

ETERNUS SF

Express V15.0/ Storage Cruiser V15.0

Event Guide

B1FW-5960-02ENZ0(00)
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Preface

Purpose

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

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 "SNMP Trap XML Definition File" in the "ETERNUS SF Storage Cruiser Operation Guide".

Intended Readers

Anyone who plans, installs, configures, and maintains Storage Cruiser or Express 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](#)

This chapter describes the settings and events of the unit to be made by this software.

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

This chapter describes events to be displayed by this software.

[Chapter 3 Device Polling Event](#)

This chapter describes events about the device polling function of this software.

Notation

The names, abbreviations, and symbols shown below are used in this manual.

Operating systems

| Formal name | Abbreviation | |
|--|---------------------|---------|
| 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 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 | Windows Server 2003 | Windows |
| Microsoft(R) Windows Server(R) 2008 Standard (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(TM) (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Enterprise (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM) (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Datacenter (32-bit)(64-bit) Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM) (32-bit)(64-bit) | Windows Server 2008 | |

| Formal name | Abbreviation | |
|---|---------------------------|--------------------------|
| Microsoft(R) Windows Server(R) 2008 R2 Foundation Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter | Windows Server 2008 R2 | |
| Microsoft(R) Windows(R) XP Professional Edition Microsoft(R) Windows(R) XP Home Edition | Windows XP | |
| Windows Vista(R) Home Basic Windows Vista(R) Home Premium Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate | Windows Vista | |
| Windows(R) 7 Home Basic Windows(R) 7 Home Premium Windows(R) 7 Professional Windows(R) 7 Enterprise Windows(R) 7 Ultimate | Windows 7 | |
| Solaris(TM) 9 Operating System | Solaris 9 | Solaris or Solaris OS |
| Oracle Solaris 10 | Solaris 10 | |
| Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) | RHEL-AS4 | Linux |
| Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) | RHEL-ES4 | |
| Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) | RHEL5 | |
| Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64) | RHEL6 | |
| SUSE(R) Linux Enterprise Server 11 (for x86) SUSE(R) Linux Enterprise Server 11 (for EM64T) | - | |
| HP-UX 11.0 HP-UX 11i HP-UX 11i v2 HP-UX 11i v3 | HP-UX | |
| AIX 5L V5.1 AIX 5L V5.2 AIX 5L V5.3 | AIX | |
| VMware(R) Infrastructure 3 Foundation VMware(R) Infrastructure 3 Standard VMware(R) Infrastructure 3 Enterprise | VMware Infrastructure 3 | VMware |
| VMware vSphere(R) 4 Essentials Kit VMware vSphere(R) 4 Essentials Plus Kit VMware vSphere(R) 4 Standard Edition(TM) VMware vSphere(R) 4 Standard Plus Data Recovery VMware vSphere(R) 4 Advanced Edition(TM) VMware vSphere(R) 4 Enterprise Edition(TM) VMware vSphere(R) 4 Enterprise Plus Edition(TM) | VMware vSphere 4 | |
| VMware vSphere(R) 5 Essentials Kit VMware vSphere(R) 5 Essentials Plus Kit VMware vSphere(R) 5 Standard Edition(TM) VMware vSphere(R) 5 Standard Plus Data Recovery | VMware vSphere 5 | |

| Formal name | Abbreviation | |
|---|--------------|--|
| VMware vSphere(R) 5 Enterprise Edition(TM) | | |
| VMware vSphere(R) 5 Enterprise Plus Edition(TM) | | |

Oracle Solaris might be described as Solaris, Solaris Operating System, or Solaris OS.

Related products with Fujitsu Storage System ETERNUS and Storage Management Software ETERNUS SF

| Formal name | Abbreviation | | |
|--|--------------------------|---------------------------------|--|
| ETERNUS DX60/DX60 S2 ETERNUS DX80/DX80 S2 ETERNUS DX90/DX90 S2 | - | | ETERNUS DX series ETERNUS Disk storage system |
| ETERNUS DX410 ETERNUS DX440 | ETERNUS DX400 series | ETERNUS DX400/DX400 S2 series | |
| ETERNUS DX410 S2 ETERNUS DX440 S2 | ETERNUS DX400 S2 series | | |
| ETERNUS DX8100 ETERNUS DX8400 ETERNUS DX8700 | ETERNUS DX8000 series | ETERNUS DX8000/DX8000 S2 series | |
| ETERNUS DX8100 S2 ETERNUS DX8700 S2 | ETERNUS DX8000 S2 series | | |
| ETERNUS2000 ETERNUS4000 ETERNUS8000 | - | | |
| Web GUI of ETERNUS DX series ETERNUSmgr | ETERNUS Web GUI | | |
| ETERNUS LT20/LT20 S2 ETERNUS LT40/LT40 S2 ETERNUS LT60/LT60 S2 ETERNUS LT200 ETERNUS LT210 ETERNUS LT220 ETERNUS LT230 ETERNUS LT250 ETERNUS LT270 | ETERNUS Tape library | | |

Software products

| Formal name | Abbreviation |
|---|-------------------|
| Microsoft(R) Internet Explorer(R) | Internet Explorer |
| Mozilla(R) Firefox(R) | Firefox |
| Microsoft(R) Cluster Service | MSCS |
| Microsoft(R) Windows Server(R) Failover Clustering | WSFC |
| Microsoft(R) Exchange Server | Exchange Server |
| Microsoft(R) SQL Server(TM) | SQL Server |
| PRIMECLUSTER Global Disk Services | GDS |
| PRIMECLUSTER Global File Services | GFS |
| Symfoware Server Enterprise Extended Edition Symfoware Server Enterprise Edition | Symfoware |
| HITACHI JP1/HiCommand Dynamic Link Manager | HDLM |

Manuals

| Formal name | Abbreviation |
|--|--|
| ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Installation and Setup Guide | ETERNUS SF Installation and Setup Guide |
| ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Migration Guide | ETERNUS SF Migration Guide |
| ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Web Console Guide | ETERNUS SF Web Console Guide |
| ETERNUS SF Express / ETERNUS SF AdvancedCopy Manager Operation Guide for Copy Control Module | ETERNUS SF Operation Guide for Copy Control Module |
| ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Cluster Environment Setup Guide | ETERNUS SF Cluster Environment Setup Guide |
| ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Messages | ETERNUS SF Messages |
| ETERNUS SF Express / ETERNUS SF Storage Cruiser Event Guide | ETERNUS SF Event Guide |
| ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Glossary | ETERNUS SF Glossary |

Others

- In this manual, "ETERNUS4000" does not include ETERNUS4000 models 80 and 100.
- In this manual, "ETERNUS LT20/LT40/LT60" includes ETERNUS LT20 S2/LT40 S2/LT60 S2.
- In this manual, "ETERNUS CS800" includes ETERNUS CS800 S2/CS800 S3.

