface cards.

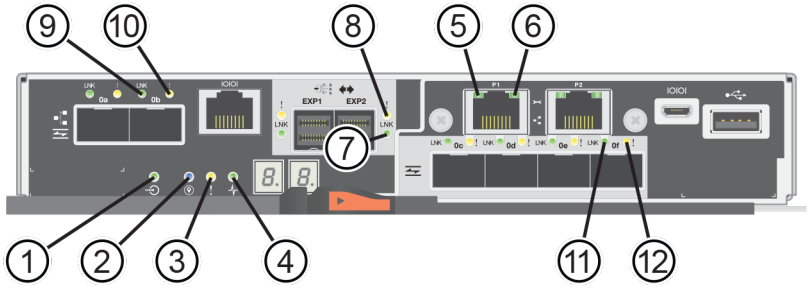
E5700 controller with dual-port EDR (IB) host interface card



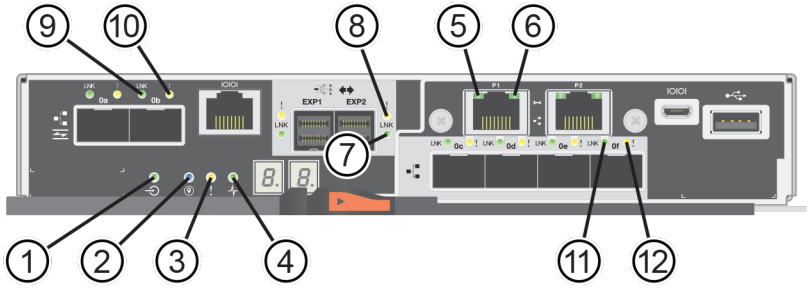
E5700 controller with quad-port SAS host interface card



E5700 controller with quad-port SFP (iSCSI) host interface card



E5700 controller with quad-port SFP (FC) host interface card



1	Cache Active
2	Locate
3	Attention
4	Activity
5	Ethernet Status
6	Ethernet Activity
7	SAS Expansion Port Link Status
8	SAS Expansion Port Attention
9	Host Port Link Status
10	Host Port Attention
11	Host Port Link Status
12	Host Port Attention

The following table describes the controller LEDs and their operational statuses:

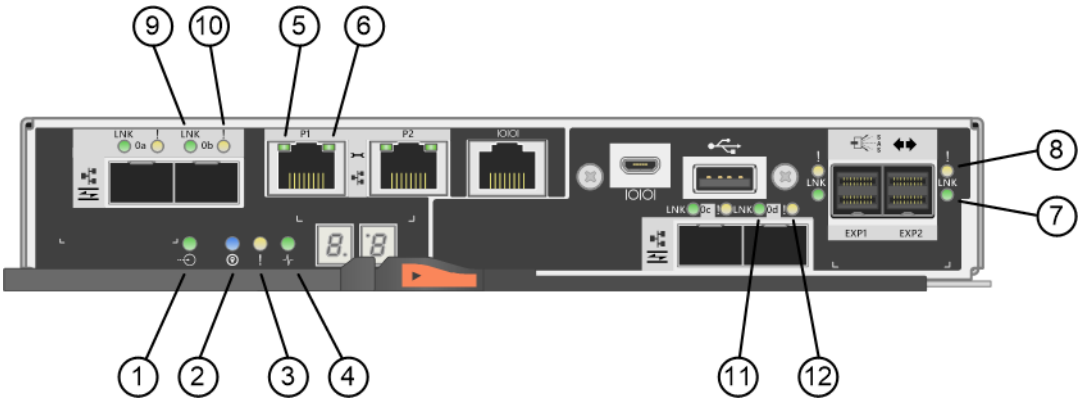
LED	Status indicator	Description
Cache Active	Green	The cache contains data not yet written to disk.
	Off	Either the cache is inactive or all data from the cache has been preserved in non-volatile memory.

LED	Status indicator	Description
Locate	Blue	There is an active request to physically locate the controller shelf.
	Off	There is no active request to locate the controller shelf.
Attention	Amber	The controller is faulty and requires operator attention, and the faulty component is serviceable.
	Off	The controller is operating normally.
Activity	Blinking green	The controller is active.
Ethernet Activity (right)	Green	The link between the Management port and the device to which it is connected (such as an Ethernet switch) is up.
	Off	There is no link between the controller and the connected Ethernet port.
	Blinking green	There is Ethernet activity.
Ethernet Link State (left)	Green	Link is established.
	Off	No link is established.
SAS expansion Port Link	Green	Link is established.
	Off	No link is established.
SAS expansion Port Link Fault	Amber	Port is degraded (one or more Phys in the port is down).
	Off	Port is optimal (all Phys in the port are up or all Phys in the port are down since the LED is off if no cables are attached).
Host Port Link Status (SFP host port, FC or iSCSI)	Green	The link is up (Fibre Channel). If the LED is solid, the link is up, but there is no activity (iSCSI). If the LED is flashing, the link is up and there is activity (iSCSI). If the LED is off, the link is down.
Host Port Attention (SFP host port, FC or iSCSI)	Amber	The port requires operator attention.

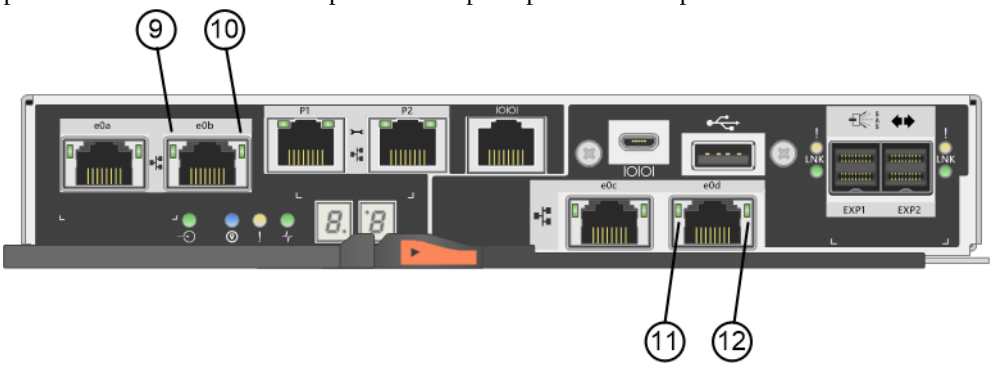
LEDs on the E2800 controller

The back of the E2800 controller includes LEDs that indicate when the controller is active, when the controller needs attention, when there is Ethernet activity, and so on.

The following example shows the LEDs on an E2800 controller with two optical (SFP+) baseboard host ports, and two optical Host Interface Card (HIC)-based host ports. These ports can be configured for 16 Gbps Fibre Channel (FC) or 10 Gbps iSCSI connections.



The following example shows the same LEDs on an E2800 controller with two RJ-45 baseboard host ports and two RJ-45 HIC host ports. These ports provide 10 Gbps iSCSI connections.



1	Cache Active
2	Locate
3	Attention
4	Activity
5	Ethernet Status
6	Ethernet Activity
7	SAS Expansion Port Link Status
8	SAS Expansion Port Attention
9	Host Port Link Status
10	Host Port Attention
11	Host Port Link Status
12	Host Port Attention

The following table describes the controller LEDs and their operational statuses:

LED	**Status indicator**	**Description**
Cache Active	Green	The cache contains data not yet written to disk.
	Off	Either the cache is inactive or all data from the cache has been preserved in non-volatile memory.
Locate	Blue	There is an active request to physically locate the controller shelf.
	Off	There is no active request to locate the controller shelf.
Attention	Amber	The controller is faulty and requires operator attention, and the faulty component is serviceable.
	Off	The controller is operating normally.
Activity	Blinking green	The controller is active.
Ethernet Activity (right)	Green	The link between the Management port and the device to which it is connected (such as an Ethernet switch) is up.
	Off	There is no link between the controller and the connected Ethernet port.
	Blinking green	There is Ethernet activity.
Ethernet Link State (left)	Green	Link is established.
	Off	No link is established.
SAS expansion Port Link	Green	Link is established.
	Off	No link is established.
SAS expansion Port Link Fault	Amber	Port is degraded (one or more Phys in the port is down).
	Off	Port is optimal (all Phys in the port are up or all Phys in the port are down since the LED is off if no cables are attached).
Host Port Link Status (SFP host port, FC or iSCSI)	Green	The link is up (Fibre Channel). If the LED is solid, the link is up, but there is no activity (iSCSI). If the LED is flashing, the link is up and there is activity (iSCSI). If the LED is off, the link is down.
Host Port Attention (SFP host port, FC or iSCSI)	Amber	The port requires operator attention.
Host Port Link Status (RJ-45 host port, iSCSI)	Green	If the LED is on, the link is established. If the LED is off, no link is established.

LED	Status indicator	Description
Host Port Activity (RJ-45 host port, iSCSI)	Green	If the LED is on, the link is up with no activity. If the LED is blinking, there is link activity. If the LED is off, no link is established.

LEDs on the operator display panel

Each E2800 and E5700 controller shelf or drive shelf has LEDs located on the operator display panel (ODP). The ODP is visible through the front bezel of a controller shelf and through the left end cap of a drive shelf.

The following figure shows the LEDs on the ODP for the E2812, E2824, and E5724 controller shelves:

Note: The above figure also applies to DE212C and DE224C drive shelves.

The following figure shows the LEDs on the ODP for the E2860 and E5760 controller shelf:

1	Power
2	Attention
3	Locate

The following table describes the LEDs on the ODP and their operational states:

LED	Status indicator	Description
Power	Green	One or more power supplies are supplying power to the shelf.
	Off	The shelf is not receiving power.

LED	Status indicator	Description
Attention	Amber	There is an error with the function of one or more of the following: • Shelf • Drives • IOMs • Power supplies • Fans
	Off	The shelf, drives, IOMs, power supply, and fans are functioning correctly.
Locate	Blue	There is an active request to physically locate the shelf. **Note:** Locate LEDs turn off automatically after 30 minutes.

Setting the shelf ID with the ODP push button

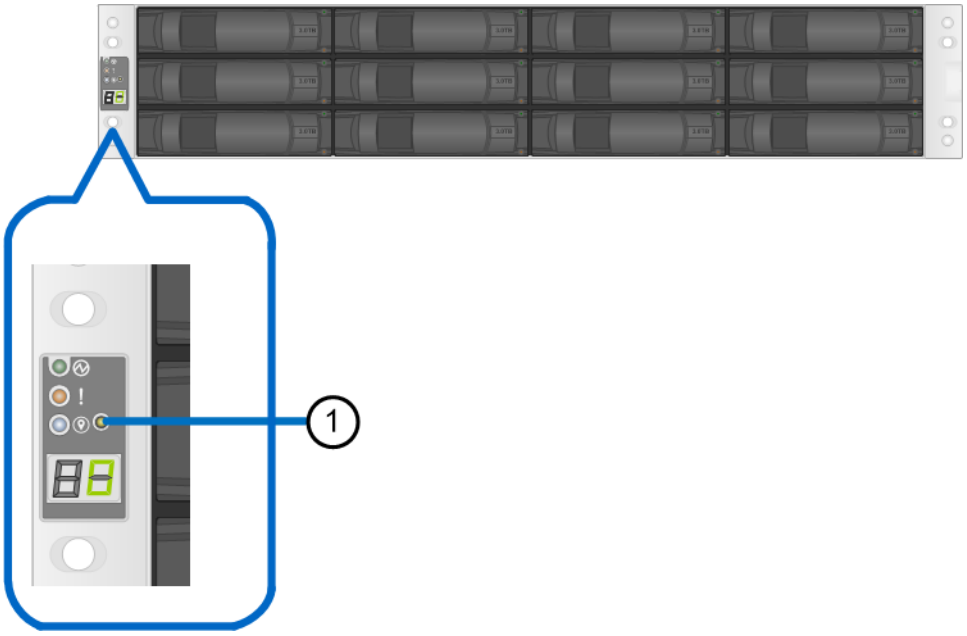
You can set or change the shelf ID for a controller shelf or a drive shelf by using the ODP push button.

Before you begin

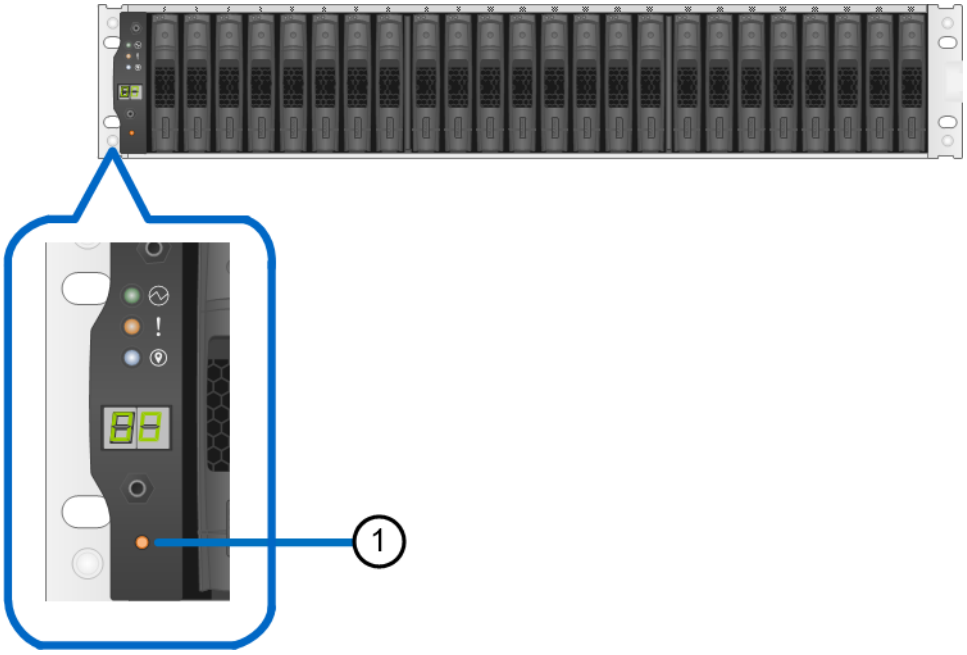
You might need to remove the front bezel or the end cap to see the ODP push button. The controller shelf or drive shelf must be powered on before you begin this task.

About this task

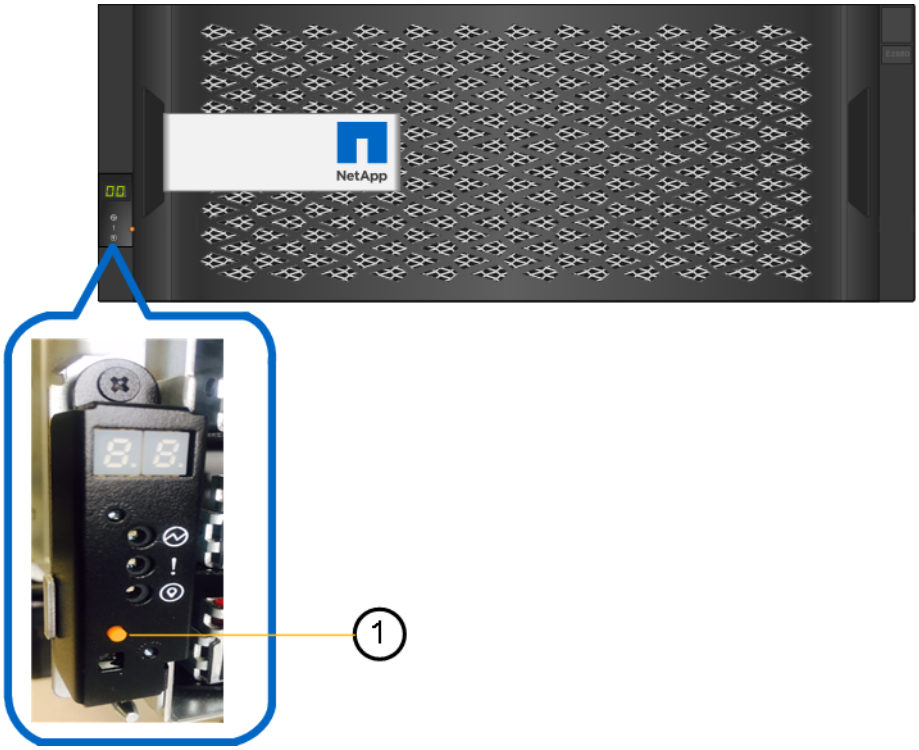
The following figure shows the ODP push button on the E2812 controller shelf and the DE212C drive shelf.



