

# ETERNUS SF Storage Cruiser 14.0



## Event Guide

Windows/Solaris/Linux

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# Preface

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## Purpose

This manual explains the events displayed on ETERNUS SF Storage Cruiser (hereafter "Storage Cruiser") and these event types.

ETERNUS SF is an integrated storage system management software series provided by Fujitsu.

There are two types of events. One is a "set event" of which settings are described when the settings are made from this product to the device. The other is an "asynchronous event" that is displayed by decoding the SNMP Trap from the device. The trap events displayed here are displayed by default, but their display can be customized using the SNMP Trap XML definition file. For more information, refer to "C.6 SNMP Trap XML Definition File" in the ETERNUS SF Storage Cruiser User's Guide.

## Target readers

Anyone who plans, installs, configures, and maintains Storage Cruiser to increase the availability of a system should read this manual.

For system design, it is assumed that a basic knowledge of the configuration methods of servers, storage, and networks is possessed.

## Organization

This manual is composed as follows.

### [Chapter 1 Events Related to Operation of This Product](#)

Describes the settings and events of the unit to be made by this software

### [Chapter 2 Events in Notifications Sent from Monitored Devices](#)

Describes events to be displayed by this software.

### [Chapter 3 Device Polling Event](#)

Describes events about the device polling function of this software.

## Notational conventions

- This manual omits trademarks and registered trademarks of the following product name.

Solaris(TM) 8 Operating System

Solaris(TM) 9 Operating System

Solaris(TM) 10 Operating System

Red Hat(R) Enterprise Linux(R) AS v.3, Red Hat(R) Enterprise Linux(R) ES v.3

Red Hat(R) Enterprise Linux(R) AS 3.9, Red Hat(R) Enterprise Linux(R) ES 3.9

Red Hat(R) Enterprise Linux(R) AS v.4, Red Hat(R) Enterprise Linux(R) ES v.4

Red Hat(R) Enterprise Linux(R) AS 4.5, Red Hat(R) Enterprise Linux(R) ES 4.5

Red Hat(R) Enterprise Linux(R) AS 4.6, Red Hat(R) Enterprise Linux(R) ES 4.6

Red Hat(R) Enterprise Linux(R) AS 4.7, Red Hat(R) Enterprise Linux(R) ES 4.7

Red Hat(R) Enterprise Linux(R) 5

Red Hat(R) Enterprise Linux(R) 5.1

Red Hat(R) Enterprise Linux(R) 5.2

Red Hat(R) Enterprise Linux(R) 5.3

SUSE(R) Linux Enterprise Server 9 for EM64T

VMware(R) Infrastructure 3 Foundation

VMware(R) Infrastructure 3 Standard

VMware(R) Infrastructure 3 Enterprise

Microsoft(R) Windows(R) 2000 Server

Microsoft(R) Windows(R) 2000 Advanced Server

Microsoft(R) Windows(R) 2000 Professional

Microsoft(R) Windows(R) XP Professional

Microsoft(R) Windows(R) XP Home Edition

Microsoft(R) Windows Vista(R) Home Basic  
 Microsoft(R) Windows Vista(R) Home Premium  
 Microsoft(R) Windows Vista(R) Business  
 Microsoft(R) Windows Vista(R) Enterprise  
 Microsoft(R) Windows Vista(R) Ultimate  
 Microsoft(R) Windows Server(R) 2003, Standard Edition  
 Microsoft(R) Windows Server(R) 2003, Standard x64 Edition  
 Microsoft(R) Windows Server(R) 2003, Enterprise Edition  
 Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition  
 Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems  
 Microsoft(R) Windows Server(R) 2003, Datacenter Edition for Itanium-based Systems  
 Microsoft(R) Windows Server(R) 2003 R2, Standard Edition  
 Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition  
 Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition  
 Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition  
 Microsoft(R) Windows Server(R) 2008 Standard  
 Microsoft(R) Windows Server(R) 2008 Enterprise  
 Microsoft(R) Windows Server(R) 2008 Datacenter  
 Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(TM)  
 Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM)  
 Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM)  
 Microsoft(R) Windows Server(R) 2008 for Itanium-based Systems

- The Solaris(TM) Operating System is described as "Solaris OS".
- Referenced items, menu names, button names, etc. are described as follows.

Type	Notation
Referenced items in this manual	Its title is enclosed in " ".
Referenced items in other manual	Its title is enclosed in " ".
Menu names	Its name is enclosed in [ ]. The order in which menu items are selected is indicated in the form [ ] - [ ].
Tab names	Its name is enclosed in " ".
Button names	Its name is enclosed in < >.
Character strings and values that need to be emphasized	Its strings are enclosed in " ".
Variable parts	It is indicated by using <i>italic</i> text.

## Abbreviations

The product name or products might be described by the abbreviation as follows.

Proper name	Notation in this manual
Windows Server 2008 Standard without Hyper-V Windows Server 2008 Enterprise without Hyper-V Windows Server 2008 Datacenter without Hyper-V Windows Server 2008 for Itanium-based Systems	When referring to these products as a group, "Windows Server 2008" will be indicated.
Softek Storage Cruiser	SSC

## Description of this product and notation used in this manual

This software and its manual have been developed based on Softek Storage Cruiser (SSC) and Systemwalker Resource Coordinator Storage manager. Output messages or windows may therefore contain references to "Softek Storage Cruiser" or "SSC", "Systemwalker Resource Coordinator" or "Resource Coordinator" accordingly.

## Related manuals

The following manuals are provided with this software. Please refer to these manuals as required.

- ETERNUS SF Storage Cruiser Installation Guide  
Explains the configuration procedure.
- ETERNUS SF Storage Cruiser User's Guide  
Contains a product description, explanations of functions, and methods of operation and maintenance.
- ETERNUS SF Storage Cruiser Message Guide  
Explains the messages displayed by storage resource manager.
- ETERNUS SF Storage Cruiser Event Guide (This manual)  
Explains the messages displayed by storage resource manager regarding hardware status.
- ETERNUS SF Storage Cruiser User's Guide for Virtual Storage Conductor  
Explains the functions and methods of operating Virtual Storage Conductor.

## Related documentation

Please refer to the following documentation as required.

- PRIMECLUSTER Installation and Administration Guide
- PRIMECLUSTER Global Link Services operation manual
- PRIMECLUSTER Global Disk Services operation manual
- Hardware Guide for Server Blades

## ETERNUS SF homepage

The latest technical information can be seen on the ETERNUS SF homepage (<http://www.fujitsu.com/global/services/computing/storage/software/>).

At first, reference to the ETERNUS SF homepage is recommended.

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- No part of this manual may be reproduced without permission.
- This manual is subject to change without advance notice.
- The following model numbers are different in Japan and other countries.  
When the model number of Japan appears in the text, please take it as referring to the model number of the other countries.

Japan	Other countries
PG-FC106	S26361-F2843-E1
PG-FC105	S26361-F2624-E1
PG-FC102	SNP:SY-F2244E2-P, SNP:SY-F2244E2-A, SNP:SY-F2244L2-P
PG-FCD101	S26361-F3023-E1
GP7B8FC1	GP7B8FC1U
PW008FC2	PW008FC2U
PW008FC3	PW008FC3U
PG-FC201	S26361-F3141-E1
PG-FC107	S26361-F3141-E10, S26361-F3141-E210
PG-FC202	S26361-F3306-E1, S26361-F3306-E201
PG-FCD201	S26361-F3306-E601
SE0X7F11F	SE0X7F11X
SE0X7F12F	SE0X7F12X
XSEFC401AF	XSEFC401AU, XSEFC401AX
XSEFC402AF	XSEFC402AU, XSEFC402AX

This product model is not the same in all regions. Please check with your sales representative to see the model name in your area.

- The following product names are different in Japan and other countries.  
When the product name of Japan appears in the text, please take it as referring to the product name of the other countries.

Japan	Other countries
SafeDisk	SynfinityDisk
SafeCluster	SynfinityCluster
SafeFile	SynfinityFile

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# Chapter 1 Events Related to Operation of This Product

## 1.1 Events Related to Basic Operation

---

### System Event output messages

---

#### **create server node**

##### Explanation

Login server be finished

##### Event ID

1

##### Function that output this event

rcxserver

---

#### **delete server node**

##### Explanation

A server was deleted.

##### Event ID

1

##### Function that output this event

rcxserver

---

#### **set auto discovery mode to START**

##### Explanation

Automatic detection mode has started.

##### Event ID

1

##### Function that output this event

rcxserver

---

#### **set auto discovery mode to STOP**

##### Explanation

The automatic detection mode has stopped.

##### Event ID

1

##### Function that output this event

rcxserver



---

### setmode server node to (mode)

#### Explanation

A server was changed to mode (name)

(name): Name of the changed mode

#### Event ID

1

#### Function that output this event

rcxserver

---

### power on server node

#### Explanation

The server node was powered on.

#### Event ID

1

#### Function that output this event

rcxserver

---

### power off server node

#### Explanation

Power-off was instructed.

#### Event ID

1

#### Function that output this event

rcxserver

---

### reboot server node

#### Explanation

The server was rebooted.

#### Event ID

1

#### Function that output this event

rcxserver

---

## 1.2 Events Related to Storage Device Operation

---

When settings are made for user operations or devices, this software displays the settings or events.

Please refer to the following sections according to model type.

- [1.2.1 Common event](#)

- [1.2.2 Event to server node](#)
- [1.2.3 Event to fibre channel switch](#)
- [1.2.4 Event to storage node](#)

## 1.2.1 Common event

### Point

The device name is not displayed in the event that there is "\*" in the leftmost column of the following table.  
Please sort by date and refer.

	Event log display example	Explanation	Measure
	Add + device-model-name	A device has been added.	
	Delete + device-model-name/parts-name	A device has been deleted.	
	Set SNMP Trap transmission address 12.34.56.78	The trap transmission address of the device was set to 12.34.56.78.	
	Delete SNMP Trap transmission address 12.34.56.78	The trap transmission address 12.34.56.78 was deleted from the device.	
	Change SNMP Trap transmission address	The trap transmission address of the device has been changed.	
*	Connect Access Path	The access path has been connected.	
*	Delete Access Path	The access path has been deleted.	
*	Re-set Access Path for + FC port name	The access path has been inherited.	
	Delete Switch Zone	The zoning information has been deleted.	
*	Failed	An error was found during the user operation.	Respond in accordance with the contents of the response dialog message and the message ID issued by the Client during operation.
*	Same WWPN already exists. (WWPN=222800000EA60011)	WWPN (222800000EA60011) is duplicated.	Check the setting if the FC device allows change of the WWPN according to user settings.
	Invalid WWPN is detected in device model name (WWPN = WWPN information)	An incorrect WWPN was detected.	Check the setting if the FC device allows change of the WWPN according to user settings.
	SNMP Trap was received. But the source IP address(12.34.56.78) of SNMP Trap is duplicatedly used by some devices in DB of Manager.	A SNMP trap was received, but the source IP address of the SNMP trap is used by multiple management target devices.	Make sure that the IP address and other information entered for incorporating the device manually is correct.
	Unsupported Firmware Version v12.34.56	A device with firmware v12.34.56, which is not supported by Storage Cruiser, was detected.	Firmware not supported Storage Cruiser is used for the target device. Contact your Fujitsu engineer (CE or SE) because patches need to be applied to Storage Cruiser.

Event log display example	Explanation	Measure
		This message is displayed at the time of an operation such as [Refresh]. See also "FIRMWARE_VERSION_CHECK" of "C.2 sanma.conf Parameter" in the ETERNUS SF Storage Cruiser User's Guide.

## 1.2.2 Event to server node

Event log display example	Explanation	Measure
Add Storage Affinity (fcaw0 -> [Disk] WWPN=222800000EA60011 TID=3 LUN=5,6)	Storage affinity (LUN binding) was created for the FC adaptor WWPN=222800000EA60011 of the disk unit from the HBA with the logical name fcaw0, TID=3 LUN=5, 6. When the target device is a tape unit, the LUN number is not displayed.	
Delete Storage Affinity (fcaw0 -> [Disk] WWPN=222800000EA60011 TID=3)	The storage affinity (LUN binding) for the FC adaptor WWPN=222800000EA60011 of the disk unit was deleted from the HBA with the logical name fcaw0, TID=3.	
Delete Storage Affinity (fcaw0 -> [Disk] WWPN=222800000EA60011)	The storage affinity (LUN binding) for the FC adaptor WWPN=222800000EA60011 of the disk unit was deleted from the HBA with the logical name fcaw0.	
Add Storage Affinity [24FF00E000A80033]	The storage affinity 24FF00E000A80033 was set to the HBA port.	
Add Maxthrottle [fjpfca0:210000eba00:40]	MaxThrottle40 was set to the 210000eba00 target of fjpfca0.	
Change Maxthrottle [fjpfca0: 210000eba00: 10->20]	The setting of MaxThrottle of the 210000eba00 target of fjpfca0 was changed from 10 to 20.	
Create Multipath Device [mplb2048,mplb2049]	The multipath device instance mplb2048 and mplb2049 was configured.	
Skip Set Maxthrottle [fjpfca0: 210000eba00:40]	The setting of MaxThrottle was skipped. 40 was supposed to have been set to the 210000eba00 target of fjpfca0.	Describe the MaxThrottle definition in fjpfca.conf, and enable the setting on the target server node.
Completed Machine Admin(ESF) Configuration information update	Updating the configuration information of the machine administration was completed normally.	
Failed Machine Admin(ESF) Configuration information update	Updating the configuration information of the machine administration failed.	Collect the data required for troubleshooting, and then contact your Fujitsu systems engineer.
Completed FJCluster automatic resource registration	The cluster resource registration was completed normally.	

Event log display example	Explanation	Measure
Delete FJCluster resource [mplb2048]	The mplb2048 device was deleted from the cluster resource.	
Delete Multipath Device [mplb2048,mplb2049]	The multipath devices mplb2048 and mplb2049 were deleted.	
Delete Maxthrottle [222800000EA60011]	MaxThrottle related to the storage affinity: 222800000EA60011 of the HBA port was deleted.	
Delete Storage Affinity [222800000EA60011]	The storage affinity: 222800000EA60011 of the HBA port was deleted.	
WebServer001:failed to release old server resource	During the automatic server recovery, the storage resource from the server node WebServer001 that is to be replaced could not be detached.	After the processing is completed, check the SAN environment, and delete the unnecessary logical resources such as access paths or volumes from the server node to be replaced.
allocate LogicalVolume (StorageA:LogicalVolume0x0000, LogicalVolume0x0001,LogicalVolume0x0002)	A LogicalVolume was allocated to a server node.	
release LogicalVolume (StorageA:LogicalVolume0x0000, LogicalVolume0x0001,LogicalVolume0x0002)	A LogicalVolume was deleted from a server node.	

### 1.2.3 Event to fibre channel switch

Event log display example	Explanation	Measure
Create Zone SNM_000B(WWPN=200000E06941432A, WWPN=220000000EBA0147)	Zone SNM_000B was created with WWPN=200000E06941432A and WWPN=220000000EBA0147.	
Add Zone SNM_000B(WWPN=200000E06941432A, WWPN=220000000EBA0147) to Zoning Configuration SNM_BCSI	Zone SNM_000B was added to the zoning configuration SNM_BCSI, and the zone was activated.	
Create Dummy Zone SNM_000B(WWPN=000B00000E000000, WWPN=000C00000E000000)	Dummy zone SNM_000B was created with WWPN=200000E06941432A and WWPN=220000000EBA0147.	
Add Dummy Zone SNM_000B(WWPN=000B00000E000000, WWPN=000C00000E000000) to Zoning Configuration SNM_BCSI	Dummy zone SNM_000B was added to the zoning configuration SNM_BCSI, and the dummy zone was activated.	
Remove Zone SNM_0007(WWPN=200000E06941456F, WWPN=222800000EA60011) from Zoning Configuration SNM_BCSI	Zone SNM_0007 was deleted from the zoning configuration SNM_BCSI, and the zone was deactivated.	
Remove Zone SNM_0007 from Zoning Configuration SNM_BCSI	Zone SNM_0007 was deleted from the zoning setting SNM_BCSI, and the zone was deactivated.	

Event log display example	Explanation	Measure
Delete Zone SNM_0007(WWPN=200000E06941456F, WWPN=222800000EA60011)	Zone SNM_0007 that had been created with WWPN=200000E06941456F and WWPN=222800000EA60011 was deleted.	
Delete Zone SNM_0007	Zone SNM_0007 was deleted.	
Create Zoning Configuration SNMP_BCSI	The zoning configuration SNMP_BCSI was created and activated.	
Delete Zoning Configuration SNMP_BCSI	Zoning configuration SNMP_BCSI was deleted.	
Unable to add zone(WWPN=200000E06941456F, WWPN=222800000EA60011)	A zone between WWPN = 200000E06941456F and WWPN = 222800000EA60011 could not be created.	Use the management software of the Fibre Channel switch or the telnet command to create the zone.
Unable to delete zone(WWPN=200000E06941456F, WWPN=222800000EA60011)	The zone created between WWPN = 200000E06941456F and WWPN = 222800000EA60011 could not be deleted.	Use the management software of the Fibre Channel switch or the telnet command to delete the zone.
Unable to delete zone(SNM_0007)	The zone SNM_0007 could not be deleted.	Use the management software of the Fibre Channel switch or the telnet command to delete the zone.

## 1.2.4 Event to storage node

Event log display example	Explanation	Measure
Add Host Affinity (WWPN=200000E069400BC8 to CA 23 / Affinity Group 0)	The access path for affinity group 0 was set via CA23 from HBA WWPN=200000E069400BC8.	
Delete Host Affinity (WWPN=200000E069400BC8 to CA 23 / Affinity Group 0)	The access path for affinity group 0 was deleted via CA23 from HBA WWPN=200000E069400BC8.	
Create AffinityGroup2(LogicalVolume0x0000,0x0001,0x0002)	AffinityGroup2, with LogicalVolume0x0000, 0x0001, and 0x0002 mapped to it, was added to the device.	
Delete AffinityGroup3(LogicalVolume0x000a,0x000b,0x000c)	AffinityGroup3, with LogicalVolume0x000a, 0x000b, and 0x000c mapped to it, was deleted from the device.	
Change LUNMapping of AffinityGroup3(Add:LogicalVolume0x0006,0x0007)	LogicalVolume0x0006 and 0x0007 were added to LUNMapping for AffinityGroup3 of the device.	
Change LUNMapping of AffinityGroup4(Delete:LogicalVolume0x0008,0x0009)	LogicalVolume0x0008 and 0x0009 were deleted from LUNMapping for AffinityGroup4 of the device.	
Unused AffinityGroup exists.(1,2,3)	AffinityGroup1, 2, or 3 exists and has not been allocated to a server node.	If the output AffinityGroup is not needed, use storage

Event log display example	Explanation	Measure
		management software to delete it.
Failed to delete AffinityGroup5, 6	AffinityGroup5, 6 could not be deleted.	Verify AffinityGroup using storage management software. Delete any AffinityGroup if it is left.
pool status changed: Warning	The use capacity ratio of Thin Provisioning Pool exceeded the warning threshold.	Please confirm the use capacity and the notification threshold of Thin Provisioning Pool. Please execute the change of the capacity enhancing or the notification threshold if necessary.
pool status changed: Caution	The use capacity ratio of Thin Provisioning Pool exceeded the caution threshold.	Please confirm the use capacity and the notification threshold of Thin Provisioning Pool. Please execute the change of the capacity enhancing or the notification threshold if necessary.
pool status changed: Normal	The use capacity ratio of Thin Provisioning Pool reached a normal	

## Chapter 2 Events in Notifications Sent from Monitored Devices

When this software receives an event notification such as an SNMP trap from the unit, the notification is decoded and displayed.

When working in cooperation with Systemwalker Centric Manager, events are linked corresponding to the relevant event levels. As for the trap common to devices except for the following traps specific to vendor, the event linkage is not operated.

Table 2.1 Trap common to devices

Event	Level	Event display
coldStart trap reception	Information	Cold Start Trap
warmStart trap reception	Information	Warm Start Trap
linkDown trap reception	Information	Link Down Trap
linkUp trap reception	Information	Link Up Trap
authenticationFailure trap reception	Information	Authentication Failure Trap
egpNeighborLoss trapz reception	Information	EGP Neighbor Loss Trap

## 2.1 Explanation of Asynchronous Events of the Server Node (Host)

### 2.1.1 Solaris OS server node (Host)

Multipath asynchronous events (SNMP traps) (When the Agent version of the server node is 1.x)

Failure event	Level	Event display	Troubleshooting
One path blocked	Error	<i>MPT</i> ype access path( <i>MP</i> AccessPath) fault	Refer to the manual for the multipath driver and take required actions. Generally, the connection to storage devices and the cable connections must be checked.
All paths blocked	Error	<i>MPT</i> ype access path( <i>MP</i> AccessPath) fault and no more path	
A multipath asynchronous event (SNMP trap) was reported to Manager; however, Manager does not manage the corresponding multipath information. (This may occur when Manager was either uninstalled or installed following a server node unit search.)	Error	Multi path( <i>Controler</i> <i>Controler</i> Number) fault	Use the resource management view to search the server node related to the asynchronous event (SNMP trap).

"*MPT*ype" of the event display is displayed, "MPLB" or "MPHD".

"*MP*AccessPath" of the event display is displayed, "c1t1" etc.

"*Controler* Number" of the event display is displayed, "No.2" etc.

#### Asynchronous event for monitored keywords

The system message file (/var/adm/messages) is monitored with monitoring keywords. When a message that includes monitoring keywords is output, an asynchronous event is sent to Manager according to the level corresponding to the monitoring keywords. In this case, the

detected message containing the monitoring keywords is sent to Manager as is. If asynchronous events corresponding to the same message are detected several times within the message monitoring time (Polling Time in the Correlation.ini parameter), these events are reported to Manager only once.

- Multipath asynchronous events (When the Agent version of the server node is 2.0 and 13.0 or later)

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Monitoring keyword	Level	Event display	Troubleshooting
. *NOTICE: mphd.*I/O path switchover succeed.*	Warning	One-line message including monitoring keywords	Refer to the manual for the multipath driver and take required actions. Generally, the connection to storage devices and the cable connections must be checked.
. *NOTICE: mplb.*I/O path failed, and standby.*			
. *NOTICE: mplb.*I/O path failed, and remaining online.*			
. *NOTICE: mplb.*disk controller connection is wrong.*			
. *NOTICE: mplb.*device connection is wrong.*			
. *WARNING: mphd.*I/O path for switch.*			
. *WARNING: mplb.*I/O path failed, no more.*			
. *WARNING: mplb.*connection of all paths is wrong.*			

- EMC PowerPath asynchronous event (When the Agent version of the server node is 2.0 and 13.0 or later)

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Monitoring keyword	Level	Event display	Troubleshooting
. *All paths to.*are dead.*	Warning	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product. Generally, the connection to storage devices and the cable connections must be checked.
. *Path.*to.*is dead.*			

- HITACHI JP1/HiCommand Dynamic Link Manager asynchronous event (When the Agent version of the server node is 2.0 and 13.0 or later)

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Monitoring keyword	Level	Event display	Troubleshooting
. *All paths to.*are dead.*	Warning	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product. Generally, the connection to storage devices and the cable connections must be checked.
. *KAPL08.*-E.*			

- Safe/PRIMECLUSTER GDS, GFS series asynchronous event

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).



Monitoring keyword	Level	Event display	Troubleshooting
NOTICE: sfx NOTICE: sfc NOTICE: sfd .*SDX:.*INFO:.*	Information	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product.
WARNING: sfx WARNING: sfc WARNING: sfd .*SDX:.*WARNING:.*	Warning	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product. Generally, the connection to storage devices and the cable connections must be checked.
PANIC: sfx PANIC: sfc ERROR: sfc HALT: sfd .*SDX:.*HALT:.* .*SDX:.*ERROR:.*	Error	One-line message including monitoring keywords	

- Sun MPxIO asynchronous event (Server node Agent version 13.2 or later)

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Monitoring keyword	Level	Event display	Troubleshooting
./scsi_vhci/ ssd.*multipath.*status:.*degraded.*	Warning	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product. Generally, the connection to storage devices and the cable connections must be checked.
./scsi_vhci/ssd.*multipath.*status:.*failed.*			

## Event reporting a changed host name

Manager uses the host name to identify each of the server nodes. However, in cases where server nodes cannot be identified correctly after their host name has changed, the following event is output:

Event	Level	Event display	Troubleshooting
The host name of a server node has changed	Warning	hostname of server node ( <i>IPaddress</i> ) has been changed from <i>Server-A</i> to <i>Server-B</i>	The hostname for the server having the IP address indicated in the event display has been changed to <i>Server-B</i> . Reset the hostname to <i>Server-A</i> . To do so, edit /etc/inet/hosts file, which contains the definitions of the hostnames.

The "*IPaddress*" indicated in the event display is the IP address of the corresponding server node.

"*Server-A*" is the name set to which the corresponding server node was originally set.

"*Server-B*" is the name to which the corresponding server node is currently set.

## 2.1.2 Windows server node (Host)

## Fujitsu multipath disk control mechanism asynchronous events (SNMP trap)

- When the Agent version of the server node is 1.x

Failure event	Level	Event display	Troubleshooting
One path blocked	Error	<i>MPT</i> ype access path( <i>MP</i> AccessPath) fault	Refer to the manual for the multipath driver and take required actions. Generally, the connection to storage devices and the cable connections must be checked.
Failure in detecting a part of paths on server node startup (failure in starting multipath operation)	Warning	Some paths could not be detected	
A multipath asynchronous event (SNMP trap) was reported to Manager; however, Manager does not manage the corresponding multipath information. (This may occur when Manager was either uninstalled or installed following a server node unit search.)	Error	Multi path(Controler <i>port</i> Target <i>target</i> ) fault	Use the resource management view to search the server node related to the asynchronous event (SNMP trap).

"*MPT*ype" of the event display is displayed, "MP".

"*MP*AccessPath" of the event display is displayed, "p2b0t0" etc.

"*port*" of the event display is displayed, "No.2" etc (SCSI port number).

"*target*" of the event display is displayed, "ID0" etc (target number).

- When the Agent version of the server node is 2.0 and 13.0 or later

Failure event	Level	Event display	Troubleshooting
1 path inhibition	Warning	[ <i>MPT</i> ype: 403] "Access path (p <i>P</i> b <i>B</i> t <i>T</i> ) fault	Refer to the manual for the multipath driver and take required actions. Generally, the connection to storage devices and the cable connections must be checked.
		[ <i>MPT</i> ype: 1010] "Access path (p <i>P</i> b <i>B</i> t <i>T</i> ) fault	
Some paths could not be detected at a server node startup. (Multipath operation could not be started.)	Warning	[ <i>MPT</i> ype: 301] "Access path (p <i>P</i> b <i>B</i> t <i>T</i> ) could not be detected.	