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| April 2012 | 2 | B1FW-5960-02ENZ0(00) / B1FW-5960-02ENZ2(00) |

Notes

- 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 |
|---------------|--|
| GP7B8FC1 | GP7B8FC1U |
| PG-FC102 | SNP:SY-F2244E2-P, SNP:SY-F2244E2-A, SNP:SY-F2244L2-P |
| PG-FC105 | S26361-F2624-E1 |
| PG-FC106 | S26361-F2843-E1 |
| PG-FC107 | S26361-F3141-E10, S26361-F3141-E210 |
| PG-FC201 | S26361-F3141-E1 |
| PG-FC202/202L | S26361-F3306-E1, S26361-F3306-E201 |
| PG-FC203/203L | S26361-F3961-E1, S26361-F3961-E201 |
| PG-FC204/204L | S26361-F3961-E2 |
| PG-FCD101 | S26361-F3023-E1 |
| PG-FCD201 | S26361-F3306-E601 |
| PG-FCD202 | S26361-D2865-A100 |
| PW008FC2 | PW008FC2U |
| PW008FC3 | PW008FC3U |
| SE0X7F11F | SE0X7F11X |
| SE0X7F12F | SE0X7F12X |
| SE0X7F21F | SE0X7F21X |
| SE0X7F22F | SE0X7F22X |
| 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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Manual organization and reading suggestions

Manual organization

The following table describes the Manual organization of Express, Storage Cruiser and AdvancedCopy Manager.

| When to read | Related manuals (abbreviated) | Related products (NOTE) | | | Explanation |
|---------------------|---|-------------------------|-----|-----|--|
| | | EXP | SC | ACM | |
| Before installation | Quick Reference | Yes | Yes | Yes | This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Quick Reference - Storage Cruiser Quick Reference - AdvancedCopy Manager Quick Reference |
| | Overview | No | No | Yes | This manual is unique for each product. |
| During installation | Installation and Setup Guide | Yes | | | This manual is common for all products. |
| | Cluster Environment Setup Guide | No | Yes | | This manual is common for Storage Cruiser and AdvancedCopy Manager. |
| | Migration Guide | Yes | | | This manual is common for all products. |
| During operation | Operation Guide | Yes | Yes | Yes | This manual is unique for each product. The following manuals are available: <ul style="list-style-type: none"> - Express Operation Guide - Storage Cruiser Operation Guide - Storage Cruiser Operation Guide for Optimization Option - AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX) |
| | Operation Guide for Copy Control Module | Yes | No | Yes | This manual is common for Express and AdvancedCopy Manager. |
| | Web Console Guide | Yes | | | This manual is common for all products. |
| Anytime | Event Guide | Yes | | No | This manual is common for Express and Storage Cruiser. |

| When to read | Related manuals (abbreviated) | Related products (NOTE) | | | Explanation |
|--------------|-------------------------------|-------------------------|----|-----|---|
| | | EXP | SC | ACM | |
| | Messages | Yes | | | This manual is common for all products. |
| | Glossary | Yes | | | This manual is common for all products. |

NOTE: "EXP" indicates Express, "SC" indicates Storage Cruiser and "ACM" indicates AdvancedCopy Manager.

How to read manuals

Please use the following table to find the most useful information in the Express, Storage Cruiser and AdvancedCopy Manager manuals to answer your inquiry.

| Purpose | Related products (NOTE) | Manual | Main contents | How to read |
|---|-------------------------|--|--|--|
| Acquiring a product overview and basic operation knowledge | EXP | - Express Quick Reference | - Product overview - Installation decision - Overview of the necessary tasks from installation to first use | Please read if you want to acquire a fundamental knowledge of the product and its operation in order to decide to install it or not. |
| | SC | - Storage Cruiser Quick Reference | | |
| | ACM | - AdvancedCopy Manager Quick Reference | - Main functions - Linkable applications - Procedure overview for Advanced Copy of ETERNUS Disk storage system | |
| | | - AdvancedCopy Manager Overview | | |
| Deciding if a version upgrade is required | common | - ETERNUS SF Migration Guide | - Incompatibilities with previous version - Notes and cautions about version upgrade - Version upgrade procedure | Please read if you want to upgrade from a previous version. |
| Installing and correctly operating the product Setting up operating environment depending on purpose | common | - ETERNUS SF Installation and Setup Guide | - Operating environment - Installation procedure - Setup procedure - Uninstallation procedure | Please read if you want to install and setup the product. |
| | SC, ACM | - ETERNUS SF Cluster Environment Setup Guide | - Supported cluster software - Installation procedure for a clustered system - Setup procedure for a clustered system - Uninstallation procedure for a clustered system | Please read if you want to install and setup the product on a clustered system. |
| Administration and operation of the installed system | EXP | - Express Operation Guide | - Starting and stopping the software - Device monitoring | Please read if you want to start or shutdown the system, monitor the operation status, do |

| Purpose | Related products (NOTE) | Manual | Main contents | How to read |
|--|-------------------------|--|--|--|
| | | | <ul style="list-style-type: none"> - Data copy inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance | backup/restore operations, etc. |
| | SC | - Storage Cruiser Operation Guide | <ul style="list-style-type: none"> - Starting and stopping the software - Device monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference | |
| | | - Storage Cruiser Operation Guide for Optimization Option | <ul style="list-style-type: none"> - Operating environment construction - Operating status monitoring - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference | |
| | EXP, ACM | - ETERNUS SF Operation Guide for Copy Control Module | - Starting and stopping the software | |
| | ACM | <ul style="list-style-type: none"> - AdvancedCopy Manager Operation Guide (for Windows) - AdvancedCopy Manager Operation Guide (for Solaris) - AdvancedCopy Manager Operation Guide (for Linux) - AdvancedCopy Manager Operation Guide (for HP-UX) - AdvancedCopy Manager Operation Guide (for AIX) | <ul style="list-style-type: none"> - Data backup/restore inside the storage system - Necessary tasks after an architectural modification of the system as well as product maintenance - Command reference | |
| | common | - ETERNUS SF Web Console Guide | <ul style="list-style-type: none"> - Operating environment - Screen layout description | |
| Dealing with messages issued by the software | common | - ETERNUS SF Messages | <ul style="list-style-type: none"> - Messages and their explanations - Parameter (variable information) description - System action | Please read if you want a practical way of investigating and dealing with messages issued by the software. |

| Purpose | Related products (NOTE) | Manual | Main contents | How to read |
|---|-------------------------|--------------------------|--|---|
| | | | - Countermeasures | |
| Dealing with events issued by the software | EXP, SC | - ETERNUS SF Event Guide | - Phenomenon of event - Countermeasures | Please read if you need to find a practical way of investigating and dealing with events. |
| Researching the meaning of specific terms related to the products and other important terms | common | - ETERNUS SF Glossary | - Product specific terminology explanation - Explanation of important terminology appearing in the manual - Synonyms and related terms - Proper form of abbreviated terms | Please read if you want to learn the meaning of important terms, product specific terms or abbreviations used in the manuals. |

NOTE: "EXP" indicates Express, "SC" indicates Storage Cruiser and "ACM" indicates AdvancedCopy Manager.