The following figure shows the ODP push button on the E2824 and E5724 controller shelf and the DE224C drive shelf.



The following figure shows the ODP push button on the E2860 and E5760 controller shelf and the DE460C drive shelf.



1	ODP push button

Steps

1. Press and hold the push button until the first number on the seven-segment display starts to blink.

   It might take up to three seconds for the number to blink. If the number does not blink in this time, release the button and press it again. Make sure to press the button all the way in.

2. Change the first number of the shelf ID by repeatedly pressing the push button to advance the number until you reach the desired number from 0 to 9.

   The first number continues to blink.

3. Press and hold the button until the second number on the digital display starts to blink.

   It might take up to three seconds for the second number to blink. The first number on the seven-segment display stops blinking.

4. Change the second number of the shelf ID by repeatedly pressing the button to advance the number until you reach the desired number from 0 to 9.

   The second number continues to blink.

5. Lock in the desired number, and exit the programming mode by pressing and holding the button until the second number stops blinking.

   It might take up to three seconds for the second number to stop blinking.

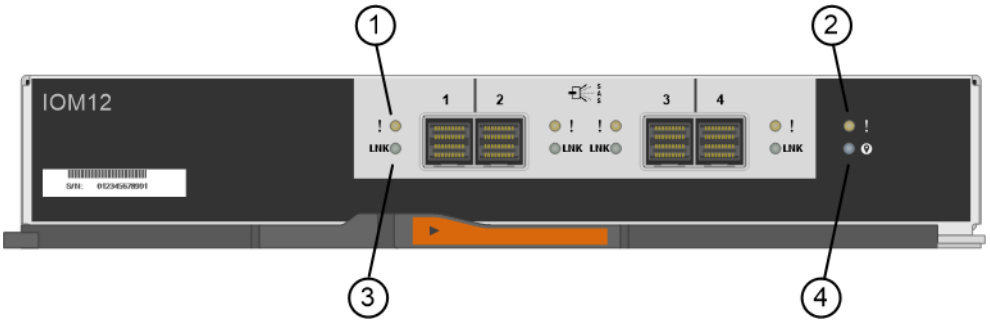
LEDs on the IOMs

All DE460C drive shelves have two I/O modules (IOMs). In a duplex array, all DE212C and DE224C drive shelves have two IOMs. In a simplex array, all DE212C and DE224C drive shelves

have one IOM. The IOMs include the SAS ports for connecting the drive shelf to the controller shelf or to other drive shelves.

- Each IOM has an Attention LED and a Locate LED.
- Each IOM has four SAS ports, each with a Port Link LED and a Port Attention LED.

The IOM LEDs are shown in the following figure:



1	SAS Port Attention
2	IOM Attention
3	SAS Port Link
4	Locate

The following table describes the IOM LEDs and their operational states:

LED	Status indicator	Description
Attention	Amber	The IOM is not functioning correctly.
	Off	The IOM is functioning correctly.
Locate	Blue	There is an active request to physically locate the drive shelf. **Note:** When this LED is activated, the Locate LED on the left end cap of the drive shelf is also activated. Locate LEDs turn off automatically after 30 minutes.
	Off	There is no active request to locate the drive shelf.
SAS Port Link	Green	The SAS port established a link (with either a controller or another drive shelf).
	Off	No link is established to another SAS port.

LED	Status indicator	Description
SAS Port Attention	Amber	One or more of the links in the port are not working properly.
	Off	The port is optimal and no link error has occurred.

LEDs on the drives

The drives that are installed in an E5700 or E2800 controller shelf or drive shelf include an Activity LED and an Attention LED.

The following figure shows the LEDs on the drives in the E2812 controller shelf and the DE212C drive shelf:

The following figure shows the LEDs on the drives in the E2824 controller shelf and the DE224C drive shelf:

Note: LEDs on drives within the E5724 controller shelf are identical to the LEDs on drives within the E2824 controller shelves.

1	Activity
2	Attention

The following tables describes the drive LEDs and their operational states:

LED	Status indicator	Description
Activity	Green	The drive has power.
	Blinking green	The drive has power, and I/O is in process.
Attention	Amber	An error occurred with the functioning of the drive.

LEDs on the drive drawer

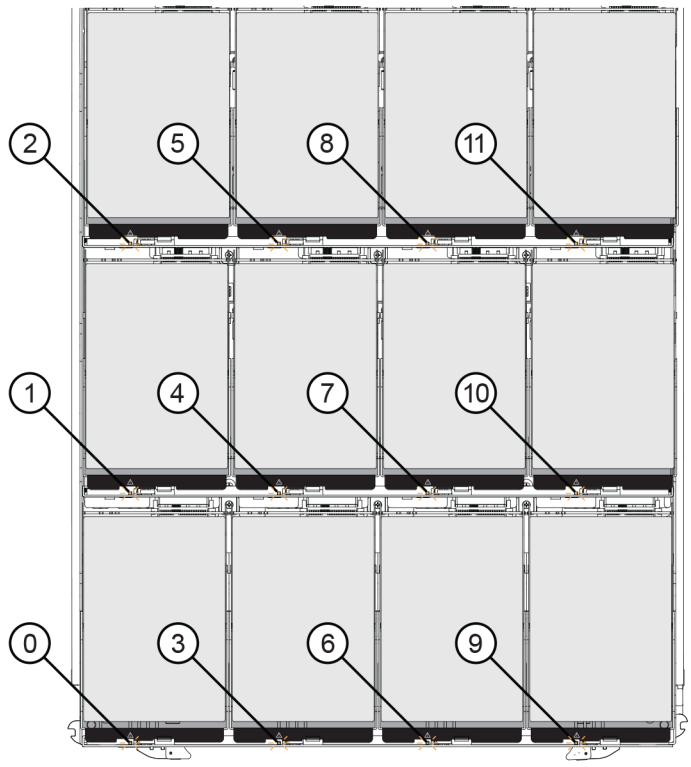
Each of the five drive drawers in the E2860 or E5760 controller shelf or the DE460C drive shelf includes a single Attention/Locate LED for the shelf and 12 Activity LEDs for the drives.

The following figure shows the LEDs on the front of the drive drawer:

The following table describes the drive drawer LEDs and their operational states:

Location	LED	Status indicator	Description
1	Attention/Locate	Amber	The drawer or a drive in the drawer requires operator attention.
		Off	The drawer and all drives in the drawer are operating normally.
		Blinking	When a locate operation for a drive in the drawer is in progress.
2-13	Activity: Drive activity for drives 0 through 11 in the drive drawer	Green	The power is turned on and the drive is operating normally.
		Off	The power is turned off.
		Blinking	Drive I/O activity is taking place.

Within a drive drawer, there are 12 drive slots numbered 0 through 11. Each drive uses an amber Attention LED that comes on if the drive requires operator attention:

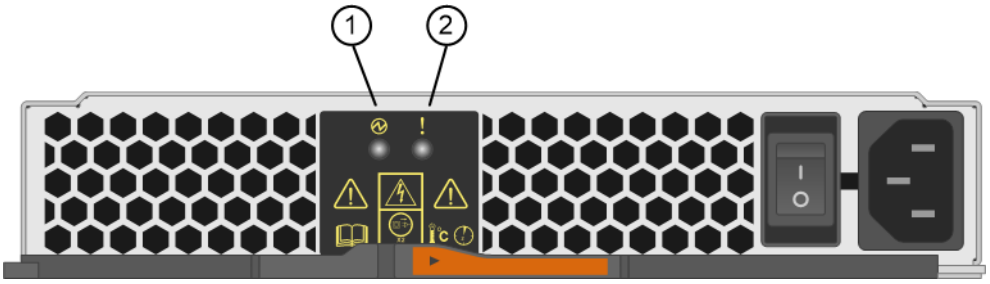


Location	LED	Status indicator and description
0	Attention/Locate Drive LED 0	• **Amber**: The drive in the drawer requires operator attention. • **Off**: The drive in the drawer is operating normally. • **Blinking**: A locate operation for the drive is in progress.
1	Attention/Locate Drive LED 1	
2	Attention/Locate Drive LED 2	
3	Attention/Locate Drive LED 3	
4	Attention/Locate Drive LED 4	
5	Attention/Locate Drive LED 5	
6	Attention/Locate Drive LED 6	
7	Attention/Locate Drive LED 7	
8	Attention/Locate Drive LED 8	
9	Attention/Locate Drive LED 9	
10	Attention/Locate Drive LED 10	
11	Attention/Locate Drive LED 11	

LEDs on the power-fan canister

The power-fan canister has LEDs and its own power switch and power outlet. Each 12-drive or 24-drive shelf has two of these canisters.

The following figure shows the LEDs on the power-fan canister:



1	Power LED
2	Attention LED

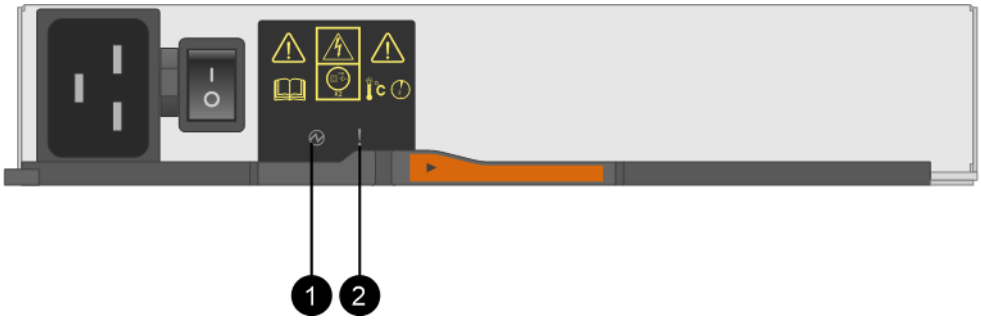
The following table describes the power-fan canister LEDs and their operational states:

LED	Status indicator	Description
Power	Green	The power supply is functioning correctly.
	Off	The power supply failed, the AC switch is turned off, the AC power cord is not properly installed, or the AC power cord input voltage is not within margin (there is a problem at the source end of the AC power cord).
Attention	Amber	The power supply or the integrated fan has a fault, or there is no input power to this power-fan canister, but the other power-fan canister is operating.

LEDs on the power canister

The power canister has LEDs and its own power switch and power outlet. Each E2860 or E5760 controller shelf and DE460C drive shelf contains two power canisters.

The following figure shows the LEDs on the power canister:



1	Power LED
2	Attention LED

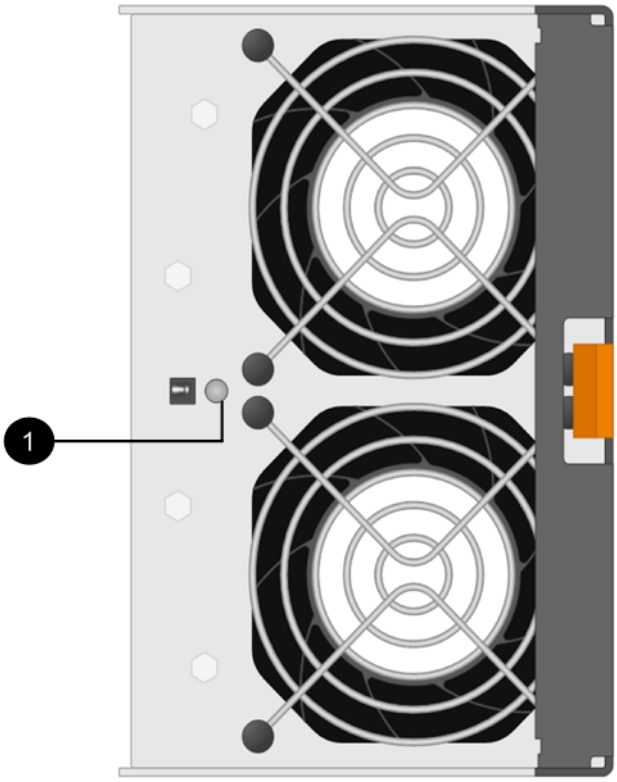
The following table describes the power-fan canister LEDs and their operational states:

LED	Status indicator	Description
Power	Green	The power supply is functioning correctly.
	Off	The power supply failed, the AC switch is turned off, the AC power cord is not properly installed, or the AC power cord input voltage is not within margin (there is a problem at the source end of the AC power cord).
Attention	Amber	The power supply has a fault, or there is no input power to this power canister, but the other power canister is operating.

LEDs on the fan canister

The fan canister has an Attention LED that is identified by a sideways exclamation point in the middle of the canister. Each 60-drive shelf contains two fan canisters, one on either side of the enclosure.

The following figure shows the LED on a fan canister:



The following table describes the fan canister LED and its operational state:

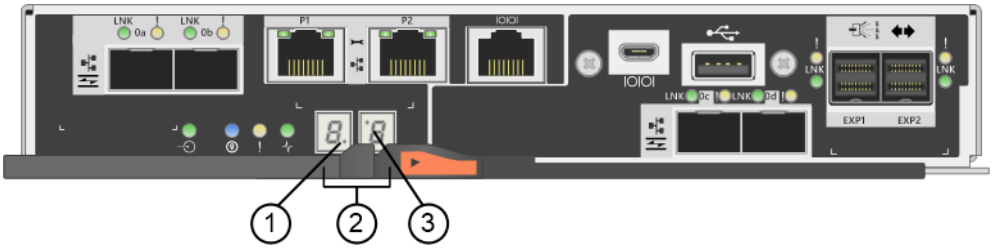
LED	LED icon	LED name	Status indicator	Description
1	!	Attention	Solid amber	The fan has a fault.

Seven-segment display overview

The E5700 and E2800 controllers have a two-digit, seven-segment display at the back, which shows the following information.

Controller state	Seven-segment display
Functioning correctly	Tray ID
Not functioning correctly	Diagnostic codes to help identify errors

The following figure shows the seven-segment display for the E2812 controller shelf, the E2824 controller shelf, and the E2860 controller shelf:



1	Heartbeat (dot in the lower right)
2	Tray ID
3	Diagnostic (dot in the upper left)

The following table describes the seven-segment display and their operational states:

LED	Status indicator	Description
Tray ID	Green	This shows the ID of the controller shelf when the controller operates normally. If the controller is not operating normally and the Diagnostic LED is on, the diagnostic code is displayed instead.
Heartbeat	Blinking green	This indicates normal activity.
Diagnostic	Green	The seven-segment display shows the diagnostic code.
	Off	The seven-segment display shows the tray ID.