"GRMPD" or "MPHD" is displayed under "*MPT*ype" in the event.

"*P*", "*B*", and "*T*" in the event display are variables that are displayed e.g. in the form "p2b0t0".

## MPIO asynchronous events (SNMP trap)

The events of msdsm (the multi path driver that is built into Windows operating system since Windows Server 2008 by the standard) are reported as MPIO events. When the multi path driver that is compliant to MPIO is used, e.g. Fujitsu ETERNUS multipath driver, these events may be reported.

Failure event	Level	Event display	Troubleshooting
Path inhibition	Warning	[MPIO:16] Access path fault.	Path switching has occurred. Check whether the cable is disconnected or whether the parts failure of storage device is occurred.
Path switching was failed	Warning	[MPIO:32] Fail-over failed.	Path switching has occurred, but it has been failed. Check whether the cable is disconnected or whether the parts

Failure event	Level	Event display	Troubleshooting
			failure of storage device is occurred.

### Event reporting a changed host name

Manager uses the host name to identify each of the server nodes. However, in cases where server nodes cannot be identified correctly after their host name has changed, the following event is output:

Event	Level	Event display	Troubleshooting
The host name of a server node has changed	Warning	hostname of server node ( <i>IPaddress</i> ) has been changed from <i>Server-A</i> to <i>Server-B</i>	The hostname for the server having the IP address indicated in the event display has been changed to <i>Server-B</i> . Reset the hostname to <i>Server-A</i> . To do so, edit %WINDIR%system32\drivers\etc\hosts file, which contains the definitions of the hostnames.

The "*IPaddress*" indicated in the event display is the IP address of the corresponding server node.

"*Server-A*" is the name set to which the corresponding server node was originally set.

"*Server-B*" is the name to which the corresponding server node is currently set.

## 2.1.3 Linux server node (Host)

### Asynchronous event monitored by keywords

The system message file (/var/adm/messages) is monitored with monitoring keywords. When a message that includes monitoring keywords is output, an asynchronous event is sent to Manager according to the level corresponding to the monitoring keywords. In this case, the detected message containing the monitoring keywords is sent to Manager as is. If asynchronous events corresponding to the same message are detected several times within the message monitoring time (Polling Time in the Correlation.ini parameter), these events are reported to Manager only once.

- Multipath asynchronous events

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Failure event	Level	Event display	Troubleshooting
. *mplb_mod.*WARNING.*I/O error.* .*PATHDIAG.*WARNING.*Auto Path.* .*MPD.*WARNING.* (*1)	Warning	One-line message including a monitored keyword	See the ETERNUS or GR multipath driver manual and take action.

\*1: Red Hat Enterprise Linux 5 or higher only

- PRIMECLUSTER GDS and GFS Series asynchronous events

".\*" in the monitoring keyword is a regular expression (which indicates that any characters appears 0 times and at more).

Failure event	Level	Event display	Troubleshooting
NOTICE: sfx NOTICE: sfc NOTICE: sfd .*SDX.*INFO.*	Information	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product.

Failure event	Level	Event display	Troubleshooting
WARNING: sfx WARNING: sfc WARNING: sfd . *SDX:. *WARNING:.*	Warning	One-line message including monitoring keywords	Refer to the manual for the corresponding middleware product. Generally, the connection to storage devices and the cable connections must be checked.
PANIC: sfx PANIC: sfc ERROR: sfc HALT: sfd . *SDX:. *HALT:.* . *SDX:. *ERROR:.*	Error	One-line message including monitoring keywords	

## Event reporting a changed host name

Manager uses the host name to identify each of the server nodes. However, in cases where server nodes cannot be identified correctly after their host name has changed, the following event is output:

Event	Level	Event display	Troubleshooting
The host name of a server node has changed	Warning	hostname of server node ( <i>IPaddress</i> ) has been changed from <i>Server-A</i> to <i>Server-B</i>	The hostname for the server having the IP address indicated in the event display has been changed to <i>Server-B</i> . Reset the hostname to <i>Server-A</i> . To do so, edit the <code>/etc/hosts</code> file, which contains the definitions of the hostnames.

The "*IPaddress*" indicated in the event display is the IP address of the corresponding server node.

"*Server-A*" is the name set to which the corresponding server node was originally set.

"*Server-B*" is the name to which the corresponding server node is currently set.

## 2.1.4 HP-UX server node (Host)

### Asynchronous event monitoring by keywords

The system message file (`/var/adm/syslog/syslog.log`) is monitored with monitoring keywords. When a message that includes monitoring keywords is output, an asynchronous event is sent to Manager according to the level corresponding to the monitoring keywords. In this case, the message containing the detected monitoring keywords is sent to Manager as is. If asynchronous events corresponding to the same message are detected multiple times within the message monitoring period (Polling Time in the `Correlation.ini` parameter file), these events are reported to Manager only once.

- PV-LINK (LVM function) asynchronous events

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Monitoring keyword	Level	Event display	Troubleshooting
. *LVM: Path.*! . *LVM: . *PVLink.*!* (HP-UX 11iv2 and higher)	Error	One-line message including monitoring keywords	Take appropriate action as described in the message.

- HBA driver asynchronous events

".\*" in the monitoring keywords is a regular expression (which indicates that any characters appears 0 times and more).

Monitoring keyword	Level	Event display	Troubleshooting
. *Target path. *gone offline. *	Error	One-line message including monitoring keywords	Take appropriate action as described in the message.

## 2.2 Fibre Channel Switch

### 2.2.1 Explanation of SN200(Brocade) Event

From the Fibre Channel switch whose firmware version is 2.2 or more, the trap with the asterisk ("\*") isn't notified but is notified as an event trap.

	Failure event	Level	Event display
	System failure	Error	Central Memory FAULT
	System failure	Error	Embedded Port FAULT
	FC port failure	Error	FC Port No.number FAULT
	FC port online	Information	FC Port No.number Online
	FC port offline	Information	FC Port No.number Offline
*	Power supply failure	Error	Power Supply #number FAULT
*	Power-off	Error	Power Supply #number FAULT
*	Power loss	Warning	Power Supply #number Absent
*	Fan failure	Error	Fan #number FAULT
*	Fan rotational speed decrease error	Error	Fan #number Below Minimal Threshold
*	Fan loss	Warning	Fan #number Absent
*	Temperature sensor failure	Error	Temp #number FAULT
*	Temperature decrease error	Error	Temp #number Below Minimal Threshold
*	Temperature rise error	Error	Temp #number Above Maximum Threshold
*	Temperature sensor loss	Warning	Temp #number Absent
	Trap event	Error, Warning, Information	The unit trap message is output without any change.



See

For information about the Fibre Channel switch SN200 model 250M and Brocade AP7420, see "[2.7.1 Explanation of Fibre Alliance MIB Support Device Events](#)".

The event trap message is output without any change from the device. When it is uncertain about the content of the message, contact your hardware customer engineer (CE). A typical event is described as follows.

#### Event at power supply fault

When the power supply fault occurs, the following events are reported. Confirm the state of a real device in power supply by LED etc. of the device.

FW-BELOW1 envPS001 (Env Power Supply 1) is below low boundary. current value : 0 (1 OK/0 FAULTY). (faulty)

### Event at fan fault

When the fan fault occurs, the following events are reported. Confirm the state of a real device in power supply by fan LED etc. of the device.

FW-BELOW1 envFan001 (Env Fan 1) is below low boundary. current value : 0 RPM. (faulty)

EM-FAN\_POLICY 1 blower failed. Replace failed blower assembly immediately.

### Event when device fault is detected

The event concerning the change in the whole status of the device is reported together when the fault occurs in the device including the above-mentioned power supply fault and fan fault, etc. The event trap of this device status is always reported at the warning level. The state to keep tedium in the device is expressed "State of warning (Marginal/Warning)", and the state to lose tedium is expressed "State of the error (DOWN/FAILED)" in this message.

- When changing from the state of normality into the state of warning

FW-STATUS\_SWITCH Switch status changed from HEALTHY/OK to Marginal/Warning

- When changing from the state of warning into the state of the error

FW-STATUS\_SWITCH Switch status changed from Marginal/Warning to DOWN/FAILED

- When changing from the state of normality into the state of the error

FW-STATUS\_SWITCH Switch status changed from HEALTHY/OK to DOWN/FAILED

The event which becomes the cause is separately reported when reported on the above-mentioned event. Contact hardware customer engineer (CE) of the device when the content of the event is uncertain.

### Event when device fault is recovered

When the fault is recovered, the following event is reported. Note that it is reported at the warning level in this case.

- When changing from the state of warning into the state of normality

FW-STATUS\_SWITCH Switch status changed from Marginal/Warning to HEALTHY/OK

- When changing from the state of error into the state of normality

FW-STATUS\_SWITCH Switch status changed from DOWN/FAILED to HEALTHY/OK

- When changing from the state of error into the state of warning (No complete restoration.)

FW-STATUS\_SWITCH Switch status changed from DOWN/FAILED to Marginal/Warning

### Event when access path is set up

The following events may be reported at the time of an access path setup.

(1) ZONE-TRANSCOMMIT Transaction Commit failed. Reason code 10 - "Fabric Merging"

(2) ZONE-TRANSCOMMIT Transaction Commit failed. Reason code 2 - "Aca Was Rejected"

These events show that zoning setting command to Fibre Channel switch is an error at the time of an access path setup. In this case, log in to the Fibre Channel switch which reported the event of (2) by telnet, perform zoning setup manually by the zoning setting command "cfgEnable" and "cfgSave". Please refer to the manual of Fibre Channel switch about the details of command.

In addition, in order to prevent a recurrence, please set up a parameter according to "SILKWORM\_ZONING\_DELAY\_TIMER" of "C.2 sanma.conf Parameter" in the ETERNUS SF Storage Cruiser User's Guide.

The following is the list of the typical events caused by hardware.

### Switch Internal Temperature

These messages are output if the value of the internal temperature sensor of the switch increased or decreased beyond the warning level. The usual possible causes of these messages include a fan failure, fan replacement, and a change in room temperature.

FW-CHANGED, 4, envTemp<element index> (Env Temperature <elementindex>) value has changed, current value: <value> C. (info)

Explanation:

The internal temperature of the switch has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, envTemp<element index> (Env Temperature <element index>)is exceeded boundary, current value: <value> C. (faulty)

Explanation:

The internal temperature of the switch exceeded the upper limit or decreased below the lower limit of the internal warning level.

Possible problem area:

- Room temperature
- Fan

Probable cause:

- Increase or decrease in room temperature
- Fan failure
- Fan replacement

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, envTemp<element index> (Env Temperature <element index>)is below low boundary, current value: <value> C. (faulty)

Explanation:

The internal temperature of the switch decreased below the lower limit of the internal warning level.

Possible problem area:

- Room temperature
- Fan

Probable cause:

- Decrease in Room Temperature
- Fan failure (recognized as 0RPM)

System administrator action:

Check the room temperature.  
Check the internal temperature of the switch.  
- tempshow  
Check whether fan-related messages (envFan) are output.  
Check the fans.  
- fanshow

FW-ABOVE, 3, envTemp<element index> (Env Temperature <element index>)is above high boundary, current value: <value> C. (faulty)

Explanation:

The internal temperature of the switch exceeded the upper limit of the internal warning level.

Possible problem area:

- Room temperature
- Fan

Probable cause:

- Increase in room temperature
- Fan failure (The failure of one fan increases the rotational speed of the other fans.)

System administrator action:

- Check the room temperature.
- Check the internal temperature of the switch.
- tempshow
- Check whether fan-related messages (envFan) are output.
- Check the fans.
- fanshow

FW-INBETWEEN, 3, envTemp<element index> (Env Temperature <element index>) is between high and low boundaries, current value: <value> C. (normal)

Explanation:

The internal temperature of the switch has returned to the normal status.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Fan Rotational Speed**

These messages are output if the rotational speed of a fan increased or decreased beyond the warning level.

FW-CHANGED, 4, envFan<element index> (Env Fan <elementindex>) value has changed, current value: <value> RPM. (info)

Explanation:

The rotational speed of a fan has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, envFan<element index> (Env Fan <element index>) is exceeded boundary, current value: <value> RPM. (info)

Explanation:

The rotational speed of a fan in the switch exceeded the upper limit or decreased below the lower limit of the internal warning level.

Possible problem area:

- Rotational speed of a room fan
- Fan



Probable cause:

- Increase or decrease in the rotational speed of a room fan
- Fan failure
- Fan replacement

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, envFan<element index> (Env Fan <element index>)is below low boundary, current value: <value> RPM.  
(normal)

Explanation:

The rotational speed of a fan in the switch decreased below the lower limit of the warning level.

Possible problem area:

- Fan

Probable cause:

- Fan failure (recognized as 0 RPM)

System administrator action:

- Check the fans.
- fanshow

FW-ABOVE, 3, envFan<element index> (Env Fan <element index>)is above high boundary, current value: <value> RPM.  
(faulty)

Explanation:

The rotational speed of a fan in the switch exceeded the upper limit of the warning level.

Possible problem area:

- Rotational speed of a room fan
- Fan

Probable cause:

- Increase in the rotational speed of a room fan
- Fan failure (The failure of one fan increases the rotational speed of the other fans.)

System administrator action:

- Check the rotational speed of the room fans.
- Check the rotational speed of the fan inside the switch
- tempshow
- Check whether messages related to fan rotational speed (envTemp) are output.
- Check the fans.
- fanshow

FW-INBETWEEN, 3, envFan<element index> (Env Fan <element index>)is between high and low boundaries, current value: <value> RPM. (info)

Explanation:

The rotational speed of a fan has returned to the normal status.

Possible problem area:

- None

Probable cause:

- None

System administrator action:

None

## Power Supply

These messages are output if the power supply fails or has been replaced.

FW-CHANGED, 4, envPS<element index> (Env Power Supply <elementindex>) value has changed, current value: <value>(1 OK/0 FAULTY). (info)

Explanation:

The status of the power supply has changed.

Possible problem area:

- Power supply

Probable cause:

- Failure or replacement of the power supply

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-EXCEEDED, 3, envPS<element index> (Env Power Supply <element index>)is exceeded boundary, current value: <value>(1 OK/0 FAULTY). (info)

Explanation:

The status of the power supply has changed.

Possible problem area:

- Power supply

Probable cause:

- Failure or replacement of the power supply

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, envPS<element index> (Env Power Supply <element index>)is below low boundary, current value: 0(1 OK/0 FAULTY). (faulty)

Explanation:

The power supply failed.

Possible problem area:

- Power supply

Probable cause:

- Power supply failure

System administrator action:

Check the components of the failed power supply.

- psshow

Replace the damaged power supply.

FW-ABOVE, 3, envPS<element index> (Env Power Supply <element index>)is above high boundary, current value: 1(1 OK/0 FAULTY). (normal)

Explanation:

The power supply has returned to the normal status.

Possible problem area:

None

Probable cause:

- Replacement of the power supply

System administrator action:

None

### **SwitchStatusPolicy**

These messages are output based on the policy set in SwitchStatusPolicySet.

FW-STATUS\_SWITCH, 3, Switch status changed from HEALTHY/OK to Marginal/Warning <reason>

Explanation:

The status of the switch has changed from the normal status to Marginal/Warning. Only FOS 4.x is displayed as the reason.

Possible problem area:

See the above table.

Probable cause:

See the above table.

System administrator action:

Enter the SwitchStatusShow command to check for the cause that changed the status of the switch to Marginal/Warning, and follow the response described in the error message corresponding to the cause.

FW-STATUS\_SWITCH, 3, Switch status changed from HEALTHY/OK to Down/Failed <reason>

Explanation:

The status of the switch has changed from the normal status to DOWN/FAILED. Only FOS 4.x is displayed as the reason.

Possible problem area:

See the above table.

Probable cause:

See the above table.

System administrator action:

Enter the SwitchStatusShow command to check for the cause that changed the status of the switch to DOWN/FAILED, and follow the response described in the error message corresponding to the cause.

FW-STATUS\_SWITCH, 3, Switch status changed from Marginal/Warning to HEALTHY/OK .<reason>

Explanation:

The status of the switch has returned to the normal status from Marginal/Warning. Only FOS 4.x is displayed as the reason.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-STATUS\_SWITCH, 3, Switch status changed from Marginal/Warning to DOWN/FAILED <reason>

Explanation:

The status of the switch has changed from Marginal/Warning to DOWN/FAILED. Only FOS 4.x is displayed as the reason.

Possible problem area:

See the above table.

Probable cause:

See the above table.

System administrator action:

Enter the SwitchStatusShow command to check for the cause that changed the status of the switch to DOWN/FAILED, and follow the response described in the error message corresponding to the cause.

FW-STATUS\_SWITCH, 3, Switch status changed from DOWN/FAILED To Marginal/Warning. <reason>

Explanation:

The status of the switch has changed from DOWN/FAILED to Marginal/Warning. Only FOS 4.x is displayed as the reason.

Possible problem area:

See the above table.

Probable cause:

See the above table.

System administrator action:

Enter the SwitchStatusShow command to check for the cause that changed the status of the switch to Marginal/Warning, and follow the response described in the error message corresponding to the cause.

FW-STATUS\_SWITCH, 3, Switch status changed from DOWN/FAILED To HEALTHY/OK . <reason>

Explanation:

The status of the switch has returned to the normal status from DOWN/FAILED. Only FOS 4.x is displayed as the reason.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Loss of Link (F/FL Port)**

These messages are output if a Loss of Link occurs. Usually, a Loss of Link occurs at the same time as a Loss of Signal or Loss of Synchronization. A Loss of Link also occurs if a hardware failure occurs.

FW-CHANGED, 4, fopportLink<element index> (FOP Port Link Failures <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of link failures occurring per minute at the F/FL port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportLink<element index> (FOP Port Link Failures <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of link failures occurring per minute at the F/FL port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable
- Hardware

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP/switch failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportLink<element index> (FOP Port Link Failures <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of link failures occurring per minute at the F/FL port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportLink<element index> (FOP Port Link Failures <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of link failures occurring per minute at the F/FL port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable
- Hardware

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP/switch failure
- Error recovery

System administrator action:

Check the Loss of Signal (fopportSignal) or Loss of Sync (fopportSync) message.  
If one of the above messages is output, follow the response described in the message.  
If neither of them is output, collect the SupportShow log data, and contact the CE.

## Loss of Synchronization (F/FL Port)

These messages are output if a Loss of Synchronization occurs. Usually, a Loss of Synchronization occurs at the same time as an SFP failure, cable failure, or Loss of Signal.

FW-CHANGED, 4, fopportSync<element index> (FOP Port Loss of sync <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

### Explanation:

The number of times a Loss of Synchronization occurred per minute at the F/FL port has changed.

### Possible problem area:

None

### Probable cause:

None

### System administrator action:

None

FW-EXCEEDED, 3, fopportSync<element index> (FOP Port Loss of sync <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

### Explanation:

The number of times a Loss of Synchronization occurred per minute at the F/FL port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

### Possible problem area:

- Connected device
- Fiber optic cable
- SFP

### Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP failure
- Error recovery

### System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportSync<element index> (FOP Port Loss of sync <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

### Explanation:

The number of times a Loss of Synchronization occurred per minute at the F/FL port returned to the normal level below the lower limit of the warning level.

### Possible problem area:

None

### Probable cause:

None

### System administrator action:

None

FW-ABOVE, 3, fopportSync<element index> (FOP Port Loss of sync <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of times a Loss of Synchronization occurred per minute at the F/FL port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable
- Hardware

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP failure

System administrator action:

Check the Loss of Signal (fopportSignal) message.

If the above message is output, follow the response described in the message.

If it is not output, collect the SupportShow log data, and contact the CE.

### Loss of Signal (F/FL Port)

These messages are output if a Loss of Signal occurs. Usually, a Loss of Signal occurs if a cable is defective or when a connected device has been shut down.

FW-CHANGED, 4, fopportSignal<element index> (FOP Port Loss of Signal <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportSignal<element index> (FOP Port Loss of Signal <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of times a Loss of Signal occurred per minute at the F/FL port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportSignal<element index> (FOP Port Loss of Signal <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of times a Loss of Signal occurred per minute at the F/FL port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportSignal<element index> (FOP Port Loss of Signal <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of times a Loss of Signal occurred per minute at the F/FL port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable

System administrator action:

- Check whether a connected device was shut down or rebooted.
- Check whether the connectors at both ends of each fiber optic cable are securely inserted.
- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

FW-CHANGED, 4, fopportProtoErr<element index> (FOP Port Protocol Errors <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of protocol errors occurring per minute at the F/FL port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportProtoErr<element index> (FOP Port Protocol Errors <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of protocol errors occurring per minute at the F/FL port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.



Possible problem area:

- Firmware
- Fiber optic cable
- Hardware

Probable cause:

- Firmware error
- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportProtoErr<element index> (FOP Port Protocol Errors <element index>) is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of protocol errors occurring per minute at the F/FL port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportProtoErr<element index> (FOP Port Protocol Errors <element index>) is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of protocol errors occurring per minute at the F/FL port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Firmware
- Fiber optic cable
- Hardware

Probable cause:

- Firmware error
- Defective fiber optic cable
- Hardware failure

System administrator action:

If the message is output only once, a firmware error is assumed. Collect the SupportShow log data, and contact the CE.  
If the message is output repeatedly, A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

### **Invalid Words (F/FL Port)**

These messages are output if Invalid Words was detected. Usually, Invalid Words is caused by a hardware failure.

FW-CHANGED, 4, fopportWords<element index> (FOP Port Invalid Words <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of Invalid Words detected per minute at the F/FL port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportWords<element index> (FOP Port Invalid Words <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of Invalid Words detected per minute at the F/FL port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportWords<element index> (FOP Port Invalid Words <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of Invalid Words detected per minute at the F/FL port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportWords<element index> (FOP Port Invalid Words <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of Invalid Words detected per minute at the F/FL port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure

System administrator action:

A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

FW-CHANGED, 4, fopportCRCs<element index> (FOP Port Invalid CRCs <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of CRC errors occurring per minute at the F/FL port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportCRCs<element index> (FOP Port Invalid CRCs <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of CRC errors occurring per minute at the F/FL port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportCRCs<element index> (FOP Port Invalid CRCs <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of CRC errors occurring per minute at the F/FL port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportCRCs<element index> (FOP Port Invalid CRCs <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of CRC errors occurring per minute at the F/FL port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure

System administrator action:

A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

### **Received Bytes (F/FL Port)**

These messages are output if the number of received bytes exceeds the predetermined value. This event is not related to a failure.

FW-CHANGED, 4, fopportRXPerf<element index> (FOP Port RX Performance <elementindex>) value has changed, current value: <value> KB/s. (info)

Explanation:

The number of received bytes has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is exceeded boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes exceeded the upper limit set in the switch or returned to the normal level below the lower limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is below low boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is above high boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

If this event causes a problem in capacity, take appropriate action, such as increasing the capacity based on the applicable policy.

FW-INBETWEEN, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is between high and low boundaries, current value: <value> KB/s. (info)

Explanation:

The number of received bytes is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Sent Bytes (F/FL Port)**

These messages are output if the number of sent bytes exceeds the predetermined value. This event is not related to a failure.

FW-CHANGED, 4, fopportTXPerf<element index> (FOP Port TX Performance <elementindex>) value has changed, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>)is exceeded boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes exceeded the upper limit set in the switch or returned to the normal level below the lower limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>)is below low boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>)is above high boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

If this event causes a problem in capacity, take appropriate action, such as increasing the capacity based on the applicable policy.

FW-INBETWEEN, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>)is between high and low boundaries, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### Changes in the Port Status (F/FL Port)

These messages are output when one of the following status changes occurs at the F/FL port. This event is not related to a failure.

- The status of the F/FL port changed to offline.
- The status of the F/FL port changed to online.
- A diagnostic test is in progress.
- The F/FL port failed.
- The port was changed to the F-Port.

FW-CHANGED, 4, fopportStatc<element index> (FOP Port State Changes <elementindex>) value has changed, current value: <value> Change(s)/minute. (info)

Explanation:

The number of F/FL port status changes per minute has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportStatc<element index> (FOP Port State Changes <element index>)is exceeded boundary, current value: <value> Change(s)/minute. (info)

Explanation:

The number of F/FL port status changes per minute exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

FW-BELOW, 3, fopportStatc<element index> (FOP Port State Changes <element index>)is below low boundary, current value: <value> Change(s)/minute. (normal)

Explanation:

The number of F/FL port status changes per minute returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

FW-ABOVE, 3, fopportStat<element index> (FOP Port State Changes <element index>)is above high boundary, current value: <value> Change(s)/minute. (faulty)

Explanation:

The number of F/FL port status changes per minute exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

FW-INBETWEEN, 3, fopportStat<element index> (FOP Port State Changes <element index>)is between high and low boundaries, current value: <value> Change(s)/minute. (info)

Explanation:

The number of F/FL port status changes per minute is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

### **Loss of Link (E Port)**

These messages are output if a Loss of Link occurs. Usually, a Loss of Link occurs at the same time as a Loss of Signal or Loss of Synchronization. A Loss of Link also occurs if a hardware failure occurs.

FW-CHANGED, 4, eportLink<element index> (E Port Link Failures <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of link failures occurring per minute at the E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportLink<element index> (E Port Link Failures <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of link failures occurring per minute at the E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware



Probable cause:

- Defective fiber optic cable
- SFP/switch failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportLink<element index> (E Port Link Failures <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of link failures occurring per minute at the E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportLink<element index> (E Port Link Failures <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of link failures occurring per minute at the E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- SFP/switch failure
- Error recovery

System administrator action:

Check the Loss of Signal (eportSignal) or Loss of Sync (eportSync) message.  
If one of the above messages is output, follow the response described in the message.  
If neither of them is output, collect the SupportShow log data, and contact the CE.

FW-CHANGED, 4, eportSync<element index> (E Port Loss of sync <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of times a Loss of Synchronization occurred per minute at the E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

## Loss of Synchronization (E Port)

These messages are output if a Loss of Synchronization occurs. Usually, a Loss of Synchronization occurs at the same time as an SFP failure, cable failure, or Loss of Signal.