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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 (*mode*)
(*mode*) : 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](#)

1.2.1 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 Operation History and the message ID 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. |
| * | Same iSCSI Name and same IP Address already exists. (iSCSI Port= iqn.1991-05.com.microsoft:bx600s3-wsfc.fpro(192.168.1.1)) | There is a duplicate value in the iSCSI Port iSCSI name and IP address settings. | Check the iSCSI name and IP address settings, and edit them so that each setting has a unique value. |
| | Invalid iSCSI Name is detected in iSCSI Port (iSCSI Port= iSCSI Port information) | An invalid iSCSI name was detected. | Check the iSCSI name setting. |

| | Event log display example | Explanation | Measure |
|--|---|---|--|
| | SNMP Trap was received. But the source IP address(12.34.56.78) of SNMP Trap is duplicately 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. This message is displayed at the time of an operation such as [Reload Conf.]. See also "FIRMWARE_VERSION_CHECK" of "sanma.conf Parameter" in the "ETERNUS SF Storage Cruiser Operation Guide". |

1.2.2 Event to server node

| Event log display example | Explanation | Measure |
|---|--|---------|
| Add Storage Affinity (fcaw0 -> [Disk] WWPN=22280000EA60011 TID=3 LUN=5,6) | Storage affinity (LUN binding) was created for the FC adaptor WWPN=22280000EA60011 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=22280000EA60011 TID=3) | The storage affinity (LUN binding) for the FC adaptor WWPN=22280000EA60011 of the disk unit was deleted from the HBA with the logical name fcaw0, TID=3. | |
| Delete Storage Affinity (fcaw0 -> [Disk] WWPN=22280000EA60011) | The storage affinity (LUN binding) for the FC adaptor WWPN=22280000EA60011 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. | |

| Event log display example | Explanation | Measure |
|--|--|---|
| Skip Set Maxthrottle [fjpfca0: 2100000eba00:40] | The setting of MaxThrottle was skipped. 40 was supposed to have been set to the 2100000eba00 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. | |
| 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. | |

| Event log display example | Explanation | Measure |
|---|---|--|
| 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. | |
| 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. | |

| Event log display example | Explanation | Measure |
|--|---|---|
| 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 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 Express or Storage Cruiser receives an event notification such as an SNMP trap from the unit, the notification is decoded and displayed.

Storage Cruiser can work 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>MPType</i> access path(<i>MPAccessPath</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. |
| All paths blocked | Error | <i>MPType</i> access path(<i>MPAccessPath</i>) 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 Controller Number</i>) fault | Search the server node related to the asynchronous event (SNMP trap). |

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

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

"*Controller 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 | 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 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 multipath driver manual and take action. |

*1: Red Hat Enterprise Linux 5 or higher only

- Device-Mapper 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 |
|---|---------|--|---|
| . *multipathd.*remove.*path.*(uevent). * .*multipathd.*checker.*failed.* | Warning | One-line message including a monitored keyword | Refer to the manual for the corresponding middleware product. |

- 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. |
| 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. |

2.1.5 VS850 server node (host)

An event trap is a message that is sent from the device. For details on these messages, refer to the instruction manual for hardware, and take appropriate action.

| Level | Event display | Failure event |
|-------------|---|------------------------------------|
| Information | ErrorCode=% 1%, ErrorID=% 2%, Node=% 3%, FRU=% 4%, Msg=% 5% | An information event has occurred. |
| Warning | ErrorCode=% 1%, ErrorID=% 2%, Node=% 3%, FRU=% 4%, Msg=% 5% | A warning event has occurred. |
| Error | ErrorCode=% 1%, ErrorID=% 2%, Node=% 3%, FRU=% 4%, Msg=% 5% | An error event has occurred. |

Information

Character strings in the event display

- The information shown in the table below is displayed in the event message for %n%.

| %n% | Information |
|------|--|
| % 1% | Error code |
| % 2% | Error ID |
| % 3% | Node number identified by the event notification |
| % 4% | FRU information identified by the event notification |
| % 5% | Message |

- When the event trap does not contain any corresponding information, "None" is displayed for %n%.
- If there is no need for device maintenance and the notification does not indicate a device error, "None" is displayed for % 1%.
- When the notification is for the cluster overall and does not depend on a specific node, "None" is displayed for % 3%.

Note

In the default setting, Information level messages are not displayed. To display Information level messages, refer to "SNMP Trap XML Definition File" in the "ETERNUS SF Storage Cruiser Operation Guide", and change the Information level setting.

2.2 Fibre Channel Switch

2.2.1 SN200 (Brocade) Events

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. |

Note

- It may takes a time to display the event when FC Port failure, FC Ports online or FC Port offline.

Following SNMP traps are displayed in the event log when execute disconnect/connect FC cable in a short time.

- When the cable is disconnected : [Link Down Trap]
- When the cable is connected : [Link Up Trap]

The port where the trouble occurs cannot be specified from the event log, also the event linkage function doesn't operate. Please login to the Fibre Channel switch to specify the Port where the trouble occurs, and confirm the state of the VE port and the GbE port.

* Also following event logs are displayed with above event log.

- When the cable is disconnected : [FC Port No.214 Offline]
- When the cable is connected : [FC Port No.214 Online]

2.2.2 PRIMERGY Fibre Channel Switch Blade Events

Refer to "2.2.1 SN200 (Brocade) Events".

2.2.3 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. |
| 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. |

| Failure event | Level | Event display | Troubleshooting |
|---|-------------|---|--|
| 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. |
| 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. |

| Failure event | Level | Event display | Troubleshooting |
|--|---------------|---|--|
| | | | 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.

2.2.4 Brocade VDX series Events

| Failure event | Level | Event display | Remarks |
|---------------|-----------------------------------|---|------------------------|
| Port failure | Error | FC Port No.%NUMBER% FAULT | Note 1, 2 and 3 |
| Port Online | Information | FC Port No.%NUMBER% Online | |
| Port Offline | Information | FC Port No.%NUMBER% Offline | |
| Event traps | Error, Warning, Information | The message notified from the device is output as is. | |

Note 1

As for the Te port and FC port number, the Index value output by "show fabric islports" command of Brocade VDX series is displayed.

In the case of the FCoE connection port, a displayed port number is the total value of followings.

- Last index value of the Te port displayed by "show fabric islports" command
- Port number of FCOE IF output by "show fcoe interface brief" command

Example

When last index value of the Te port is 60 and port number of FCOE IF is 5, a displayed port number is 65.