Seven-segment display sequence codes

Seven-segment display sequences enable you to understand errors and operational states of the various components in your storage array. Each sequence shows a two-digit category code, followed by a two-digit detail code. The category code appears at the start of a sequence and the detail code follows the category code with more specific information about the error. After each category code is displayed, the LED goes blank. The detail code then appears and disappears, and the entire sequence is repeated. For example, if there is a power-on validation error during startup, you see the following codes displayed on the seven-segment display: SE, followed by Sx, in which SE is the category code and Sx is the detail code.

When the seven-segment display sequence starts, the Diagnostic LED is on (green).

The following table includes the seven-segment display sequence codes and descriptions:

Category	Category code	Detail code
Startup error	SE	• **88**: Power-on default • **dF**: Power-on diagnostic fault • **Sx**: Power-on validation error
Operational error	OE	• **Lx**: Lock-down codes See *Seven-segment display lock-down codes*.

Category	Category code	Detail code
Operational state	OS	• **OL**: Offline • **bb**: Battery backup (operating on batteries) • **OH**: CPU temperature exceeds the warning level • **CF**: Component failure
Component failure	CF	• **dx**: Processor or cache DIMM • **Cx**: Cache DIMM • **Px**: Processor DIMM • **Hx**: Host interface card • **Fx**: Flash drive • **bl**: Base controller card
Diagnostic failure	dE	• **Lx**: Lock-down codes See *Seven-segment display lock-down codes*.
Category delimiter	-- The double hyphen (--) is the separator between category-detail code pairs when more than one pair exists in the sequence.	
End-of-sequence delimiter	Blank; display turns off at the end of a sequence	

Seven-segment display codes when controller turns on

The following table describes the seven-segment codes that are displayed when the controller turns on:

Code	Description
0xEA	DDR4 training failed
0xE8	No memory installed
0x22	No master boot record found on any boot device
0x23	No SATA drive installed
0xAE	Booting OS
0xAB	Alternate boot code
0x40	Invalid DIMMs
0x41	Invalid DIMMs

Code	Description
0x42	Memory test failed
0x2A, 0x2B	Stuck bus, unable to read DIMM SPD data
0x51	DIMM SPD read failure
0xA0, 0xA1, 0xA2, and 0xA3	SATA drive initialization
0x92 – 0x96	PCI bus initialization

Seven-segment display use cases

The following table shows seven-segment display use cases and the sequence that is displayed in each case:

Use case	Display sequence
Controller power-on	
• Normal power-on controller insertion • Controller inserted while held in reset	`SE 88 blank`
Operational states	
Normal operation	`xy` (static controller tray ID)
Start-of-day (SOD) processing	`OS Sd blank`
The controller is placed in reset while showing the tray ID	`OS OL blank`
The controller is operating on batteries (cache backup)	`OS bb blank`
The CPU temperature has exceeded the warning level	`OS OH blank`
Component failure when the controller is operational	
Failed host interface card (HIC)	`OS CF HX blank`
Failed flash drive	`OS CF Fx blank`
Power-on diagnostic failure	
Failure of a component that is not a field replaceable unit	`SE dF blank-`
Processor DIMM failure	`SE dF -- CF Px blank-`
Cache memory DIMM failure	`SE dF -- CF Cx blank-`
Processor DIMM or cache memory DIMM failure	`SE dF -- CF dx blank-`
Host interface card failure	`SE dF -- CF Hx blank-`
Incorrect number of cache backup devices	`SE LC -- CF Fx blank-`
The controller is suspended and there are no other errors to report	
All lock-down conditions	`OH Lx blank-`
The controller is suspended because of component errors	

Use case	Display sequence
Persistent processor DIMM error correcting code (ECC) errors	`OE L2 -- CF Px blank-`
Persistent cache DIMM ECC errors	`OE L2 -- CF Cx blank-`
Persistent processor or cache DIMM ECC errors	`OE L2 -- CF dx blank-`
The controller is suspended as a result of persistent cache backup configuration errors	
The write-protect switch is set during cache restore	`OE LC blank-`
The memory size changed with dirty data in the flash drives	`OE L2 -- CF dx blank-`
The controller is suspended as a result of diagnostic errors	
Cache memory diagnostic failure	`dE L2 -- CF Cx blank-`
Base controller diagnostic failure	`dE L3 -- CF b1 blank-`
Base controller I/O Controller chip (IOC) diagnostic failure	`dE L3 -- CF b2 blank-`

Seven-segment display lock-down codes

Diagnostic lock-down codes are displayed when the controller is not operational, either because of a configuration problem or a hardware fault. The lock-down code is displayed as part of the seven-segment display sequence.

The following table includes the lock-down codes and describes the conditions that cause the controller to be in a suspended state:

Lock-down code	Description
L0	The controller types in a duplex configuration are mismatched.
L1	Missing interconnect cannister.
L2	A persistent memory error has occurred.
L3	A persistent hardware error has occurred.
L4	A persistent data protection error has occurred.
L5	An auto-code synchronization (ACS) failure has been detected.
L6	An unsupported HIC has been detected.
L7	A sub-model identifier either has not been set or has been mismatched.
L8	A memory configuration error has occurred.
L9	A link speed mismatch condition has been detected in either the I/O module (IOM) or the power supply.
Lb	A HIC configuration error has been detected.
LC	A persistent cache backup configuration error has been detected.
Ld	A mixed cache memory DIMMs condition has been detected.
LE	Uncertified cache memory DIMM sizes have been detected.

Lock-down code	Description
LF	The controller has locked down in a suspended state with limited SYMbol support.
LH	Controller in Simplex Mode installed in the wrong slot.
LJ	The controller does not have enough memory to support the configuration.
LL	The controller cannot access either midplane SBB EEPROM.
Ln	A module is not valid for a controller.
LP	Drive port mapping tables are not detected.
Lr	A component that is not a field replaceable unit (FRU) has been replaced.
Lt	A configuration data base corruption has been detected.
LU	The SOD reboot limit has been exceeded.

In some cases, controllers detect errors during the startup process. The following table describes seven-segment startup errors and conditions that result in the controller being in a suspended state:

Startup error code	Description
S1	The controller detects a checksum failure in EEPROM.
S2	The SBB Signature/Revision is invalid.
S3	An unsupported enclosure is detected in the storage array.
S4	The power supplies are incapable of powering the controller.
S5	The SBB pairing has failed.

Critical Events Reference

Critical events from E-Series arrays display certain defined fields in the alert and SNMP trap messages.

Storage array alert traps

When a critical Major Event Log (MEL) event is generated, the embedded SNMP agent delivers a storage array alert trap to all configured trap destinations. This message contains the following data:

MIB variable field	Description
Storage array name	Storage array user label. If the label contains non-ASCII characters, the resulting variable binding is populated with the fixed string "NonASCII Name." If the label is blank, the variable binding is populated with the fixed string "Unnamed."
Event type	Event Code (4-digit hexadecimal) for the particular MEL event that prompted the trap.
Event time	Timestamp of event in MM/DD/YYYY HH:MM:SS (24-hour clock) format. Note this is always controller/GMT time.
Event description	Description of the specific MEL event that prompted the trap.
Event component type	String representation of component type for the MEL vent that prompted the trap. Defaults to "Not Available" if component type cannot be identified.
Event component location	This data is not populated by the embedded SNMP agent running on the controller at this time.
Event severity	String representation of the severity of the MEL event that prompted the trap. Defaults to "Unknown" if severity cannot be identified.
Event priority	String representation of the priority of the MEL event that prompted the trap. Defaults to "Unknown" if priority cannot be identified.
Storage array WWID	32-character printable ASCII representation of the 16-byte Storage Array World Wide Name.
Chassis serial number	32-character printable ASCII representation of the 16-byte Storage array World Wide Name.

Critical event data

Critical event data from E-Series arrays is shown below:

MEL_EV_DRIVE_PFA - 0x1010

This event occurs when: The logged device generated a PFA condition.

Event Name - Drive PFA

Event description: Impending drive failure detected by drive

Event Group - Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DRIVE_CDB
```

RecoveryFailureType - REC_IMPENDING_DRIVE_FAILURE_RISK_HIGH (impendingDriveFailureHigh.html), REC_IMPENDING_DRIVE_FAILURE_RISK_MED (impendingDriveFailureMed.html)

MEL_EV_SYNTH_DRIVE_PFA - 0x101E

This event occurs when: The controller has detected that a drive failure is imminent.

Event Name - Synth Drv PFA

Event description: Impending drive failure detected by controller

Event Group - Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Error (0x1)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DRIVE_SPFA_STATS
```

RecoveryFailureType - REC_IMPENDING_DRIVE_FAILURE_RISK_LOW (impendingDriveFailureLow.html)

MEL_EV_PI_DRIVE_LOCKED_OUT - 0x1020

This event occurs when: An incompatible Protection Information drive has been discovered.

Event Name - PI Drive Locked Out

Event description: Data assurance drive has been locked out

Event Group - Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - State (0x5)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DRIVE_INCOMPATIBLE_PI_TYPE
(driveIncompatiblePIType.html)

MEL_EV_FC_LINK_ERROR_THRESHOLD_CRITICAL - 0x1207

This event occurs when: A Link Error count exceeds the threshold the first time.

Event Name - Link Error Threshold Critical

Event description: Fibre channel link errors - threshold exceeded

Event Group - Fibre Channel Source Driver

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_FC_SPEED_NEG_FAILURE - 0x1208

This event occurs when: A data rate negotiation fails.

Event Name - FC Speed Neg Failure

Event description: Data rate negotiation failed

Event Group - Fibre Channel Source Driver

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DEGRADE_CHANNEL - 0x1209

This event occurs when: A drive channel is set to degraded.

Event Name - Degrade Channel

Event description: Drive channel set to Degraded

Event Group - Fibre Channel Source Driver

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DDS_RECORD
```

RecoveryFailureType - REC_CHANNEL_DEGRADED (degradedDriveChannel.html)

MEL_EV_FC_SFP_FAILED - 0x120A

This event occurs when: The SFP on an XBB class controller has failed.

Event Name - SFP Failed

Event description: SFP failed

Event Group - Fibre Channel Source Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller SFP (0x2, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_FC_HOST_SFP_FAILED - 0x120D

This event occurs when: The host side SFP on an XBB class controller has failed.

Event Name - Host Side SFP Failed

Event description: Host-side SFP failed

Event Group - Fibre Channel Source Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller SFP (0x2, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_EXCESSIVE_REBOOTS_DETECTED - 0x1403

This event occurs when: This event is logged when the number of times a controller reboots reaches a certain threshold in a certain time window.

Event Name - Excessive Reboots Detected

Event description: Excessive reboots (exceptions) have occurred on the controller

Event Group - System

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_EXCESSIVE_REBOOTS_DETECTED

MEL_EV_DFC_ALT_LOOP_DIAG_FAIL - 0x150E

This event occurs when: A loop or minihub diagnostics detect that the controller is the bad device on the loop.

Event Name - Loop Diagnostic Failure

Event description: Controller loop-back diagnostics failed

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DFC_CHANNEL_MISWIRE - 0x150F

This event occurs when: Two channels are connected with one or more ESMs in between.

Event Name - Channel Miswire

Event description: Channel miswire

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DFC_ESM_MISWIRE - 0x1510

This event occurs when: Two IOMs (ESMs) of the same tray are seen on the same channel.

Event Name - ESM Miswire

Event description: IOM (ESM) miswire

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_ESM_MISWIRE (esmMiswire.html)

MEL_EV_DFC_CHANNEL_FAILOVER - 0x1513

This event occurs when: A drive fails.

Event Name - Channel Failover

Event description: Individual drive - Degraded path

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_CHANNEL_LOCATION
```

RecoveryFailureType - REC_PATH_DEGRADED (degradedDrivePath.html)

MEL_EV_DFC_HW_FAILED_CHANNEL - 0x1515

This event occurs when: A drive channel hardware fails.

Event Name - Drive Channel Hardware Failed

Event description: Drive Channel hardware failed

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DDS_RECORD
```

RecoveryFailureType - N/A

MEL_EV_DFC_LSD_FAILURE - 0x151A

This event occurs when: A drive enclosure attached to a channel port is set to a link speed not supported by the SFP, resulting in a port bypass. Could also be Are is a faulty SFP, cable, or ESM.

Event Name - Link Speed Detection Failure

Event description: Optical link speed detection failure

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_LINK_SPEED_DETECTION_MISMATCH
(dataRateMismatch.html)

MEL_EV_DFC_CTL_MISWIRE - 0x151E

This event occurs when: This error is logged only for controllers with integrated drive channel ports. When two ESMs in the same drive tray are connected to different channels from the same controller. This error is reported for both channel ports involved in the miswire.

Event Name - Controller Miswire

Event description: Controller miswire for drive channel occurred

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Channel Port (0x2, 0x3)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DFC_MIXED_LOOP_TECHNOLOGY_MISWIRE - 0x1522

This event occurs when: Information not available.

Event Name - Drive Enclosure Type Miswire

Event description: Drive enclosure type miswire

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_MIXED_DRIVE_ENCLOSURE_MISWIRE
(mixedDriveTrayMiswire.html)

MEL_EV_DFC_TRUNK_INCOMPATIBLE_ESM - 0x1524

This event occurs when: The drive channel is trunk capable but an IOM (ESM) is determined to be trunk incompatible. This event is logged for each IOM (ESM) that is trunk incompatible.

Event Name - Trunk Incompatible ESM

Event description: Trunk incompatible IOM (ESM)

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_FIBRE_TRUNK_INCOMPATIBLE_ESM
(fcTrunkingIncompatibleEsm.html)

MEL_EV_DFC_FIBRE_TRUNK_MISWIRE - 0x1525

This event occurs when: Drive enclosures are trunk capable but are not cabled correctly for trunking or the cables themselves are missing. There should be one MEL event logged irrespective of the number of devices in miswire.

Event Name - Fibre Trunk Miswire

Event description: Fibre trunk miswire

Event Group - Fibre Channel-specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FIBRE_TRUNK_MISWIRE (fcTrunkingMiswire.html)

MEL_EV_SAS_FRNT_END_MISWIRE - 0x1650

This event occurs when: Two ESMs or controllers, residing in the same tray, are cabled together.

Event Name - SAS Front End Miswire

Event description: SAS host channel miswire detected

Event Group - SAS-Specific Source Driver and Miscellaneous

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SAS_PORT_MISWIRED (SASMiswire.html)

MEL_EV_SAS_PARTNER_INITIATOR_OVERFLOW - 0x1652

This event occurs when: A SAS source driver detects an initiator overflow condition resulting in the partner controller being unable to communicate with the SAS backend elements. This event is only logged on SAS-1 controllers (Mary Jane and Winterpark).

Event Name - Initiator Overflow

Event description: SAS source driver partner initiator overflow

Event Group - SAS-Specific Source Driver and Miscellaneous

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DEVICE_NAME
```

RecoveryFailureType - N/A

MEL_EV_SAS_HOST_WIDE_PORT_DEGRADED - 0x1654

This event occurs when: One of the host port physical devices goes down from the optimal state.

Event Name - Host Wide Port Degraded

Event description: Host wide port is degraded

Event Group - SAS-Specific Source Driver and Miscellaneous

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - State (0x5)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_SAS_BACKEND_DISCOVERY_ERROR - 0x165A

This event occurs when: The event is logged when a connectivity error has been detected during the SAS backend discovery processing. The error means that there has been a loss of redundancy with the connectivity to trays and/or drives.