FW-EXCEEDED, 3, eportSync<element index> (E Port Loss of sync <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

### Explanation:

The number of times a Loss of Synchronization occurred per minute at the E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

### Possible problem area:

- Fiber optic cable
- SFP

### Probable cause:

- Defective fiber optic cable
- SFP failure
- Error recovery

### System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportSync<element index> (E Port Loss of sync <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

### Explanation:

The number of times a Loss of Synchronization occurred per minute at the E port returned to the normal level below the lower limit of the warning level.

### Possible problem area:

None

### Probable cause:

None

### System administrator action:

None

FW-ABOVE, 3, eportSync<element index> (E Port Loss of sync <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

### Explanation:

The number of times a Loss of Synchronization occurred per minute at the E port exceeded the upper limit of the warning level set in the switch.

### Possible problem area:

- Fiber optic cable
- Hardware

### Probable cause:

- Defective fiber optic cable
- SFP failure

### System administrator action:

Check the Loss of Signal (eportSignal) message.

If the above message is output, follow the response described in the message.

If it is not output, collect the SupportShow log data, and contact the CE.

## Loss of Signal (E Port)

These messages are output if a Loss of Signal occurs. Usually, a Loss of Signal occurs if a cable is defective.

FW-CHANGED, 4, eportSignal<element index> (E Port Loss of Signal <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportSignal<element index> (E Port Loss of Signal <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of times a Loss of Signal occurred per minute at the E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable

Probable cause:

- Defective fiber optic cable  
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportSignal<element index> (E Port Loss of Signal <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of times a Loss of Signal occurred per minute at the E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportSignal<element index> (E Port Loss of Signal <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of times a Loss of Signal occurred per minute at the E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable

Probable cause:

- Defective fiber optic cable

System administrator action:

- Check whether the connectors at both ends of each fiber optic cable are securely inserted.
- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

### **Protocol Error (E Port)**

These messages are output if a protocol error occurs. Usually, a protocol error occurs because of a software error or hardware failure.

FW-CHANGED, 4, eportProtoErr<element index> (E Port Protocol Errors <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of protocol errors occurring per minute at the E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportProtoErr<element index> (E Port Protocol Errors <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of protocol errors occurring per minute at the E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Firmware
- Fiber optic cable
- Hardware

Probable cause:

- Firmware error
- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportProtoErr<element index> (E Port Protocol Errors <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of protocol errors occurring per minute at the E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportProtoErr<element index> (E Port Protocol Errors <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of protocol errors occurring per minute at the E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Firmware
- Fiber optic cable
- Hardware

Probable cause:

- Firmware error
- Defective fiber optic cable
- Hardware failure

System administrator action:

If the message is output only once, a firmware error can be assumed. Collect the SupportShow log data, and contact the CE.  
If the message is output repeatedly, a device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

#### **Invalid Words (E Port)**

These messages are output if Invalid Words was detected. Usually, Invalid Words is caused by a hardware failure.

FW-CHANGED, 4, eportWords<element index> (E Port Invalid Words <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of Invalid Words detected per minute at the E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportWords<element index> (E Port Invalid Words <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of Invalid Words detected per minute at the E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportWords<element index> (E Port Invalid Words <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of Invalid Words detected per minute at the E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportWords<element index> (E Port Invalid Words <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of Invalid Words detected per minute at the E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure

System administrator action:

A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
  - Replace any defective fiber optic cable.
- Collect the SupportShow log data, and contact the CE.

### **CRC Error (E Port)**

These messages are output if a CRC error occurs. Usually, a CRC error occurs because of a hardware failure.

FW-CHANGED, 4, eportCRCs<element index> (E Port Invalid CRCs <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of CRC errors occurring per minute at the E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportCRCs<element index> (E Port Invalid CRCs <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of CRC errors occurring per minute at the E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportCRCs<element index> (E Port Invalid CRCs <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of CRC errors occurring per minute at the E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportCRCs<element index> (E Port Invalid CRCs <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of CRC errors occurring per minute at the E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure

System administrator action:

A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

### Received Bytes (E Port)

These messages are output if the number of received bytes exceeds the predetermined value. This event is not related to a failure.

FW-CHANGED, 4, eportRXPerf<element index> (E Port RX Performance <elementindex>) value has changed, current value: <value> KB/s. (info)

Explanation:

The number of received bytes has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportRXPerf<element index> (E Port RX Performance <element index>)is exceeded boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportRXPerf<element index> (E Port RX Performance <element index>)is below low boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportRXPerf<element index> (E Port RX Performance <element index>)is above high boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

If this event causes a problem in capacity, take appropriate action, such as increasing the capacity based on the applicable policy.



FW-INBETWEEN, 3, eportRXPerf<element index> (E Port RX Performance <element index>)is between high and low boundaries, current value: <value> KB/s. (info)

Explanation:

The number of received bytes is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Sent Bytes (F/FL/E Port)**

These messages are output if the number of sent bytes exceeds the predetermined value. This event is not related to a failure.

FW-CHANGED, 4, eportTXPerf<element index> (E Port TX Performance <elementindex>) value has changed, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportTXPerf<element index> (E Port TX Performance <element index>)is exceeded boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, eportTXPerf<element index> (E Port TX Performance <element index>)is below low boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, eportTXPerf<element index> (E Port TX Performance <element index>)is above high boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

If this event causes a problem in capacity, take appropriate action, such as increasing the capacity based on the applicable policy.

FW-INBETWEEN, 3, eportTXPerf<element index> (E Port TX Performance <element index>)is between high and low boundaries, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Changes in the Port Status (E Port)**

These messages are output if one of the following status changes occurs at the E port. This event is not related to a failure.

- The status of the E port changed to offline.
- The status of the E port changed to online.
- A diagnostic test is in progress.
- The E port failed.
- The port was changed to the E-Port.
- The E port was segmented.
- The E port became a trunk port.

FW-CHANGED, 4, eportStatc<element index> (E Port State Changes <elementindex>) value has changed, current value: <value> Change(s)/minute. (info)

Explanation:

The number of E port status changes per minute has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, eportStatc<element index> (E Port State Changes <element index>)is exceeded boundary, current value: <value> Change(s)/minute. (info)

Explanation:

The number of E port status changes per minute exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other E port message was output.

FW-BELOW, 3, eportStatc<element index> (E Port State Changes <element index>)is below low boundary, current value: <value> Change(s)/minute. (normal)

Explanation:

The number of E port status changes per minute returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other E port message was output.

FW-ABOVE, 3, eportStatc<element index> (E Port State Changes <element index>)is above high boundary, current value: <value> Change(s)/minute. (faulty)

Explanation:

The number of E port status changes per minute exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other E port message was output.

FW-INBETWEEN, 3, eportStatc<element index> (E Port State Changes <element index>)is between high and low boundaries, current value: <value> Change(s)/minute. (info)

Explanation:

The number of E port status changes per minute is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other E port message was output.

## Loss of Link (F/FL/E Port)

These messages are output if a Loss of Link occurs. Usually, a Loss of Link occurs at the same time as a Loss of Signal or Loss of Synchronization. A Loss of Link also occurs if a hardware failure occurs.

FW-CHANGED, 4, fopportLink<element index> (FOP Port Link Failures <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

### Explanation:

The number of link failures occurring per minute in the F/FL/E port has changed.

### Possible problem area:

None

### Probable cause:

None

### System administrator action:

None

FW-EXCEEDED, 3, fopportLink<element index> (FOP Port Link Failures <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

### Explanation:

The number of link failures occurring per minute in the F/FL/E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

### Possible problem area:

- Connected device
- Fiber optic cable
- Hardware

### Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP/switch failure
- Error recovery

### System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportLink<element index> (FOP Port Link Failures <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

### Explanation:

The number of link failures occurring per minute in the F/FL/E port returned to the normal level below the lower limit of the warning level.

### Possible problem area:

None

### Probable cause:

None

### System administrator action:

None

FW-ABOVE, 3, fopportLink<element index> (FOP Port Link Failures <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of link failures occurring per minute in the F/FL/E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable
- Hardware

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP/switch failure
- Error recovery

System administrator action:

Check the Loss of Signal (fopportSignal) or Loss of Sync (fopportSync) message.  
If one of the above messages is output, follow the response described in the message.  
If neither of them is output, collect the SupportShow log data, and contact the CE.

### Loss of Synchronization (F/FL/E Port)

These messages are output if a Loss of Synchronization occurs. Usually, a Loss of Synchronization occurs at the same time as an SFP failure, cable failure, or Loss of Signal.

FW-CHANGED, 4, fopportSync<element index> (FOP Port Loss of sync <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of times a Loss of Synchronization occurred per minute in the F/FL/E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportSync<element index> (FOP Port Loss of sync <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of times a Loss of Synchronization occurred per minute in the F/FL/E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable
- SFP

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportSync<element index> (FOP Port Loss of sync <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of times a Loss of Synchronization occurred per minute in the F/FL/E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportSync<element index> (FOP Port Loss of sync <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of times a Loss of Synchronization occurred per minute in the F/FL/E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Connected device
- Fiber optic cable
- Hardware

Probable cause:

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- SFP failure

System administrator action:

Check the Loss of Signal (fopportSignal) message.  
If the above message is output, follow the response described in the message.  
If it is not output, collect the SupportShow log data, and contact the CE.

**Loss of Signal (F/FL/E Port)**

These messages are output if a Loss of Signal occurs. Usually, a Loss of Signal occurs if a cable is defective or when a connected device has been shut down.

FW-CHANGED, 4, fopportSignal<element index> (FOP Port Loss of Signal <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportSignal<element index> (FOP Port Loss of Signal <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

**Explanation:**

The number of times a Loss of Signal occurred per minute in the F/FL/E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

**Possible problem area:**

- Connected device
- Fiber optic cable

**Probable cause:**

- Reboot or shutdown of a connected device
- Defective fiber optic cable
- Error recovery

**System administrator action:**

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportSignal<element index> (FOP Port Loss of Signal <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

**Explanation:**

The number of times a Loss of Signal occurred per minute in the F/FL/E port returned to the normal level below the lower limit of the warning level.

**Possible problem area:**

None

**Probable cause:**

None

**System administrator action:**

None

FW-ABOVE, 3, fopportSignal<element index> (FOP Port Loss of Signal <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

**Explanation:**

The number of times a Loss of Signal occurred per minute in the F/FL/E port exceeded the upper limit of the warning level set in the switch.

**Possible problem area:**

- Connected device
- Fiber optic cable

**Probable cause:**

- Reboot or shutdown of a connected device
- Defective fiber optic cable

**System administrator action:**

Check whether a connected device was shut down or rebooted.  
Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

**Protocol Error (F/FL/E Port)**

These messages are output if a protocol error occurs. Usually, a protocol error occurs because of a software error or hardware failure.

FW-CHANGED, 4, fopportProtoErr<element index> (FOP Port Protocol Errors <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of protocol errors occurring per minute in the F/FL/E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportProtoErr<element index> (FOP Port Protocol Errors <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of protocol errors occurring per minute in the F/FL/E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Firmware
- Fiber optic cable
- Hardware

Probable cause:

- Firmware error
- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportProtoErr<element index> (FOP Port Protocol Errors <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of protocol errors occurring per minute in the F/FL/F port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportProtoErr<element index> (FOP Port Protocol Errors <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of protocol errors occurring per minute in the F/FL/E port exceeded the upper limit of the warning level set in the switch.



Possible problem area:

- Firmware
- Fiber optic cable
- Hardware

Probable cause:

- Firmware error
- Defective fiber optic cable
- Hardware failure

System administrator action:

If the message is output only once, a firmware error is assumed. Collect the SupportShow log data, and contact the CE.

If the message is output repeatedly, a device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

### **Invalid Words (F/FL/E Port)**

These messages are output if Invalid Words was detected. Usually, Invalid Words is caused by a hardware failure.

FW-CHANGED, 4, fopportWords<element index> (FOP Port Invalid Words <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of Invalid Words detected per minute at the F/FL/E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportWords<element index> (FOP Port Invalid Words <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of Invalid Words detected per minute at the F/FL/E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportWords<element index> (FOP Port Invalid Words <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of Invalid Words detected per minute at the F/FL/E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportWords<element index> (FOP Port Invalid Words <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of Invalid Words detected per minute at the F/FL/E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure

System administrator action:

A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
  - Replace any defective fiber optic cable.
- Collect the SupportShow log data, and contact the CE.

### **CRC Error (F/FL/E Port)**

These messages are output if a CRC error occurs. Usually, a CRC error occurs because of a hardware failure.

FW-CHANGED, 4, fopportCRCs<element index> (FOP Port Invalid CRCs <elementindex>) value has changed, current value: <value> Error(s)/minute. (info)

Explanation:

The number of CRC errors occurring per minute in the F/FL/E port has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportCRCs<element index> (FOP Port Invalid CRCs <element index>)is exceeded boundary, current value: <value> Error(s)/minute. (info)

Explanation:

The number of CRC errors occurring per minute in the F/FL/E port exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure
- Error recovery

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportCRCs<element index> (FOP Port Invalid CRCs <element index>)is below low boundary, current value: <value> Error(s)/minute. (normal)

Explanation:

The number of CRC errors occurring per minute in the F/FL/E port returned to the normal level below the lower limit of the warning level.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportCRCs<element index> (FOP Port Invalid CRCs <element index>)is above high boundary, current value: <value> Error(s)/minute. (faulty)

Explanation:

The number of CRC errors occurring per minute in the F/FL/E port exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Fiber optic cable
- Hardware

Probable cause:

- Defective fiber optic cable
- Hardware failure

System administrator action:

A device or fiber optic cable may be faulty. Check whether the connectors at both ends of each fiber optic cable are securely inserted.

- Disconnect and then reconnect connectors.
- Replace any defective fiber optic cable.

Collect the SupportShow log data, and contact the CE.

### Received Bytes (F/FL/E Port)

These messages are output if the number of received bytes exceeds the predetermined value. This event is not related to a failure.

FW-CHANGED, 4, fopportRXPerf<element index> (FOP Port RX Performance <elementindex>) value has changed, current value: <value> KB/s. (info)

Explanation:

The number of received bytes has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is exceeded boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is below low boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is above high boundary, current value: <value> KB/s. (info)

Explanation:

The number of received bytes exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

If this event causes a problem in capacity, take appropriate action, such as increasing the capacity based on the applicable policy.

FW-INBETWEEN, 3, fopportRXPerf<element index> (FOP Port RX Performance <element index>)is between high and low boundaries, current value: <value> KB/s. (info)

Explanation:

The number of received bytes is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Sent Bytes (F/FL/E Port)**

These messages are output if the number of sent bytes exceeds the predetermined value. This event is not related to a failure.

FW-CHANGED, 4, fopportTXPerf<element index> (FOP Port TX Performance <elementindex>) value has changed, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>)is exceeded boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>)is below low boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-ABOVE, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>) is above high boundary, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

If this event causes a problem in capacity, take appropriate action, such as increasing the capacity based on the applicable policy.

FW-INBETWEEN, 3, fopportTXPerf<element index> (FOP Port TX Performance <element index>) is between high and low boundaries, current value: <value> KB/s. (info)

Explanation:

The number of sent bytes is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Changes in the Port Status (F/FL/E Port)**

These messages are output if one of the following status changes occurs in the F/FL/E port. This event is not related to a failure.

- The status of the F/FL/E port changed to offline.
- The status of the F/FL/E port changed to online.
- A diagnostic test is in progress.
- The F/FL/E port failed.
- The port was changed to the F-Port.
- The E port was segmented.
- The E port became a trunk port.

FW-CHANGED, 4, fopportStatc<element index> (FOP Port State Changes <elementindex>) value has changed, current value: <value> Change(s)/minute. (info)

Explanation:

The number of F/FL/E port status changes per minute has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, fopportStatc<element index> (FOP Port State Changes <element index>)is exceeded boundary, current value: <value> Change(s)/minute. (info)

Explanation:

The number of F/FL/E port status changes per minute exceeded the upper limit or returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

FW-BELOW, 3, fopportStatc<element index> (FOP Port State Changes <element index>)is below low boundary, current value: <value> Change(s)/minute. (normal)

Explanation:

The number of F/FL/E port status changes per minute returned to the normal level below the lower limit of the warning level set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

FW-ABOVE, 3, fopportStatc<element index> (FOP Port State Changes <element index>)is above high boundary, current value: <value> Change(s)/minute. (faulty)

Explanation:

The number of F/FL/E port status changes per minute exceeded the upper limit set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

FW-INBETWEEN, 3, fopportStatc<element index> (FOP Port State Changes <element index>)is between high and low boundaries, current value: <value> Change(s)/minute. (info)

Explanation:

The number of F/FL/E port status changes per minute is between the upper and lower limits set in the switch.

Possible problem area:

None

Probable cause:

None

System administrator action:

Check whether any other fopport message was output.

## SFP Temperature

These messages are output when the SFP temperature changes.

FW-CHANGED, 4, sfpTemp<element index> (Sfp Temperature <elementindex>) value has changed, current value: <value> C. (info)

**Explanation:**

The SFP temperature has changed.

**Possible problem area:**

None

**Probable cause:**

None

**System administrator action:**

None

FW-EXCEEDED, 3, sfpTemp<element index> (Sfp Temperature <element index>)is exceeded boundary, current value: <value> C. (faulty)

**Explanation:**

The SFP temperature exceeded the upper limit or decreased below the lower limit of the warning level set in the switch.

**Possible problem area:**

- Room temperature
- Fan
- SFP

**Probable cause:**

- Increase or decrease in room temperature
- Fan failure
- SFP failure

**System administrator action:**

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, sfpTemp<element index> (Sfp Temperature <element index>)is below low boundary, current value: <value> C. (faulty)

**Explanation:**

The SFP temperature decreased below the lower limit of the warning level set in the switch.

**Possible problem area:**

- Room temperature
- Fan

**Probable cause:**

- Decrease in room temperature
- Fan failure
- SFP failure

**System administrator action:**

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.



FW-ABOVE, 3, sfpTemp<element index> (Sfp Temperature <element index>)is above high boundary, current value: <value> C. (faulty)

Explanation:

The SFP temperature exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- Room temperature
- Fan

Probable cause:

- Increase in room temperature
- Fan failure
- SFP failure

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-INBETWEEN, 3, sfpTemp<element index> (Sfp Temperature <element index>)is between high and low boundaries, current value: <value> C. (normal)

Explanation:

The SFP temperature has returned to the normal status.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

## Optical Receiving Power

These messages are output when the SFP optical receiving power changes.

FW-CHANGED, 4, sfpRX<element index> (Sfp RX power <elementindex>) value has changed, current value: <value> uWatts. (info)

Explanation:

The optical receiving power has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, sfpRX<element index> (Sfp RX power <element index>)is exceeded boundary, current value: <value> uWatts. (info)

Explanation:

The optical receiving power exceeded the upper limit or decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP
- Fiber optic cable

Probable cause:

- SFP failure
- Fiber optic cable deterioration or connection failure

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, sfpRX<element index> (Sfp RX power <element index>)is below low boundary, current value: <value> uWatts. (info)

Explanation:

The optical receiving power decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP
- Fiber optic cable

Probable cause:

- SFP failure
- Fiber optic cable deterioration or connection failure

System administrator action:

Check the fiber optic cable.  
If the fiber optic cable is normal, replace the SFP.

FW-ABOVE, 3, sfpRX<element index> (Sfp RX power <element index>)is above high boundary, current value: <value> uWatts. (info)

Explanation:

The optical receiving power exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-INBETWEEN, 3, sfpRX<element index> (Sfp RX power <element index>)is between high and low boundaries, current value: <value> uWatts. (info)

Explanation:

The SFP optical receiving power has returned to the normal status.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

## Optical Sending Power

These messages are output when the SFP optical sending power changes.

FW-CHANGED, 4, sfpTX<element index> (Sfp TX power <elementindex>) value has changed, current value: <value> uWatts. (info)

Explanation:

The optical sending power has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, sfpTX<element index> (Sfp TX power <element index>)is exceeded boundary, current value: <value> uWatts. (info)

Explanation:

The optical sending power exceeded the upper limit or decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, sfpTX<element index> (Sfp TX power <element index>)is below low boundary, current value: <value> uWatts. (info)

Explanation:

The optical sending power decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP  
- Fiber optic cable

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-ABOVE, 3, sfpTX<element index> (Sfp TX power <element index>)is above high boundary, current value: <value> uWatts. (info)

Explanation:

The optical sending power exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-INBETWEEN, 3, sfpTX<element index> (Sfp TX power <element index>)is between high and low boundaries, current value: <value> uWatts. (info)

Explanation:

The SFP optical sending power has returned to the normal status.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

## **SFP Current**

These messages are output when the SFP current changes.

FW-CHANGED, 4, sfpCrnt<element index> (Sfp Current <elementindex>) value has changed, current value: <value> mA. (info)

Explanation:

The SFP current has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, sfpCrnt<element index> (Sfp Current <element index>)is exceeded boundary, current value: <value> mA. (info)

Explanation:

The SFP current exceeded the upper limit or decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP
- Fiber optic cable

Probable cause:

- SFP failure

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, sfpCrnt<element index> (Sfp Current <element index>)is below low boundary, current value: <value> mA. (normal)

Explanation:

The SFP current decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP
- Fiber optic cable

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-ABOVE, 3, sfpCrnt<element index> (Sfp Current <element index>)is above high boundary, current value: <value> mA. (faulty)

Explanation:

The SFP current exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-INBETWEEN, 3, sfpCrnt<element index> (Sfp Current <element index>)is between high and low boundaries, current value: <value> mA. (info)

Explanation:

The SFP current has returned to the normal status.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

### **Supply Voltage to the SFP**

These messages are output when the voltage supplied to the SFP changes.

FW-CHANGED, 4, sfpVold<element index> (Sfp Voltage <elementindex>) value has changed, current value: <value> mV. (info)

Explanation:

The supply voltage to the SFP has changed.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

FW-EXCEEDED, 3, sfpVold<element index> (Sfp Voltage <element index>)is exceeded boundary, current value: <value> mV. (info)

Explanation:

The supply voltage to the SFP exceeded the upper limit or decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Check the FW-ABOVE or FW-BELOW message that is output at the same time as this message, and follow the response described in the message.

FW-BELOW, 3, sfpVold<element index> (Sfp Voltage <element index>)is below low boundary, current value: <value> mV. (normal)

Explanation:

The supply voltage to the SFP decreased below the lower limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-ABOVE, 3, sfpVold<element index> (Sfp Voltage <element index>)is above high boundary, current value: <value> mV. (faulty)

Explanation:

The supply voltage to the SFP exceeded the upper limit of the warning level set in the switch.

Possible problem area:

- SFP

Probable cause:

- SFP failure

System administrator action:

Replace the SFP.

FW-INBETWEEN, 3, sfpVold<element index> (Sfp Voltage <element index>)is between high and low boundaries, current value: <value> mV. (info)

Explanation:

The supply voltage to the SFP has returned to the normal status.

Possible problem area:

None

Probable cause:

None

System administrator action:

None

## 2.2.2 Explanation of Virtualization Switch Device VS900 Events

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For information about events of ETERNUS VS900 virtualization switch (excluding model 200), refer to "[2.2.1 Explanation of SN200\(Brocade\) Event](#)".

For information about events of ETERNUS VS900 model 200 virtualization switch, refer to "[2.7.1 Explanation of Fibre Alliance MIB Support Device Events](#)".

## 2.2.3 Explanation of PRIMERGY BX600 Fibre Channel Switch Blade Events

Refer to "[2.2.1 Explanation of SN200\(Brocade\) Event](#)".

## 2.2.4 Explanation of SN200 MDS (Cisco MDS) Events

Failure event	Level	Event display	Troubleshooting
The domain ID is not configured or assigned.	Warning	Domain ID is not configured or assigned on a <i>VSAN-number</i>	Check the domain ID setting and set the appropriate ID.
The principal switch was selected.	Warning	Principal switch is selected on a <i>VSAN-number</i>	Check whether the cable was disconnected and then reconnected. If this operation was not performed, check the SFP, cable, and the connection destination switch.
A fabric was built or reconfigured.	Warning	Fabric is built or reconfigured on a <i>VSAN-number</i>	Check whether the cable was disconnected and then reconnected. If this operation was not performed, check the SFP, cable, and the connection destination switch.
The module status has become unknown. The module is likely to be faulty.	Error	Module is unknown state	Replace the possibly faulty module.
The module was stopped by user operation.	Warning	Module is administratively disabled	Perform a user operation to activate the module.
The module is active, but is diagnosed to have encountered an error.	Warning	Module is operational but there is some diagnostic information available	Since this error is likely to recur, preventive replacement is recommended.
The module has entered an error state.	Error	Module has failed due to some condition	Replace the possibly faulty module.
The installed module was lost.	Error	Module has been provisioned but it is missing	Replace the possibly faulty module unless this status was encountered during operation.
An incompatible module is installed.	Error	Module has not been provisioned and wrong type of module is plugged in	Verify that the components are installed at correct locations.
The module is incompatible with the current configuration.	Error	Module is not compatible with the current configuration	Set up a configuration that is suitable for the installed module.
A module diagnostic test encountered an error caused by hardware failure.	Error	Module diagnostic test failed due to some hardware failure	Replace the possibly faulty module.
The module is still not ready.	Error	Module is waiting for an external or internal event to become operational	Contact the support service if the possibly faulty location cannot be identified using device error logs or other information.
The module is inactive although it is switched on.	Error	Module is administratively set to be powered on but out of service	Check the module status or configuration. If no abnormality is found, contact the support service.