FCOE IF is displayed with the following format.

| Displayed format | Explanation |
|------------------|---|
| XX/YY/ZZ | The explanation of XX, YY, and ZZ is as follows: <ul style="list-style-type: none"> - XX: VCS ID - YY: RBridgeID - ZZ: Port number |

Note 2

The Te port is also displayed as "FC Port".

Note 3

For the Ge port, the following events of "[Table 2.1 Trap common to devices](#)" are displayed.

- In the case of Port Offline: Link Down Trap
- In the case of Port Online: Link Up Trap

The port number is not displayed. Therefore, log in the target device and check the status of all Ge ports.

2.2.5 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, 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 was not performed, contact Support. |
| The status of the Fibre Channel port has changed to error. | Error | 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. | Warning | 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. |

| Failure event | Level | Event display | Troubleshooting |
|---|-------------|--|--|
| 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. | Error | 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. | Warning | The switch detects that a port binding violation occurs. | Check the SANtegrity settings. |
| The status of the FRU has changed to unknown. | Warning | 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. |
| 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. |

| Failure event | Level | Event display | Troubleshooting |
|--------------------------------|-------------|---|-----------------|
| 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 "[2.5.1 Fibre Alliance MIB Support Device Events](#)".

2.3 Storage device

2.3.1 ETERNUS4000(models 300, 500), ETERNUS8000(models 700, 900, 1100, 2100) 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#MMFault | 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#MMSMC Alarm | MM : Module ID(10-11) |
| CM MMC | Error | P 0700MM00 CM#MMMMC 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) |
| 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#MMCOMPACT FLASH Fault | t : Type(1-3) MM : Module ID(10-17) |

| Target | Level | Event display | Remarks |
|-------------------------------|-------|--|--|
| 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) |
| CE FAN UNIT | Error | P 710ttnn00 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 730ttnn00 CPSU Fault | t: Type(1,2) nn: Slot No. |
| BCU | Error | P 75000000 BCU Fault | |
| BTU | Error | P 760t0000 BTU Fault | t: Type(1,2) |
| 3.5 Inch DISK | Error | P 80ttDDnn PP xxxGB 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 80ttDDnn PP xxxGB 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 88ttDDnn PP xxxGB DISK(cccccc) DE#DD/Slot#nn Fault | tt: Type DD: DE-ID nn: Slot No.(00-0E) |

| Target | Level | Event display | Remarks |
|-------------------------------|-------|--|--|
| | | | <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information |
| 2.5 Inch DISK | Error | P 81 <i>ttDDnn PP xxx</i> GB DISK(<i>cccccc</i>) DE# <i>DD</i> /Slot# <i>nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information |
| 2.5 Inch Disk (Failed Usable) | Error | P 81 <i>ttDDnn PP xxx</i> GB DISK(<i>cccccc</i>) DE# <i>DD</i> /Slot# <i>nn</i> FailedUse | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information |
| 2.5 Inch DISK (Compare Error) | Error | P 88 <i>ttDDnn PP xxx</i> GB DISK(<i>cccccc</i>) DE# <i>DD</i> /Slot# <i>nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>PP</i> : Product ID(Disk) <i>cccccc</i> : Disk information |
| PBC (15DE) | Error | P 9001 <i>DD0N</i> PBC Fault | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 |
| PBC (30DE) | Error | P 9002 <i>DD0N</i> PBC Fault | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 |
| PBC Port | Error | P 9100 <i>DDNn</i> PBC PORT Alarm | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>n</i> : Port No.(0-3) |
| SFP Optical Shortwave (PBC) | Error | P 9A00 <i>DDNn</i> PBC SFP OPTICAL SHORTWAVE Fault | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>n</i> : Port No.(0-3) |
| SFP Copper (PBC) | Error | P 9B00 <i>DDNn</i> PBC SFP COPPER Fault | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 <i>n</i> : Port No.(0-3) |
| DEI CABLE | Error | P 9C00 <i>DD0N</i> DEI CABLE Fault | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 |
| 30 DE FAN UNIT | Error | P D100 <i>DD00</i> DE FAN UNIT Fault | <i>DD</i> : DE-ID |
| DPSU (15DE) | Error | P D20 <i>dDD0N</i> DPSU Fault | <i>t</i> : Type(1-3) <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 |
| BBU CABLE | Error | P D300 <i>DD0N</i> BBU CABLE Fault | <i>DD</i> : DE-ID <i>N</i> : Side 0, side 1 |

- Warning (temperature alarm)

| Target | Level | Event display | Remarks |
|---|---------|--------------------------------|------------------------------------|
| CE exhaust temperature alarm (FATAL) | Error | P 7B00 <i>EEEE</i> CE OUT TEMP | <i>EEEE</i> : Position information |
| CE exhaust temperature alarm (WARNING) | Warning | J 7B00 <i>EEEE</i> CE OUT TEMP | <i>EEEE</i> : Position information |
| CE intake air temperature alarm (WARNING) | Warning | J 7A00 <i>EEEE</i> CE IN TEMP | <i>EEEE</i> : Position information |
| DE exhaust temperature alarm (FATAL) | Error | P DB00 <i>EEEE</i> DE OUT TEMP | <i>EEEE</i> : Position information |

| Target | Level | Event display | Remarks |
|---|---------|-------------------------|----------------------------|
| 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 <i>n</i> 6MONTH WARNING YYYY/MM | <i>n</i> : Battery No. (0 - 2) YYYY/MM: Term of validity (year/month) |
| One week before battery life expiration | Warning | J 1170000000 BATTERY <i>n</i> 1WEEK WARNING YYYY/MM | <i>n</i> : Battery No. (0 - 2) YYYY/MM: Term of validity (year/month) |
| Battery life expiration | Warning | J 1170000000 BATTERY <i>n</i> EXPIRATION ALARM YYYY/MM | <i>n</i> : 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 | <i>t</i> : 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 | <i>t</i> : 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 | <i>t</i> : 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 | <i>t</i> : 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 | <i>tt</i> : Type EEEE: Position information MM: CM Module ID(10-17) |
| CM Warning (MCE Correctable) | Warning | J 01 ttEEEE CM#MM MCE Correctable Error | <i>tt</i> : Type EEEE: Position information MM: CM Module ID(10-17) |
| CM Warning (FAN) | Warning | J 01 ttEEEE CM#MM FAN Alarm | <i>tt</i> : Type EEEE: Position information MM: CM Module ID(10-17) |
| CM Warning (IN TEMP ALARM) | Warning | J 01 ttEEEE CM#MM IN TEMP Alarm | <i>tt</i> : 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 | <i>tt</i> : Type EEEE: Position information MM: CM Module ID(10-17) |