Event Name - SAS Backend Discovery Error

Event description: An error has been detected during SAS backend discovery processing

Event Group - SAS-Specific Source Driver and Miscellaneous

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DSAS_TOPOLOGY_MISWIRE - 0x1700

This event occurs when: A RAID controller detects an invalid SAS topology, such as an expander PHY with a table routing attribute attached to another expander PHY with a table routing attribute, a SAS loop, or multiple ports with the same SAS address.

Event Name - DSAS Topology Miswire

Event description: Invalid SAS topology detected

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SAS_PORT_MISWIRED (SASMiswire.html), REC_SAS_LOOP_MISWIRE (SASLoopMiswire.html)

MEL_EV_DSAS_BK_END_HBA_MISWIRE - 0x1702

This event occurs when: A RAID controller detects a SAS adapter miswire.

Event Name - DSAS Back End HBA Miswire

Event description: SAS host adapter miswire detected

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SAS_PORT_MISWIRED (SASMiswire.html), REC_SAS_HOST_MISWIRE (SASHostMiswire.html)

MEL_EV_DSAS_ESM_MISWIRE - 0x1704

This event occurs when: A RAID controller detects a SAS IOM (ESM) miswire.

Event Name - DSAS ESM Miswire

Event description: SAS IOM (ESM) miswire detected

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SAS_PORT_MISWIRED (SASMiswire.html), REC_SAS_CROSS_MISWIRE (SASChannelMiswire.html)

MEL_EV_DSAS_WPORT_OPT_TO_DEG - 0x1706

This event occurs when: At least one of the phys that comprise a port is determined to be connected to an attached device, but the remaining port phys cannot connect to or communicate with an attached device.

Event Name - Optimal Wide Port Becomes Degraded

Event description: Optimal wide port becomes degraded

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_SAS_PORT_DEGRADED (failedSASPort.html)

MEL_EV_DSAS_WPORT_DEG_TO_FAIL - 0x1707

This event occurs when: An attached device is determined to be present, but none of the PHYs that comprise the port attached to that device can connect to or communicate with the device.

Event Name - Degraded Wide Port Becomes Failed

Event description: Degraded wide port becomes failed

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_SAS_PORT_FAILED (failedSASPort.html)

MEL_EV_DSAS_EXP_PORT_DEV_MISWIRE - 0x170A

This event occurs when: Information not available.

Event Name - DSAS Exp Port Dev Miswire

Event description: Drive expansion port miswire

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SAS_PORT_MISWIRED (SASMiswire.html)

MEL_EV_DSAS_WPORT_OPT_TO_DEG_CTLR - 0x170F

This event occurs when: At least one of the phys that comprise a port is determined to be connected to an attached device, but the remaining port phys cannot connect to or communicate with an attached device.

Event Name - Controller Wide Port Has Gone To Degraded State

Event description: Controller wide port has gone to degraded state

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_SAS_PORT_DEGRADED (failedSASPort.html)

MEL_EV_DSAS_WPORT_DEG_TO_FAIL_CTLR - 0x1710

This event occurs when: A device attached to the controller is determined to be present, but none of the PHYs that comprise the port attached to that device can connect to or communicate with the device.

Event Name - Controller Wide Port Has Gone To Failed State

Event description: Controller wide port has gone to failed state

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_SAS_PORT_FAILED (failedSASPort.html)

MEL_EV_LOSS_EXT_REDUNDANCY - 0x171A

This event occurs when: A controller may have lost access to expansion trays.

Event Name - Loss of External Redundancy

Event description: A controller may have lost access to expansion trays

Event Group - SAS-Specific Destination Driver

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Channel Port (0x2, 0x3)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_LOSS_OF_EXTERNAL_REDUNDANCY (noExtRedundancy.html)

MEL_EV_ISCSI_FAILED_HOST_CARD - 0x180A

This event occurs when: The firmware detects an iSCSI interface error. The optional data field of the MEL event includes information about the cause of the error, which, if Andrecht, Snowsnake, or

Glencove HICS, includes (1) Uncorrectable ECC error, (2) The firmware cannot successfully restart the iSCSI interface, or (3) an iSCSI Controller EEPROM Error occurs. If Zion or Samoa HICS, the firmware cannot successfully restart the iSCSI interface.

Event Name - iSCSI Failed Host Card

Event description: Failed I/O host card; iSCSI interface error detected

Event Group - iSCSI-Specific

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Host Board (0x2, 0x5)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FAILED_HOST_IO_CARD (failedHostCard.html)

MEL_EV_FAILED_HOST_INTERFACE_CARD - 0x1904

This event occurs when: The host interface card fails a loopback diagnostic test.

Event Name - Failed Host Interface Card

Event description: Failed host interface card

Event Group - Controller Field Replaceable HW

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Host I/O Card (0x2, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_HOST_BOARD_FAULT (hostCardFault.html)

MEL_EV_MISSING_DRIVE_LOCKDOWN - 0x1907

This event occurs when: A controller is locked down due to detecting enough missing drives that if left alone would result in failed volumes.

Event Name - Missing Drive Lockdown

Event description: Controller is locked down due to too many missing drives

Event Group - Controller Field Replaceable HW

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MISSING_DRIVE_LOCKDOWN (missingDrivesLockdown.html)

MEL_EV_HIC_CONFIGURATION_OOC - 0x1908

This event occurs when: A controller has detected that the combination of host interface cards are out of compliance with limitations of the controller and/or the firmware.

Event Name - HIC Configuration OOC

Event description: A controller has detected that the combination of host interface cards are out of compliance with limitations of the controller and/or the firmware.

Event Group - Controller Field Replaceable HW

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_HIC_CONFIGURATION_OOC

MEL_EV_DATA_PARITY_MISMATCH - 0x200A

This event occurs when: A data/parity mismatch is detected during data scrubbing.

Event Name - Data Parity Mismatch

Event description: Data/parity mismatch on volume

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_PARITY_READ_LBA
```

RecoveryFailureType - N/A

MEL_EV_MISCORRECTED_DATA - 0x202E

This event occurs when: An Unrecoverable Read Error is detected.

Event Name - Miscorrected Data

Event description: Read drive error during interrupted write

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_LBA_INFO
```

RecoveryFailureType - N/A

MEL_EV_DRIVE_FAIL_READ_ERROR_SCAN_CYCLE - 0x203B

This event occurs when: A drive is failed due to an unrecoverable read error detected during scan cycle.

Event Name - Drive Failure From Un-Recoverable Read Error

Event description: Drive failed due to un-recoverable read error during scan

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FAILED_DRIVE (failedDrive.html)

MEL_EV_REDUN_GROUP_NOT_CONSISTENT - 0x2045

This event occurs when: As part of a reconfiguration operation, a redundancy group is determined to be inconsistent. After the reconfiguration operation completes, the data will be consistent but the data may be corrupt.

Event Name - Redundancy Group Not Consistent During Reconfiguration

Event description: Redundancy group not consistent during reconfiguration

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_PARITY_READ_LBA
```

RecoveryFailureType -
REC_REDUNDANCY_GROUP_NOT_CONSISTENT_DURING_RECONFIG
(RedundancyGroupInconsistency.html)

MEL_EV_ISOLATION_REDUN_MISMATCH - 0x2046

This event occurs when: In RAID 6 environments, via media scan with redundancy check or when pre-read redundancy check is enabled. The event is logged when a drive can be isolated as causing corruption using P and Q parity of RAID 6. In this event data on disk is not altered as correction action without the potential of corruption is ambiguous.

Event Name - Isolation Redundancy Mismatch

Event description: Isolation of drive causing redundancy mismatch

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_REDUNDANCY_MISMATCH_DETECTED
```

RecoveryFailureType - N/A

MEL_EV_DIFFERENT_DATA_RETURNED_ON_RETRY - 0x2047

This event occurs when: A redundancy check results in retried reads and the drive returns different data on the retry.

Event Name - Different Data Returned On Retry

Event description: Different Data Returned On Read Retry

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DIFFERENT_DATA_RETURNED_ON_RETRY
```

RecoveryFailureType - N/A

MEL_EV_DATA_ALTERED_TO_CORRECT_REDUN_MISMATCH - 0x2048

This event occurs when: Data is altered due to a detected inconsistency in redundancy. The data, which was within a redundancy group with multiple redundancy (e.g. RAID 6), was isolated, recovered, and rewritten to the drive.

Event Name - Data Altered to Correct Redundancy Mismatch

Event description: Data altered to correct redundancy mismatch

Event Group - VDD

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_REDUNDANCY_MISMATCH_DETECTED
```

RecoveryFailureType - N/A

MEL_EV_PI_SERVICE_MODE_ENTERED - 0x2069

This event occurs when: This event is logged when the controller has been rebooted into Service Mode because the controller has detected excessive Data Assurance errors.

Event Name - Data Assurance Service Mode Entered

Event description: Controller is in Service Mode due to excessive Data Assurance errors

Event Group - Protection Information

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PI_ERROR_SERVICE_MODE

MEL_EV_PI_ANALYSIS_LOCKDOWN_MODE_ENTERED - 0x206A

This event occurs when: This event is logged when the controller has been rebooted into Analysis Lockdown Mode because the controller has detected excessive Data Assurance errors.

Event Name - Data Assurance Analysis Lockdown Mode Entered

Event description: Controller is in Analysis Lockdown Mode due to excessive Data Assurance errors

Event Group - Protection Information

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PI_ERROR_LOCKDOWN

MEL_EV_CCM_HW_MISMATCH - 0x2109

This event occurs when: A write back cache could not be enabled due to different cache sizes of the controllers in the subsystem. ASC/ASCQ value of 0xA1/0x00 is also logged with this event.

Event Name - CCM Hardware Mismatch

Event description: Controller cache not enabled - cache sizes do not match

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_LBA_INFO
```

RecoveryFailureType - REC_CACHE_MEM_SIZE_MISMATCH (cacheMismatch.html)

MEL_EV_CACHE_BATTERY_FAILURE - 0x210C

This event occurs when: A cache battery has failed. ASC/ASCQ of 0x0C/0x00 is also logged with this event.

Event Name - Cache Battery Failure

Event description: Controller cache battery failed

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SMART_BATTERY
```

RecoveryFailureType - REC_FAILED_BATTERY (failedBattery.html)

MEL_EV_CACHE_DATA_LOSS - 0x210E

This event occurs when: Logged by cache manager when cache blocks can't be successfully recovered. Companion to an ASC/ASCQ status of 0x0C/0x81.

Event Name - Cache Data Loss

Event description: Controller cache memory recovery failed after power cycle or reset

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_LBA_INFO
```

RecoveryFailureType - REC_CACHE_DATA_LOSS (cache_failed_data_loss.html)

MEL_EV_CACHE_MEM_DIAG_FAIL - 0x2110

This event occurs when: A persistent RPA Memory Parity error is detected. A test of the cache memory (the data buffer on the controller) fails. The test is initiated with the startCacheMemoryDiagnostic_1 SYMbolAPI command. When the error occurs, the controller logs this event and locks down.

Event Name - Cache Memory Diagnostic Fail

Event description: Controller cache memory initialization failed

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_CACHE_BATTERY_WARN - 0x2113

This event occurs when: A cache battery is within the specified number of weeks of failing. The ASC/ASCQ value of 0x3F/0xD9 is also logged with this event.

Event Name - Cache Battery Warning

Event description: Controller cache battery nearing expiration

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SMART_BATTERY
```

RecoveryFailureType - REC_BATTERY_NEAR_EXPIRATION (batteryNearExpiration.html)

MEL_EV_OCB_SETTING_CONFLICT - 0x211B

This event occurs when: A conflict is detected between the NVSRAM setting and the presence of batteries.

Event Name - OCB Setting Conflict

Event description: Batteries present but NVSRAM file configured for no batteries

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_BATTERY_CONFIG_MISMATCH (batterySettingsMismatch.html)

MEL_EV_UNSUPPORTED_CACHE_SIZE - 0x211E

This event occurs when: Controller is configured with an unsupported cache memory size.

Event Name - Unsupported Cache Size

Event description: Current cache size is unsupported

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_UNSUPPORTED_CACHE_MEMORY_SIZE
(unsupportedCacheMemSize.html)

MEL_EV_CACHE_BACKUP_INSUFFICIENT_CAPACITY - 0x211F

This event occurs when: The cache backup device is missing, leaving insufficient capacity to perform full cache backup.

Event Name - Insufficient Backup Device Capacity

Event description: Insufficient cache backup device capacity

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CACHE_BACKUP_DEVICE_INSUFFICIENT_CAPACITY
(cacheBackupDevInsuffCapacity.html)

MEL_EV_INSUFFICIENT_MEMORY_FOR_CACHE_SIZE - 0x2120

This event occurs when: The controller has insufficient processor memory to support the configured cache.

Event Name - Insufficient Processor Memory For Cache

Event description: Insufficient processor memory for cache

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PROC_MEM_TOO_SMALL_FOR_CACHE

MEL_EV_DEDICATED_MIRROR_CHANNEL_FAILED - 0x2124

This event occurs when: Information not available.

Event Name - Dedicated Mirror Channel Failed

Event description: Dedicated mirror channel failed

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DEDICATED_MIRROR_CHANNEL_FAILED
(failedDedicatedMirrorChannel.html)

MEL_EV_CACHE_BACKUP_PROTECTION_ERROR - 0x2125

This event occurs when: A data integrity check failed when the cache data was being restored from the backup device.

Event Name - Cache Backup Protection Error

Event description: Integrity check failed during cache restore

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_INCOMPLETE_CACHE_BACKUP - 0x2126

This event occurs when: The backup of the cache did not complete before the controller lost power -- input power and battery backup power.

Event Name - Incomplete Cache Backup

Event description: Backup of cache to persistent device did not complete

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_INC_BACKUP_REASON
```

RecoveryFailureType - N/A

MEL_EV_WB_CACHING_FORCIBLY_DISABLED - 0x212B

This event occurs when: Write-back caching is forcibly disabled beyond a threshold period of time for volumes that are configured to use the write caching capability.

Event Name - Write-back Caching Forcibly Disabled

Event description: Write-back caching forcibly disabled

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_VOLUMES_INFO
```

RecoveryFailureType - REC_WB_CACHING_FORCIBLY_DISABLED (wBcacheDisabled.html)

MEL_EV_RCB_CACHE_DATA_LOSS - 0x212E

This event occurs when: Recovery control block information has been lost either while restoring from a backup device or some other reason.

Event Name - Recovery Control Block Cache Data Loss

Event description: Cached data may have been lost

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CACHE_DATA_LOSS (cache_failed_data_loss.html)

MEL_EV_CACHE_NOT_FLUSHED_ON_ONLY_CTLR - 0x2131

This event occurs when: Logged when the alternate controller is held in reset and this controller fails to flush dirty cache data on failed volume(s) possibly due to offlined drives. The controller should not be replaced to avoid loss of data.

Event Name - Dirty Cache Not Flushed On The Only Active Controller

Event description: Dirty cache not flushed on the only active controller

Event Group - Cache Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CACHE_NOT_FLUSHED_ON_ONLY_CTLR

MEL_EV_DEVICE_FAIL - 0x222D

This event occurs when: A device is failed manually (via a SYMbolAPI command).

Event Name - Device Fail

Event description: Drive manually failed

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_CFG_DRV_TO_SMALL - 0x2249

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0x8B indicating the controller set the drivestate to Drive Capacity is less than Minimum.