Failure event	Level	Event display	Troubleshooting
The module is inactive due to a temperature abnormality although it is switched on.	Error	Module is powered on but out of service by environmental temperature problem	Check the fan status. If no problem is found, check the installation environment.
The power was cut off.	Error	Module is in powered down state	If the power was not intentionally turned off, replace the possibly faulty module.
The system power is not sufficient for the module.	Error	System does not have enough power in power budget to power on this module	Check the power environment. If no problem is found, contact the support service.
The module is being rebooted.	Error	Module is being power cycled	If the module is not intentionally being rebooted, contact the support service.
The module is active, but is likely to enter an error state.	Error	Module is still operational but may go into a failure state	Contact the support service if the possibly faulty location cannot be identified using device error logs or other information.
The module is active, but is likely to encounter system failure.	Error	Module is still operational but could potentially take the system down	Contact the support service if the possibly faulty location cannot be identified using device error logs or other information.
The power to the FRU was cut off for an unknown reason.	Error	FRU is powered off because of unknown problem	Replace the possibly faulty module.
The power to the FRU was cut off.	Warning	FRU is administratively powered off	To maintain redundancy, perform user operation to turn on the power to the module.
The power to the FRU was turned off because of insufficient system power.	Warning	FRU is powered off because available system power is insufficient	Check the power environment. If no problem is found, contact the support service.
The power to the FRU was cut off because of a power problem within the FRU.	Error	FRU is powered off because of power problem in the FRU	Check the power status. If no problem is found, check the installation environment.
The power to the FRU was cut off due to a temperature problem.	Error	FRU is powered off because of temperature problem	Check the power status. If no problem is found, check the installation environment.
The power to the FRU was cut off due to a fan problem.	Error	FRU is powered off because of fan problems	Check the fan status. If no problem is found, check the installation environment.
The status of the FRU has changed to error.	Error	FRU is in failed state	Replace the possibly faulty module.
The power is normal, but the power supply fan is faulty.	Error	FRU is on but fan has failed	Replace the pertinent power supply.
The status of the fan has changed to unknown.	Error	FAN is unknown state	Contact the support service.
The power to the fan was cut off.	Error	FAN is powered down	Verify that the fan is correctly inserted. If the problem remains, contact the support service.
The fan has become faulty.	Warning	FAN is partial failure	Replace the fan.
The sensor threshold has been exceeded.	Information	The sensor value(% VALUE%) crossed the threshold(% VALUE%)	If this event recurs frequently, contact the support service.



Failure event	Level	Event display	Troubleshooting
A software crash occurred and the core file was generated.	Information	Software crash occurs and a core file is generated.	Replace the supervisor or device.
The trunking port has failed.	Warning	Trunking port is down(%CAUSE%)	Check whether the cable was disconnected and then reconnected. If this operation was not performed, check the SFP, cable, and the connection destination switch.  The "The status of the port has changed" event occurs at the same time as this event.
The status of the Fibre Channel port has changed to normal.	Information	The status of the port has changed to Ready/%STATUS% fc%SLOT NUMBER%/PORT NUMBER INSIDE THE SLOT%(PORT NUMBER%)  *1	No action is required.
The status of the Fibre Channel port has changed to warning.	Warning	The status of the port has changed to Warning/%STATUS% fc%SLOT NUMBER%/PORT NUMBER INSIDE THE SLOT%(PORT NUMBER%)  *1	Check whether the cable was disconnected and then reconnected. If this operation was not performed, check the SFP, cable, and the connection destination device.
The status of the Fibre Channel port has changed to unknown.	Warning *2	The status of the port has changed to Unknown/%STATUS% fc%SLOT NUMBER%/PORT NUMBER INSIDE THE SLOT%(PORT NUMBER%)  *1	Check whether the cable was disconnected and then reconnected. If this operation was not performed, check the SFP, cable, and the connection destination device.
The status of the Fibre Channel port has changed to error.	Error	The status of the port has changed to FAILURE/%STATUS% fc%SLOT NUMBER%/PORT NUMBER INSIDE THE SLOT%(PORT NUMBER%)  *1	Check whether the cable was disconnected and then reconnected. If this operation was not performed, check the SFP, cable, and the connection destination device.

\*1: Any of the following words is inserted in %STATUS%.

Unknown, Online, Offline, Bypassed, Diagnostics

\*2: When "The status of the port has changed to Unknown/Offline" is displayed, it is notified as Information level.

## 2.2.5 Explanation of McDATA Fibre Channel Switch Events

Failure event	Level	Event display	Troubleshooting
The status of the Fibre Channel port has changed to online.	Information	The status of the port has changed to Online Port No.%NUMBER%	None.
The status of the Fibre Channel port has changed to offline.	Information	The status of the port has changed to Offline Port No.%NUMBER%	Check whether the cable was disconnected and then reconnected. If this operation was not performed,

Failure event	Level	Event display	Troubleshooting
			check the SFP, cable, and the connection destination switch.
The status of the Fibre Channel port has changed to testing.	Information	The status of the port has changed to Testing Port No.%NUMBER%	If the Testing operation Support was not performed, contact Support.
The status of the Fibre Channel port has changed to error.	<b>Error</b>	The status of the port has changed to Faulty Port No.%NUMBER%	Check whether the cable was disconnected and then reconnected.If this operation was not performed, check the SFP, cable, and the connection destination switch.
The status of the FRU has changed to unknown.	<b>Warning</b>	The status of the unit has changed to Unknown FRU(%FRU NAME%) %NUMBER% *1	Replace modules that are deemed to be defective.
The status of the FRU has changed to normal.	Information	The status of the unit has changed to Active FRU(%FRU NAME%) %NUMBER% *1	None.
The status of the FRU has changed to backup.	Information	The status of the unit has changed to Backup FRU(%FRU NAME%) %NUMBER% *1	None.
The status of the FRU has changed to update/busy.	Information	The status of the unit has changed to Update-busy FRU(%FRU NAME%) %NUMBER% *1	None.
The status of the FRU has changed to error.	<b>Error</b>	The status of the unit has changed to failed FRU(%FRU NAME%) %NUMBER% *1	Replace modules that are deemed to be defective.
A connection has been made to a device for which connection is not allowed.	<b>Warning</b>	The switch detects that a port binding violation occurs.	Check the SANtegrity settings.
The status of the FRU has changed to unknown.	<b>Warning</b>	The FRU(%FRU NAME%) %NUMBER% is removed or changes to an unknown status. *1	Replace modules that are deemed to be defective.
The status of the FRU has changed to normal.	Information	The FRU(%FRU NAME%) %NUMBER% transitions to an active status. *1	None.
The status of the FRU has changed to backup.	Information	The FRU(%FRU NAME%) %NUMBER% transitions to a backup status. *1	None.
The status of the FRU has changed to update/busy.	Information	The FRU(%FRU NAME%) %NUMBER% transitions to an update/busy status. *1	None.

Failure event	Level	Event display	Troubleshooting
The status of the FRU has changed to error.	Error	The FRU(%FRU NAME%) %NUMBER% transitions to a failed status. *1	Replace modules that are deemed to be defective.
The Fibre Channel port Link Bit error rate has exceeded the threshold.	Warning	Bit error rate for a link exceeded an allowed threshold in Port No. %NUMBER%	Check the SFP, cable, and the connection destination switch.
The Fibre Channel port connection was lost.	Warning	Lost of signal or sync in port %NUMBER%	Check the SFP, cable, and the connection destination switch.
An abnormal sequence was received.	Error	Not operational primitive sequence was received in Port No.%NUMBER%	Check the SFP, cable, and the connection destination switch.
The sequence timed out.	Error	Primitive sequence timeout occurred in Port No.%NUMBER%	Check the SFP, cable, and the connection destination switch.
An invalid sequence was detected.	Error	Invalid primitive sequence was detected in Port No.%NUMBER%	Check the SFP, cable, and the connection destination switch.
A new connection was detected.	Information	The firmware detects that a new connection has been established on a Port No.%NUMBER%	None.

\*1: The %FRU NAME% may contain any of the following strings:

BKPLNE, CTP, SBR, Center FAN, FAN, POWER, GLSL, GSML, GXXL, FPM, UPM, GLSR, GSMR, GXXR, FINT1, XPM

Also see "[2.7.1 Explanation of Fibre Alliance MIB Support Device Events](#)".

## 2.3 ETERNUS, GR Series

### 2.3.1 Explanation of ETERNUS8000(models 700, 900, 1100, 2100), ETERNUS4000(models 300, 500) Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

- Notification of component blockage

Target	Level	Event display	Remarks
CM Unit	Error	P 010tMM00 CM#MM Fault	t: Type(1-3) MM: Module ID(10-11)
CM Mantaray SP	Error	P 030tMMnn CM#MMDMA PORT Alarm	t: Type(1-3) MM: Module ID(10-17) nn: Chip No.(0-1)
CM DI NP	Error	P 040tMMnn CM#MMDI Alarm	t: Type(1-3) MM: Module ID(10-17) nn: Chip No.(0-1)
CM DI SP	Error	P 0500MMnn CM#MMDI PORT Alarm	MM: Module ID(10-17) nn: Port No.(0-7)
CM SMC	Error	P 0600MM00 CM#MM SMC Alarm	MM: Module ID(10-11)
CM MMC	Error	P 0700MM00 CM#MM MMC Alarm	MM: Module ID(10-11)

Target	Level	Event display	Remarks
CM DI SP/Path	Error	P 0A00MMnn CM#MM DI PORT/PATH Alarm	MM: Module ID(10-11) nn: Port No.(0-7)
CM Memory:512MB	Error	P 0B1tMMnn CM#MM MEMORY(512MB) Fault	t: Type(1-2) MM: Module ID(10-17) nn: Slot No.(0-3)
CM Memory:1GB	Error	P 0B2tMMnn CM#MM MEMORY(1024MB) Fault	t: Type(1-2) MM: Module ID(10-17) nn: Slot No.(0-3)
CM Memory:2GB	Error	P 0B4tMMnn CM#MM MEMORY(2048MB) Fault	t: Type(1-2) MM: Module ID(10-17) nn: Slot No.(0-3)
CM Memory:4GB	Error	P 0B8tMMnn CM#MM MEMORY(4096MB) Fault	t: Type(1-2) MM: Module ID(10-17) nn: Slot No.(0-3)
Compact Flash	Error	P 0C0tMM00 CM#MM COMPACT FLASH Fault	t: Type(1-3) MM: Module ID(10-17)
CM FAN UNIT	Error	P 0D00MM00 CM#MM FAN UNIT Fault	MM: Module ID(10-17)
CA	Error	P 10ttMM00 CA#MM (on CM#XX) CaType Fault	tt: Type(00-19) MM: CA Module ID(40-4F,, 70-7F) XX: CM Module ID(10-17)
CA Port	Error	P 11ttMMnn CA#MM (on CM#XX) CaType PORT Alarm	tt: Type(00-19) MM: CA Module ID(40-4F,, 70-7F) XX: CM Module ID(10-17) nn: Port No.(00-01)
SFP Optical Shortwave	Error	P 1AttMMnn CA#MM (on CM#XX) CaType SFP OPTICAL SHORTWAVE Fault	tt: Type(00,18) MM: CA Module ID(40-4F,, 70-7F) XX: CM Module ID(10-17) nn: Port No.(00-01)
SFP Optical Longwave	Error	P 1BttMMnn CA#MM (on CM#XX) CaType SFP OPTICAL LONGWAVE Fault	tt: Type(00,18) MM: CA Module ID(40-4F,, 70-7F) XX: CM Module ID(10-17) nn: Port No.(00-01)
XFP (UndefCA)	Error	P 1CttMMnn CA#MM (on CM#XX) CaType XFP Fault	tt: Type(00-0F) MM: CA Module ID(40-4F,, 70-7F) XX: CM Module ID(10-17) nn: Port No.(00-01)
FRT	Error	P 4000MM00 FRT Fault	MM: Module ID(F0-F1)
BRT	Error	P 5000MM00 BRT Fault	MM: Module ID(B0-B7)
BRT Port/Path	Error	P 5100MMnn BRT PORT/PATH Alarm	MM: Module ID(B0-B7) nn: Port No.(00-07)
SFP Optical Shortwave (BRT)	Error	P 5A00MMnn BRT SFP OPTICAL SHORTWAVE Fault	MM: Module ID(B0-B7) nn: Port No.(00-07)
SVC	Error	P 6000MM00 SVC Fault	MM: Module ID(E0-E1)

Target	Level	Event display	Remarks
CE FAN UNIT	Error	P 710 $tnn$ 00 CE FAN UNIT Fault	$t$ : Type(1,2) $nn$ : Slot No.
OPNL UNIT	Error	P 720 $0000$ PANEL UNIT Fault	$t$ : Type(1,2)
CPSU	Error	P 730 $tnn$ 00 CPSU Fault	$t$ : Type(1,2) $nn$ : Slot No.
BCU	Error	P 75000000 BCU Fault	
BTU	Error	P 760 $0000$ BTU Fault	$t$ : Type(1,2)
3.5 Inch DISK	Error	P 80 $ttDDnn PP xxx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $cccccc$ : Disk information
3.5 Inch Disk (Failed Usable)	Error	P 80 $ttDDnn PP xxx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ FailedUse	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $cccccc$ : Disk information
3.5 Inch DISK (Compare Error)	Error	P 88 $ttDDnn PP xxx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $cccccc$ : Disk information
2.5 Inch DISK	Error	P 81 $ttDDnn PP xxx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-1D) $PP$ : Product ID(Disk) $cccccc$ : Disk information
2.5 Inch Disk (Failed Usable)	Error	P 81 $ttDDnn PP xxx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ FailedUse	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-1D) $PP$ : Product ID(Disk) $cccccc$ : Disk information
2.5 Inch DISK (Compare Error)	Error	P 88 $ttDDnn PP xxx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-1D) $PP$ : Product ID(Disk) $cccccc$ : Disk information
PBC (15DE)	Error	P 9001 $DD0N$ PBC Fault	$DD$ : DE-ID $N$ : Side 0, side 1
PBC (30DE)	Error	P 9002 $DD0N$ PBC Fault	$DD$ : DE-ID $N$ : Side 0, side 1
PBC Port	Error	P 9100 $DDNn$ PBC PORT Alarm	$DD$ : DE-ID $N$ : Side 0, side 1 $n$ : Port No.(0-3)
SFP Optical Shortwave (PBC)	Error	P 9A00 $DDNn$ PBC SFP OPTICAL SHORTWAVE Fault	$DD$ : DE-ID $N$ : Side 0, side 1 $n$ : Port No.(0-3)
SFP Copper (PBC)	Error	P 9B00 $DDNn$ PBC SFP COPPER Fault	$DD$ : DE-ID $N$ : Side 0, side 1 $n$ : Port No.(0-3)

Target	Level	Event display	Remarks
DEI CABLE	Error	P 9C00DD0NDEI CABLE Fault	DD: DE-ID N: Side 0, side 1
30 DE FAN UNIT	Error	P D100DD00 DE FAN UNIT Fault	DD: DE-ID
DPSU (15DE)	Error	P D20DD0NDPSU Fault	t: Type(1-3) DD: DE-ID N: Side 0, side 1
BBU CABLE	Error	P D300DD0NBBU CABLE Fault	DD: DE-ID N: Side 0, side 1

- Warning (temperature alarm)

Target	Level	Event display	Remarks
CE exhaust temperature alarm (FATAL)	Error	P 7B00EEEE CE OUT TEMP	EEEE: Position information
CE exhaust temperature alarm (WARNING)	Warning	J 7B00EEEE CE OUT TEMP	EEEE: Position information
CE intake air temperature alarm (WARNING)	Warning	J 7A00EEEE CE IN TEMP	EEEE: Position information
DE exhaust temperature alarm (FATAL)	Error	P DB00 EEEE DE OUT TEMP	EEEE: Position information
DE exhaust temperature alarm (WARNING)	Warning	J DB00 EEEE DE OUT TEMP	EEEE: Position information
DE intake air temperature alarm (WARNING)	Warning	J DA00 EEEE DE IN TEMP	EEEE: Position information

- Warning (expiration)

Target	Level	Event display	Remarks
Six months before battery life expiration	Warning	J 1170000000 BATTERY n 6MONTH WARNING YYYY/MM	n: Battery No. (0 - 2) YYYY/MM: Term of validity (year/month)
One week before battery life expiration	Warning	J 1170000000 BATTERY n 1WEEK WARNING YYYY/MM	n: Battery No. (0 - 2) YYYY/MM: Term of validity (year/month)
Battery life expiration	Warning	J 1170000000 BATTERY n EXPIRATION ALARM YYYY/MM	n: Battery No. (0 - 2) YYYY/MM: Term of validity (year/month)

- Warning (other)

Target	Level	Event display	Remarks
CM Check1	Warning	J C1MM0000 CM#MM Check-1	MM: Module ID(10-17)
CA Check1	Warning	J C1MM0000 CA#MM Check-1	MM: Module ID(40-4F,,70-7F)
Frequent occurrence of a correctable memory error: 512MB	Warning	J C31tMMnn CM#MM MEMORY(512MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
Frequent occurrence of a correctable memory error: 1GB	Warning	J C32tMMnn CM#MM MEMORY(1024MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)

Target	Level	Event display	Remarks
Frequent occurrence of a correctable memory error: 2GB	Warning	J C34tMMnn CM#MM MEMORY(2048MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
Frequent occurrence of a correctable memory error: 4GB	Warning	J C38 tMMnn CM#MM MEMORY(4096MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
CM warning (statistics/ other)	Warning	J 01 ttEEEE CM#MM Warning	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (MCE Correctable)	Warning	J 01 ttEEEE CM#MM MCE Correctable Error	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (FAN)	Warning	J 01 ttEEEE CM#MM FAN Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (IN TEMP ALARM)	Warning	J 01 ttEEEE CM#MM IN TEMP Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (IN TEMP SENSOR)	Warning	J 01 ttEEEE CM#MM IN TEMP SENSOR Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (RTC ALARM)	Warning	J 01 ttEEEE CM#MM RTC Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CF Warning	Warning	J 0C0tMM00 CM#MM COMPACT FLASH Warning	t: Type(1-3) MM: CM Module ID(10-17)
CA Warning (Undefined)	Warning	J 10ttMM00 CA#MM (on CM#XX) CaType Warning	tt: Type(00-19) MM: CA Module ID(40-4F,, 70-7F) XX: CM Module ID(10-17)
FRT Warning	Warning	J 4000MM00 FRT Warning	MM: FRT Module ID(F0,F1)
BRT Warning	Warning	J 5000MM00 BRT Warning	MM: BRT Module ID(B0-B7)
SMART notification from a disk (3.5-inch)	Warning	J 80ttEEEE PP xxxGB DISK(ccccccc) DE#DD/Slot#nn SMART	tt: Type EEEE: Position information PP: Product ID(Disk) ccccccc: Disk information DD: DE-ID nn: Slot No.(00-0E)
SMART: Preventive disk disconnection (3.5-inch)	Warning	J 80ttEEEE PP xxxGB DISK(ccccccc) DE#DD/Slot#nn Warning	tt: Type EEEE: Position information PP: Product ID(Disk) ccccccc: Disk information DD: DE-ID nn: Slot No.(00-0E)
SMART notification from a disk (2.5-inch)	Warning	J 81ttEEEE PP xxxGB DISK(ccccccc) DE#DD/Slot#nn SMART	tt: Type EEEE: Position information PP: Product ID(Disk) ccccccc: Disk information DD: DE-ID nn: Slot No.(00-1D)

Target	Level	Event display	Remarks
SMART: Preventive disk disconnection (2.5-inch)	Warning	J 81 <i>ttEEEE PP xxxGB</i> DISK( <i>cccccc</i> ) DE# <i>DD/Slot#mn</i> Warning	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>mn</i> : Slot No.(00-1D)
SVC Alarm (Warning Level)	Warning	J 6000 <i>MM</i> 00 SVC	<i>MM</i> : Module ID
PBC Alarm (Warning Level)	Warning	J 9001 <i>EEEE</i> PBC 15DE	<i>EEEE</i> : Position information
PBC Alarm (Warning Level)	Warning	J 9002 <i>EEEE</i> PBC 30DE	<i>EEEE</i> : Position information

• Event notification (M messages)

Target	Level	Event display	Remarks
Write Bad Data	Error	M E0050 <i>xxx</i> WRITE BAD DATA	<i>xxx</i> : RLU No.
PINNED Data	Error	M E10300 <i>MM</i> PINNED DATA	<i>MM</i> : CM module ID where PINNED occurred
NRDY (cause 01)	Error	M E2070001 NOT READY(01:Configuration Error)	
NRDY (cause 02)	Error	M E2070002 NOT READY(02:CM F/W Version Error)	
NRDY (cause 04)	Error	M E2070004 NOT READY(04:Restore Fail)	
NRDY (cause 08)	Error	M E2070008 NOT READY(08:Basic Set Online(Normal) Error)	
NRDY (cause 09)	Error	M E2070009 NOT READY(09:Maintenance Set Online Error)	
NRDY (cause 11)	Error	M E207000B NOT READY(11:Power Off/Fail Incomplete)	
NRDY (cause 12)	Error	M E207000C NOT READY(12:Backup Fail)	
NRDY (cause 13)	Error	M E207000D NOT READY(13:Multi CM Down)	
NRDY (cause 14)	Error	M E207000E NOT READY(14:Machine Down Recovery End)	
NRDY (cause 15)	Error	M E207000F NOT READY(15:Machine Down Recovery Failed)	
NRDY (cause 16)	Error	M E2070010 NOT READY(16:DE Build Error)	
NRDY (cause 17)	Error	M E2070011 NOT READY(17:CM Memory Shortage)	
NRDY (cause 18)	Error	M E2070012 NOT READY(18:PBC Combination Error)	
NRDY (cause 19)	Error	M E2070013 NOT READY(19:FRT Fault)	
NRDY (cause 20)	Error	M E2070014 NOT READY(20:BRT Fault)	



Target	Level	Event display	Remarks
Successful FC recovery	Error	M E406C0DD FC Loop Recovery Completed	DD : Lower DE No.
Unsuccessful FC loop recovery	Error	M E406F0DD FC Loop Recovery Failed	DD : Lower DE No.
Rebuilding to HS completed (bad data included)	Error	M 21810xxx RAID Group#0xxx REBUILD to HS (Recovered end)	xxx : RLU No.
Rebuilding to DV completed (bad data included)	Error	M 21810xxx RAID Group#0xxx REBUILD to DV (Recovered end)	xxx : RLU No.
Disconnected intra-cabinet path	Error	M 0732MMnn Remote Copy Path (MID#MMPORT#nn) Not Available	MM : Module ID nn : Port
REC automatic HALT occurrence	Error	M 13CF11xx REC Automatic HALT or ERROR occurred.(xx)	xx : 00 - path error, 01 - heavy load, 02 - ERROR

## 2.3.2 Explanation of ETERNUS8000(models 800, 1200, 2200), ETERNUS4000(models 400, 600) Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

- Notification of component blockage

Target	Level	Event display	Remarks
CM Unit	Error	P 010tMM00 CM#MM Fault	t : Type(1-3) MM : Module ID(10-11)
CM Mantaray SP	Error	P 030tMMnn CM#MMDMA PORT Alarm	t : Type(1-3) MM : Module ID(10-17) nn : Chip No.(0-1)
CM DI NP	Error	P 040tMMnn CM#MMDI Alarm	t : Type(1-3) MM : Module ID(10-17) nn : Chip No.(0-1)
CM DI SP	Error	P 0500MMnn CM#MMDI PORT Alarm	MM : Module ID(10-17) nn : Port No.(0-7)
CM SMC	Error	P 0600MM00 CM#MM SMC Alarm	MM : Module ID(10-11)
CM MMC	Error	P 0700MM00 CM#MM MMC Alarm	MM : Module ID(10-11)
CM DI SP/Path	Error	P 0A00MMnn CM#MMDI PORT/PATH Alarm	MM : Module ID(10-11) nn : Port No.(0-7)
CM Memory:512MB	Error	P 0B1tMMnn CM#MM MEMORY(512MB) Fault	t : Type(1-2) MM : Module ID(10-17) nn : Slot No.(0-3)
CM Memory:1GB	Error	P 0B2tMMnn CM#MM MEMORY(1024MB) Fault	t : Type(1-2) MM : Module ID(10-17) nn : Slot No.(0-3)
CM Memory:2GB	Error	P 0B4tMMnn CM#MM MEMORY(2048MB) Fault	t : Type(1-2) MM : Module ID(10-17) nn : Slot No.(0-3)

Target	Level	Event display	Remarks
CM Memory:4GB	Error	P 0B8tMMnn CM#MM MEMORY(4096MB) Fault	t : Type(1-2) MM : Module ID(10-17) nn : Slot No.(0-3)
Compact Flash	Error	P 0C0tMM00 CM#MM COMPACT FLASH Fault	t : Type(1-3) MM : Module ID(10-17)
CM FAN UNIT	Error	P 0D00MM00 CM#MM FAN UNIT Fault	MM : Module ID(10-17)
CA	Error	P 10ttMM00 CA#MM (on CM#XX) CaType Fault	tt : Type(00-19) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17)
CA Port	Error	P 11ttMMnn CA#MM (on CM#XX) CaType PORT Alarm	tt : Type(00-19) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
SFP Optical Shortwave	Error	P 1A ttMMnn CA#MM (on CM#XX) CaType SFP OPTICAL SHORTWAVE Fault	tt : Type(00-1D) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
SFP Optical Longwave	Error	P 1B ttMMnn CA#MM (on CM#XX) CaType SFP OPTICAL LONGWAVE Fault	tt : Type(00,18) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
XFP (UndefCA)	Error	P 1C ttMMnn CA#MM (on CM#XX) CaType XFP Fault	tt : Type(00-0F) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
SFP+ Optical Shortwave	Error	P 1C ttMMnn CA#MM (on CM#XX) CaType SFP+ OPTICAL SHORTWAVE Fault	tt : Type(00-09) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
SFP Optical Longwave	Error	P 1D ttMMnn CA#MM (on CM#XX) CaType SFP OPTICAL LONGWAVE Fault	tt : Type(00-06) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
SFP Unknown	Error	P 1F ttMMnn CA#MM (on CM#XX) SFP Type Unknown Fault	tt : Type(03-06) MM : CA Module ID(40-4F,, 70-7F) XX : CM Module ID(10-17) nn : Port No.(00-01)
FRT	Error	P 400tMM00 FRT Fault	t : Type(0,1) MM : Module ID(F0-F1)
BRT	Error	P 5000MM00 BRT Fault	MM : Module ID(B0-B7)
BRT Port/Path	Error	P 5100MMnn BRT PORT/PATH Alarm	MM : Module ID(B0-B7) nn : Port No.(00-07)