| Target | Level | Event display | Remarks |
|---|---------|---|--|
| CM Warning (RTC ALARM) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> RTC Alarm | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CF Warning | Warning | J 0C0 <i>tMM00</i> CM# <i>MM</i> COMPACT FLASH Warning | <i>t</i> : Type(1-3) <i>MM</i> : CM Module ID(10-17) |
| CA Warning (Undefined) | Warning | J 10 <i>ttMM00</i> CA# <i>MM</i> (on CM# <i>XX</i>) <i>CaType</i> Warning | <i>tt</i> : Type(00-19) <i>MM</i> : CA Module ID(40-4F,,70-7F) <i>XX</i> : CM Module ID(10-17) |
| FRT Warning | Warning | J 4000 <i>MM00</i> FRT Warning | <i>MM</i> : FRT Module ID(F0,F1) |
| BRT Warning | Warning | J 5000 <i>MM00</i> BRT Warning | <i>MM</i> : BRT Module ID(B0-B7) |
| SMART notification from a disk (3.5-inch) | Warning | J 80 <i>ttEEEE PP xxxGB</i> 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.(00-0E) |
| SMART: Preventive disk disconnection (3.5-inch) | Warning | J 80 <i>ttEEEE PP xxxGB</i> 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 notification from a disk (2.5-inch) | Warning | J 81 <i>ttEEEE PP xxxGB</i> 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 xxxGB</i> 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 |
| 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:Configration Error) | |

| Target | Level | Event display | Remarks |
|--|-------|---|---|
| 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 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 ETERNUS DX400 series, ETERNUS DX8000 series, ETERNUS4000(models 400, 600), ETERNUS8000(models 800, 1200, 2200) 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(10-17) |
| 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) |
| 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(00-1D) MM: CA Module ID(40-4F,,,70-7F) XX: CM Module ID(10-17) nn: Port No.(00-01) |

| Target | Level | Event display | Remarks |
|----------------------------------|-------|---|--|
| 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) |
| SFP+ Optical Shortwave | Error | P 1CttMMnn 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 1DttMMnn 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 1FttMMnn 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) |
| 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) |

| Target | Level | Event display | Remarks |
|---|-------|--|---|
| | | | <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 3.5 Inch Disk (DISK performance abnormal) | Error | P 80 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> Slowdown | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 3.5 Inch DISK (Compare Error) | Error | P 88 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 2.5 Inch DISK | Error | P 81 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 2.5 Inch Disk (Failed Usable) | Error | P 81 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> FailedUse | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 2.5 Inch DISK (Compare Error) | Error | P 88 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-1D) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 3.5 Inch SATA DISK | Error | P 82 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 3.5 Inch SATA Disk (Failed Usable) | Error | P 82 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> FaildUse | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |
| 3.5 Inch SATA Disk (Compare Error) | Error | P 88 <i>ttDDnn PP xx</i> GB DISK(<i>cccccc</i>) DE# <i>DD/Slot#nn</i> Fault | <i>tt</i> : Type <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E) <i>PP</i> : Product ID(Disk) <i>xx</i> : Disk capacity <i>cccccc</i> : Disk information |

| Target | Level | Event display | Remarks |
|-----------------------------------|-------|--|---|
| 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) |
| SFP Copper (PBC) | Error | P 9B00 $DDNn$ PBC SFP COPPER Fault | DD : DE-ID N : Side 0, side 1 n : Port No.(0-3) |
| DEI CABLE | Error | P 9C00 $DD0N$ DEI CABLE Fault | DD : DE-ID N : Side 0, side 1 |
| 30 DE FAN UNIT | Error | P D100 $DD00$ DE FAN UNIT Fault | DD : DE-ID |
| DPSU (15DE) | Error | P D20 $DD0N$ DPSU Fault | t : Type(1-3) DD : DE-ID N : Side 0, side 1 |
| BBU CABLE | Error | P D300 $DD0N$ BBU 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 7A00 $EEEE$ CE OUT TEMP | $EEEE$: Position information |
| CE exhaust temperature alarm (WARNING) | Warning | J 7A00 $EEEE$ CE OUT TEMP | $EEEE$: Position information |
| CE intake air temperature alarm (WARNING) | Warning | J 7B00 $EEEE$ CE IN TEMP | $EEEE$: Position information |

| Target | Level | Event display | Remarks |
|--|---------|------------------------|----------------------------|
| DE exhaust temperature alarm (FATAL) | Error | P DA00EEEE DE OUT TEMP | EEEE: Position information |
| DE exhaust temperature alarm (Sensor trouble) | Error | P DA00EEEE DE OUT TEMP | EEEE: Position information |
| DE exhaust temperature alarm (WARNING) | Warning | J DA00EEEE DE OUT TEMP | EEEE: Position information |
| DE intake air temperature alarm (Sensor trouble) | Error | P DB00EEEE DE IN TEMP | EEEE: Position information |
| DE intake air temperature alarm (WARNING) | Warning | J DB00EEEE DE IN TEMP | EEEE: Position information |

- Warning (expiration)

| Target | Level | Event display | Remarks |
|---|---------|--|---|
| Six months before battery life expiration | Warning | J 7006nn00 BATTERY N6MONTH WARNING YYYY/MM | nn: Slot No. N: Battery No. (0 - 7) YYYY/MM: Term of validity (year/month) |
| One week before battery life expiration | Warning | J 7007nn00 BATTERY N1WEEK WARNING YYYY/MM | nn: Slot No. N: Battery No. (0 - 7) YYYY/MM: Term of validity (year/month) |
| N day before battery life expiration | Warning | J 7007nn00 BATTERY NzDAY WARNING YYYY/MM | nn: Slot No. N: Battery No. (0 - 7) z: Days (1 - 6) YYYY/MM: Term of validity (year/month) |
| Battery life expiration | Warning | J 70Fenn00 BATTERY NEXPIRATION ALARM YYYY/MM | nn: Slot No. 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) |
| 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) |

| Target | Level | Event display | Remarks |
|--|---------|---|--|
| CM warning (statistics/ other) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> Warning | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CM Warning (MCE Correctable) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> MCE Correctable Error | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CM Warning (FAN) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> FAN Alarm | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CM Warning (IN TEMP ALARM) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> IN TEMP Alarm | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CM Warning (IN TEMP SENSOR) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> IN TEMP SENSOR Alarm | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CM Warning (RTC ALARM) | Warning | J 01 <i>ttEEEE</i> CM# <i>MM</i> RTC Alarm | <i>tt</i> : Type <i>EEEE</i> : Position information <i>MM</i> : CM Module ID(10-17) |
| CF Warning | Warning | J 0C0 <i>tMM00</i> CM# <i>MM</i> COMPACT FLASH Warning | <i>t</i> : Type(1-3) <i>MM</i> : CM Module ID(10-17) |
| CA Warning (Undefined) | Warning | J 10 <i>ttMM00</i> CA# <i>MM</i> (on CM# <i>XX</i>) <i>CaType</i> Warning | <i>tt</i> : Type(00-19) <i>MM</i> : CA Module ID(40-4F,,,70-7F) <i>XX</i> : CM Module ID(10-17) |
| FRT Warning | Warning | J 400 <i>tMM00</i> FRT Warning | <i>t</i> : Type(1,2) <i>MM</i> : FRT Module ID(F0,F1) |
| BRT Warning | Warning | J 5000 <i>MM00</i> BRT Warning | <i>MM</i> : BRT Module ID(B0-B7) |
| SMART notification from a disk (3.5-inch) | Warning | J 80 <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.(00-0E) |
| 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) |