Event Name - CFG Drive Too Small

Event description: Physical drive replacement is too small

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DRV_REPLACE
```

RecoveryFailureType - N/A

MEL_EV_WRONG_SECTOR_SIZE - 0x224A

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0x8C indicating the controller set the drive state to Drive has wrong blocksize.

Event Name - Wrong Sector Size

Event description: Drive has wrong block size

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_WRONG_SECTOR_SIZE
```

RecoveryFailureType - REC_DRIVE_INCOMPATIBLE_SECTOR_SIZE
(sectorSizeIncompatible.html)

MEL_EV_DRV_FORMAT_FAILED - 0x224B

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0x86 indicating the controller set the drive state to Failed Format failure.

Event Name - Drive Format Failed

Event description: Drive failed - initialization failure

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DRV_NO_RESPONSE - 0x224D

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0x85 indicating the controller set the drive state to Failed No Response.

Event Name - Drive No Response

Event description: Drive failed - no response at start of day

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FAILED_DRIVE (failedDrive.html)

MEL_EV_RECON_DRV_FAILED - 0x224E

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0x82 indicating the controller set the drive state to Failed be it was unable to make the drive usable after replacement.

Event Name - Reconstruction Drive Failed

Event description: Drive failed - initialization/reconstruction failure

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_LUN_DOWN - 0x2250

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0xE0 indicating Logical Unit Failure.

Event Name - LUN Down

Event description: Volume failure

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FAILED_VOLUME (failedVolume.html)

MEL_EV_CFG_READ_FAIL - 0x2251

This event occurs when: A configuration manager posts an UA/AEN of ASC/ASCQ = 0x3F/0x8E indicating that the drive failed due to a reconstruction failure at SOD.

Event Name - CFG Read Failure

Event description: Drive failed - reconstruction failure

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - State (0x5)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_FAIL_VDSK_DELAYED - 0x2252

This event occurs when: A specified device is failed during interrupted write processing. SK/ASC/ASCQ = 0x06/0x3F/0x98 will be offloaded for each failing device.

Event Name - Fail Vdisk Delayed

Event description: Drive marked offline during interrupted write

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_VOL_LABEL
```

RecoveryFailureType - N/A

MEL_EV_UNCERTIFIED_DRIVE - 0x2260

This event occurs when: An uncertified drive has been detected in the array.

Event Name - Uncertified Drive

Event description: Uncertified Drive Detected

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_UNCERTIFIED_DRIVE (uncertifiedDrive.html)

MEL_EV_CFG_WRONG_DRIVE_TYPE - 0x2262

This event occurs when: A drive assigned to a volume group is failed, removed, and replaced with a drive that is not the same as the failed drive (for example, a Fibre Channel drive is replaced with a SATA drive).

Event Name - Configuration Wrong Drive Type

Event description: Failed drive replaced with wrong drive type

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_REPLACED_DRIVE_WRONG_TYPE (incorrectDriveType.html)

MEL_EV_RECONFIGURATION_FAILED - 0x2266

This event occurs when: A drive fails during a reconfiguration operation causing the failure of all volumes in the volume group.

Event Name - Reconfiguration Failed

Event description: Volume modification operation failed

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume Group (0x0, 0xE), Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_RETURNCODE
```

RecoveryFailureType - REC_FAILED_MODIFYING_VOLUME (failedModifyingVolume.html)

MEL_EV_INCOMPAT_DRIVE_INVALID_CONFIG - 0x2267

This event occurs when: A drive transitions to incompatible due to a invalid volume group configuration.

Event Name - Incompatible Drive Due To Invalid Configuration

Event description: Incompatible drive due to invalid configuration on drive

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_ADOPTION_FAILED_RAID_LEVEL_UNSUPPORTED (sodAdoptFailUnsupportedRAID.html), REC_DB_ADOPTION_HARD_LIMIT_EXCEEDED (sodAdoptFailHardLimitExceeded.html), REC_DRIVE_INCOMPATIBLE_DOWNREV_DACSTORE (downrevDacstoreIncomplete.html), REC_DRIVE_INCOMPATIBLE_SECTOR_SIZE (sectorSizeIncompatible.html), REC_DRIVE_INCOMPATIBLE_UPREV_DACSTORE (uprevDacstoreIncomplete.html), REC_FOREIGN_DRIVE_INCONSISTENT (pvgFrnDrvInconsConfig.html), REC_FOREIGN_DRIVE_REFERS_TO_NATIVE_DRIVE (pvgFrnDrvRefsNatDrv.html), REC_REPLACED_INSUFFICIENT_DRIVE_CAPACITY (replacedDriveWrongType.html), REC_INCOMPATIBLE_FAILED_LEGACY_DRIVE (pvgFailedLegacyDrive.html), REC_MULTIPLE_CONFIG_DATABASES_DETECTED (sodAdoptFailMultipleConfDBs.html), REC_NATIVE_VG_FOREIGN_DRIVE_MUTUAL_REF (pvgNatVgFrnDrvMutualRef.html), REC_REPLACED_DRIVE_WRONG_TYPE (incorrectDriveType.html), REC_VG_CLONED (pvgVgCloned.html), REC_VG_DRIVE_PART_OF_MULTIPLE_VGS (pvgMultVgsRefFrnDrv1.html), REC_VG_HAS_DRIVE_PART_OF_MULTIPLE_VGS (pvgMultVgsRefFrnDrv2.html), REC_DRIVE_UNSUPPORTED_PROTOCOL_CONNECTION (SATA_unsupported_protocol.html), REC_DRIVE_INCOMPATIBLE_PI_TYPE (driveIncompatiblePIType.html)

MEL_EV_FDE_LOCK_KEY_NEEDED - 0x226B

This event occurs when: A FDE lock key needed.

Event Name - FDE Lock Key Needed

Event description: Security (FDE) key needed

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_LOCK_KEY_NEEDED
```

RecoveryFailureType - REC_SECURITY_GET_KEY (securityGetKey.html)

MEL_EV_CFG_DRIVE_FAILURE - 0x226C

This event occurs when: A drive failure has been detected.

Event Name - Drive Failure

Event description: Drive failure

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DRIVE_FAILED
```

RecoveryFailureType - REC_FAILED_DRIVE (failedDrive.html)

MEL_EV_DRIVE_IN_VG_OR_HOT_SPARE_REMOVED - 0x226D

This event occurs when: A drive that was assigned to a volume group or a hot spare drive that is in use has been removed.

Event Name - Drive In Volume Group Or Hot Spare In Use Removed

Event description: Assigned drive or hot spare-in use drive removed

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Failure (0x2)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_HOTSPARE_DRIVE_MISSING (missingHotSpare.html)

MEL_EV_SSD_AT_END_OF_LIFE - 0x226E

This event occurs when: It is recommended that the customer schedule replacing the SSD immediately or risk having the drive fail.

Event Name - SSD At End Of Life

Event description: Solid state disk drive at end of life

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SSD_AT_END_OF_LIFE (ssdEndOfLife.html)

MEL_EV_DRIVE_UNSUPPORTED_CAPACITY - 0x2271

This event occurs when: The controller firmware detects a drive that has a capacity which is unsupported.

Event Name - Physical Drive Has Unsupported Capacity

Event description: Physical drive has unsupported capacity

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DRIVE_UNSUPPORTED_CAPACITY
(driveUnsupportedDriveCap.html)

MEL_EV_HOT_SPARE_IN_USE - 0x2273

This event occurs when: Information not available.

Event Name - Hot Spare In Use

Event description: Hot spare in use

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_VOLUME_HOT_SPARE_IN_USE (volumeHotSpareInUse.html)

MEL_EV_VOLUME_GROUP_MISSING - 0x2274

This event occurs when: A volume group has gone to the missing state because all drives from the group have been removed.

Event Name - Volume Group Missing

Event description: Component is missing

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume Group (0x0, 0xE), Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_VOLUME_GROUP_MISSING (missingVGorDP.html)

MEL_EV_VOLUME_GROUP_INCOMPLETE - 0x2275

This event occurs when: A volume group becomes incomplete because one or more drives in the group have been removed.

Event Name - Volume Group Incomplete

Event description: Component incomplete

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume Group (0x0, 0xE), Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_VOLUME_GROUP_INCOMPLETE (incompleteVGorDP.html)

MEL_EV_DRIVE_UNSUP_INTERPOSER_FW_VER - 0x2276

This event occurs when: The firmware version in an interposer is incompatible with the drive behind the interposer. New interposer firmware is necessary.

Event Name - Interposer FW Version Unsupported

Event description: Interposer FW version unsupported

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DRIVE_UNSUPPORTED_INTERPOSER_FW_VERSION (driveUnsupportedInterposerFWVersion.html)

MEL_EV_INCOMPATIBLE_ALIGNMENT_FOR_EMULATION_DRIVE - 0x2278

This event occurs when: Locking out an emulation drive that has a non-zero lowest aligned LBA. An emulation drive is one in which the logical and physical block sizes are not identical and therefore emulates the logical block size.

Event Name - Incompatible Alignment for Emulation Drive

Event description: Incompatible alignment for emulation drive

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_NON_ZERO_LOWEST_ALIGNED_LBA
```

RecoveryFailureType - REC_DRIVE_INCOMPATIBLE_ALIGNMENT_FOR_EMULATION_DRIVE (incompatibleDriveAlignment.html)

MEL_EV_COPY_THEN_FAIL_NO_SPARE - 0x227C

This event occurs when: The controller detects an impending drive failure but is unable to trigger an automatic drive copy operation because there is not an eligible copy destination available.

Event Name - Copy Then Fail No Spare

Event description: Waiting for eligible copy destination to start drive copy

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DRIVE_COPY_INFORMATION
```

RecoveryFailureType - REC_COPY_THEN_FAIL_WAITING_ON_HOT_SPARE
(impendingDriveFailurePending.html)

MEL_EV_DRIVE_PFA2 - 0x2285

This event occurs when: This event is logged when a PFA condition has been detected but an automatic drive copy operation will not be initiated because of the configuration settings or current volume state.

Event Name - Drive PFA 2

Event description: Impending drive failure detected by drive

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_IMPENDING_DRIVE_FAILURE_RISK_HIGH
(impendingDriveFailureHigh.html), REC_IMPENDING_DRIVE_FAILURE_RISK_MED
(impendingDriveFailureMed.html)

MEL_EV_CFG_NTP_RES - 0x2287

This event occurs when: The controller was unable to resolve an IP address for the given domain name of the NTP server using the administered primary or secondary DNS.

Event Name - Primary/Secondary NTP Server Domain Name Resolution Failure

Event description: A NTP domain server name is either invalid or the configured primary or secondary DNS servers are unreachable

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_NET_NTP_RESOLUTION_FAIL
(UnableToResolveNTPAddress.html)

MEL_EV_CFG_NTP_UNREACH - 0x2288

This event occurs when: The controller was unable to reach an NTP server's resolved or configured IP address.

Event Name - Primary/Secondary NTP Server Unreachable

Event description: Either the NTP server's resolved or configured IP address is wrong or the IP address is unavailable via the attached network

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_NET_NTP_QUERY_FAIL (ntpQueryFailed.html)

MEL_EV_CFG_NTP_SERVICE_UNAVAIL - 0x2289

This event occurs when: All SNTP queries to the configured Primary and Secondary NTP Servers have failed.

Event Name - NTP Service Unavailable

Event description: The DNS/NTP configuration on this controller is either incorrect or all the NTP servers are unreachable over the network

Event Group - Configuration Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_NET_NTP_SERVICE_UNAVAILABLE
(ntpServiceUnavailable.html)

MEL_EV_SBB_VALIDATION_FAIL_FOR_POWER_SUPPLY - 0x2302

This event occurs when: A power supply fails the validation for Storage Bridge Bay.

Event Name - SBB Validation Failure For Power Supply

Event description: SBB validation failure for power supply

Event Group - SBB Validation

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Power Supply (0x0, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_INVALID_POWER_SUPPLY (invalidPowerSupply.html)

MEL_EV_SBB_MISMATCHED_ENCL_EEPROM_CONTENTS - 0x2303

This event occurs when: The contents of the EEPROMs on the midplanes are not matched.

Event Name - Mismatched Midplane EEPROM Contents

Event description: Mismatched midplane EEPROM contents

Event Group - SBB Validation

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_TRAY_ID
```

RecoveryFailureType - REC_MISMATCHED_MIDPLANE_EEPROMS
(mismatched_midplane_eeproms.html)

MEL_EV_SBB_TWO_WIRE_INTERFACE_BUS_FAILURE - 0x2304

This event occurs when: A failure is detected on the two wire interface bus.

Event Name - Two Wire Interface Bus Failure

Event description: Two wire interface bus failure

Event Group - SBB Validation

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_TRAY_ID
```

RecoveryFailureType - REC_FAILED_I2C_BUS (failed_i2c_bus.html)

MEL_EV_SBB_VPD_EEPROM_CORRUPTION - 0x2305

This event occurs when: VPD data in the Storage Bridge Bay EEPROM is corrupted.