Target	Level	Event display	Remarks
SFP Optical Shortwave (BRT)	Error	P 5A00MMnn BRT SFP OPTICAL SHORTWAVE Fault	MM: Module ID(B0-B7) nn: Port No.(00-07)
SVC	Error	P 6000MM00 SVC Fault	MM: Module ID(E0-E1)
CE FAN UNIT	Error	P 710tnn00 CE FAN UNIT Fault	t: Type(1,2) nn: Slot No.
OPNL UNIT	Error	P 720t0000 PANEL UNIT Fault	t: Type(1,2)
CPSU	Error	P 730tnn00 CPSU Fault	t: Type(1,2) nn: Slot No.
SCCI	Error	P 740tnn00 SCCI CABLE Fault	t: Type(1,2) nn: Slot No.
BCU	Error	P 7500nn00 BCU Fault	nn: Slot No.
BTU	Error	P 760tnn00 BTU Fault	t: Type(1,2) nn: Slot No.
BBU Signal CABLE	Error	P 7700MM00 BBU SIG CABLE Fault	MM: Module ID(10-11)
3.5 Inch DISK	Error	P 80ttDDnn PP xxGB DISK(ccccccc) DE#DD/Slot#nn Fault	tt: Type DD: DE-ID nn: Slot No.(00-0E) PP: Product ID(Disk) xx: Disk capacity ccccc: Disk information
3.5 Inch Disk (Failed Usable)	Error	P 80ttDDnn PP xxGB DISK(ccccccc) DE#DD/Slot#nn FailedUse	tt: Type DD: DE-ID nn: Slot No.(00-0E) PP: Product ID(Disk) xx: Disk capacity ccccc: Disk information
3.5 Inch Disk (DISK performance abnormal)	Error	P 80ttDDnn PP xxGB DISK(ccccccc) DE#DD/Slot#nn Slowdown	tt: Type DD: DE-ID nn: Slot No.(00-0E) PP: Product ID(Disk) xx: Disk capacity ccccc: Disk information
3.5 Inch DISK (Compare Error)	Error	P 88ttDDnn PP xxGB DISK(ccccccc) DE#DD/Slot#nn Fault	tt: Type DD: DE-ID nn: Slot No.(00-0E) PP: Product ID(Disk) xx: Disk capacity ccccc: Disk information
2.5 Inch DISK	Error	P 81ttDDnn PP xxGB DISK(ccccccc) DE#DD/Slot#nn Fault	tt: Type DD: DE-ID nn: Slot No.(00-1D) PP: Product ID(Disk) xx: Disk capacity ccccc: Disk information
2.5 Inch Disk (Failed Usable)	Error	P 81ttDDnn PP xxGB DISK(ccccccc) DE#DD/Slot#nn FailedUse	tt: Type DD: DE-ID nn: Slot No.(00-1D) PP: Product ID(Disk) xx: Disk capacity ccccc: Disk information

Target	Level	Event display	Remarks
2.5 Inch DISK (Compare Error)	Error	P 88 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-1D) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
3.5 Inch SATA DISK	Error	P 82 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
3.5 Inch SATA Disk (Failed Usable)	Error	P 82 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ FaildUse	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
3.5 Inch SATA Disk (Compare Error)	Error	P 88 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
Solid State Drive	Error	P 84 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
Solid State Drive (Failed Usable)	Error	P 84 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ FaildUse	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
Solid State Drive (Compare Error)	Error	P 84 $ttDDnn$ PP $xx$ GB DISK( $cccccc$ ) DE# $DD$ /Slot# $nn$ Fault	$tt$ : Type $DD$ : DE-ID $nn$ : Slot No.(00-0E) $PP$ : Product ID(Disk) $xx$ : Disk capacity $cccccc$ : Disk information
PBC (15DE)	Error	P 9001 $DD0N$ PBC Fault	$DD$ : DE-ID $N$ : Side 0, side 1
PBC (30DE)	Error	P 9002 $DD0N$ PBC Fault	$DD$ : DE-ID $N$ : Side 0, side 1
PBC Port	Error	P 9100 $DDNn$ PBC PORT Alarm	$DD$ : DE-ID $N$ : Side 0, side 1 $n$ : Port No.(0-3)
SFP Optical Shortwave (PBC)	Error	P 9A00 $DDNn$ PBC SFP OPTICAL SHORTWAVE Fault	$DD$ : DE-ID $N$ : Side 0, side 1 $n$ : Port No.(0-3)

Target	Level	Event display	Remarks
SFP Copper (PBC)	Error	P 9B00DD <i>n</i> PBC SFP COPPER Fault	DD: DE-ID N: Side 0, side 1 n: Port No.(0-3)
DEI CABLE	Error	P 9C00DD0NDEI CABLE Fault	DD: DE-ID N: Side 0, side 1
30 DE FAN UNIT	Error	P D100DD00 DE FAN UNIT Fault	DD: DE-ID
DPSU (15DE)	Error	P D20DD0NDPSU Fault	t: Type(1-3) DD: DE-ID N: Side 0, side 1
BBU CABLE	Error	P D300DD0NBBU CABLE Fault	DD: DE-ID N: Side 0, side 1

- Warning (temperature alarm)

Target	Level	Event display	Remarks
CE exhaust temperature alarm (FATAL)	Error	P 7A00EEEECE OUT TEMP	EEEE: Position information
CE exhaust temperature alarm (WARNING)	Warning	J 7A00EEEECE OUT TEMP	EEEE: Position information
CE intake air temperature alarm (WARNING)	Warning	J 7B00EEEECE IN TEMP	EEEE: Position information
DE exhaust temperature alarm (FATAL)	Error	P DA00EEEEDE OUT TEMP	EEEE: Position information
DE exhaust temperature alarm (Sensor trouble)	Error	P DA00EEEEDE OUT TEMP	EEEE: Position information
DE exhaust temperature alarm (WARNING)	Warning	J DB00EEEEDE OUT TEMP	EEEE: Position information
DE intake air temperature alarm (Sensor trouble)	Error	P DB00EEEEDE IN TEMP	EEEE: Position information
DE intake air temperature alarm (WARNING)	Warning	J DA00EEEEDE IN TEMP	EEEE: Position information

- Warning (expiration)

Target	Level	Event display	Remarks
Six months before battery life expiration	Warning	J 7006 <i>nn</i> 00 BATTERY <i>N</i> 6MONTH WARNING <i>YYYY/MM</i>	<i>nn</i> : Slot No. <i>N</i> : Battery No. (0 - 7) <i>YYYY/MM</i> : Term of validity (year/month)
One week before battery life expiration	Warning	J 7007 <i>nn</i> 00 BATTERY <i>N</i> 1WEEK WARNING <i>YYYY/MM</i>	<i>nn</i> : Slot No. <i>N</i> : Battery No. (0 - 7) <i>YYYY/MM</i> : Term of validity (year/month)
<i>N</i> day before battery life expiration	Warning	J 7007 <i>nn</i> 00 BATTERY <i>Nz</i> DAY WARNING <i>YYYY/MM</i>	<i>nn</i> : Slot No. <i>N</i> : Battery No. (0 - 7) <i>z</i> : Days (1 - 6) <i>YYYY/MM</i> : Term of validity (year/month)
Battery life expiration	Warning	J 70FE <i>nn</i> 00 BATTERY <i>N</i> EXPIRATION ALARM <i>YYYY/MM</i>	<i>nn</i> : Slot No. <i>N</i> : Battery No. (0 - 2)

Target	Level	Event display	Remarks
			YYYY/MM: Term of validity (year/month)

• Warning (other)

Target	Level	Event display	Remarks
CM Check1	Warning	J C1MM0000 CM#MM Check-1	MM: Module ID(10-17)
CA Check1	Warning	J C1MM0000 CA#MM Check-1	MM: Module ID(40-4F,,70-7F)
Frequent occurrence of a correctable memory error: 512MB	Warning	J C31tMMnn CM#MM MEMORY(512MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
Frequent occurrence of a correctable memory error: 1GB	Warning	J C32tMMnn CM#MM MEMORY(1024MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
Frequent occurrence of a correctable memory error: 2GB	Warning	J C34tMMnn CM#MM MEMORY(2048MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
Frequent occurrence of a correctable memory error: 4GB	Warning	J C38tMMnn CM#MM MEMORY(4096MB) Correctable Error	t: Type(1,2) MM: CM Module ID(10-17) nn: Slot No.(0-7)
CM warning (statistics/ other)	Warning	J 01 ttEEEE CM#MM Warning	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (MCE Correctable)	Warning	J 01 ttEEEE CM#MM MCE Correctable Error	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (FAN)	Warning	J 01 ttEEEE CM#MM FAN Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (IN TEMP ALARM)	Warning	J 01 ttEEEE CM#MM IN TEMP Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (IN TEMP SENSOR)	Warning	J 01 ttEEEE CM#MM IN TEMP SENSOR Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CM Warning (RTC ALARM)	Warning	J 01 ttEEEE CM#MM RTC Alarm	tt: Type EEEE: Position information MM: CM Module ID(10-17)
CF Warning	Warning	J 0C0tMM00 CM#MM COMPACT FLASH Warning	t: Type(1-3) MM: CM Module ID(10-17)
CA Warning (Undefined)	Warning	J 10ttMM00 CA#MM (on CM#XX) CaType Warning	tt: Type(00-19) MM: CA Module ID(40-4F,,70-7F) XX: CM Module ID(10-17)
FRT Warning	Warning	J 400tMM00 FRT Warning	t: Type(1,2) MM: FRT Module ID(F0,F1)
BRT Warning	Warning	J 5000MM00 BRT Warning	MM: BRT Module ID(B0-B7)
SMART notification from a disk (3.5-inch)	Warning	J 80ttEEEE PP xxxGB DISK(cccccc) DE#DD/Slot#nn SMART	tt: Type EEEE: Position information PP: Product ID(Disk)

Target	Level	Event display	Remarks
			<i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E)
SMART: Preventive disk disconnection (3.5-inch)	Warning	J 80 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> Warning	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E)
SMART: Disk performance abnormal (3.5-inch)	Warning	J 80 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> WarnSlow	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E)
Detection notification of disk performance abnormal (3.5-inch)	Warning	J 80 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> Slowdown	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E)
SMART notification from a disk (2.5-inch)	Warning	J 81 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> SMART	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D)
SMART: Preventive disk disconnection (2.5-inch)	Warning	J 81 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> Warning	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D)
SMART notification from a SATA disk (3.5-inch)	Warning	J 82 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> SMART	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D)
SMART: Preventive SATA disk disconnection (3.5-inch)	Warning	J 82 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> ) DE# <i>DD</i> /Slot# <i>nn</i> Warning	<i>tt</i> : Type <i>EEEE</i> : Position information <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D)
SVC Alarm (Warning Level)	Warning	J 6000 <i>MM00</i> SVC	<i>MM</i> : Module ID
SMC Alarm (Warning Level)	Warning	J 0600 <i>MM00</i> CM SMC	<i>MM</i> : Module ID
PBC Alarm (Warning Level)	Warning	J 9001 <i>EEEE</i> PBC 15DE	<i>EEEE</i> : Position information

Target	Level	Event display	Remarks
PBC Alarm (Warning Level)	Warning	J 9002EEEE PBC 30DE	EEEE: Position information

- Event notification (M messages)

Target	Level	Event display	Remarks
Write Bad Data	Error	M E0050xxx WRITE BAD DATA	xxx: RLU No.
PINNED Data	Error	M E10300MMPINNED DATA	MM: CM module ID where PINNED occurred
NRDY (cause 01)	Error	M E2070001 NOT READY(01:Configuration Error)	
NRDY (cause 02)	Error	M E2070002 NOT READY(02:CM F/W Version Error)	
NRDY (cause 04)	Error	M E2070004 NOT READY(04:Restore Fail)	
NRDY (cause 08)	Error	M E2070008 NOT READY(08:Basic Set Online(Normal) Error)	
NRDY (cause 09)	Error	M E2070009 NOT READY(09:Maintenance Set Online Error)	
NRDY (cause 11)	Error	M E207000B NOT READY(11:Power Off/Fail Incomplete)	
NRDY (cause 12)	Error	M E207000C NOT READY(12:Backup Fail)	
NRDY (cause 13)	Error	M E207000D NOT READY(13:Multi CM Down)	
NRDY (cause 14)	Error	M E207000E NOT READY(14:Machine Down Recovery End)	
NRDY (cause 15)	Error	M E207000F NOT READY(15:Machine Down Recovery Failed)	
NRDY (cause 16)	Error	M E2070010 NOT READY(16:DE Build Error)	
NRDY (cause 17)	Error	M E2070011 NOT READY(17:CM Memory Shortage)	
NRDY (cause 18)	Error	M E2070012 NOT READY(18:PBC Combination Error)	
NRDY (cause 19)	Error	M E2070013 NOT READY(19:FRT Fault)	
NRDY (cause 20)	Error	M E2070014 NOT READY(20:BRT Fault)	
Successful FC recovery	Error	M E406C0DDFC Loop Recovery Completed	DD: Lower DE No.
Unsuccessful FC loop recovery	Error	M E406F0DDFC Loop Recovery Failed	DD: Lower DE No.
Rebuilding to HS completed (bad data included)	Error	M 21810xxx RAID Group#0xxx REBUILD to HS (Recovered end)	xxx: RLU No.
Rebuilding to DV completed (bad data included)	Error	M 21810xxx RAID Group#0xxx REBUILD to DV (Recovered end)	xxx: RLU No.



Target	Level	Event display	Remarks
Disconnected intra-cabinet path	Error	M 0732MMnn Remote Copy Path (MID#MMPORT#nn) Not Available	MM: Module ID nn: Port
REC automatic HALT occurrence	Error	M 13CF11xx REC Automatic HALT or ERROR occurred.(xx)	xx: 00 - path error, 01 - heavy load, 02 - ERROR
Use capacity of Pool has changed. NORMAL -> CAUTION	Information	M E8010xxx Pool#xxx turned to CAUTION (decrease of available capacity)	xxx: Thin Provisioning Pool No. (Hexadecimal notation)
Use capacity of Pool has changed. NORMAL or CAUTION -> WARNING	Information	M E8020xxx Pool#xxx turned to WARNING (decrease of available capacity)	xxx: Thin Provisioning Pool No. (Hexadecimal notation)
Use capacity of Pool has changed. WARNING -> CAUTION	Information	M E8010xxx Pool#xxx returned to CAUTION(decrease of available capacity)	xxx: Thin Provisioning Pool No. (Hexadecimal notation)
Use capacity of Pool has changed. CAUTION or WARNING -> NORMAL	Information	M E8040xxx Pool#xxx returned to NORMAL(increase of available capacity)	xxx: Thin Provisioning Pool No. (Hexadecimal notation)

### 2.3.3 Explanation of ETERNUS6000, ETERNUS4000(models 80, 100), ETERNUS3000, GR Series Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Failure event	Level	Event display
Module degradation	Error	ElementName(Item Id)degraded See the following table for the detailed module display.
Timing of battery replacement	Error	ElementName(Item Id)expiration
Panic reboot due to a CM hardware error	Warning	CM(Item ID) HARD ERROR PANIC REBOOT
Frequency of collectable memory errors	Warning	MEMORY (Item ID) ERROR
Frequency of collectable CM errors	Warning	CM(Item ID) CORRECTABLE ERROR
Panic reboot due to a CPU, FROM, SCM hardware, or CA hardware error	Warning	ElementName(Item ID) ERROR PANIC REBOOT
Panic reboot or DA one-side port blocking due to a DA hardware failure	Warning	DA(Item ID) ERROR
I2C bus error	Warning	IBUS(Item ID) BUS ERROR
Disk error detection using the Disk SMART function	Warning	DISK (Item ID) SMART Warning
CM Thermal Trip(CMCPT)	Warning	CM UNIT<CMCPT>(Item ID) Thermal Trip
Voltage failure	Warning	ElementName(Item Id) Voltage Sensor Fault
Temperature error	Error	ElementName(Item Id) Thermal Fatal Error
Temperature warning	Warning	ElementName(Item Id) Thermal Warning
Temperature warning	Warning	ElementName(Item Id) Temperature Warning
Internal module communication error	Warning	ElementName(Item Id) Communication Error

Failure event	Level	Event display
Internal module error(omen failure)	Warning	ElementName(Item Id) Error
Internal module CHECK-1	Warning	ElementName(Item Id) CHECK-1
Internal module warning	Warning	ElementName(Item Id) Warning
Six months before a battery expires	Warning	ElementName(Item Id) Expiration Warning
CM Warning(FAN ALARM #0)	Warning	CM(Item Id) Warning(FAN ALARM #0)
CM Warning(FAN ALARM #1)	Warning	CM(Item Id) Warning(FAN ALARM #1)
CM Warning(CR-6L BATTERY)	Warning	CM(Item Id) Warning(CR-6L BATTERY)
CM Warning(FLASH MEMORY)	Warning	CM(Item Id) Warning(FLASH MEMORY)
CM Warning(RTC Error)	Warning	CM(Item Id) Warning(RTC Error)
CM Warning(RSP-CFD)	Warning	CM(Item Id) Warning(RSP-CFD)
CM Warning(BIOS-CFD)	Warning	CM(Item Id) Warning(BIOS-CFD)
CM Warning(CF-CFD)	Warning	CM(Item Id) Warning(CF-CFD)
CM Warning(FAN ALARM #2)	Warning	CM(Item Id) Warning(FAN ALARM #2)
CM Warning(FAN ALARM #3)	Warning	CM(Item Id) Warning(FAN ALARM #3)
Write Bad Data occurrence	Error	Write Bad Data
PIN Data occurrence	Error	PIN Data
Multi Dead Recovery occurrence	Error	Multi Dead Recovery
Disk move detection	Warning	Disk was removed to other slot
Power ON retry	Error	Power ON Retry
Machine Down Recovery occurrence	Error	Machine Down Recovery
Not Ready occurrence	Error	Not Ready
Memory table error	Error	Invalid Memory Table Address
PBC Enclosure Service error	Error	PBC Enclosure Service Error
FC Loop Recovery completed	Warning	FC Loop Recovery completed
FC Loop Recovery failed	Error	FC Loop Recovery failed
Rebuilding completed(Bad Data included)	Error	Rebuilding completed(Bad Data included)
FC one-side Loop blocking	Error	FC Loop Error
Remote copy path not available	Error	Remote copy path not available
REC Automatic HALT occurrence	Error	REC Automatic HALT or ERROR occurred

Table 2.2 ETERNUS6000, ETERNUS4000 models 80 and 100, ETERNUS3000, GR module correspondence

Module name	Event display Display format	GR710, GR720, GR730, ETERNUS3000 M50	GR740, GR820, GR840	ETERNUS4000(e xcept M80 and M100), ETERNUS3000(e xcept M50)	ETERNUS6000
Controller enclosure	CE				
Central module processor	CM	Yes	Yes	Yes	Yes
PNB Chip(CMPNB)	CM UNIT<CMPNB>			Yes	
Compact flash memory	CM UNIT<CF>			Yes	

Module name	Event display Display format	GR710, GR720, GR730, ETERNUS3000 M50	GR740, GR820, GR840	ETERNUS4000(e xcept M80 and M100), ETERNUS3000(e xcept M50)	ETERNUS6000
Compact flash memory	COMPACT FLASH				Yes
Battery (CMBAT)	CM UNIT<CMBAT>			Yes	
RSP(CMRSP)	CM UNIT<CMRSP>			Yes	
RSP	RSP				Yes
RTC(CMRTC)	CM UNIT<CMRTC>			Yes	
Advanced communication process (CA)	CA	Yes	Yes	Yes	Yes
Advanced device process (DA)	DA	Yes	Yes		Yes
DA(CMDA)	CM UNIT<CMDA>			Yes	
RSP communication error (CMRCO)	CM COMM<CMRCO >			Yes	
CPU fan (CMCPF)	CM UNIT<CMCPF>			Yes	
Service control	SVC	Yes	Yes		Yes
Controller enclosure: Primary power supply unit	CE FE	Yes			
Controller enclosure: Secondary power supply unit (12V/5V)	CE BE(12V/5V)	Yes			
Controller enclosure: Secondary power supply unit (3.3V)	CE BE(3.3V)	Yes			
Controller enclosure: Fan	CE FAN	Yes			Yes
Central module processor: Memory	MEMORY	Yes	Yes	Yes	Yes
Central module processor: CPU	CM CPU	Yes		Yes	
CPU voltage failure (CMCVL)	CM UNIT<CMCVL>			Yes	
CPU temperature error (CMTMP)	CM UNIT<CMTMP>			Yes	
Internal temperature sensor error (CMTPS)	CM UNIT<CMTPS>			Yes	
Controller enclosure: Panel unit	CE PANEL	Yes	Yes		
Panel unit	PANEL UNIT				Yes

Module name	Event display Display format	GR710, GR720, GR730, ETERNUS3000 M50	GR740, GR820, GR840	ETERNUS4000(e xcept M80 and M100), ETERNUS3000(e xcept M50)	ETERNUS6000
CACD	CACD				Yes
External temperature error (TEMP)	OUTER			Yes	
Internal temperature error (CMTMP)	CM			Yes	
CSL unit	CSL UNIT			Yes	
CSL communication failure	CSL COMM			Yes	
CSL voltage failure(PNLVL)	CSL			Yes	
Central module processor: DC/DC converter	CM DDCON	Yes			
Communication error between CMs	CM COMM			Yes	
CM voltage failure(CMPWR)	CM UNIT<CMPWR>			Yes	
PBC in CM	CM UNIT<CMPBC>			Yes	
Communication error between PBCs(CMPCO) in CM	CM PBC COMM			Yes	
PBC voltage failure(CPBVL) in CM	CM UNIT<CPBVL>			Yes	
DEI failure(CMDEI) in CM	CM UNIT<CMDEI>			Yes	
FC failure(CMFC) in CM	CM UNIT<FC>			Yes	
Battery	BATTERY	Yes			
Battery unit	BTU		Yes		Yes
Battery unit	BBU			Yes	
Expanded battery unit	EX-BBU			Yes	
Battery control unit	BCU		Yes		Yes
PC battery	BCU-PC		Yes		
Battery backup unit: Charger	BBUC	Yes			
Battery output board	BTOUTPUT	Yes			
Battery backup unit communication error	BBU COMM	Yes (GR710, ETERNUS3000 M50 only)		Yes	
Expanded battery backup unit communication error	EX-BBU COMM			Yes	

Module name	Event display Display format	GR710, GR720, GR730, ETERNUS3000 M50	GR740, GR820, GR840	ETERNUS4000(e xcept M80 and M100), ETERNUS3000(e xcept M50)	ETERNUS6000
Battery backup unit: Switch	BBU UNIT			Yes	
Expanded battery backup unit: Switch	EX-BBU CORE			Yes	
Battery backup unit voltage failure (BBUVL)	BBU			Yes	
BBU cable	BBU CABLE		Yes		Yes
DACA	DACD				Yes
Drive enclosure	DE	Yes	Yes		
Port bypass circuit	PBC	Yes			Yes
Drive enclosure: Fan unit and DC/DC converter	DE FAN DDCON	Yes			
Device	DISK	Yes	Yes	Yes	Yes
Drive enclosure: Primary power supply unit	DE FE	Yes			
Drive enclosure (10 drives enclosed): Fan	DE(10) FE		Yes		
Drive enclosure: Secondary power supply unit	DE BE	Yes			
Drive enclosure (10 drives enclosed): Fan	DE(10) FAN	Yes			
Drive enclosure: Panel unit	DE PANEL	Yes	Yes		
Drive enclosure: Fan board	DE FANBD	Yes			
Drive enclosure (10 drives enclosed): Fan	DE(10) FAN		Yes		
Drive enclosure: Back panel unit	DE BPU	Yes			
Drive enclosure: Power supply unit	DPSU		Yes	Yes	Yes
Drive enclosure (30 drives enclosed): Fan	DE(30) FAN UNIT		Yes		
Drive enclosure (30 drives enclosed): Fan	DE(30) FAN		Yes		
DE voltage failure	DE			Yes	
External DE temperature error	DE OUTER			Yes	
Internal DE temperature error	DE			Yes	
Central module processor: Fan	CM FAN	Yes		Yes	

Module name	Event display Display format	GR710, GR720, GR730, ETERNUS3000 M50	GR740, GR820, GR840	ETERNUS4000(e xcept M80 and M100), ETERNUS3000(e xcept M50)	ETERNUS6000
Controller enclosure: Fan board	CE FANBD	Yes			
Controller enclosure: Back panel unit	CE BPU	Yes			
Controller enclosure: Fan unit	CE FAN UNIT		Yes		
Controller enclosure: Fan unit	CE FAN		Yes		
Controller enclosure: Front fan S	FAN UNIT S			Yes	
Controller enclosure: Front fan L	FAN UNIT L			Yes	
CM FAN Front(MFANF)	CM FAN Front			Yes	
CM FAN Rear(MFANR)	CM FAN Rear			Yes	
Controller enclosure: Power supply unit	CPSU		Yes	Yes	Yes
CE outlet thermal sensor	CE OUTLET THERMAL SENSOR				Yes
IO board	IOB		Yes		
Router	RT		Yes		Yes
IO board: DC/DC converter	IOB DDCON		Yes		
Central module: DC/DC converter	CM DDCON		Yes	Yes	
System control board: DC/DC converter	SVC DDCON		Yes		
Router: DC/DC converter	RT DDCON		Yes		
Port bypass circuit	PBC		Yes	Yes	
Port bypass circuit: DC/DC converter	PBC DDCON		Yes		
Communication error between PBCs (PBCCO)	PBC COMM			Yes	
RCI cable (DEI)	RCI CABLE	Yes (GR720, GR730 only)		Yes	
FC loop	FC LOOP	Yes		Yes	
FC cable	FC CABLE	Yes (GR720, GR730 only)	Yes		Yes
DEI cable	DEI CABLE		Yes		Yes

Module name	Event display Display format	GR710, GR720, GR730, ETERNUS3000 M50	GR740, GR820, GR840	ETERNUS4000(e xcept M80 and M100), ETERNUS3000(e xcept M50)	ETERNUS6000
FC EXPOSED loop	FC EXPOSED LOOP			Yes	
Personal computer: DC/ DC converter	PC DDCON		Yes		Yes
Maintenance PC	MAINTENANCE PC				Yes
SCSI board	SCCI BOARD				Yes
CM FLASH	FMEMBD	Yes			
Power supply unit	PSU/PSUDM	Yes (GR710, ETERNUS3000 M50 only)			
BFCBP	FCBP	Yes (GR710, ETERNUS3000 M50 only)			
Thrmistor cable	THRMISTOR CABLE	Yes (GR710, ETERNUS3000 M50 only)			
PBC DIP-SW set error	PBC UNIT SETTING			Yes	
PBC DIP-SW count error	PBC UNIT COMBINATION			Yes	

## 2.3.4 Explanation of ETERNUS2000 Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

- Notification of component blockage

Target	Level	Event display	Remarks
CM Unit	<b>Error</b>	P 01. <i>SSMM</i> 00 Controller Module(CM <i>xx</i> Hz <i>zz</i> <i>yy</i> Port)# <i>MM</i> < <i>pp</i> <i>ss</i> <i>rr</i> > Fault	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>xx</i> : Frequency(800MHz/1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM BE Expander	<b>Error</b>	P 06. <i>SSMM</i> 00 Controller Module(CM <i>xx</i> Hz <i>zz</i> <i>yy</i> Port)# <i>MM</i> < <i>pp</i> <i>ss</i> <i>rr</i> > BE Expander Fault	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>xx</i> : Frequency(800MHz/1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2)