| Target | Level | Event display | Remarks |
|--|---------|--|--|
| SMART notification from a disk (2.5-inch) | Warning | J 81 <i>ttEEEE PP xxxGB DISK(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 xxxGB DISK(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 xxxGB DISK(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 xxxGB DISK(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>MM</i> 00 SVC | <i>MM</i> : Module ID |
| SMC Alarm (Warning Level) | Warning | J 0600 <i>MM</i> 00 CM SMC | <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) | |

| Target | Level | Event display | Remarks |
|---|-------------|--|--|
| 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 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 |
| 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 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 | Error | 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 | Error | 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) <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>xx</i> Hz <i>zz</i> <i>yy</i> Port)# <i>MM</i> < <i>pp</i> <i>ss</i> <i>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>xx</i> Hz <i>zz</i> <i>yy</i> Port)# <i>MM</i> < <i>pp</i> <i>ss</i> <i>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</i> <i>ss</i> <i>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</i> <i>ss</i> <i>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</i> <i>ss</i> <i>rr</i> > Fault | <i>MM</i> : Module ID(10-11) <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|-----------------------|-------|---|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Flash ROM | Error | P 0C <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> > 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>xx</i> Hz <i>zz</i> <i>yy</i> Port)# <i>MM</i> < <i>pp</i> <i>ss</i> <i>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 |
| CM FE Expander | Error | P 12 <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> > FE 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) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM FE Expander Port | Error | P 13 <i>SSMMnn</i> 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> > FE Expander 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 |
| SFP Optical Shortwave | Error | P 1A00 <i>MMnn</i> FC SFP CM# <i>MM</i> Port# <i>nn</i> < <i>pp</i> <i>ss</i> <i>rr</i> <i>oo</i> > Fault | <i>MM</i> : Module ID(10-11) <i>nn</i> : Port No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision <i>oo</i> : Other Information |
| BBU | Error | P 750000 <i>nn</i> Battery Unit(BBU) Slot# <i>nn</i> < <i>pp</i> <i>ss</i> <i>rr</i> > Fault | <i>nn</i> : Slot No.(0-1) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| 3.5 Inch DISK | Error | P 80. <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB- <i>yy</i> krpm) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp</i> <i>ss</i> <i>rr</i> <i>cc</i> > Fault | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0b) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation |

| Target | Level | Event display | Remarks |
|----------------------------------|-------|---|--|
| | | | <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| 3.5 Inch Disk (Failed Usable) | Error | P 80. <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB- <i>yy</i> krpm) 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.(00-0b) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| 3.5 Inch DISK (Compare Error) | Error | P 88. <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB- <i>yy</i> krpm) 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.(00-0b) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| 2.5 Inch DISK | Error | P 81. <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB- <i>yy</i> krpm) 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>yy</i> : Disk rotation <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 81. <i>SSDDnn</i> Disk Drive(HDD- <i>xxx</i> GB- <i>yy</i> krpm) 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>yy</i> : Disk rotation <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- <i>yy</i> Krpm) 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>yy</i> : Disk rotation <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| 3.5 Inch DISK | Error | P 82. <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.(00-0b) <i>xxx</i> : Disk capacity <i>pp</i> : Product ID(Disk) |

| Target | Level | Event display | Remarks |
|----------------------------------|-------|--|---|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| 3.5 Inch Disk (Failed Usable) | Error | P 82.SSD <i>nn</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.(00-0b) <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 |
| 3.5 Inch DISK (Compare Error) | Error | P 88.SSD <i>nn</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.(00-0b) <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 | Error | P 83.SSD <i>nn</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 |
| 2.5 Inch Disk (Failed Usable) | Error | P 83.SSD <i>nn</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.SSD <i>nn</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>DD</i> <i>N</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>DD</i> <i>Nn</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) |

| Target | Level | Event display | Remarks |
|---------|-------|---|--|
| | | | <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| EXP FAN | Error | P 9200 <i>DD</i> <i>N</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>DD</i> <i>N</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>DD</i> <i>N</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 DA0 <i>tDD</i> 00 DE OUT TEMP | <i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID |
| DE Abnormal exhaust gas temperature (Sensor failure) | Error | P DA0 <i>tDD</i> 00 DE OUT TEMP | <i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID |
| DE Abnormal exhaust gas temperature (WARNING) | Warning | J DA0 <i>tDD</i> 00 DE OUT TEMP | <i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID |
| DE Abnormal intake temperature (Sensor failure) | Error | P DB0 <i>tDD</i> 00 DE IN TEMP | <i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID |
| DE Abnormal intake temperature (WARNING) | Warning | J DB0 <i>tDD</i> 00 DE IN TEMP | <i>t</i> : Type(1=1U, 2=2U) <i>DD</i> : DE-ID |

- Warning (expiration)

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

| Target | Level | Event display | Remarks |
|----------------|---------|--|---|
| | | | YYYY/MM: Term of validity (year/month) |
| BATTERY expiry | Warning | J 70FE00 nn 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 C1 MM 0000 Controller Module(CM xx Hz zz yy Port)# 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 C301 MM 00 Controller Cache(MEM-512MB)# MM < pp ss rr > Correctable Error | MM : Module ID(10-11) pp : Parts No. ss : Serial No. rr : Revision |
| Multiple memory collectable error:1GB | Warning | J C302 MM 00 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 C304 MM 00 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 $SSMM$ 00 Controller Module(CM xx Hz zz yy Port)# 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 $SSMM$ 00 Controller Module(CM xx Hz zz yy Port)# 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 $SSMM$ nn Controller Module(CM xx Hz zz yy Port)# 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. |

| Target | Level | Event display | Remarks |
|--|---------|---|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : 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 |
| 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 |

| Target | Level | Event display | Remarks |
|---|---------|---|---|
| | | | <i>DD</i> : DE-ID <i>nn</i> : Slot No.(00-0E) <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| SATA Disk preventative separation SMART (3.5inch) | Warning | J 82.SSEEEE Disk Drive(HDD-xxxGB-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.(00-0E) <i>pp</i> : Product ID(Disk) <i>ss</i> : Serial No. <i>rr</i> : Revision <i>cc</i> : Disk information |
| SMAR notice from SATA Disk (2.5inch) | Warning | J 83.SSEEEE Disk Drive(HDD-xxxGB-SATA) DE# <i>DD</i> /Slot# <i>nn</i> < <i>pp ss rr cc</i> > SMART | <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 |
| SATA Disk preventative separation SMART (2.5inch) | Warning | J 83.SSEEEE Disk Drive(HDD-xxxGB-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 E0050xxx WRITE BAD DATA | xxx : RLU No. |