Event Name - VPD EEPROM Corruption

Event description: VPD EEPROM corruption

Event Group - SBB Validation

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_TRAY_ID
```

RecoveryFailureType - REC_CORRUPT_VPD_EEPROM (corrupt_vpd_eeprom.html)

MEL_EV_CONTROLLER - 0x2500

This event occurs when: A controller is removed from an array configured to use dual controllers.

Event Name - Controller Removed

Event description: Controller removed

Event Group - Hot Swap

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_REMOVED_CONTROLLER (removedCtrl.html)

MEL_EV_ACS_ERROR - 0x2602

This event occurs when: An auto code synchronization failed.

Event Name - ACS Error

Event description: Automatic controller firmware synchronization failed

Event Group - Start of Day

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_PERSIST_MPE - 0x2604

This event occurs when: A SOD detects that the persistent memory parity error state has been set. RPA memory has reported a persistent error, this generally results in a lock-down.

Event Name - Persistent Memory Parity Error

Event description: Persistent controller memory parity error

Event Group - Start of Day

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_SOD_FDE_INCONSISTENT_ARRAY_LOCK_KEY - 0x2607

This event occurs when: An inconsistent array lock key situation is detected.

Event Name - FDE Inconsistent Array Lock Key

Event description: Inconsistent security (FDE) storage array lock key

Event Group - Start of Day

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SECURITY_KEY_INCONSISTENT
(fdeInconsistentSecurityKey.html)

MEL_EV_MULTIPLE_MISMATCHED_KEY_IDS - 0x2705

This event occurs when: Multiple mismatched drive lock key ids are detected by the firmware.

Event Name - Multiple Mismatched Key Ids Found

Event description: Multiple mismatched key ids found

Event Group - Start of Day

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MULTIPLE_MISMATCHED_KEY_IDS_FOUND
(multiMismatchKeyIDs.html)

MEL_EV_ON_BATTERY - 0x2801

This event occurs when: A UPS battery starts to supply power to the subsystem.

Event Name - On Battery

Event description: Storage array running on UPS battery

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_UPS_ON_BATTERY (lostACPower.html)

MEL_EV_UPS_BATTERY_2MIN - 0x2803

This event occurs when: A UPS battery has transitioned and given the 2 minute warning. The UPS has signaled that it has 2 minutes of power left before failing. The controllers will flush any dirty data in their caches and turn off data caching.

Event Name - UPS Battery 2 Minute Warning

Event description: UPS battery - two minutes to failure

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_LINE_MISSING - 0x280A

This event occurs when: An expected subsystem line is removed.

Event Name - Line Missing

Event description: Controller tray component removed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_REMOVED_SUPPORT_CRU (removedSupportCRU.html)

MEL_EV_LINE_FAILED - 0x280B

This event occurs when: A subsystem line has transitioned to the Failed state.

Event Name - Line Failed

Event description: Controller tray component failed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_FAILED_ICC_CRU (failedInterconnectCRU.html), REC_SUPPORT_CRU_NOINPUT (supportCRUNoInput.html)

MEL_EV_ENCL_FAIL - 0x280D

This event occurs when: An enclosure has transitioned to the Failed state.

Event Name - Enclosure Fail

Event description: Drive tray component failed or removed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_FAN_UNKNOWN_STAT (unknownCompStatus.html), REC_REMOVED_ESM (removedEsm.html), REC_SUPPORT_CRU_NOINPUT (supportCRUNoInput.html)

MEL_EV_ENCL_ID_CONFLICT - 0x2816

This event occurs when: A controller detects duplicate drive tray IDs in the subsystem.

Event Name - Enclosure ID Conflict

Event description: Tray ID conflict - duplicate IDs across drive trays

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_TRAYID_CONFLICT (trayIdConflict.html)

MEL_EV_TEMP_SENSOR_WARNING - 0x281B

This event occurs when: A controller detects that a temperature sensor has transitioned to a warning status.

Event Name - Temperature Sensor Warning

Event description: Nominal temperature exceeded

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_NOMINAL_TEMP_EXCEEDED (nominalTempExceeded.html)

MEL_EV_TEMP_SENSOR_FAIL - 0x281C

This event occurs when: A controller detects that a temperature sensor has transitioned to a failed status.

Event Name - Temperature Sensor Failed

Event description: Maximum temperature exceeded

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_MAX_TEMP_EXCEEDED (maxTempExceeded.html)

MEL_EV_TEMP_SENSOR_MISSING - 0x281D

This event occurs when: A controller detects that a temperature sensor is missing. This event is logged in the temp sensor is missing which means an SES in an enclosure is missing. The user should check the enclosure to make sure both SES components are installed. A different event is A temp sensor is present but failed.

Event Name - Temperature Sensor Missing

Event description: Temperature sensor removed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_REMOVED_TEMP_SENSOR (removedSupportCRU.html)

MEL_EV_ESM_VERSION_MISMATCH - 0x281E

This event occurs when: A controller detects that two IOMs (ESMs) do not have the same version of firmware running.

Event Name - ESM Version Mismatch

Event description: IOM (ESM) firmware mismatch

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_ESM_CODE_VERSION_MISMATCH (trayCodeMismatch.html)

MEL_EV_BYPASS_GENERIC - 0x2823

This event occurs when: A drive is bypassed on both ports.

Event Name - Bypass Generic

Event description: Drive by-passed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_DRIVE_BYPASSED_CAUSE_UNKNOWN (bypassedDrive.html)

MEL_EV_CONT_REDUNDANCY_LOSS - 0x2829

This event occurs when: An array determines that one controller is in a failed mode.

Event Name - Cont Redundancy Loss

Event description: Controller redundancy lost

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_TRAY_REDUNDANCY_LOSS - 0x282B

This event occurs when: A drive tray path fails.

Event Name - Tray Redundancy Loss

Event description: Drive tray path redundancy lost

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_LOST_REDUNDANCY_TRAY (noRedundancyTray.html)

MEL_EV_DRIVE_REDUNDANCY_LOSS - 0x282D

This event occurs when: An array determines that a loss of drive path redundancy is a persistent condition.

Event Name - Drive Redundancy Loss

Event description: Drive path redundancy lost

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_DRIVE_BYPASSED_SINGLE_PORT (bypassedDrive.html), REC_LOST_REDUNDANCY_DRIVE (noRedundancyDrive.html)

MEL_EV_UNSUPPORTED_LHA_SATA_ESM - 0x282F

This event occurs when: A firmware download to an IOM (ESM) fails because the IOM (ESM) firmware is not compatible with the version of controller firmware on the storage array.

Event Name - Unsupported LHA SATA ESM Detected

Event description: Incompatible version of IOM (ESM) firmware detected

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_ESM_HARDWARE_MISMATCH (ESMHwMismatch.html)

MEL_EV_MIXED_DRIVE_TYPES_NOT_ALLOWED - 0x2830

This event occurs when: Logged for two reasons: (1) when mixed drive types are not supported and (2) when firmware determines that a mixture of physical drive types is present, Mixed Drive Types is configured as a premium feature, and MDT has not been enabled..

Event Name - Mixed Drive Types Not Allowed

Event description: Mixed drive types out of compliance

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MISMATCHED_DRIVE_TYPE (mixedDrivesNotSupported.html)

MEL_EV_UNCERTIFIED_ESM - 0x2831

This event occurs when: An uncertified IOM (ESM) is discovered in a drive enclosure.

Event Name - Uncertified ESM

Event description: Uncertified IOM (ESM) detected

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_UNCERTIFIED_ESM (uncertifiedESM.html)

MEL_EV_DRIVE_TRAY_LOCKOUT - 0x2832

This event occurs when: Both ESMs in the tray are uncertified, or there is only one ESM in the tray, and it is uncertified.

Event Name - Drive Tray Lockout

Event description: Uncertified drive tray detected

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_UNSUPPORTED_TRAY (unsupportedDriveTray.html)

MEL_EV_CONT_ID_MISMATCH - 0x2833

This event occurs when: Either the base controller or the host interface card is found to be different between the primary and the alternate controller in a storage array.

Event Name - Mismatched Controller Types

Event description: Controller host interface card ID mismatch

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CTL_MISMATCH (ctrlMismatch.html)

MEL_EV_DRIVE_TRAYS_NOT_GROUPED_TOGETHER - 0x2835

This event occurs when: A storage array configuration requires drive trays to be sequentially cabled together, but they are not.

Event Name - Drive Trays Not Grouped Together

Event description: Drive trays not cabled correctly

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DRIVE_TRAYS_NOT_GROUPED_TOGETHER
(driveTrayCluster.html)

MEL_EV_DISCRETE_LINE_FAIL - 0x2836

This event occurs when: A discrete line test has failed, due to either a fault Controller or a faulty Interconnect Module.

Event Name - Discrete Line Failure

Event description: Discrete lines diagnostic failure

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_I2C_VALUE
```

RecoveryFailureType - REC_FAILED_DISCRETE_LINE (discreteLineFailed.html)

MEL_EV_ICC_REMOVED - 0x2838

This event occurs when: An interconnect or battery canister is removed from the controller enclosure.

Event Name - Interconnect CRU Removed

Event description: Interconnect/battery canister removed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Interconnect-battery canister pack (0x2, 0x0)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_REMOVED_ICC_CRU (removedInterconnectCRU.html)

MEL_EV_POWER_SUPPLY_FAIL - 0x283B

This event occurs when: A power supply fails.

Event Name - Power Supply Failure

Event description: Power supply failed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Power Supply (0x0, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_FAILED_POWER_SUPPLY (failedPowerSupply.html)

MEL_EV_CONT_SUBMODEL_MISMATCH - 0x2841

This event occurs when: An alternate controller has performed a self-lockdown due to an unsupported or mismatched sub-model identifier.

Event Name - Controller Submodel Mismatch

Event description: Controller submodel mismatch

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SUBMODEL_MISMATCH (ctrlMismatch.html)

MEL_EV_ESM_TYPE_MISMATCH - 0x2849

This event occurs when: A controller detects an IOM (ESM) hardware mismatch in an enclosure in the storage array.

Event Name - ESM Type Mismatch

Event description: IOM (ESM) Hardware mismatch

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Tray Component (ESM, GBIC/SFP, Power Supply, or Fan) (0x0, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_ESM_HARDWARE_MISMATCH (ESMHwMismatch.html)

MEL_EV_LINK_SPEED_SWITCH_CHANGE - 0x284B

This event occurs when: A controller detects that an ESM hardware mismatch condition has been cleared.

Event Name - Link Speed Switch Change

Event description: Link Speed (data rate) switch position has changed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_REDUNDANT_PS_REQUIRED - 0x284E

This event occurs when: A controller discovers a fan-only CRU in an enclosure that requires, for redundancy reasons, the power supply/fan combination CRU. This event will only be logged once when the condition occurs.

Event Name - Redundant Power Supply Required

Event description: Redundant power-fan canisters required - only one power-fan canister detected

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Power Supply (0x0, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_REDUNDANT_PS_REQUIRED (noRedundancyPowerFanPS.html)

MEL_EV_INVALID_ENCLOSURE_SETTING - 0x284F

This event occurs when: Needed.

Event Name - Invalid Enclosure Setting

Event description: Misconfigured tray

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_ENCLOSURE_MISCONFIGURED (misconfiguredTray.html)

MEL_EV_FACTORY_DEFAULT_MISMATCH - 0x2852

This event occurs when: Two IOMs (ESMs) in an enclosure report different factory default VPD data, and the automated correction of this condition is unsuccessful.

Event Name - Factory Def Mismatch

Event description: IOM (ESM) configuration settings version mismatch

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_EDL_MEL_SWAPPED_B
```

RecoveryFailureType - REC_ESM_FACTORY_DEFAULTS_MISMATCH
(esmConfigSettingsMismatch.html)

MEL_EV_ESM_DRIVE_BYPASS - 0x2854

This event occurs when: A Fibre Channel drive port is bypassed by an ESM because the error thresholds have been exceeded.

Event Name - ESM Drv Bypass

Event description: Drive port bypassed - Error thresholds exceeded

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DRIVE_FAULT
```

RecoveryFailureType - REC_DRIVE_BYPASSED_SINGLE_PORT (bypassedDrive.html)

MEL_EV_CONT_ID_READ_FAILURE - 0x2855

This event occurs when: An alternate controller board ID cannot be read.

Event Name - Alternate Board Controller ID Cannot Be Read

Event description: Controller cannot read alternate controller board ID

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_ALT_CTLR_BOARD_ID_UNREADABLE (ctrlNoIdentifier.html)

MEL_EV_DRAWER_FAILED - 0x2856

This event occurs when: A drawer has failed and is inoperable. The drives in this drawer are not accessible.

Event Name - Drawer Failed

Event description: Drawer failed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drawer (0x3, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_DRAWER_FAILED (failedDrawer.html)

MEL_EV_DRAWER_OPEN - 0x2857

This event occurs when: A drawer has been opened or removed.

Event Name - Drawer Open Or Removed

Event description: Drawer open or removed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drawer (0x3, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_DRAWER_OPENED (missingDrawer.html)

MEL_EV_EXPANSION_TRAY_THERMAL_SHUTDOWN - 0x285D

This event occurs when: An expansion tray is shutdown for thermal reasons.

Event Name - Expansion Tray Thermal Shutdown

Event description: Expansion tray thermal shutdown

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_TRAYNUMBER
```

RecoveryFailureType - REC_ENCLOSURE_THERMAL_SHUTDOWN (thermal_shutdown.html)

MEL_EV_DRAWER_DEGRADED - 0x285F

This event occurs when: Either DCM on the drawer has failed, the drawer is marked as degraded. The drawer needs to be serviced but one DCM is still operational, allowing continued IO to the drives on the drawer. If both DCMs fail, the drawer is marked as failed.

Event Name - Drawer Degraded

Event description: A drawer in the tray has become degraded

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drawer (0x3, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_DCMM_DRAWER_PATH_FAIL
```

RecoveryFailureType - REC_DRAWER_DEGRADED (degradedDrawer.html)

MEL_EV_DRAWER_INVALID - 0x2861

This event occurs when: An invalid drawer has been detected inside the drive enclosure.

Event Name - Drawer Invalid

Event description: A drawer has been detected that is not valid

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drawer (0x3, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_DRAWER_INVALID (invalidDrawerType.html)

MEL_EV_DRAWER_REMOVED - 0x2862

This event occurs when: A drawer has been removed.

Event Name - Drawer Removed

Event description: A drawer has been removed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Drawer (0x3, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_SLOTNUMBER
```

RecoveryFailureType - REC_DRAWER_REMOVED (removedDrawer.html)

MEL_EV_HOST_SFP_FAILED - 0x2863

This event occurs when: The host-side SFP has failed. It could be failed because it is the wrong type for the protocol in use.

Event Name - Host SFP Removed

Event description: Host-side SFP failed

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller SFP (0x2, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FAILED_TRANSCEIVER_MODULE (failedGbic.html)

MEL_EV_HOST_SFP_UNSUPPORTED - 0x2864

This event occurs when: The wrong type of host-side SFP has been installed for the protocol in use

Event Name - Host SFP Unsupported

Event description: Host-side SFP unsupported

Event Group - Sub System Monitor

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller SFP (0x2, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FAILED_TRANSCEIVER_MODULE (failedGbic.html)

MEL_EV_ICM_ENTERING_INVALID_SYSTEM_CONFIG - 0x2900

This event occurs when: The system enters an invalid configuration state as well as every 24 hours if the system remains in that state. When the system is in an invalid configuration state, no configuration changes are allowed -- no new volumes can be created, no new snapshots, no changes of any kind. IO can still be performed to existing user data. Use the recovery guru to correct the invalid configuration state.

Event Name - Entering Invalid System Configuration

Event description: Entering invalid system configuration

Event Group - ICM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_FLASH_CACHE_FAILED_CACHE_SIZE_MISMATCH - 0x3604

This event occurs when: An SSD cache fails due to cache size mismatch on the two controllers.

Event Name - SSD Cache Failed Cache Size Mismatch

Event description: SSD cache failed due to cache size mismatch on the two controllers

Event Group - Flash Cache

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Unknown (0x0)

Event Component Type - SSD Cache (0x3, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CACHE_MEM_SIZE_MISMATCH (cacheMismatch.html)

MEL_EV_FLASH_CACHE_NON_OPTIMAL_DRIVES - 0x3605

This event occurs when: An SSD cache has associated non-optimal drives.

Event Name - SSD Cache Non-Optimal Drives

Event description: SSD cache has associated non-optimal drives

Event Group - Flash Cache

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Unknown (0x0)

Event Component Type - SSD Cache (0x3, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FLASH_CACHE_NON_OPTIMAL_DRIVES
(nonOptimalFCdrive.html)

MEL_EV_DISK_POOL_REC_RDRVCNT_BEL_THRSHLD - 0x3803

This event occurs when: An available space reserved for reconstructions within a disk pool falls below the reconstruction reserved disk count value. This occurs when failed drives are rebuilt and use reserved space.

Event Name - Disk Pool Reconstruction Reserved Drive Count Below Threshold

Event description: Disk pool reconstruction reserved drive count is below threshold

Event Group - Disk Pool

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_RETURNCODE
```

RecoveryFailureType -
REC_DISK_POOL_RECONSTRUCTION_DRIVE_COUNT_BELOW_THRESHOLD
(reservedDriveCountBelowThreshold.html)

MEL_EV_DISK_POOL_UTILIZATION_WARNING - 0x3804

This event occurs when: A pool utilization surpasses the pool utilization warning threshold.