Target	Level	Event display	Remarks
			<i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM SAS Port	Error	P 09. <i>SSMMnn</i> Controller Module(CM <i>xxHz zz yy</i> Port)# <i>MM</i> < <i>pp ss rr</i> > SAS Port Fault	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>nn</i> : Port No.(0-1) <i>xx</i> : Frequency(800MHz/1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM BE Expander Port	Error	P 0A. <i>SSMMnn</i> Controller Module(CM <i>xxHz zz yy</i> Port)# <i>MM</i> < <i>pp ss rr</i> > BE Expander Port# <i>nn</i> Fault	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>nn</i> : Port No.(0-2) <i>xx</i> : Frequency(800MHz/1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM Memory:512MB	Error	P 0B01 <i>MM</i> 00 Controller Cache(MEM-512MB)# <i>MM</i> < <i>pp ss rr</i> > Fault	<i>MM</i> : Module ID(10-11) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM Memory:1GB	Error	P 0B02 <i>MM</i> 00 Controller Cache(MEM-1GB)# <i>MM</i> < <i>pp ss rr</i> > Fault	<i>MM</i> : Module ID(10-11) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM Memory:2GB	Error	P 0B04 <i>MM</i> 00 Controller Cache(MEM-2GB)# <i>MM</i> < <i>pp ss rr</i> > Fault	<i>MM</i> : Module ID(10-11) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM Flash ROM	Error	P 0C. <i>SSMM00</i> Controller Module(CM <i>xxHz zz yy</i> Port)# <i>MM</i> < <i>pp ss rr</i> > Flash ROM Fault	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>xx</i> : Frequency(800MHz/1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM FAN Unit	Error	P 0D00 <i>MM</i> 00 Cooling Fan(BLOWER FAN)# <i>MM</i> < <i>pp</i> > Fault	<i>MM</i> : Module ID(10-11) <i>pp</i> : Parts No.
CA Port	Error	P 11. <i>SSMMnn</i> Controller Module(CM <i>xxHz zz yy</i> Port)# <i>MM</i> < <i>pp ss rr</i> > Host Port# <i>nn</i> Fault	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>nn</i> : Port No.(0-1) <i>xx</i> : Frequency(800MHz/1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision



Target	Level	Event display	Remarks
CM FE Expander	Error	P 12.SSMM00 Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> FE Expander Fault	SS: Parts subtype MM: Module ID(10-11) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision
CM FE Expander Port	Error	P 13.SSMMnn Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> FE Expander Port#nn Fault	SS: Parts subtype MM: Module ID(10-11) nn: Port No.(0-1) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision
SFP Optical Shortwave	Error	P 1A00MMnn FC SFP CM#MM Port#nn<pp ss rr oo> Fault	MM: Module ID(10-11) nn: Port No.(0-1) pp: Parts No. ss: Serial No. rr: Revision oo: Other Information
BBU	Error	P 75000nn Battery Unit(BBU) Slot#nn<pp ss rr> Fault	nn: Slot No.(0-1) pp: Parts No. ss: Serial No. rr: Revision
3.5 Inch DISK	Error	P 80.SSDDnn Disk Drive(HDD-xxxGB-yykrpm) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-0b) xxx: Disk capacity yy: Disk rotation pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
3.5 Inch Disk (Failed Usable)	Error	P 80.SSDDnn Disk Drive(HDD-xxxGB-yykrpm) DE#DD/Slot#nn<pp ss rr cc> FailedUse	SS: Parts subtype DD: DE-ID nn: Slot No.(00-0b) xxx: Disk capacity yy: Disk rotation pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
3.5 Inch DISK (Compare Error)	Error	P 88.SSDDnn Disk Drive(HDD-xxxGB-yykrpm) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-0b) xxx: Disk capacity yy: Disk rotation pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information

Target	Level	Event display	Remarks
2.5 Inch DISK	Error	P 81.SSDDnn Disk Drive(HDD-xxxGB-yykrpm) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-09) xxx: Disk capacity yy: Disk rotation pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
2.5 Inch Disk (Failed Usable)	Error	P 81.SSDDnn Disk Drive(HDD-xxxGB-yykrpm) DE#DD/Slot#nn<pp ss rr cc> FailedUse	SS: Parts subtype DD: DE-ID nn: Slot No.(00-09) xxx: Disk capacity yy: Disk rotation pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
2.5 Inch DISK (Compare Error)	Error	P 88.SSDDnn Disk Drive(HDD-xxxGB-yyKrpm) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-09) xxx: Disk capacity yy: Disk rotation pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
3.5 Inch DISK	Error	P 82.SSDDnn Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-0b) xxx: Disk capacity pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
3.5 Inch Disk (Failed Usable)	Error	P 82.SSDDnn Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> FailedUse	SS: Parts subtype DD: DE-ID nn: Slot No.(00-0b) xxx: Disk capacity pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
3.5 Inch DISK (Compare Error)	Error	P 88.SSDDnn Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-0b) xxx: Disk capacity pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
2.5 Inch DISK	Error	P 83.SSDDnn Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> Fault	SS: Parts subtype DD: DE-ID nn: Slot No.(00-09)

Target	Level	Event display	Remarks
			<i>xxx</i> : Disk capacity <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information
2.5 Inch Disk (Failed Usable)	Error	P 83 <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB-SATA) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp ss rr cc</i> > FailedUse	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-09) <i>xxx</i> : Disk capacity <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information
2.5 Inch DISK (Compare Error)	Error	P 88 <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB-SATA) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp ss rr cc</i> > Fault	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-09) <i>xxx</i> : Disk capacity <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information
EXP	Error	P 9001 <i>DD0N</i> Expander(EXP) DE# <i>DD</i> /Group# <i>nn</i> < <i>pp ss rr</i> > Fault	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>nn</i> : Slot No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
EXP Port	Error	P 9100 <i>DDNn</i> Expander(EXP) DE# <i>DD</i> /Group# <i>N</i> /Port# <i>m</i> < <i>pp ss rr</i> > Fault	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>n</i> : Slot No.(0-1) <i>m</i> : Port No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
EXP FAN	Error	P 9200 <i>DD0N</i> Cooling Fan(BLOWER FAN) DE# <i>DD</i> /Group# <i>nn</i> < <i>pp</i> > Fault	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>nn</i> : Slot No.(0-1) <i>pp</i> : Parts No.
DE FANU	Error	P D100 <i>DD0N</i> Cooling Fan(ENC FAN) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp</i> > Fault	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>nn</i> : Slot No.(0-1) <i>pp</i> : Parts No.
PSU	Error	P D200 <i>DD0N</i> Power Supply(PSU) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp ss rr</i> > Fault	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>nn</i> : Slot No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision

- Warning (temperature alarm)

Target	Level	Event display	Remarks
DE Abnormal exhaust gas temperature (FATAL)	Error	P DA0tDD00 DE OUT TEMP	t: Type(1=1U, 2=2U) DD: DE-ID
DE Abnormal exhaust gas temperature (Sensor failure)	Error	P DA0tDD00 DE OUT TEMP	t: Type(1=1U, 2=2U) DD: DE-ID
DE Abnormal exhaust gas temperature (WARNING)	Warning	J DA0tDD00 DE OUT TEMP	t: Type(1=1U, 2=2U) DD: DE-ID
DE Abnormal intake temperature (Sensor failure)	Error	P DB0tDD00 DE IN TEMP	t: Type(1=1U, 2=2U) DD: DE-ID
DE Abnormal intake temperature (WARNING)	Warning	J DB0tDD00 DE IN TEMP	t: Type(1=1U, 2=2U) DD: DE-ID

- Warning (expiration)

Target	Level	Event display	Remarks
BATTERY six months prior to expiry	Warning	J 700600nn BATTERY n 6MONTH WARNING YYYY/MM	nn: Slot No. n: Battery No.(0-1) YYYY/MM: Term of validity (year/month)
BATTERY one week prior to expiry	Warning	J 700700nn BATTERY n 1WEEK WARNING YYYY/MM	nn: Slot No. n: Battery No.(0-1) YYYY/MM: Term of validity (year/month)
BATTERY n day(s) prior to expiry	Warning	J 700700nn BATTERY n dDAY WARNING YYYY/MM	nn: Slot No. n: Battery No.(0-1) d: Days(1-6) YYYY/MM: Term of validity (year/month)
BATTERY expiry	Warning	J 70FE00nn BATTERY n EXPIRATION ALARM YYYY/MM	nn: Slot No. n: Battery No.(0-1) YYYY/MM: Term of validity (year/month)

- Warning (other)

Target	Level	Event display	Remarks
CM Check1	Warning	J C1MM0000 Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> Check-1	MM: Module ID(10-11) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision
Multiple memory collectable error:512MB	Warning	J C301MM00 Controller Cache(MEM-512MB)#MM<pp ss rr> Correctable Error	MM: Module ID(10-11) pp: Parts No. ss: Serial No. rr: Revision

Target	Level	Event display	Remarks
Multiple memory collectable error:1GB	Warning	J C302MM00 Controller Cache(MEM-1GB)#MM<pp ss rr> Correctable Error	MM: Module ID(10-11) pp: Parts No. ss: Serial No. rr: Revision
Multiple memory collectable error:2GB	Warning	J C304MM00 Controller Cache(MEM-2GB)#MM<pp ss rr> Correctable Error	MM: Module ID(10-11) pp: Parts No. ss: Serial No. rr: Revision
CM-Warning	Warning	J 01.SSMM00 Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> Warning FACTOR(ww)	SS: Parts subtype MM: Module ID(10-11) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision ww: Factor Code
CM BE Expander Warning	Warning	J 06.SSMM00 Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> BE Expander Warning	SS: Parts subtype MM: Module ID(10-11) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision
CM SAS Port Warning	Warning	J 09.SSMMnn Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> SAS Port#nn Warning	SS: Parts subtype MM: Module ID(10-11) nn: Port No.(0-1) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision
CM BE Expander Port Warning	Warning	J 0A.SSMMnn Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> BE Expander Port#nn Warning	SS: Parts subtype MM: Module ID(10-11) nn: Port No.(0-2) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision
SMART notice from Disk (3.5inch)	Warning	J 80.SSEEEE Disk Drive(HDD-xxxGB-yyKrpm) DE#DD/Slot#nn<pp ss rr cc> SMART	SS: Parts subtype EEEE: Position information xxx: Disk capacity yy: Disk rotation DD: DE-ID nn: Slot No.(00-0E) pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information

Target	Level	Event display	Remarks
Disk preventative separation SMART (3.5inch)	Warning	J 80.SSEEEE Disk Drive(HDD-xxxGB-yyKrpm) DE#DD/Slot#nn<pp ss rr cc> Warning	SS: Parts subtype EEEE: Position information xxx: Disk capacity yy: Disk rotation DD: DE-ID nn: Slot No.(00-0E) pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
SMART notice from Disk (2.5inch)	Warning	J 81.SSEEEE Disk Drive(HDD-xxxGB-yyKrpm) DE#DD/Slot#nn<pp ss rr cc> SMART	SS: Parts subtype EEEE: Position information xxx: Disk capacity yy: Disk rotation DD: DE-ID nn: Slot No.(00-1D) pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
Disk preventative separation SMART (2.5inch)	Warning	J 81.SSEEEE Disk Drive(HDD-xxxGB-yyKrpm) DE#DD/Slot#nn<pp ss rr cc> Warning	SS: Parts subtype EEEE: Position information xxx: Disk capacity yy: Disk rotation DD: DE-ID nn: Slot No.(00-1D) pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
SATA Disk notice from Disk (3.5inch)	Warning	J 82.SSEEEE Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> SMART	SS: Parts subtype EEEE: Position information xxx: Disk capacity DD: DE-ID nn: Slot No.(00-0E) pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
SATA Disk preventative separation SMART (3.5inch)	Warning	J 82.SSEEEE Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> Warning	SS: Parts subtype EEEE: Position information xxx: Disk capacity DD: DE-ID nn: Slot No.(00-0E) pp: Product ID(Disk) ss: Serial No. rr: Revision cc: Disk information
SMART notice from SATA Disk (2.5inch)	Warning	J 83.SSEEEE Disk Drive(HDD-xxxGB-SATA) DE#DD/Slot#nn<pp ss rr cc> SMART	SS: Parts subtype EEEE: Position information xxx: Disk capacity DD: DE-ID nn: Slot No.(00-1D) pp: Product ID(Disk)

Target	Level	Event display	Remarks
			<i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information
SATA Disk preventative separation SMART (2.5inch)	Warning	J 83.SSEEEE Disk Drive(HDD- <i>xxx</i> GB-SATA) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp ss rr cc</i> > Warning	<i>SS</i> : Parts subtype <i>EEEE</i> : Position information <i>xxx</i> : Disk capacity <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information
EXP Alarm (Warning Level)	Warning	J 9002EEEE Expander(EXP) DE# <i>DD</i> / Group# <i>nn</i> < <i>pp ss rr</i> > Warning	<i>SS</i> : Parts subtype <i>EEEE</i> : Position information <i>DD</i> : DE-ID <i>nn</i> : Slot No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
EXP Port (Warning Level)	Warning	J 9002EEEE Expander(EXP) DE# <i>DD</i> / Group# <i>N</i> /Port# <i>nn</i> < <i>pp ss rr</i> > Warning	<i>SS</i> : Parts subtype <i>EEEE</i> : Position information <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>nn</i> : Port No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision

- Event notification (M messages)

Target	Level	Event display	Remarks
Write Bad Data	Error	M E0050 <i>xxx</i> WRITE BAD DATA	<i>xxx</i> : RLU No.
PINNED Data	Error	M E10300 <i>MM</i> PINNED DATA	<i>MM</i> : CM module ID where PINNED occurred
NRDY (Factor 01)	Error	M E2070001 NOT READY(01:Configuration Error)	
NRDY (Factor 02)	Error	M E2070002 NOT READY(02:CM F/W Version Error)	
NRDY (Factor 03)	Error	M E2070003 NOT READY(03:NVRAM Parity Error)	
NRDY (Factor 04)	Error	M E2070004 NOT READY(04:Restore Fail)	
NRDY (Factor 05)	Error	M E2070005 NOT READY(05:RSP/SVC Degrade)	
NRDY (Factor 06)	Error	M E2070006 NOT READY(06:Basic Set Online(Pre) Error)	
NRDY (Factor 07)	Error	M E2070007 NOT READY(07:Basic Set Online(Recovery) Error)	
NRDY (Factor 08)	Error	M E2070008 NOT READY(08:Basic Set Online(Normal) Error)	

Target	Level	Event display	Remarks
NRDY (Factor 09)	Error	M E2070009 NOT READY(09:Maintenance Set Online Error)	
NRDY (Factor 10)	Error	M E207000A NOT READY(10:Basic Restore Error)	
NRDY (Factor 11)	Error	M E207000B NOT READY(11:Power Off/Fail Incomplete)	
NRDY (Factor 12)	Error	M E207000C NOT READY(12:Backup Fail)	
NRDY (Factor 13)	Error	M E207000D NOT READY(13:Multi CM Down)	
NRDY (Factor 14)	Error	M E207000E NOT READY(14:Machine Down Recovery End)	
NRDY (Factor 15)	Error	M E207000F NOT READY(15:Machine Down Recovery Failed)	
NRDY (Factor 16)	Error	M E2070010 NOT READY(16:DE Build Error)	
NRDY (Factor 17)	Error	M E2070011 NOT READY(17:CM Memory Shortage)	
NRDY (Factor 18)	Error	M E2070012 NOT READY(18:PBC Combination Error)	
NRDY (Factor 19)	Error	M E2070013 NOT READY(19:RT Type Error)	
NRDY (Factor 21)	Error	M E2070015 NOT READY(21:Configuration Data restored from System Disk)	
NRDY (Factor 22)	Error	M E2070016 NOT READY(22:No Version)	
FC loop recovery success	Error	M E406C0DD FC Loop Recovery Completed	DD: Young number DE No.
FC loop recovery failure	Error	M E406F0DD FC Loop Recovery Failed	DD: Young number DE No.
End of rebuild to HS (Bad Data)	Error	M 21810xxx RAID Group#0xxx REBUILD to HS (Recovered end)	xxx: RLU No.
End of rebuild to DV (Bad Data)	Error	M 21810xxx RAID Group#0xxx REBUILD to DV (Recovered end)	xxx: RLU No.
Bass is cut off between Eternuses	Error	M 38040C0732.xxyy Remote Copy Path (MID#xx PORT#yy) Not Available	xx: MID yy: Port

- Recovery notification

Target	Level	Event display	Remarks
CM BE Expander Warning recovery	Information	R 06.SSMM00 Controller Module(CM xxHz zz yyPort)#MM<pp ss rr> BE Expander Normal	SS: Parts subtype MM: Module ID(10-11) xx: Frequency(800MHz/1.2GHz) zz: Model(FC/SAS/iSCSI) yy: Number of ports(1-2) pp: Parts No. ss: Serial No. rr: Revision



Target	Level	Event display	Remarks
EXP Warning recovery	Information	R 9002 $EEEE$ Expander(EXP) DE# $DD$ / Group# $nn$ < $pp$ $ss$ $rr$ > Normal	$EEEE$ : Position information $DD$ : DE-ID $N$ : Side 0, side 1 $nn$ : Port No.(00-01) $pp$ : Parts No. $ss$ : Serial No. $rr$ : Revision
PSU Alarm recovery (AC-Fail clear)	Information	R D200 $DD0N$ Power Supply(PSU) DE# $DD$ /Slot# $nn$ < $pp$ $ss$ $rr$ > Normal	$DD$ : DE-ID $N$ : Side 0, side 1 $nn$ : Port No.(00-01) $pp$ : Parts No. $ss$ : Serial No. $rr$ : Revision
DE exhaust temperature alarm recovery	Information	R DA0 $tDD00$ DE OUT TEMP Normal	$DD$ : DE-ID $t$ : Type(1=1U, 2=2U)
DE intake air temperature alarm recovery	Information	R DB0 $tDD00$ DE IN TEMP Normal	$DD$ : DE-ID $t$ : Type(1=1U, 2=2U)

## 2.3.5 ETERNUS DX60, ETERNUS DX80 Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

- Notification of component blockage

Target	Level	Event display	Remarks
CM Unit	<b>Error</b>	P 01. $SSMM00$ Controller Module# $m$ ( $zz$ $xx$ Hz) Fault < $pp$ $ss$ $rr$ >	$SS$ : Parts subtype $MM$ : Module ID(10-11) $m$ : CM No. $zz$ : Model(FC/SAS/iSCSI) $xx$ : Frequency (800MHz/ 1.2GHz) $pp$ : Parts No. $ss$ : Serial No. $rr$ : Revision
CM BE Expander	<b>Error</b>	P 06. $SSMM00$ Controller Module# $m$ ( $zz$ $xx$ Hz) BE Expander Fault < $pp$ $ss$ $rr$ >	$SS$ : Parts subtype $MM$ : Module ID(10-11) $m$ : CM No. $zz$ : Model(FC/SAS/iSCSI) $xx$ : Frequency (800MHz/ 1.2GHz) $pp$ : Parts No. $ss$ : Serial No. $rr$ : Revision
CM DI PORT	<b>Error</b>	P 08. $SSMM0n$ Controller Module# $m$ ( $zz$ $xx$ Hz) DI Port# $n$ Fault < $pp$ $ss$ $rr$ >	$SS$ : Parts subtype $MM$ : Module ID(10-11) $n$ : Port No.(0-1) $m$ : CM No. $zz$ : Model(FC/SAS/iSCSI) $xx$ : Frequency (800MHz/ 1.2GHz) $pp$ : Parts No.

Target	Level	Event display	Remarks
			<i>ss</i> : Serial No. <i>rr</i> : Revision
CM SAS Port	Error	P 09. <i>SSMM</i> 00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz) SAS Port Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM BE Expander Port	Error	P 0A. <i>SSMM</i> 0 <i>n</i> Controller Module# <i>m</i> ( <i>zz xx</i> Hz) BE Expander Port# <i>n</i> Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>n</i> : Port No.(0-2) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM Memory	Error	P 0B. <i>SSMM</i> 00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz) Cache( <i>MEM</i> ) Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>MEM</i> : Memory capacity <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM Flash ROM	Error	P 0C. <i>SSMM</i> 00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz) Flash ROM Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM NAND Controller	Error	P 0E. <i>SSMM</i> 00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz) NAND Controller Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
SCU	Error	P 0F. <i>SSMM</i> 00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz) Super Capacitor Unit Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/

Target	Level	Event display	Remarks
			1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CA Port	Error	P 11. <i>SSMM0n</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) Port# <i>n</i> Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>n</i> : Port No.(0-1) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM FE Expander	Error	P 12. <i>SSMM00</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) FE Expander Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM FE Expander Port	Error	P 13. <i>SSMM0n</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) FE Expander Port# <i>n</i> Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>nn</i> : Port No.(0-1) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>zz</i> : Model(FC/SAS/iSCSI) <i>yy</i> : Number of ports(1-2) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
SFP Optical Shortwave	Error	P 1A00 <i>MM0n</i> FC SFP Controller Module# <i>m</i> Port# <i>n</i> Fault < <i>pp ss rr oo</i> >	<i>MM</i> : Module ID(10-11) <i>n</i> : Port No.(0-1) <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision <i>oo</i> : Other Information
SFP+ Optical Shortware	Error	P 1C00 <i>MM0n</i> FC SFP+ Controller Module# <i>m</i> Port# <i>n</i> Fault < <i>pp ss rr oo</i> >	<i>MM</i> : Module ID(10-11) <i>n</i> : Port No.(0-1) <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision <i>oo</i> : Other Information
3.5 Inch DISK	Error	P 80. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> - Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NN</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation

Target	Level	Event display	Remarks
			<i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
3.5 Inch Disk (Failed Usable)	Error	P 80. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> - Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Failed Usable < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NN</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
3.5 Inch DISK (Compare Error)	Error	P 80. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> - Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Fault < <i>pp ss</i> <i>rr</i> >	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NN</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
3.5 Inch DISK	Error	P 82. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> - Disk# <i>n</i> (SATA <i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NN</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) <i>xxx</i> : Disk capacity <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
3.5 Inch Disk (Failed Usable)	Error	P 82. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> - Disk# <i>n</i> (SATA <i>xxx</i> GB <i>cc</i> ) Failed Usable < <i>pp ss</i> <i>rr</i> >	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NN</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) <i>xxx</i> : Disk capacity <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
3.5 Inch DISK (Compare Error)	Error	P 82. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> - Disk# <i>n</i> (SATA <i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NN</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) <i>xxx</i> : Disk capacity <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
EXP	Error	P 9000 <i>DDON</i> Expander DE# <i>DD</i> / <i>EXP#N</i> Fault < <i>pp ss rr</i> >	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>pp</i> : Parts No.

Target	Level	Event display	Remarks
			<i>ss</i> : Serial No. <i>rr</i> : Revision
EXP Port	Error	P 9100 <i>DDn</i> Expander Port DE# <i>DD</i> /EXP# <i>N</i> / Port# <i>n</i> Fault < <i>pp ss rr</i> >	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>n</i> : Port No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
PSU	Error	P D200 <i>DD0n</i> Power Supply Unit DE# <i>DD</i> / PSU# <i>n</i> Fault < <i>pp ss rr</i> >	<i>DD</i> : DE-ID <i>n</i> : Slot No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision

- Warning (temperature alarm)

Target	Level	Event display	Remarks
DE Abnormal exhaust gas temperature (FATAL)	Error	P DA0 <i>tDD00</i> DE Exhaust temperature DE# <i>DD</i> Fatal	<i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID
DE Abnormal exhaust gas temperature (Sensor failure)	Error	P DA0 <i>tDD00</i> DE Exhaust temperature sensor DE# <i>DD</i> Fault	<i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID
DE Abnormal exhaust gas temperature (WARNING)	Warning	J DA0 <i>tDD00</i> DE Exhaust temperature DE# <i>DD</i> Warning	<i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID
DE Abnormal intake temperature (Sensor failure)	Error	P DB0 <i>tDD00</i> DE Intake temperature sensor DE# <i>DD</i> Fault	<i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID
DE Abnormal intake temperature (WARNING)	Warning	J DB0 <i>tDD00</i> DE Intake temperature DE# <i>DD</i> Warning	<i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID

- Warning (other)

Target	Level	Event display	Remarks
CM Check1	Warning	J C1 <i>MM0000</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) Reboot < <i>pp ss rr</i> >	<i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
Multiple memory collectable error	Warning	J C301 <i>MM00</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) Cache( <i>MEM</i> ) Correctable Error < <i>pp ss rr</i> >	<i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>MEM</i> : Memory capacity <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision

Target	Level	Event display	Remarks
CM-Warning	Warning	J 01.SSMM00 Controller Module# <i>m</i> ( <i>zz xxHz</i> ) Warning factor( <i>ww</i> ) < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>ww</i> : Factor Code <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM BE Expander Warning	Warning	J 06.SSMM00 Controller Module## <i>m</i> ( <i>zz xxHz</i> ) BE Expander Warning < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>m</i> : CM No. <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM SAS Port Warning	Warning	J 09.SSMM0 <i>n</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) SAS Port# <i>n</i> Warning < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>n</i> : Port No.(0-1) <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM BE Expander Port Warning	Warning	J 0A.SSMM0 <i>n</i> Controller Module# <i>m</i> ( <i>zz xxHz</i> ) BE Expander Port# <i>n</i> Warning < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>n</i> : Port No.(0-2) <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM FLASH ROM	Warning	J 0C.SSMM00 Controller Module# <i>m</i> ( <i>zz xxHz</i> ) Flash ROM Warning < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
CM NAND Controller	Warning	J 0E.SSMM00 Controller Module# <i>m</i> ( <i>zz xxHz</i> ) NAND Flash Warning < <i>pp ss rr</i> >	<i>SS</i> : Parts subtype <i>MM</i> : Module ID(10-11) <i>zz</i> : Model(FC/SAS/iSCSI) <i>xx</i> : Frequency (800MHz/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision

Target	Level	Event display	Remarks
SMART notice from Disk (3.5inch)	Warning	J 80.SSDDNNDisk Drive DE#DD-Disk#n(SAS xxxGB yykrpm cc) SMART <pp ss rr>	SS: Parts subtype DD: DE-ID NV: Slot No.(00-0b) n : Slot No.(00-11) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision
Disk preventative separation SMART (3.5inch)	Warning	J 80.SSDDNNDisk Drive DE#DD-Disk#n(SAS xxxGB yykrpm cc) Warning <pp ss rr>	DD: DE-ID NV: Slot No.(00-0b) n : Slot No.(00-11) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision
SATA Disk notice from Disk (3.5inch)	Warning	J 82.SSDDNNDisk Drive DE#DD-Disk#n(SATA xxxGB cc) SMART <pp ss rr>	SS: Parts subtype DD: DE-ID NV: Slot No.(00-0b) n : Slot No.(00-11) xxx: Disk capacity cc: Disk information pp: Parts No. ss: Serial No. rr: Revision
SATA Disk preventative separation SMART (3.5inch)	Warning	J 82.SSDDNNDisk Drive DE#DD-Disk#n(SATA xxxGB cc) Warning <pp ss rr>	DD: DE-ID NV: Slot No.(00-0b) n : Slot No.(00-11) xxx: Disk capacity cc: Disk information pp: Parts No. ss: Serial No. rr: Revision
EXP Alarm (Warning Level)	Warning	J 9000DD0NExpander DE#DD/EXP#n Warning <pp ss rr>	DD: DE-ID N: Side 0, side 1 pp: Parts No. ss: Serial No. rr: Revision
EXP Port (Warning Level)	Warning	J 9100DDNn Expander Port DE#DD/EXP#N/Port#n Warning <pp ss rr>	DD: DE-ID N: Side 0, side 1 n : Port No.(0-1) pp: Parts No. ss: Serial No. rr: Revision

- Event notification (M messages)

Target	Level	Event display	Remarks
Write Bad Data	Error	M E0050xxx WRITE BAD DATA	xxx: RLU No.