| Target | Level | Event display | Remarks |
|--------------------------|-------|---|--|
| PINNED Data | Error | M E10300MMPINNED 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) | |
| 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 E406C0DDFC Loop Recovery Completed | <i>DD</i> : Young number DE No. |

| Target | Level | Event display | Remarks |
|---------------------------------|-------|---|-------------------------|
| FC loop recovery failure | Error | M E406F0DDFC 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. |
| Disconnected intra-cabinet path | 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 06SSMM00 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 |
| EXP Warning recovery | Information | R 9002EEEE 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 D200DD0N 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 DA0tDD00 DE OUT TEMP Normal | DD: DE-ID t: Type(1=1U, 2=2U) |
| DE intake air temperature alarm recovery | Information | R DB0tDD00 DE IN TEMP Normal | DD: DE-ID t: Type(1=1U, 2=2U) |

2.3.4 ETERNUS DX60/DX60 S2/DX80/DX90 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 01.SSMM00 Controller Module#m(zz xxHz) 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. |

| Target | Level | Event display | Remarks |
|---------------------|-------|---|---|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM BE Expander | Error | P 06. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz xx</i> Hz) BE 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 DI PORT | Error | P 08. <i>SSMM</i> 0 <i>n</i> Controller Module# <i>m</i> (<i>zz xx</i> Hz) DI 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 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. |

| Target | Level | Event display | Remarks |
|---------------------|-------|--|---|
| | | | <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.SSMM00 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.SSMM00 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/ 1.2GHz) <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CA Port | Error | P 11.SSMM0 <i>n</i> Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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.SSMM00 Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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.SSMM0 <i>n</i> Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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 |

| Target | Level | Event display | Remarks |
|----------------------------------|-------|---|---|
| SFP Optical Shortware | Error | P 1A00MM0n FC SFP Controller Module#m Port#n Fault <pp ss rr oo> | MM: Module ID(10-11) n: Port No.(0-1) m: CM No. pp: Parts No. ss: Serial No. rr: Revision oo: Other Information |
| SFP+ Optical Shortware | Error | P 1C00MM0n FC SFP+ Controller Module#m Port#n Fault <pp ss rr oo> | MM: Module ID(10-11) n: Port No.(0-1) m: CM No. pp: Parts No. ss: Serial No. rr: Revision oo: Other Information |
| 3.5 Inch DISK | Error | P 80.SSDDNNDisk Drive DE#DD- Disk#n(SAS xxxGB yykrpm cc) Fault <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 |
| 3.5 Inch Disk (Failed Usable) | Error | P 80.SSDDNNDisk Drive DE#DD- Disk#n(SAS xxxGB yykrpm cc) Failed Usable <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 |
| 3.5 Inch DISK (Compare Error) | Error | P 88.SSDDNNDisk Drive DE# DD- Disk#n(SAS xxxGB yykrpm cc) Fault <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 |
| 2.5 Inch DISK | Error | P 81.SSDDNNDisk Drive DE#DD- Disk#n(SAS xxxGB yykrpm cc) Fault <pp ss rr> | SS: Parts subtype DD: DE-ID NV: Slot No.(00-17) n: Slot No.(00-23) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision |

| Target | Level | Event display | Remarks |
|----------------------------------|-------|---|---|
| 2.5 Inch Disk (Failed Usable) | Error | P 81.SSDDNNDisk Drive DE#DD- Disk#n(SAS xxxGB yykrpm cc) Failed Usable <pp ss rr> | SS: Parts subtype DD: DE-ID NV: Slot No.(00-17) n: Slot No.(00-23) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision |
| 2.5 Inch DISK (Compare Error) | Error | P 88.SSDDNNDisk Drive DE# DD- Disk#n(SAS xxxGB yykrpm cc) Fault <pp ss rr> | SS: Parts subtype DD: DE-ID NV: Slot No.(00-17) n: Slot No.(00-23) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision |
| 3.5 Inch DISK | Error | P 82.SSDDNNDisk Drive DE#DD- Disk#n(SATA xxxGB cc) Fault <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 |
| 3.5 Inch Disk (Failed Usable) | Error | P 82.SSDDNNDisk Drive DE#DD- Disk#n(SATA xxxGB cc) Failed Usable <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 |
| 3.5 Inch DISK (Compare Error) | Error | P 88.SSDDNNDisk Drive DE# DD- Disk#n(SATA xxxGB cc) Fault <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 |
| 3.5 Inch SSD | Error | P 84.SSDDNNSSD 3.5 DE#dd-Slot#n(SAS xxxGB cc) Fault <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. |

| Target | Level | Event display | Remarks |
|---------------------------------|-------|---|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| 3.5 Inch SSD (Failed Usable) | Error | P 84. <i>SSDDNN</i> SSD 3.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS <i>xxx</i> GB <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>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| 3.5 Inch SSD (Compare Error) | Error | P 88. <i>SSDDNN</i> SSD 3.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS <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 |
| 2.5 Inch SSD | Error | P 85. <i>SSDDNN</i> SSD 2.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS <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.(00-17) <i>n</i> : Slot No.(00-23) <i>xxx</i> : Disk capacity <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| 2.5 Inch SSD (Failed Usable) | Error | P 85. <i>SSDDNN</i> SSD 2.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS <i>xxx</i> GB <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.(00-17) <i>n</i> : Slot No.(00-23) <i>xxx</i> : Disk capacity <i>cc</i> : Disk information <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| 2.5 Inch SSD (Compare Error) | Error | P 88. <i>SSDDNN</i> SSD 2.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS <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.(00-17) <i>n</i> : Slot No.(00-23) <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. <i>ss</i> : Serial No. <i>rr</i> : Revision |

| Target | Level | Event display | Remarks |
|----------|-------|---|---|
| EXP Port | Error | P 9100 <i>DDNn</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>DDn</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 |
| CM Warning | Warning | J 01 <i>SSMM00</i> 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. |

| Target | Level | Event display | Remarks |
|----------------------------------|---------|---|--|
| | | | <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. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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. <i>SSMM</i> 0 <i>n</i> Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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. <i>SSMM</i> 0 <i>n</i> Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz xx</i> Hz) 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 |
| SMART notice from Disk (3.5inch) | Warning | J 80. <i>SSDD</i> <i>N</i> NDisk Drive DE# <i>DD</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) SMART < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NV</i> : Slot No.(00-0b) <i>n</i> : Slot No.(00-11) |