Event Name - Disk pool utilization warning

Event description: Disk pool utilization exceeded the warning threshold

Event Group - Disk Pool

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_RETURNCODE
```

RecoveryFailureType - REC_DISK_POOL_UTILIZATION_WARNING
(diskPoolCapacityWarning.html)

MEL_EV_DISK_POOL_UTILIZATION_CRITICAL - 0x3805

This event occurs when: A disk pool utilization surpasses the pool utilization critical threshold.

Event Name - Disk Pool Utilization Critical

Event description: Disk pool utilization exceeded the critical threshold

Event Group - Disk Pool

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DISK_POOL_UTILIZATION_CRITICAL
(diskPoolCapacityCritical.html)

MEL_EV_DISK_POOL_CAPACITY_DEPLETED - 0x3809

This event occurs when: A disk pool has completely run out of capacity. This is typically seen when reconstruction operations consume all of the capacity while trying to recover from drive failures.

Event Name - Disk Pool Capacity Depleted

Event description: All of the disk pool's free capacity has been used

Event Group - Disk Pool

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Disk Pool (0x3, 0x2)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_RETURNCODE
```

RecoveryFailureType - REC_DISK_POOL_CAPACITY_DEPLETED (diskPoolCapacityFull.html)

MEL_EV_DISK_POOL_INSUFFICIENT_MEMORY - 0x380C

This event occurs when: A disk pool configuration has insufficient memory.

Event Name - Disk Pool Insufficient Memory

Event description: Disk pool configuration has insufficient memory

Event Group - Disk Pool

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DISK_POOL_INSUFFICIENT_MEMORY
(diskPoolInsuffMemory.html)

MEL_EV_DISK_POOL_CORRUPTED_DB_RECORD - 0x380D

This event occurs when: A disk pool corrupts database record.

Event Name - Disk Pool Corrupted DB Record

Event description: Disk pool has corrupted database record

Event Group - Disk Pool

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_VOL_XFER_ALERT - 0x4011

This event occurs when: A "volume not on preferred path" condition persists longer than the alert delay period. Some OEM customers classify this as an informational event, others as a critical event.

Event Name - Vol Xfer Alert

Event description: Volume not on preferred path due to AVT/RDAC failover

Event Group - RDAC, Quiescence and ICON Mgr

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_SYMBOL_CONT_FAIL - 0x5005

This event occurs when: Logged on entry to setControllerToFailed_1.

Event Name - Set Controller Failed

Event description: Place controller offline

Event Group - SYMbol Server

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Command (0x3)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_CONTROLLER_NUMBER
```

RecoveryFailureType - N/A

MEL_EV_SYMBOL_AUTH_FAIL_CONT_LOCKOUT - 0x5038

This event occurs when: A lockout state has been entered.

Event Name - SYMbol Auth Fail Cont Lockout

Event description: Storage array 10-minute lockout; maximum incorrect passwords attempted

Event Group - SYMbol Server

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AUTH_DATA
```

RecoveryFailureType - N/A

MEL_EV_SYMBOL_CONT_SERVICE_MODE - 0x5040

This event occurs when: A controller is placed in service mode.

Event Name - SYMbol Cont Service Mode

Event description: Place controller in service mode

Event Group - SYMbol Server

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Command (0x3)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_SYMBOL_DATA_CONTROLLER_NUMBER
```

RecoveryFailureType - N/A

MEL_EV_LOCK_KEY_VALID_ATTEMPTS_EXCEEDED - 0x506D

This event occurs when: The number of attempts to validate the lock key has exceeded the threshold.

Event Name - Lock Key Failed Validation Attempts Exceeded

Event description: Security (FDE) key failed validation attempts due to excessive tries

Event Group - SYMbol Server

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Command (0x3)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SECURITY_KEY_VALIDATION_LOCK
(securityKeyValidationLock.html)

MEL_EV_BASE_CONTROLLER_DIAGNOSTIC_FAILED - 0x5100

This event occurs when: One or more diagnostic tests detects that one or more component within the base controller is not functioning as desired.

Event Name - Base Controller Diagnostic Failed

Event description: Base controller diagnostic failed

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_CONTROLLER_ID
```

RecoveryFailureType - REC_BASE_CONTROLLER_DIAG_FAILED (offlineCtl.html)

MEL_EV_IOC_CONTROLLER_FAILURE - 0x5101

This event occurs when: One or more diagnostic tests detected that one or more component on the alternate controller is not functioning as desired. As a result, the alternate controller is locked down.

Event Name - Base Controller Diagnostic On Alternate Controller Failed

Event description: Base controller diagnostic on alternate controller failed

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_IOC_DIAG_FAIL (ctrlIocDiagFailed.html)

MEL_EV_IOC_FAILURE - 0x5102

This event occurs when: An IOC diagnostic test has detected a failure. As a result, the controller is locked down.

Event Name - IOC Fault Diagnostic Failure

Event description: IOC fault diagnostic failure has been detected

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_CONTROLLER_ID
```

RecoveryFailureType - REC_IOC_DIAG_FAIL (ctrlIocDiagFailed.html)

MEL_EV_SAS_PHY_DISABLED_BYPASSED_PORT - 0x5103

This event occurs when: One of the PHYs on a wide port is disabled. The wide ports are used only between the IOC and either the local or the partner controller's expander. The bad hardware would be one of the controllers or the mid-plane.

Event Name - SAS PHY Disabled Bypassed Port

Event description: SAS PHY disabled bypassed port

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Failure (0x2)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SASFI_PHY_ERROR_BCAST
```

RecoveryFailureType - N/A

MEL_EV_SAS_PHY_DISABLED_BYPASSED_DRIVE - 0x5104

This event occurs when: A PHY that is connected to a drive is disabled. The error could be in the expander or drive. This event is generated only when the controller disables a PHY not the ESM. The easiest replacement option is the drive, so it should be called out as the first choice for replacement.

Event Name - SAS PHY Disabled Bypassed Drive

Event description: SAS PHY disabled bypassed drive

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Failure (0x2)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SASFI_PHY_ERROR_BCAST
```

RecoveryFailureType - N/A

MEL_EV_SAS_PHY_DISABLED_LOCAL_WIDE_PORT - 0x5105

This event occurs when: A bad SAS PHY has disabled the local wide port.

Event Name - SAS PHY Disabled Local Wide Port

Event description: SAS PHY disabled local wide port

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SASFI_PHY_ERROR_PHYNUM
```

RecoveryFailureType - REC_SAS_PHY_DISABLED_LOCAL_WIDE_PORT_DEGRADED
(chanSASPhyDisabledLocalWidePortDegraded.html)

MEL_EV_SAS_PHY_DISABLED_SHARED_WIDE_PORT - 0x5106

This event occurs when: A bad SAS PHY has disabled a shared wide port.

Event Name - SAS PHY Disabled Shared Wide Port

Event description: SAS PHY disabled shared wide port

Event Group - Base Controller Diagnostic

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Channel (0x0, 0x6)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SASFI_PHY_ERROR_PHYNUM
```

RecoveryFailureType - REC_SAS_PHY_DISABLED_SHARED_WIDE_PORT_DEGRADED
(chanSASPhyDisabledSharedWidePortDegraded.html)

MEL_EV_SPM_INVALID_HOST_OS_INDEX_DETECTED - 0x5222

This event occurs when: A host index has been detected that is considered to be invalid due to NVSRAM settings.

Event Name - Invalid Host OS Index Detected

Event description: Invalid host OS index detected

Event Group - SPM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Host (0x2, 0xF)

Event Specific Data - Optional data is provided with this event.

```
MEL_SPM_DATA_NOTIFY_INVALID_OSINDEX
```

RecoveryFailureType - REC_INVALID_HOST_TYPE_INDEX (invalidHostType.html)

MEL_EV_SPM_INVALID_DEFAULT_OS_INDEX_DETECTED - 0x5223

This event occurs when: The default OS index is invalid.

Event Name - Invalid Default OS Index Detected

Event description: Invalid default OS index detected

Event Group - SPM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Relative (0x0, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_SPM_DATA_NOTIFY_INVALID_OSINDEX
```

RecoveryFailureType - REC_INVALID_HOST_TYPE_INDEX (invalidHostType.html)

MEL_EV_INACTIVE_HOST_PORT_REGISTERED - 0x5224

This event occurs when: A Host Context Agent (HCA) attempted to register a host port associated with a host that already has storage partition mappings. The host port was consequently marked inactive and can be activated through the storage management software or CLI.

Event Name - Inactive Host Port Registered

Event description: Inactive host port registered

Event Group - SPM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Host Port (0x0, 0xF)

Event Specific Data - Optional data is provided with this event.

```
MEL_SPM_DATA_HCA_REGISTRATION
```

RecoveryFailureType - REC_INACTIVE_HOST_PORT

MEL_EV_INACTIVE_INITIATOR_REGISTERED - 0x5225

This event occurs when: A Host Context Agent (HCA) attempted to register an iSCSI initiator associated with a host that already has storage partition mappings. The iSCSI initiator was consequently marked inactive and can be activated through the storage management software.

Event Name - Inactive Initiator Registered

Event description: Inactive initiator registered

Event Group - SPM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - iSCSI Initiator (0x2, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_SPM_DATA_HCA_REGISTRATION
```

RecoveryFailureType - REC_INACTIVE_INITIATOR (inactiveHostIdentifier.html)

MEL_EV_SAFE_NON_COMPLIANCE - 0x5402

This event occurs when: There are features enabled that have not been purchased.

Event Name - Non-Compliance

Event description: Premium feature out of compliance

Event Group - SAFE

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Relative (0x0, 0x0)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_EXTERNAL_KMS_NOT_COMPLIANT
(extKMSNonCompliant.html)

MEL_EV_SAFE_TIER_NON_COMPLIANCE - 0x5403

This event occurs when: The limits of a premium feature have been exceeded (e.g. 6 storage partitions mapped when 4 have been purchased).

Event Name - Tier Non-Compliance

Event description: Premium feature exceeds limit

Event Group - SAFE

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Relative (0x0, 0x0)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SNAPSHOT_NOT_COMPLIANT (nonCompliantSnapshot.html)

MEL_EV_SAFE_MISMATCHED_GK_DEP - 0x5405

This event occurs when: Each controller of the pair has a different setting for the NVSRAM bit that controls whether or not the controller is subject to Gold Key restrictions. When this condition is detected, both controllers are treated as though they are subject to the restrictions.

Event Name - Mismatched Gold Key Settings

Event description: Gold Key - mismatched settings

Event Group - SAFE

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Relative (0x0, 0x0)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MISMATCHED_GOLD_KEY_SETTINGS

MEL_EV_SAFE_MISMATCHED_MDT_DEP - 0x5406

This event occurs when: Each controller of the pair has a different setting for the NVSRAM bit that controls whether or not Mixed Drive Types is a premium feature. When this condition is detected, both controllers are treated as though MDT is a premium feature.

Event Name - Mismatched Mixed Drive Type Settings

Event description: Mixed drive types - mismatched settings

Event Group - SAFE

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Relative (0x0, 0x0)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MISMATCHED_MDT_SETTINGS

MEL_EV_SAFE_EVAL_EXPIRATION_IMMINENT - 0x5409

This event occurs when: The trial period for a feature license is very near expiration.

Event Name - Feature Evaluation Period Expiration Is Imminent

Event description: Feature evaluation period expiration is imminent

Event Group - SAFE

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Relative (0x0, 0x0)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_EVAL_MEL_DATA
```

RecoveryFailureType - REC_EVALUATION_LICENSE_EXPIRATION_IMMINENT
(featureTrialNearExpiration.html)

MEL_EV_DIAG_READ_FAILURE - 0x560D

This event occurs when: Runtime Diagnostics Read test failed on this controller.

Event Name - Runtime Diagnostics error Diagnostic read test failed

Event description: Diagnostics read test failed on controller

Event Group - Runtime Diagnostics

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DIAG_TEST_ID
```

RecoveryFailureType - N/A

MEL_EV_DIAG_READ_FAILURE_ALT - 0x560E

This event occurs when: Runtime Diagnostics Read test failed on the alternate controller.

Event Name - Runtime Diagnostics error Diagnostic read failure on alternate controller

Event description: This controller's alternate failed diagnostics read test

Event Group - Runtime Diagnostics

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DIAG_WRITE_FAILURE - 0x560F

This event occurs when: Runtime Diagnostics Write test failed on this controller.

Event Name - Runtime Diagnostics error Diagnostic write test failed

Event description: Diagnostics write test failed on controller

Event Group - Runtime Diagnostics

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DIAG_TEST_ID
```

RecoveryFailureType - N/A

MEL_EV_DIAG_WRITE_FAILURE_ALT - 0x5610

This event occurs when: Runtime Diagnostics Write test failed on the alternate controller.

Event Name - Runtime Diagnostics error Diagnostic write test failed on alternate controller

Event description: This controller's alternate failed diagnostics write test

Event Group - Runtime Diagnostics

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DIAG_CONFIG_ERR - 0x5616

This event occurs when: A configuration error occurs on this controller for running diagnostics.

Event Name - Runtime Diagnostics error Configuration error

Event description: Diagnostics rejected configuration error on controller

Event Group - Runtime Diagnostics

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DIAG_CONFIG_ERR_ALT - 0x5617

This event occurs when: A configuration error of the alternate controller occurs for running diagnostics.

Event Name - Runtime Diagnostics error Alternate controller configuration error

Event description: Diagnostics rejected - configuration error on this controller's alternate

Event Group - Runtime Diagnostics

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DIAG_TEST_ID
```

RecoveryFailureType - N/A

MEL_EV_DBM_CONFIG_DB_FULL - 0x6101

This event occurs when: An internal configuration database is full. This error has never been reported. If this were to occur, the system would operate normally but no configuration changes that created additional objects would be allowed. The customer should contact support if this event is logged. There is no recovery action for the customer.

Event Name - DBM Config DB Full

Event description: Internal configuration database full

Event Group - Hierarchical Config DB

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DBM_HCK_ALTCTL_NOT_FUNC - 0x6107

This event occurs when: A controller's alternate is non-functional and is being held in reset.

Event Name - DBM Hck Altctl Not Func

Event description: This controller's alternate is non-functional and is being held in reset

Event Group - Hierarchical Config DB

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_OFFLINE_CTL (offlineCtl.html)

MEL_EV_DATABASE_RECOVERY_MODE_ACTIVE - 0x6109

This event occurs when: The controller is booting up in database recovery mode, with no configuration. The backup database images are locked in read-only mode. The storage administrator is expected to recreate the configuration, using the database backup images.

Event Name - Database is in recovery mode

Event description: The controller is booting up in database recovery mode

Event Group - Hierarchical Config DB

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DATABASE_RECOVERY_MODE (configDbRecoveryMode.html)

MEL_EV_MIRROR_DUAL_PRIMARY - 0x6400

This event occurs when: There is a conflict over the primary volume. Since both sides of the mirrored pair are in the same Primary role, both storage arrays will report this MEL event.

Event Name - Mirror Dual Primary

Event description: Dual primary volume conflict

Event Group - Mirroring

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MIRROR_DUAL_PRIMARY (mirrorDualPrimary.html)

MEL_EV_MIRROR_DUAL_SECONDARY - 0x6401

This event occurs when: There is a conflict over the secondary volume. Since both sides of the mirrored pair are in the same Secondary role, both storage arrays will report this MEL event.

Event Name - Mirror Dual Secondary

Event description: Dual secondary volume conflict

Event Group - Mirroring

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MIRROR_DUAL_SECONDARY (mirrorDualSecondary.html)

MEL_EV_MIRROR_UNSYNCHRONIZED - 0x6402

This event occurs when: A mirror state transitions to the unsynchronized state from either the synchronizing or optimal state.

Event Name - Mirror Unsynchronized

Event description: Data on mirrored pair unsynchronized

Event Group - Mirroring

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MIRROR_UNSYNCHRONIZED (mirrorUnsync.html)

MEL_EV_RVM_WRITE_MODE_INCONSISTENT - 0x6411

This event occurs when: The mirror relationship has inconsistent write mode.

Event Name - RVM Write Mode Incocnsistent

Event description: Mirror relationship has inconsistent write mode

Event Group - Mirroring

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_RVM_WRITE_MODE_INCONSISTENT

MEL_EV_RMTVOL_LINK_DOWN - 0x6503

This event occurs when: A link is down.

Event Name - RMTVOL Link Down

Event description: Communication to remote volume down

Event Group - Remote Volume

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_REMOTE_NO_ARRAY (remoteNoArray.html)

MEL_EV_RMTVOL_WWN_CHANGE_FAILED - 0x6505

This event occurs when: This error occurs if an array detects during start-up processing that its WWN changed. When the firmware detects this name change, it attempts to notify any remote array that had previously been participating in a mirroring relationship. This event has been replaced with 0x6507.

Event Name - RMTVOL Node WWN Changed Failed

Event description: Failed to communicate storage array's world-wide name

Event Group - Remote Volume

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_RMTVOL_NODE_WWN_CHANGED
```

RecoveryFailureType - REC_REMOTE_WWN_CHANGE_FAILED (wwnChangeFailed.html)

MEL_EV_VOLCOPY_FAILED - 0x6600

This event occurs when: A volume copy operation fails due to one of the following reasons: Read error on source volume, Write error on target volume, Configuration change resulting in a feature compatibility violation (e.g. Role Change of a Remote Mirror).