Target	Level	Event display	Remarks
PINNED Data	Error	M E10300MM PINNED DATA	MM: CM module ID where PINNED occurred
NRDY (Factor 01)	Error	M E2070001 NOT READY(01:Configuration Error)	
NRDY (Factor 02)	Error	M E2070002 NOT READY(02:CM F/W Version Error)	
NRDY (Factor 04)	Error	M E2070004 NOT READY(04:Restore Fail)	
NRDY (Factor 11)	Error	M E207000B NOT READY(11:Power Off/Fail Incomplete)	
NRDY (Factor 12)	Error	M E207000C NOT READY(12:Backup Fail)	
NRDY (Factor 13)	Error	M E207000D NOT READY(13:Multi CM Down)	
NRDY (Factor 14)	Error	M E207000E NOT READY(14:Machine Down Recovery End)	
NRDY (Factor 15)	Error	M E207000F NOT READY(15:Machine Down Recovery Failed)	
NRDY (Factor 16)	Error	M E2070010 NOT READY(16:DE Build Error)	
NRDY (Factor 17)	Error	M E2070011 NOT READY(17:CM Memory Shortage)	
NRDY (Factor 21)	Error	M E2070015 NOT READY(21:Configuration Data restored from System Disk)	
NRDY (Factor 22)	Error	M E2070016 NOT READY(22:No Version)	
End of rebuild to HS (Bad Data)	Error	M 21810xxx RAID Group#0xxx recovered end of Rebuild processing	xxx: RLU No.
End of rebuild to DV (Bad Data)	Error	M 21810xxx RAID Group#0xxx recovered end of Rebuild processing	xxx: RLU No.
Bass is cut off between Eternuses	Error	M 0732xxyy Remote Copy Path (MID#xx PORT#yy) Not Available	xx: MID yy: Port

- Recovery notification

Target	Level	Event display	Remarks
CM BE Expander Warning recovery	Information	R 06.SSMM00 Controller Module#n(zz xxHz) BE Expander Normal <pp ss rr>	SS: Parts subtype MM: CM Mid(10-11) n: Port No.(0-1) zz: Model(FC/SAS/iSCSI) xx: Frequency (800MHz/ 1.2GHz) pp: Parts No. ss: Serial No. rr: Revision
EXP Warning recovery	Information	R 9000DDnn Expander DE#DD/EXP#n Normal <pp ss rr>	DD: DE-ID nn: Port No.(00-01) n: Port No.(0-1) pp: Parts No.



Target	Level	Event display	Remarks
			<i>ss</i> : Serial No. <i>rr</i> : Revision
PSU Alarm recovery (AC-Fail clear)	Information	R D200 <i>DD</i> 0 <i>N</i> Power Supply Unit DE# <i>DD</i> / PSU# <i>N</i> Normal < <i>pp ss rr</i> >	<i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision
DE exhaust temperature alarm recovery	Information	R DA0 <i>tDD</i> 00 DE OUT TEMP Normal	<i>DD</i> : DE-ID <i>t</i> : Type(1:3.5"DE / 2:2.5"DE)
DE intake air temperature alarm recovery	Information	R DB0 <i>tDD</i> 00 DE IN TEMP Normal	<i>DD</i> : DE-ID <i>t</i> : Type(1:3.5"DE / 2:2.5"DE)

### 2.3.6 Explanation of ETERNUS SX300, SX300S Events

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Critical event	<b>Error</b>	The device trap message is output as is. Display example is as follows. Critical Event(Code:280d) on SX3RF2B-000001 : Drive tray component failed or removed. Jun 30, 2005 8:30:10 AM

### 2.3.7 Explanation of HDS SANRISE2000 Series Storage Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Failure event	Level	Event display
Entire subsystem stop error	<b>Error</b>	"Acute Event (REFCODE=xxxxx Parts=yyyyy)"
Faulty part operation stop error	<b>Error</b>	"Serious Event (REFCODE=xxxxx Parts=yyyyy)"
Partial error	<b>Error</b>	"Moderate Event (REFCODE=xxxxx Parts=yyyyy)"
Minor error	<b>Error</b>	"Service Event (REFCODE=xxxxx Parts=yyyyy)"

Table 2.3 Explanation of HDS SANRISE2000 series storage traps

Displayed character strings	Region/parts name
"DKCHWProcessor"	DKC processor
"DKCHWCsw"	DKC Starnet
"DKCHWCACHE"	DKC cache
"DKCHWSM"	DKC shared memory
"DKCHWPS"	DKC power supply

Displayed character strings	Region/parts name
"DKCHWBattery"	DKC battery
"DKCHWFan"	DKC fan
"DKCHWEnvironment"	DKC environment system
"DKUHWPS"	DKU power supply
"DKUHWFan"	DKU fan
"DKUHWEnvironment"	DKU environment system
"DKUHWDive"	DKU drive

### 2.3.8 Explanation of HDS SANRISE1000 Series Storage Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Failure event	Level	Event display
Local control failure	Error	System down occurred.
Drive disabled (data drive)	Error	Drive blocking occurred.
Fan alarm	Error	Fan failure occurred.
DC power supply failure	Error	Power supply failure occurred.
Battery alarm	Error	Battery failure occurred.
Partial disabling of cache	Error	Cache memory failure occurred.
UPS alarm	Error	UPS failure occurred.
InboxFailure	Error	AC line or inbox failure occurred.
Battery charger circuit alarm	Error	Cache backup circuit failure occurred.
Remote controller disabled	Error	Other controller failure occurred.
Array unit warning state	Warning	Warning occurred.
Drive disabled (spare drive)	Error	Spare drive failure occurred.
ENC alarm	Error	Enclosure controller failure occurred.
Loop alarm	Error	Loop failure occurred.

### 2.3.9 Explanation of EMC Symmetrix Series Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Failure event	Level	Event display
Device status	Error	Decode and display the DISPLAY STRING part of SNMP Trap
Symmetrix status	Error	Decode and display the DISPLAY STRING part of SNMP Trap
ECC discoveryTableChange	Information	EMC ControlCenter Agent, IP xx.xx.xx.xx Discovery Table Change at xxxxx (event log only)
Symmetrix event	Information	Decode and display the DISPLAY STRING part of SNMP Trap (event log only)

## 2.4 Tape Library

### 2.4.1 Explanation of LT270 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Library hardware error	<b>Error</b>	Library system failed. Use the Remote Panel to check the error contents (FSC=xxxx, Sensekey=xxxx).
Barcode reader error	Warning	Barcode reader in robot#number failed.
CM error	Warning	An error occurred in media error(CM fail).(Barcode Label=xxxx)
CAS cell error	Warning	CAS unit number error occurred.
Cell error	Warning	Cell unit failed.(Barcode Label=xxxx)
CIC sensor error	Warning	CIC sensor in robot #number failed.
Battery alarm	Warning	Battery unit in LCT#number failed.
Shelf 0 fan alarm	Warning	Shelf FAN in LCT#0 failed.
Shelf 1 fan alarm	Warning	Shelf FAN in LCT#1 failed.
CAS open error	Warning	An open error occurred in CAS unit number
FC/SCSI adapter card error	Warning	Adapter#number failed.
Firmware BOOTUP alarm	Warning	The LCT#number bootup alarm occurred.
EEPROM error	Warning	EEPROM failed.
ROBOT PSU alarm	Warning	PSU unit in robot robot#number failed.
ROBOT PSU power off alarm	Warning	Power-off occurred in PSU unit in robot#number.
ROBOT PSU FAN alarm	Warning	PSU unit FAN in robot#number failed.
Temperature alarm	Warning	The temperature in the library is abnormal.(temperature degree C).
Temperature abnormality error	<b>Error</b>	Tape library temperature increased abnormally (temperature degrees C), leading to a library system fail.
Vibration alarm	Warning	Library system detected an abnormal vibration.
Humidity alarm	Warning	Tape library humidity (humidity %) is abnormal.
LCT failover alarm	Warning	Failover occurred in LCT#number.
LCT cutoff alarm	Warning	Cutoff occurred in LCT#number.
ROBOT Down alarm	Warning	Robot#number failed.
Front door open (during operation)	Warning	Front door of the library system was opened.
Nearing no cleaning tape	Warning	The installed cleaning cartridges will reach a limit soon.
Expired deadline for cleaning	Warning	Maximum number of uses of cleaning cell#number (barcode label: xxxx) was reached.
Cleaning cartridge none	Warning	Cleaning cartridge is not available.
ROBOT Serdes alarm	Warning	Serdes in robot#number failed.

Failure event	Level	Event display
Power control card alarm	Warning	Power control card in LCT#number failed.
LCD power off alarm	Warning	Power-off occurred in operation panel.
Drive hardware error	Error	An error occurred in drive#number. Use the remote panel to check the error contents (FSC=xxxx, Sensekey=xxxxxx).
Media error	Warning	An Error occurred in media error (barcode label:xxxxxx).
Fan alarm	Warning	A FAN alarm occurred in drive #number.
Cleaning request	Warning	Drive#number needs cleaning. Perform cleaning.
Cluster PSU0 power off alarm	Warning	Power-off occurred in PSU0 in drive cluster#number.
Cluster PSU1 power off alarm	Warning	Power-off occurred in PSU1 in drive cluster#number.
Cluster PSU0 alarm	Warning	PSU0 in drive cluster#number failed.
Cluster PSU1 alarm	Warning	PSU1 in drive cluster#number failed.
LCT/DCT0 IF failure	Warning	Interface between LCT#number and DCI#0 (drive cluster#number) failed.
LCT/DCT1 IF failure	Warning	Interface between LCT#number and DCI#1 (drive cluster#number) failed.
DCT0 failure	Warning	DCI#number in drive cluster#number failed.
DCT1 failure	Warning	DCI#number in drive cluster#number failed.
Nearing Media Life	Warning	Media soon will be end of life (Barcode Label:xxxxx).
Reach Media Life	Warning	Media reached at the end of life (Barcode Label:xxxxx).
Reach ROBOT life	Warning	Robot#number reached at the end of life.
Reach Drive Life	Warning	Drive#number reached at the end of life.

## 2.4.2 Explanation of LT250 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Library hardware error	Error	Library system failed. Use the Remote Panel to check the error contents(FSC=xx, Sensekey=xx).
Barcode reader error	Warning	Barcode reader failed.
CM reader error	Warning	CM reader failed.
CAS error	Warning	CAS unit#number failed.
Cell error	Warning	Cell unit failed (Barcode Label:xxxxx).
CIC sensor error	Warning	CIC sensor failed.
Battery alarm	Warning	Battery unit failed.
Shelf FAN0 alarm	Warning	Shelf FAN#0 failed.
Shelf FAN1 alarm	Warning	Shelf FAN#1 failed.
Library FAN0 alarm	Warning	Library FAN#0 failed.
Library FAN1 alarm	Warning	Library FAN#1 failed.
Library FAN2 alarm	Warning	Library FAN#2 failed.

Failure event	Level	Event display
CAS unlock error	Warning	An Unlock error occurred in CAS unit#number.
FC/SCSI error	Warning	Adapter#number failed.
Boot up alarm	Warning	Bootup alarm occurred.
MAC address alarm	Warning	EEPROM failed.
Shelf PSU alarm	Warning	Shelf PSU#number unit failed.
Shelf PSU not installed	Warning	Shelf PSU#number is not installed.
Thermal alarm	Warning	Tape library temperature increased (temperature degree C), leading to an alarm.
Thermal error	Error	Tape library temperature increased abnormally (temperature degree C), leading to a library system fail.
Humidity alarm	Warning	Tape library humidity (humidity %) is abnormal.
Front door open (during operation)	Warning	Front door of the library system was opened.
Nearing no cleaning tape	Warning	The installed cleaning cartridges will reach a limit soon.
Cleaning tape limit	Warning	Maximum number of uses of cleaning cell#number (Barcode Label:xxxxx) was reached.
No cleaning tape	Warning	Cleaning cartridge is not available.
ROBOT Serdes alarm	Warning	Robot serdes failed.
Power control card alarm	Warning	Power control card failed.
Operator Panel P-Off alarm	Warning	Power-off occurred in operation panel.
Nearing Media Life	Warning	Media soon will be end of life. (Barcode Label:xxxxx)
Reach Media Life	Warning	Media reached at the end of life. (Barcode Label:xxxxx)
Reach ROBOT life	Warning	Robot reached at the end of life.
Magazine set sensor error	Warning	Magazine set sensor in CAS#number failed.
No magazine	Warning	Magazine in CAS#number is not installed.
Trash cell full	Warning	There is a media in the Trash cell. (Barcode label:xxxxx)
Media error (CM)	Warning	An error occurred in media error(CM fail).(Barcode Label:xxxxx)
Drive hardware error	Error	An error occurred in drive#number. Use the Remote Panel to check the error contents (FSC=xx, Sensekey=xx).
Media error	Warning	An Error occurred in media error (Barcode Label:xxxxx).
Drive FAN alarm	Warning	A FAN alarm occurred in drive#number.
Drive cleaning request	Warning	Drive#number needs cleaning. Perform cleaning.
Reach Drive Life	Warning	Drive#number reached at the end of life.
Drive PSU power off alarm	Warning	Power-off occurred in drive PSU#number unit.
Drive PSU alarm	Warning	Drive PSU#number unit failed.
Drive LCT/DC IF alarm	Warning	Interface between LCT and DC failed.
Grease is necessary	Warning	Need Greasing.

### 2.4.3 Explanation of LT210, LT220, LT230 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Library error (Fatal error)	<b>Error</b>	emergency: controller: ROBOT01 Broken CHK=XXXX
Library error (Others)	<b>Warning</b>	warning: controller: ROBOT01 Warning CHK=XXXX
Drive#1 error (Fatal error)	<b>Error</b>	emergency: drive1: DRIVE01 Broken CHK=XXXX
Drive#1 error (Others)	<b>Warning</b>	warning: drive1: DRIVE01 Warning CHK=XXXX
Drive#2 error (Fatal error)	<b>Error</b>	emergency: drive2: DRIVE02 Broken CHK=XXXX
Drive#2 error (Others)	<b>Warning</b>	warning: drive2: DRIVE02 Warning CHK=XXXX
Request for replacement of Cleaning Cartridge	<b>Warning</b>	warning: controller: ROBOT01 Exchange Cleaning Cartridge
Library Maintenance	<b>Warning</b>	warning: controller: ROBOT01 Library Maintenance
Reception of a Cleaning request from drive#1	<b>Warning</b>	warning: drive1: DRIVE01 CleaningRequest
Reception of a Cleaning request from drive#2	<b>Warning</b>	warning: drive2: DRIVE02 CleaningRequest
Start of Inventory	Information	info: controller: ROBOT01 Inventory
Change of library operation mode	Information	info: controller: ROBOT01 ModeChange to RANDOM or info: controller: ROBOT01 ModeChange to SEQUENTIAL
Start of medium transfer	Information	info: controller: ROBOT01 MoveStart XXXX to YYYY
Completion of medium transfer	Information	info: controller: ROBOT01 MoveComplete XXXX to YYYY
The library enters Not Ready state.	Information	info: controller: ROBOT01 NotReady
The drive#1 enters Not Ready state.	Information	info: drive1: DRIVE01 NotReady
The drive#2 enters Not Ready state.	Information	info: drive2: DRIVE01 NotReady
The library enters online state.	Information	info: controller: ROBOT01 Online
The drive#1 enters online state.	Information	info: drive1: DRIVE01 Online
The drive#2 enters online state.	Information	info: drive2: DRIVE02 Online
Unlock magazine	Information	info: controller: ROBOT01 MagazineUnlock
Unlock mailbox	Information	info: controller: ROBOT01 MailboxUnlock
Request of Bus Device Reset	Information	info: controller: ROBOT01 BusDeviceReset

## 2.4.4 Explanation of LT200 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Autoloader error (Fatal error)	<b>Error</b>	emergency: controller: ACCESSOR Broken CHK=XXXX
Autoloader error (Others)	<b>Warning</b>	warning: controller: ACCESSOR Warning CHK=XXXX
Drive error (Fatal error)	<b>Error</b>	emergency: drive1: DRIVE01 Broken CHK=XXXX

Failure event	Level	Event display
Drive error (Others)	Warning	warning: drive1: DRIVE01 Warning CHK=XXXX
Request for replacement of Cleaning Cartridge	Warning	warning: controller: ACCESSOR Exchange Cleaning Cartridge
Request for maintenance of autoloader	Warning	warning: controller: ACCESSOR Library Maintenance
Reception of a Cleaning request from drive	Warning	warning: drive1: DRIVE01 CleaningRequest
Start of Inventory	Information	info: controller: ACCESSOR Inventory
Change of autoloader operation mode	Information	info: controller: ACCESSOR ModeChange to RANDOM in logical library 1 or info: controller: ACCESSOR ModeChange to SEQUENTIAL in logical library 1
Start of tape transfer	Information	info: controller: ACCESSOR MoveStart XXXX to YYYY
Completion of tape transfer	Information	info: controller: ACCESSOR MoveComplete XXXX to YYYY
The autoloader enters Not Ready state.	Information	info: controller: ACCESSOR NotReady
The drive enters Not Ready state.	Information	info: drive1: DRIVE01 NotReady
The autoloader enters online state.	Information	info: controller: ACCESSOR Online
The drive enters online state.	Information	info: drive1: DRIVE01 Online
Unlock magazine	Information	info: controller: ACCESSOR MagazineUnlock
Unlock I/O Station	Information	info: controller: ACCESSOR I/O StationUnlock
Start of auto cleaning	Information	info: controller: Auto Cleaning Start
Completion of auto cleaning	Information	info: controller: Auto Cleaning Complete

## 2.4.5 Explanation of LT160 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Media error	Warning	The media error occurred. (Barcode label: xxxxxxxx).
Drive error	Error	The drive unit0 error occurred.
Drive offline	Information	The drive unit0 became offline.
Drive fan alarm	Error	The drive unit0 FAN alarm occurred.
Cleaning request	Warning	The drive unit0 needs cleaning.
Drive LinkDown	Information	The drive unit0 Link Down occurred.
FC-CA error	Error	The adapter0 error occurred.
CM reader error or CM error in medium	Warning	The CM reader error or CM error in medium occurred.
Barcode Reader error	Warning	The barcode reader error occurred.
CAS error	Warning	The CAS unit0 error occurred.
BBU alarm	Warning	The battery unit error occurred.
FAN-1 alarm	Warning	The library FAN(1) error occurred.
FAN-2 alarm	Warning	The library FAN(2) error occurred.

Failure event	Level	Event display
Library error	Error	The library system error occurred. (FSC=xxxxxxxx)
Front door open	Information	The front door opened on the library system.
Library offline	Information	The library system became offline.
CIC sensor error	Warning	The CIC sensor error occurred.
CAS open error	Warning	The CAS unit0 open error occurred.
FC-CA LinkDown	Information	The adapter0 Link Down occurred.
Flash ROM error	Warning	The FlashROM error occurred.
FC-CA not installed alarm	Warning	No install adapter card in library system.
PDU power supply error	Warning	The PDU0 error occurred.
PDU power supply interception	Warning	The PDU0 power off occurred.

## 2.4.6 Explanation of LT130 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Door open	Information	A library door has been opened
Mail slot access	Information	A mail slot is being accessed
Library error	Error	The library has posted a hard fault
Slave error	Error	A slave module has faulted
Cleaning cycle request	Information	One of the library tape drives has requested a cleaning cycle to ensure continued data reliability
Fan error	Error	A tape drive fan has stalled
Tape drive error	Error	A tape drive error has occurred
Tape drive replacement	Warning	A tape drive has been removed from the library
Slave replacement	Warning	A slave module has been removed from the library
Load retry	Information	The library has detected excessive loader retries

- Explanation of the built-in LT130 bridge traps
  - Built-in bridge (FCO)

Failure event	Level	Event display
Unit state change	Information, Warning, Error	Unit status changed: OK/Warning/Failed
Unit event notification	Information	The unit trap message is output without any change.
Unit sensor state change	Information, Warning, Error	Unit Sensor status changed: OK/Warning/Failed
Unit port state change	Information	Unit Port state changed: online/offline/diagnostics



- Built-in bridge (FCO2)

Failure event	Level	Event display
FCO temperature status change	Warning	The temperature status of FCO has changed.
FCO voltage status change	Warning	The voltage status of FCO has changed.
Online/offline status change	Warning	The online and offline status of the device has changed.

## 2.4.7 Explanation of LT120 Tape Library Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (Error) or yellow (Warning). (In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display: "()" indicates a trap code.
The tape drive is having problems reading data. No data has been lost, but there has been a reduction in the performance of the tape.	Warning	Read Data Error(1)
The tape drive is having problems writing data. No data has been lost, but there has been a reduction in the capacity of the tape.	Warning	Write Data Error(2)
The operation has stopped because an error has occurred while reading or writing data which the drive cannot correct.	Warning	Read or Write Data Error(3)
Your data is at risk: 1. Copy any data you require from this tape. 2. Do not use this tape again. 3. Restart the operation with a different tape	Error	Detected Faulty Media(4)
The tape is damaged or the drive is faulty. Call the tape drive supplier helpline.	Error	Read Fault(5)
The tape is from a faulty batch or the tape drive is faulty: 1. Use a good tape to test the drive. 2. If the problem persists, call the tape drive supplier helpline.	Error	Write Fault(6)
The tape cartridge has reached the end of its calculated useful life: 1. Copy any data you need to another tape. 2. Discard the old tape.	Warning	Reach end of Media(7)
The tape cartridge is not data-grade. Any data you back up to the tape is at risk. Replace the cartridge with a data-grade tape.	Warning	Not Data Grade Tape(8)
You are trying to write to a write-protected cartridge. Remove the write-protection or use another tape.	Error	Attempted Backup to Write-protected Tape (9)
You cannot eject the cartridge because the tape. drive is in use. Wait until the operation is complete before ejecting the cartridge.	Information	Tape Drive is in use (10)
The tape in the drive is a cleaning cartridge. If you want to back up or restore, insert a data-grade tape.	Information	Attempted Backup/Restore To Cleaning Tape(11)
You have tried to load a cartridge of a type which is not supported by this drive.	Information	Unsupported Media(12)
The operation has failed because the tape in the drive has snapped: 1. Discard the old tape. 2. Restart the operation with a different tape.	Error	Detected Snapped Tape(13)

Failure event	Level	Event display: "()" indicates a trap code.
The operation has failed because the tape in the drive has snapped: 1. Do not attempt to extract the tape cartridge. 2. Call the tape drive supplier helpline.	Error	Detected Snapped Tape(14)
The memory in the tape cartridge has failed, which reduces performance. Do not use the cartridge for further backup operations.	Warning	Memory Chip in Cartridge Failure(15)
The operation has failed because the tape cartridge was manually ejected while the tape drive was actively writing or reading.	Error	Tape Cartridge was ejected(16)
You have loaded a cartridge of a type that is read-only in this drive. The cartridge will appear as write-protected.	Warning	Detected Read-only Media(17)
The directory on the tape cartridge has been corrupted. File search performance will be degraded.	Warning	Detected Corrupted Directory On Tape(18)
The tape cartridge is nearing the end of its useful life. It is recommended that you: 1. Use another tape cartridge for your next backup. 2. Store this tape cartridge in a safe place in case you need to restore data from it.	Information	Detected Worn Out Media(19)
The tape drive needs cleaning: 1. If the operation has stopped, eject the tape and clean the drive. 2. If the operation has not stopped, wait for it to finish and then clean the drive. Check the tape drive users manual for device specific cleaning instructions.	Error	Tape Device Needs Cleaning(20)
The tape drive is due for routine cleaning: 1. Wait for the current operation to finish. 2. Then use a cleaning cartridge. Check the tape drive users manual for device specific cleaning instructions.	Warning	Drive Needs Routine Cleaning(21)
The last cleaning cartridge used in the tape drive has worn out: 1. Discard the worn out cleaning cartridge. 2. Wait for the current operation to finish. 3. Then use a new cleaning cartridge.	Error	Detected Worn Out Cleaning Cartridge(22)
The last cleaning cartridge used in the tape drive was an invalid type: 1. Do not use this cleaning cartridge in this drive. 2. Wait for the current operation to finish. 3. Then use a valid cleaning cartridge.	Error	Detected Invalid Cleaning Cartridge(23)
Request retention	Warning	Request retention(24)
A redundant interface port on the tape drive has failed.	Warning	A Redundant Interface Port Failed(25)
A tape drive cooling fan has failed.	Warning	Fan Failed(26)
A redundant power supply has failed inside the tape drive enclosure. Check the enclosure users manual for instructions on replacing the failed power supply.	Warning	Power Supply Failed(27)
The tape drive power consumption is outside the specified range.	Warning	Power Consumption is outside the specified range(28)
Preventive maintenance of the tape drive is required. Check the tape drive user's manual for device specific preventive maintenance tasks or call the tape drive supplier helpline.	Warning	Require Preventative Maintenance(29)
The tape drive has a hardware fault: 1. Eject the tape or magazine. 2. Reset the drive. 3. Restart the operation.	Error	Drive Hardware Fault(30)