Event Name - VOLCOPY Failed

Event description: Volume copy operation failed

Event Group - Volume Copy

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_VOLCOPY_FAILED (copyFailed.html)

MEL_EV_USM_BAD_LBA_DETECTED - 0x6700

This event occurs when: An unreadable sector is detected and data loss occurred.

Event Name - USM BAD LBA Detected

Event description: Unreadable sector(s) detected data loss occurred

Event Group - Unreadable Sector Management

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_USM_UNREADABLE_SECTOR
```

RecoveryFailureType - REC_USM_UNREADABLE_SECTORS_EXIST (UnreadableSctrs.html)

MEL_EV_USM_DATABASE_FULL - 0x6703

This event occurs when: A database is full.

Event Name - USM Database Full

Event description: Overflow in unreadable sector database

Event Group - Unreadable Sector Management

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_USM_UNREADABLE_SECTOR
```

RecoveryFailureType - REC_USM_DATABASE_FULL (UnreadableSctrsLogFull.html)

MEL_EV_SPRI_ACTIVATED - 0x6800

This event occurs when: A Service Interface has been activated. This event is a security measure and does not cause a Needs Attention condition on the array.

Event Name - SPRI Activated

Event description: Support Recovery Interface (SPRI) activated

Event Group - Support and Recovery Interface

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_SPRI_WRONG_PASSWORD - 0x6801

This event occurs when: A controller detects that a wrong password or corrupted password has been entered. This event is a security measure and does not cause a Needs Attention condition on the array.

Event Name - SPRI Wrong Password

Event description: Support Recovery Interface (SPRI) wrong password

Event Group - Support and Recovery Interface

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_DDC_AVAILABLE_CRITICAL - 0x6900

This event occurs when: An unusual event on the controller has triggered the DDC feature to store diagnostic data.

Event Name - DDC Available

Event description: Diagnostic data is available

Event Group - DDC

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Notification (0x4)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_DDC_AVAILABLE (diagnosticDataCapture.html)

MEL_EV_FBM_BUNDLE_VIOLATION - 0x7001

This event occurs when: A RAID controller detects that one or more features are enabled that violate the current Sub-Model definition.

Event Name - FBM Bundle Violation

Event description: Feature pack key file required

Event Group - Feature Bundle Management

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Error (0x1)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_FEATURE_NOT_COMPLIANT (nonCompliantFeature.html)

MEL_EV_BBU_OVERHEATED - 0x7300

This event occurs when: The BBU is overheated.

Event Name - BBU Overheated

Event description: Battery backup unit overheated

Event Group - Battery Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SMART_BATTERY
```

RecoveryFailureType - REC_BATTERY_OVERTEMP (batteryOverTemp.html)

MEL_EV_INSUFFICIENT_LEARNED_CAPACITY - 0x7301

This event occurs when: Measured capacity of the BBU is insufficient to hold cache data for at least 72 hours.

Event Name - Insufficient Learned Capacity

Event description: Insufficient learned battery capacity

Event Group - Battery Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SMART_BATTERY
```

RecoveryFailureType - REC_BATTERY_WARN (batteryReplacementRequired.html)

MEL_EV_BATTERY_MISSING - 0x7306

This event occurs when: Information not available.

Event Name - Battery Missing

Event description: Battery missing

Event Group - Battery Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SMART_BATTERY
```

RecoveryFailureType - REC_REMOVED_BATTERY (batteryRemoved.html)

MEL_EV_BATTERY_EXPIRED - 0x7308

This event occurs when: Information not available.

Event Name - Battery Expired

Event description: Battery expired

Event Group - Battery Manager

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Battery Pack (0x0, 0x9)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_SMART_BATTERY
```

RecoveryFailureType - REC_EXPIRED_BATTERY (batteryExpired.html)

MEL_EV_CACHE_BACKUP_DEVICE_FAILED - 0x7500

This event occurs when: The persistent cache backup device has failed.

Event Name - Cache Backup Device Failed

Event description: Persistent cache backup device has failed

Event Group - Persistent Cache Backup

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Cache Backup Device (0x2, 0xC)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CACHE_BACKUP_DEVICE_FAILED
(failedCacheBackupDev.html)

MEL_EV_CACHE_BACKUP_DEV_WRITE_PROTECTED - 0x7501

This event occurs when: Write protection is enabled on the cache backup device.

Event Name - Cache Backup Device Write-Protected

Event description: Cache backup device is write-protected

Event Group - Persistent Cache Backup

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Cache Backup Device (0x2, 0xC)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_CACHE_BACKUP_DEVICE_WRITE_PROTECTED
(cacheBackupDevWriteProtect.html)

MEL_EV_BACKUP_COMPONENT_STATUS_UNKNOWN - 0x7506

This event occurs when: The status of the cache backup device is unknown because of a communication failure with the device.

Event Name - Backup Component Status Unknown

Event description: Backup component status unknown

Event Group - Persistent Cache Backup

Event Priority - CRITICAL_EVENT

Log Group - Controller (0x1)

Event Category - Failure (0x2)

Event Component Type - Controller (0x0, 0x8)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - N/A

MEL_EV_PIT_ROLLBACK_PAUSED - 0x7800

This event occurs when: A PiT rollback operation has been paused.

Event Name - PiT Rollback Paused

Event description: Snapshot image rollback paused

Event Group - Pit Group Support

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Snapshot Image (0x3, 0x3)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_VDD_STATUS
```

RecoveryFailureType - REC_PIT_ROLLBACK_PAUSED (pitRollbackPaused.html)

MEL_EV_PITGROUP_REPOSITORY_FULL - 0x7802

This event occurs when: The PiT group repository is full -- the current allocation has been consumed.

Event Name - PiT Group Repository Full

Event description: Snapshot group repository full

Event Group - Pit Group Support

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD), Consistency Group (0x3, 0x5)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PIT_GROUP_REPOSITORY_FULL (pgCGMemberReposFull.html)

MEL_EV_PITGROUP_FAILED - 0x7803

This event occurs when: A failure with a PiT group has been detected.

Event Name - PiT Group Failed

Event description: Snapshot group failed

Event Group - Pit Group Support

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD), Consistency Group (0x3, 0x5)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PIT_GROUP_FAILED (failedPgCgMember.html)

MEL_EV_VIEW_REPOSITORY_FULL - 0x7805

This event occurs when: The view repository is full -- the current allocation has been consumed.

Event Name - View Repository Full

Event description: Snapshot volume repository full

Event Group - Pit Group Support

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD), Consistency Group Snapshot Volume (0x3, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PIT_VIEW_REPOSITORY_FULL (pitVolumeRepositoryFull.html)

MEL_EV_VIEW_REPOSITORY_FAILED - 0x7806

This event occurs when: A failure has been detected with a view repository.

Event Name - View Repository Failed

Event description: Snapshot volume repository failed

Event Group - Pit Group Support

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD), Consistency Group Snapshot Volume (0x3, 0x6)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_PIT_VIEW_FAILED (failedPiTVolume.html)

MEL_EV_PIT_PURGED - 0x7807

This event occurs when: A PiT has been purged.

Event Name - PiT Purged

Event description: Snapshot image purged

Event Group - Pit Group Support

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Snapshot Image (0x3, 0x3)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_LBA_BLOCK
```

RecoveryFailureType - REC_PIT_PURGED (pitPurged.html)

MEL_EV_TPV_REPOSITORY_FULL - 0x7B01

This event occurs when: A TPV Repository has no more capacity available to accept WRITE operations.

Event Name - TPV Repository Capacity Full

Event description: A thin volume repository is full

Event Group - Thin Provisioned Volume (TPV)

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_VOL_LABEL
```

RecoveryFailureType - REC_TPV_REPOSITORY_FULL (thinVolumeRepositoryFull.html)

MEL_EV_TPV_REPOSITORY_FAILED - 0x7B02

This event occurs when: A TPV transitions to a failed state.

Event Name - TPV Repository Failed

Event description: A thin volume repository has failed

Event Group - Thin Provisioned Volume (TPV)

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_VOL_LABEL
```

RecoveryFailureType - REC_TPV_FAILED (failedThinVolume.html)

MEL_EV_ARVM_AMG_INTERNAL_SUSPENSION - 0x7C02

This event occurs when: A controller firmware internally suspends synchronization for an AMG. This usually is the result of an error condition that requires user intervention to resolve.

Event Name - Async Mirror Group Sync Internal Suspension

Event description: An asynchronous mirror group was suspended internally

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Asynchronous Mirror Group (0x3, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_REF
```

RecoveryFailureType - REC_ARVM_SYNC_INTERNALLY_SUSPENDED (syncSuspended.html)

MEL_EV_ARVM_AMG_ROLE_CONFLICT - 0x7C03

This event occurs when: An AMG role conflict is detected by the controller firmware.

Event Name - Async Mirror Group Role Conflict

Event description: The asynchronous mirror group has a role (primary or secondary) conflict

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Asynchronous Mirror Group (0x3, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_REF
```

RecoveryFailureType - REC_ARVM_MIRROR_GROUP_ROLE_CONFLICT
(amgRoleConflict.html)

MEL_EV_ARVM_AMG_RECOVERY_POINT_LOST - 0x7C04

This event occurs when: An AMG's recovery point is lost.

Event Name - Async Mirror Group Recovery Point Lost

Event description: A recovery point for an asynchronous mirror group was lost

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Asynchronous Mirror Group (0x3, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_REF
```

RecoveryFailureType - REC_ARVM_MIRROR_GROUP_RECOVERY_POINT_LOST
(lostRecoveryPoint.html)

MEL_EV_ARMV_MIRROR_FAILED - 0x7C06

This event occurs when: A controller firmware detects an error condition that results in the mirror being failed. This will result in an internally suspended mirror.

Event Name - Async Mirror Group Member Failed

Event description: Asynchronous mirror group member has failed

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_MEMBER_FAIL_STOP
```

RecoveryFailureType - REC_ARVM_FAILED_MIRROR (failedMirror.html)

MEL_EV_ARVM_AMG_SEC_MEM_REP_FULL - 0x7C09

This event occurs when: A secondary repository's utilization is at capacity resulting in an internally suspended synchronization so that the user can determine how to resolve the condition.

Event Name - Async Mirror Group Secondary Member Repository Full

Event description: An asynchronous mirror group secondary member repository is full

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Volume (0x0, 0xD)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_MEMBER_REF
```

RecoveryFailureType - REC_ARVM_SECONDARY_REPOSITORY_FULL
(mirrorReposFullSecondary.html)

MEL_EV_ARVM_AMG_SYNC_PAUSED_ALT_STATE - 0x7C34

This event occurs when: An AMG's synchronization becomes paused because the alternate state is preventing synchronization from proceeding.

Event Name - Async Mirror Group Sync Paused Alt State

Event description: An asynchronous mirror group's synchronization has paused because the alternate state is preventing synchronization from proceeding

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Failure (0x2)

Event Component Type - Asynchronous Mirror Group (0x3, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_REF
```

RecoveryFailureType - REC_ARVM_SYNC_PAUSED_ALT_STATE (syncPaused.html)

MEL_EV_ARVM_AMG_ROLE_CHANGE_PAUSED - 0x7C37

This event occurs when: The controller firmware detects that the role change for an AMG has been paused.

Event Name - Async Mirror Group Mirror Role Change Requested

Event description: Controller firmware detected a role change for an AMG has been paused

Event Group - ARVM

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Asynchronous Mirror Group (0x3, 0x7)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_AMG_REF
```

RecoveryFailureType - REC_ARVM_ROLE_CHANGE_PAUSED (remoteNoArray.html)

MEL_EV_SCT_COMMAND_UNSUPPORTED - 0x7D00

This event occurs when: Logged by MEL event VDM.

Event Name - SCT Commands Unsupported

Event description: SMART Command Transfer (SCT) commands unsupported

Event Group - Native SATA Drive

Event Priority - CRITICAL_EVENT

Log Group - Drive (0x2)

Event Category - Failure (0x2)

Event Component Type - Drive (0x0, 0x1)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_INCOMPATIBLE_SATA_DRIVE (incompatibleSATAdrive.html)

MEL_EV_HOST_REDUNDANCY_LOST - 0x9102

This event occurs when: The controller has detected that the specified host has lost connection to one of the two controllers.

Event Name - Host Connection Redundancy Lost

Event description: Loss of host-side connection redundancy detected

Event Group - AutoLoadBalancing

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Host (0x2, 0xF)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_HOST_REDUNDANCY_LOST

MEL_EV_MULTIPATH_CONFIG_ERROR - 0x9103

This event occurs when: The behavior exhibited by the host multipath driver for the specified host does not match expectations of the supported driver(s) for the specified host type. This usually indicates a missing, out-of-date, or misconfigured multipath driver installed on the host or an incorrect host type specified for this host in the array configuration.

Event Name - Multipath Configuration Error

Event description: Host multipath driver configuration error detected

Event Group - AutoLoadBalancing

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Host (0x2, 0xF)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_MULTIPATH_CONFIGURATION_ERROR

MEL_EV_SECURITY_AUDIT_LOG_FULL - 0x9200

This event occurs when: The Security Audit Log has reached its maximum capacity, and the Audit Log Full Policy is set to 'Manually Clear'.

Event Name - Security Audit Log Full

Event description: Security Audit Log has reached its maximum capacity and cannot record new security audit events until it is cleared

Event Group - Security Events

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Notification (0x4)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is not provided with this event.

RecoveryFailureType - REC_SECURITY_AUDIT_LOG_FULL

MEL_EV_DIRECTORY_SERV_CONFIG_ERROR - 0x9204

This event occurs when: The controller is unable to communicate with the configured Directory Services server.

Event Name - Directory Services Server Configuration Error

Event description: A Directory Services server is unreachable or misconfigured

Event Group - Security Events

Event Priority - CRITICAL_EVENT

Log Group - System (0x0)

Event Category - Error (0x1)

Event Component Type - Enclosure (0x0, 0xA)

Event Specific Data - Optional data is provided with this event.

```
MEL_DATA_DIRECTORY_SERVICES_DOMAIN
```

RecoveryFailureType - REC_DIRECTORY_SERVICES_CONFIG_ERROR

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