Failure event	Level	Event display: "()" indicates a trap code.
The tape drive has a hardware fault: 1. Turn the tape drive off and then on again. 2. Restart the operation. 3. If the problem persists, call the tape drive supplier helpline. Check the tape drive users manual for device specific instructions on turning the device power on and off.	Error	Drive Hardware Fault(31)
The tape drive has a problem with the host interface: 1. Check the cables and cable connections. 2. Restart the operation.	Warning	Host Interface Fault(32)
The operation has failed: 1. Eject the tape or magazine. 2. Insert the tape or magazine again. 3. Restart the operation.	Error	Eject Media Request(33)
The firmware download has failed because you have tried to use the incorrect firmware for this tape drive. Obtain the correct firmware and try again.	Warning	Firmware Download Fault(34)
Environmental conditions inside the tape drive are exceeding the humidity specifications.	Warning	Humidity Specification Exceeded(35)
Environmental conditions inside the tape drive are exceeding the temperature specifications.	Warning	Temperature Specification Exceeded(36)
The voltage supply to the tape drive exceeds specifications.	Warning	Voltage Specification Exceeded(37)
A hardware failure of the tape drive is predicted. Call the tape drive supplier helpline.	Error	Tape Device Predicted to Fail(38)
The tape drive may have a hardware fault. Run extended diagnostics to verify and diagnose the problem. Check the tape drive users manual for device specific instructions on running extended diagnostic tests.	Warning	Drive Hardware Fault(39)
The changer mechanism is having difficulty Communicating with the tape drive: 1. Turn the autoloader off then on. 2. Restart the operation. 3. If problem persists, call the tape drive supplier helpline.	Error	Autoloader Communications Fault(40)
A tape has been left in the autoloader by a previous hardware fault: 1. Insert an empty magazine to clear the fault. 2. If the fault does not clear, turn the autoloader off and then on again. 3. If the problem persists, call the tape drive supplier helpline.	Error	Detected Stray Tape In Autoloader(41)
There is a problem with the autoloader mechanism.	Warning	Autoloader Mechanism Fault(42)
The operation has failed because the autoloader door is open: 1. Clear any obstructions from the autoloader door. 2. Eject the magazine and then insert it again. 3. If the fault does not clear, turn the autoloader off and then on again. 4. If the problem persists, call the tape drive supplier helpline.	Information (Error)	Autoloader Door Open(43)
The autoloader has a hardware fault: 1. Turn the autoloader off and then on again. 2. Restart the operation. 3. If the problem persists, call the tape drive supplier helpline. Check the autoloader user's manual for device specific instructions on turning the device power on and off.	Error	Autoloader Hardware Fault(44)

Failure event	Level	Event display: "()" indicates a trap code.
The autoloader cannot operate without the magazine. 1. Insert the magazine into the autoloader. 2. Restart the operation.	Error	Autoloader Cannot Operate Without Magazine(45)
A hardware failure of the changer mechanism is predicted. Call the tape drive supplier helpline.	Warning	Autoloader Predicted to Fail(46)
Media statistics have been lost at some time in the past.	Warning	Media Statistics have been lost(50)
The tape directory on the tape cartridge just unloaded has been corrupted.	Warning	Tape Directory has been corrupted(51)
The tape just unloaded could not write its system area successfully: 1. Copy date to another tape cartridge. 2. Discard the old cartridge.	Error	Tape just unloaded could not write its system area(52)
The tape system area could not be read successfully at load time: 1. Copy date to another tape cartridge. 2. Discard the old cartridge.	Error	Could not read System Area(53)
The start of date could not be found on the tape: 1. Check you are using the correct format tape. 2. Discard the tape or return the tape to your supplier.	Error	Start of Date Not Found(54)
The library mechanism is having difficulty communicating with the drive: 1. Turn the library off then on. 2. Restart the operation. 3. If problem persists, call the library supplier helpline.	Error	Drive Communications Fault(256)
There is a problem with the library mechanism. If problem persists, call the library supplier helpline.	Warning	Changer Mechanism Fault(257)
The library has a hardware fault: 1. Reset the library. 2. Restart the operation. Check the library user's manual for device specific instructions on resetting the device.	Error	Library Hardware Fault(258)
The library has a hardware fault: 1. Turn the library off and then on again. 2. Restart the operation. 3. If the problem persists, call the library supplier helpline. Check the library user's manual for device specific instructions on turning the device power on and off.	Error	Library Hardware Fault(259)
The library mechanism may have a hardware fault. Run extended diagnostics to verify and diagnose the problem. Check the library user's manual for device specific instructions on running extended diagnostic tests.	Warning	Library Hardware Fault(260)
The library has a problem with the host interface: 1. Check the cables and cable connections. 2. Restart the operation.	Error	Library Host Interface Fault(261)
A hardware failure of the library is predicted. Call the library supplier helpline.	Warning	Library Predicted to Fail(262)
Preventative maintenance of the library is required. Check the library user's manual for device specific preventative maintenance tasks, or call your library supplier helpline.	Warning	Require Preventative Maintenance(263)
General environmental conditions inside the library have exceeded the humidity specifications.	Error	Humidity Specification Exceeded(264)

Failure event	Level	Event display: "()" indicates a trap code.
General environmental conditions inside the library have exceeded the temperature specifications.	Error	Temperature Specification Exceeded(265)
The voltage supply to the library exceeds specifications. There is a potential problem with the power supply or failure of a redundant power supply.	Error	Voltage Specification Exceeded(266)
A cartridge has been left in a drive inside the library by a previous hardware fault: 1. Insert an empty magazine to clear the fault. 2. If the fault does not clear, turn the library off and then on again. 3. If the problem persists, call the library supplier helpline.	Error	Detected Stray Tape In Drive(267)
A cartridge has been left in a drive inside the library by a previous hardware fault: 1. Insert an empty magazine to clear the fault. 2. If the fault does not clear, turn the library off and then on again. 3. If the problem persists, call the library supplier helpline.	Warning	Picking Cartridge From Slot Fault(268)
There is a potential problem with the library mechanism placing a cartridge into a slot: 1. No action needs to be taken at this time. 2. If the problem persists, call the library supplier helpline.	Warning	Picking Cartridge Into Slot Fault(269)
There is a potential problem with a drive or the library mechanism loading cartridges, or an incompatible cartridge.	Warning	Loading Cartridge Into Drive Fault(270)
The operation has failed because the library door is open: 1. Clear any obstructions from the library door. 2. Close the library door. 3. If the problem persists, call the library supplier helpline.	Information (Error)	Library Door Open(271)
There is a mechanical problem with the library media import/export mailslot.	Error	Mailslot Fault(272)
The library cannot operate without the magazine. 1. Insert the magazine into the library. 2. Restart the operation.	Error	Library Cannot Operate Without Magazine(273)
Library security has been compromised.	Information (Warning)	Library Security Compromised(274)
The security mode of the library has been changed. The library has either been put into secure mode, or the library has exited the secure mode. This is for information purposes only. No action is required.	Information	Library Security Mode Changed(275)
The library has been manually turned offline and is unavailable for use.	Information	Library Manually Turned Offline(276)
A drive inside the library has been taken offline. This is for information purposes only. No action is required.	Information	Library Drive Turned Offline(277)
There is a potential problem with the barcode label or the scanner hardware in the library mechanism. 1. No action needs to be taken at this time. 2. If the problem persists, call the library supplier helpline.	Warning	Reading Barcode Labels Fault(278)
The library has detected a inconsistency in its inventory. 1. Redo the library inventory to correct inconsistency. 2. Restart the operation Check the applications users manual or the hardware users manual for specific instructions on redoing the library inventory.	Error	Library Inventory is Inconsistent(279)
A library operation has been attempted that is invalid at this time.	Warning	Invalid Library Operation Attempted(280)

Failure event	Level	Event display: "()" indicates a trap code.
A redundant interface port on the library has failed.	Warning	Redundant Interface Port Fault(281)
A library cooling fan has failed.	Warning	Fan Fault(282)
library power fault	Warning	Power Supply Fault(283)
library power fault	Warning	Power Consumption Warning(284)
A failure has occurred in the cartridge pass-through mechanism between two library modules.	Error	Robot Hardware Fault(285)
A cartridge has been left in the library pass-through mechanism from a previous hardware fault. Check the library users guide for instructions on clearing this fault.	Error	Robot Hardware Fault(286)
The library was unable to read the bar code on a cartridge.	Information	Barcode Read Error(287)

## 2.5 Bridge

### 2.5.1 Explanation of Tape Encrypting Device Traps

There is no vendor-specific trap of the tape encrypting device.



See

For information about the common traps to the device, see "[Table 2.1 Trap common to devices](#)".

## 2.6 Storage Router

### 2.6.1 Explanation of McDATA UltraNet Edge Storage Router Traps

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

Failure event	Level	Event display
Service monitor (urgent)	Error	The unit trap message is output without any change.
Service monitor (urgent)	Error	The unit trap message is output without any change.
Service monitor (serious)	Error	The unit trap message is output without any change.
Service monitor (notification)	Information	The unit trap message is output without any change. Display example is as follows. 2003/04/22 15:31:36 cnt : tankio 2003_04_22-15:26:51 1 3 605 0 Circuit, 1, is DOWN @ MaxReXmits
Service monitor (information)	Information	The unit trap message is output without any change. Display example is as follows.

Failure event	Level	Event display
		2003/04/22 15:28:42 cnt : tankio 2003_04_22-15:26:50 1 4 0 0 send_rexmit 134 max_retries 1 xmlt_count 1 xmit_pkt_cnt 9 maxcur 32, maxmin 32, rtcur 5

## 2.7 Other Devices

### 2.7.1 Explanation of Fibre Alliance MIB Support Device Events

The events are reported from the following SNMP Traps to a device that supports Fibre Alliance MIB (Fibre Alliance Fibre Channel Management Framework Integration MIB, FA-MIB).



#### About words of Event display in the table:

- %STATUS% is replaced with any of the following words:  
Unknown, Online, Offline, Bypassed, Diagnostics
- When the level of an event except event trap is Information, an event display other than OK and Ready may appear.

Failure event	Level	Event display
The status of the unit has changed to normal.	Information	The status of the unit has changed to OK/%STATUS%
The status of the unit has changed to warning.	Warning	The status of the unit has changed to Warning/%STATUS%
The status of the unit has changed to unknown.	Warning	The status of the unit has changed to Unknown/%STATUS%
The status of the unit has changed to error.	Error	The status of the unit has changed to FAILED/%STATUS%
The status of the power supply, fan, or temperature sensor has changed to normal.	Information	The status of the sensor has changed to OK/%STATUS%
The status of the power supply, fan, or temperature sensor has changed to warning.	Warning	The status of the sensor has changed to Warning %STATUS%
The status of the power supply, fan, or temperature sensor has changed to unknown.	Warning	The status of the sensor has changed to Unknown/ %STATUS%
The status of the power supply, fan, or temperature sensor has changed to error.	Error	The status of the sensor has changed to FAILED/ %STATUS%
The status of the Fibre Channel port has changed to normal.	Information	The status of the port has changed to Ready/%STATUS%
The status of the Fibre Channel port has changed to warning.	Warning	The status of the port has changed to Warning/%STATUS%
The status of the Fibre Channel port has changed to unknown.	Warning	The status of the port has changed to Unknown/%STATUS%
The status of the Fibre Channel port has changed to error.	Error	The status of the port has changed to FAILURE/ %STATUS%

Failure event	Level	Event display
Event trap	Error, Warning, Information	The message of the device trap is output as it is.

### Troubleshooting

- When the level is **Error** or **Warning**, hardware maintenance is required.
- For the event trap, hardware maintenance may also be required when the level is Information. If the contents of the message are unknown, contact your hardware maintenance engineer (CE).
- For other events, no action is required when the level is Information.

## 2.7.2 Explanation of NR1000F/C Events

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the instruction manual for hardware to take corrective actions.

Depending on the event level, the corresponding icon may turn red (**Error**) or yellow (**Warning**).  
(In case of the level "Information," the icon color is not changed.)

### Information

The message contents may differ depending on the Data ONTAP(R) version and the event.

Failure event	Level	Event display
User definition error	Information	The device trap message is output as is.
DHM Disk Degrade-I/O	Warning	The device trap message is output as is.
DHM Disk Predictive Failure	Warning	The device trap message is output as is.
User definition (urgent)	Error	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (caution)	Error	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (important)	Error	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (error)	Error	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (warning)	Warning	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (notice)	Information	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (information)	Information	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
User definition (debug)	Information	The device trap message is output as is. Display example is as follows. userDefined == 20670538 priority == informational
Shutdown because of an exceeded time limit in degrade mode	Error	The device trap message is output as is. Display example is as follows.



Failure event	Level	Event display
		data disk in RAID group /vol1/plex0/rg0 is broken. Halting system now.
Disk failure	Error	The device trap message is output as is. Display example is as follows. data disk in RAID group /vol1/plex0/rg0 is broken.
Disk recovery	Information	The device trap message is output as is.
Shutdown because of a fan failure	Error	The device trap message is output as is. Display example is as follows. Multiple chassis fan enclosures have failed: Fans 1/2Fans 3/4
Fan failure	Error	The device trap message is output as is.
Fan failure (warning)	Warning	The device trap message is output as is. Display example is as follows. Fans 1/2 are bad or missing; Replace quickly
Fan recovery	Information	The device trap message is output as is. Display example is as follows. Backplane_Fan_5 spinning at or above normal speed
Shutdown because of a power supply failure	Error	The device trap message is output as is.
Power supply failure	Error	The device trap message is output as is. Display example is as follows. Power supply is in degraded mode: Power Supply #1 is off
Power supply failure (warning)	Warning	The device trap message is output as is. Display example is as follows. Power supply 2 is powered off
Power supply recovery	Information	The device trap message is output as is. Display example is as follows. Power supply 1 is powered on
CPU usage rate warning	Warning	The device trap message is output as is.
CPU usage rate recovery	Information	The device trap message is output as is.
NVRAM battery completely discharged	Error	The device trap message is output as is.
NVRAM battery power low	Warning	The device trap message is output as is.
Cluster node error	Error	The device trap message is output as is. Display example is as follows. Cluster monitor: takeover started
Cluster node takeover	Information	The device trap message is output as is. Display example is as follows. Cluster monitor: takeover completed
Cluster recovery notification	Information	The device trap message is output as is. Display example is as follows. Cluster monitor: giveback completed
Volume usage rate warning (98%)	Warning	The device trap message is output as is. Display example is as follows. /vol/vol1 is full (using or reserving 98% of space and 0% of inodes).
Volume usage rate warning (95%)	Warning	The device trap message is output as is. Display example is as follows. /vol/vol1 is nearly full (using or reserving 95% of space and 0% of inodes).
Volume usage rate recovery	Information	The device trap message is output as is. Display example is as follows. No volumes are full or nearly full.
Shutdown because of a system temperature error	Error	The device trap message is output as is.
System temperature warning	Warning	The device trap message is output as is.
System temperature recovery	Information	The device trap message is output as is.

Failure event	Level	Event display
Shelf failure	Error	The device trap message is output as is. Display example is as follows. Fault reported on disk storage shelf attached to slot 8. Please check fans,power and temperature.
Shelf recovery	Information	The device trap message is output as is. Display example is as follows. Fault previously reported on disk storage shelf attached to channel 7 has been corrected.
Shutdown because the global status is NonRecoverable	Error	The device trap message is output as is.
global Status Critical	Error	The device trap message is output as is. Display example is as follows. Disk shelf fault.
global Status NonCritical	Warning	The device trap message is output as is. Display example is as follows. Disk on adapter 8, shelf 1, bay 1, failed.
Global status normal	Information	The device trap message is output as is. Display example is as follows. The system's global status is normal.
"soft Quota" threshold exceeded	Warning	The device trap message is output as is. Display example is as follows. Threshold exceeded for user 1008, tree 0 on volume vol1
"soft Quota" normal	Information	The device trap message is output as is. Display example is as follows. Soft block limit returned to normal for user 1008, tree 0 on volume vol1
autosupport transfer error	Warning	The device trap message is output as is. Display example is as follows. Autosupport mail was not sent because the system cannot reach any of the mail hosts from the autosupport.mailhost option
autosupport configuration definition error	Warning	The device trap message is output as is. Display example is as follows. Autosupport cannot connect to host lavender (Unknown mhost)
autosupport transmission	Information	The device trap message is output as is. Display example is as follows. System Notification mail sent
UPS power being supplied	Warning	The device trap message is output as is. Display example is as follows. Input power to UPS at 192.168.1.10 has failed.
There is a state of emergency because the UPS power has almost reached a state of discharge	Warning	The device trap message is output as is.
Shutdown due to a fully discharged UPS	Error	The device trap message is output as is. Display example is as follows. The time left on battery is marginal for UPS at 192.168.1.10.
Low UPS power warning	Warning	The device trap message is output as is.
UPS power recovery	Information	The device trap message is output as is. Display example is as follows. Input power to UPS at 192.168.1.10 has been restored.
AppEmergency trap	Error	The device trap message is output as is.
AppAlert trap	Error	The device trap message is output as is.
AppCritical trap	Error	The device trap message is output as is.
AppError trap	Error	The device trap message is output as is.
AppWarning trap	Warning	The device trap message is output as is.
AppNotice trap	Information	The device trap message is output as is.

Failure event	Level	Event display
AppInfo trap	Information	The device trap message is output as is.
AppTrap trap	Information	The device trap message is output as is.
Audit log wrap enabled	Information	The device trap message is output as is.
Saving to audit log	Information	The device trap message is output as is.
Audit log nearly full	Information	The device trap message is output as is.
Quota limit exceeded	Warning	The device trap message is output as is. Display example is as follows. Quota Event: status=exceeded, type=threshold, volume=vol1, limit_item=disk, limit_value=1024, user=65534, treeid=0
Recovery from the "quota limit exceeded" status	Information	The device trap message is output as is. Display example is as follows. Quota Event: status=normal, type=soft, volume=vol1, limit_item=disk limit_value=2048, user=65534, treeid=0
Directory size limit reached	Error	The device trap message is output as is.
ECC correctable error	Error	The device trap message is output as is.
Multiple ECC correctable errors	Warning	The device trap message is output as is.
FTP daemon error	Warning	The device trap message is output as is.
Maximum number of connections reached	Information	The device trap message is output as is.
Maximum number of connections nearly reached	Information	The device trap message is output as is.
FCP linkDown	Error	The device trap message is output as is.
FCP partner path definition error	Error	The device trap message is output as is.
Slot-limit-related event	Information	The device trap message is output as is.
Primary interface failure	Warning	The device trap message is output as is. Display example is as follows. vif1 has failed over to the Backup interface e7a received trap from [192.168.1.10].
Failure of all interfaces	Error	The device trap message is output as is. Display example is as follows. All links for vif1 have failed
vfiler stop	Information	The device trap message is output as is.
vfiler start	Information	The device trap message is output as is.
Virus detected	Error	The device trap message is output as is.
vscan server disconnected	Warning	The device trap message is output as is.
vscan setting changed	Information	The device trap message is output as is.
vscan server connection	Information	The device trap message is output as is.
vsan server upgraded	Information	The device trap message is output as is.
Media error occurrence during reconstruction (wafliron failure)	Error	The device trap message is output as is.
No matching volume	Error	The device trap message is output as is.
Volume status changed (offline or restricted)	Information	The device trap message is output as is.
Volume online	Information	The device trap message is output as is.
RMC card replacement required	Error	The device trap message is output as is.
RMC card cable connection error	Error	The device trap message is output as is.

Failure event	Level	Event display
Remote volume connection failed	Warning	The device trap message is output as is.
Remote volume connection restored	Information	The device trap message is output as is.
Remote volume recovery complete	Information	The device trap message is output as is.
Remote volume recovery started	Information	The device trap message is output as is.
Root volume conflict	Error	The device trap message is output as is.
Physical volume size limit exceeded	Error	The device trap message is output as is.
Volume offline	Information	The device trap message is output as is.
Volume made restricted	Information	The device trap message is output as is.
wafL_check execution required because of degraded volume and dirty parity	Error	The device trap message is output as is.
Volume error resulting in inability to place the volume online	Warning	The device trap message is output as is.
Synchronous SnapMirror error (transition to asynchronous mode)	Warning	The device trap message is output as is.
Return to synchronous SnapMirror mode	Information	The device trap message is output as is.
Shutdown due to abnormal controller temperature	Error	The device trap message is output as is.
Abnormal controller temperature	Error	The device trap message is output as is.
Unknown controller temperature	Warning	The device trap message is output as is.
Normal controller temperature	Information	The device trap message is output as is.
Controller CPU fan stopped	Error	The device trap message is output as is.
Controller CPU fan operating at a low speed	Warning	The device trap message is output as is.
Controller CPU fan normal	Information	The device trap message is output as is.
Multiple redundant controller power supplies failed	Error	The device trap message is output as is.
Redundant controller power supply degraded	Error	The device trap message is output as is.
Redundant controller power supply failed	Error	The device trap message is output as is.
Redundant controller power supply removed	Warning	The device trap message is output as is.
Redundant controller power supply turned off	Warning	The device trap message is output as is.
All redundant controller power supply functions normal	Information	The device trap message is output as is.
Redundant controller power supplies normal	Information	The device trap message is output as is.
Redundant controller fan degraded	Error	The device trap message is output as is.
Redundant controller fan removed	Warning	The device trap message is output as is.
Redundant controller fan stopped	Warning	The device trap message is output as is.
Redundant controller fan warning	Warning	The device trap message is output as is.
Redundant controller fan normal	Information	The device trap message is output as is.

Failure event	Level	Event display
Failure in write-verification of a snapvalidator-enabled volume	Error	The device trap message is output as is.
Domain controller disconnected	Warning	The device trap message is output as is.
Password replacement with the domain controller failed	Warning	The device trap message is output as is.
One plex failed	Warning	The device trap message is output as is.
One plex placed offline	Warning	The device trap message is output as is.
Device fault in the shelf	Error	The device trap message is output as is.
Device in the shelf repaired	Information	The device trap message is output as is.
Module fault in the shelf	Error	The device trap message is output as is.
Module fault in the shelf repaired	Information	The device trap message is output as is.
The directory size has reached the maximum value	Error	The device trap message is output as is.
The directory size is approaching the maximum value	Warning	The device trap message is output as is.
All control blocks for CIFS statistics are being used	Warning	The device trap message is output as is.
The power unit has been disengaged, therefore shutdown will occur if this is left as it is	Warning	The device trap message is output as is.
There is a discrepancy between power unit types	Error	The device trap message is output as is.
More than one package FAN is faulty, therefore shutdown will occur if this is left as it is	Error	The device trap message is output as is.
A power unit in the system has connected to an incompatible external power source	Error	The device trap message is output as is.

## 2.8 Explanation of Performance Management Traps

- Failure event of performance monitoring

Failure event	Level	Event display	Troubleshooting
Performance data collection failure	Error	Performance data collecting failure	Please confirm the device and the state of the LAN with IP address shown in the event message.
Start of performance data re-collection	Information	Performance date re-collecting start	None.
Success of performance data re-collection	Information	Performance date re-collecting success	

- Failure event of performance threshold monitoring

Failure event	Level	Event display	Troubleshooting
Logical volume response time failure	Warning	Report-ID=reportnumber / LogicalVolume Response Time Abnormal	Detailed content and corresponding methods can be found by selecting Report-ID shown in the event message from [Thresholds Monitoring] - [Thresholds Alarm Log] of the menu bar of the Performance Management Window.
Abnormal CM load	Warning	Report-ID=reportnumber / CM OverLoad Abnormal	
Abnormal RAID group load	Warning	Report-ID=reportnumber / RAIDGroup OverLoad Abnormal	
Abnormal Port Throughput load	Warning	Report-ID=reportnumber / Port Throughput Threshold value Exceed	

## Chapter 3 Device Polling Event

When the device polling function of this software detects the state change of the device, display it in the event as follows.

### Note

When the state change of device is detected by executing [Refresh] operation, the following events are not displayed. Confirm the state from a device icon.

Event	Level	Event display	Troubleshooting
When the state changes into error(red)	Error	Unit status changed: Error	Please confirm the state of the device.
When the state has changed warning(yellow)	Warning	Unit status changed: Warning	Please confirm the state of the device.
When the state has changed normal(green)	Information	Unit status changed: OK	None.
When the State has changed unmonitored	Warning	Connection Timeout	<p>Please confirm whether the LAN between Manager and the device is operating normally. Please confirm whether the state of each device is proper, processes for network communication such as SNMP are operating, and when the device contains the server node Agent then the Agent is operating normally.</p> <p>If the community name of a device that uses SNMP for communication is changed, set the "SNMP_COMMUNITY_NAME_FOR_IP" to the setting file by referring to "C.2 sanma.conf Parameter" in the ETERNUS SF Storage Cruiser User's Guide, and reflect the contents of the setting file on this software.</p>
When communication has been recovered	Information	Connection OK	None.
When error occurs in the polling function	Error	[Polling] (Error event)	<p>Take appropriate action for each event message as follows:</p> <ul style="list-style-type: none"> <li>Command could not be executed: &lt;command name&gt;            This event occurs when command processing fails to start because of a resource shortage on the administrative server.            If it is a temporary event, no special action need be taken. If it occurs regularly, however, check whether system resources (memory and file descriptors) on the administrative server have been depleted.</li> <li>XML File can not read: &lt;file name&gt;            This event occurs when reading of the XML definition file fails. Check for an error in the definition contents.</li> <li>XML File not found: &lt;file name&gt;            This event occurs when there is no XML definition file. Check for the file in the correct directory, which is specified by the directory path.</li> <li>Other</li> </ul>

Event	Level	Event display	Troubleshooting
			Collect the message and other information for an investigation, and contact your Fujitsu certified service engineer.

When communication is reestablished, the event displayed differs, depending on the polling function communication method.

- Device status polling method

In accordance with the most recent status, the event displayed is either Unit status changed: OK, Unit status changed: Warning, or Unit status changed: Error.

- Communication status polling method

The event displayed is Connection OK. Changes in device status are not detected.



See

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 For information about polling methods, refer to the "ETERNUS SF Storage Cruiser User's Guide", section "Function Outline" > "Device Polling".  
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See

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 For information about this event of ETERNUS VS900 model 200 virtualization switch, refer to the "ETERNUS SF Storage Cruiser User's Guide", section "Environment Configuration" > "Fibre Channel Switch" > "VS900 model 200 Virtualization switch" > "Points of concern".  
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