| Target | Level | Event display | Remarks |
|---|---------|--|---|
| | | | <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 |
| Disk preventative separation SMART (3.5inch) | Warning | J 80.SSDDNNDisk Drive DE#DD-Disk#n(SAS xxxGB yykrpm cc) Warning <pp ss rr> | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NV</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 |
| SMART notice from Disk (2.5inch) | Warning | J 81.SSDDNNDisk Drive DE#DD-Disk#n(SAS xxxGB yykrpm cc) SMART <pp ss rr> | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NV</i> : Slot No.(00-17) <i>n</i> : Slot No.(00-23) <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 |
| Disk preventative separation SMART (2.5inch) | Warning | J 81.SSDDNNDisk Drive DE#DD-Disk#n(SAS xxxGB yykrpm cc) Warning <pp ss rr> | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NV</i> : Slot No.(00-17) <i>n</i> : Slot No.(00-23) <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 |
| SATA Disk notice from Disk (3.5inch) | Warning | J 82.SSDDNNDisk Drive DE#DD-Disk#n(SATA xxxGB cc) SMART <pp ss rr> | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NV</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 |
| SATA Disk preventative separation SMART (3.5inch) | Warning | J 82.SSDDNNDisk Drive DE#DD-Disk#n(SATA xxxGB cc) Warning <pp ss rr> | <i>SS</i> : Parts subtype <i>DD</i> : DE-ID <i>NV</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 |

| Target | Level | Event display | Remarks |
|---|---------|---|---|
| SMART notice from SSD (3.5inch) | Warning | J 84SSDDNVSSD 3.5 DE#dd-Slot#n(SAS 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 |
| SSD preventative separation SMART (3.5inch) | Warning | J 84SSDDNVSSD 3.5 DE#dd-Slot#n(SAS xxxGB cc) Warning <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 |
| SMART notice from SSD (2.5inch) | Warning | J 85SSDDNVSSD 2.5 DE#dd-Slot#n(SAS xxxGB cc) SMART <pp ss rr> | DD : DE-ID NV : Slot No.(00-17) n : Slot No.(00-23) xxx : Disk capacity cc : Disk information pp : Parts No. ss : Serial No. rr : Revision |
| SSD preventative separation SMART (2.5inch) | Warning | J 85SSDDNVSSD 2.5 DE#dd-Slot#n(SAS xxxGB cc) Warning <pp ss rr> | DD : DE-ID NV : Slot No.(00-17) n : Slot No.(00-23) 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. |
| PINNED Data | Error | M E10300MM PINNED DATA | MM : CM module ID where PINNED occurred |

| Target | Level | Event display | Remarks |
|---------------------------------|-------|---|---|
| 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 21810.xxx RAID Group#0.xxx recovered end of Rebuild processing | xxx : RLU No. |
| End of rebuild to DV (Bad Data) | Error | M 21810.xxx RAID Group#0.xxx recovered end of Rebuild processing | xxx : RLU No. |
| Disconnected intra-cabinet path | Error | M 0732.xxyy Remote Copy Path (MID#xx PORT#yy) Not Available | xx : MID yy : Port |
| REC automatic HALT occurrence | Error | M 13CF11.xx REC Automatic HALT or ERROR occurred.(xx) | xx : 00 - path error, 01 - heavy load, 02 - ERROR |

- 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 9000.DDnn 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) |

2.3.5 ETERNUS DX80 S2/DX90 S2, ETERNUS DX400 S2 series, ETERNUS DX8000 S2 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.

- Notification of component blockage

| Target | Level | Event display | Remarks |
|-------------|--------------|--|---|
| CM Unit | Error | P 01. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz</i>) Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM DMA Port | Error | P 02. <i>SSMM</i> 0 <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) DMA PORT# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM BIOS | Error | P 03. <i>SSMM</i> 0 <i>v</i> Controller Module# <i>m</i> (<i>zz</i>) BIOS# <i>v</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM RTC | Error | P 04. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz</i>) RTC Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM NVRAM | Error | P 05. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz</i>) NVRAM Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID |

| Target | Level | Event display | Remarks |
|----------------------|-------|--|---|
| | | | <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM MMC | Error | P 0600 <i>MM</i> 0 Controller Module# <i>m</i> (<i>zz</i>) MMC Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Expander | Error | P 06. <i>SSMM</i> 0 <i>v</i> Controller Module# <i>m</i> (<i>zz</i>) EXP# <i>v</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM DI PORT | Error | P 08. <i>SSMM</i> <i>v</i> <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) DI Port# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Expander In Port | Error | P 09. <i>SSMM</i> <i>v</i> <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) EXP# <i>v</i> In Port# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Expander Out Port | Error | P 0A. <i>SSMM</i> <i>v</i> <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) EXP# <i>v</i> Out Port# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Memory | Error | P 0B. <i>SSMM</i> <i>nn</i> Controller Module# <i>m</i> (<i>zz</i>) Cache(MEM # <i>x</i> GB) Slot# <i>nn</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>nn</i> : Slot No. <i>m</i> : CM No. <i>zz</i> : Model <i>x</i> : Capacity <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |

| Target | Level | Event display | Remarks |
|--------------------|-------|---|--|
| CM BUD | Error | P 0C.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) BUD(# <i>xx</i> GB) Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>xx</i> : Capacity <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM FAN | Error | P 0D.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) FAN Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM NAND Controller | Error | P 0E.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) NAND Controller Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM SCU | Error | P 0F.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) SCU Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CA | Error | P 10.SSMM00 CA Slot# <i>n</i> - <i>v</i> (<i>zz</i>) (on CM# <i>m</i>) Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CA Port | Error | P 11.SSMM0 <i>p</i> CA Slot# <i>n</i> - <i>v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SFP for FC-CA | Error | P 1A.SSMM0 <i>p</i> FC SFP CA Slot# <i>n</i> - <i>v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Fault < <i>pp ss rr oo</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model |

| Target | Level | Event display | Remarks |
|---|-------|---|---|
| | | | <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 for FCLink-CA | Error | P 1B. <i>SSMM</i> 0 <i>p</i> FCLink SFP CA Slot# <i>n-v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Fault < <i>pp ss rr oo</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <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+ for FC-CA | Error | P 1C. <i>SSMM</i> 0 <i>p</i> FC SFP+ CA Slot# <i>n-v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Fault < <i>pp ss rr oo</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <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+ for 10G-iSCSI-CA SFP+ for FCoE-CA | Error | P 1D. <i>SSMM</i> 0 <i>p</i> iSCSI FCoE SFP+ CA Slot# <i>n-v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Fault < <i>pp ss rr oo</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <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 Type Unknown | Error | P 1F. <i>SSMM</i> 0 <i>p</i> SFP(Type Unknown) CA Slot# <i>n-v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Fault < <i>pp ss rr oo</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision <i>oo</i> : Other Information |
| CM FPGA | Error | P 21. <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz</i>) FPGA Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|--------------|-------|--|---|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM LAN Port | Error | P 22 <i>SSMM</i> <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) LAN PORT# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM PCH | Error | P 2300 <i>MM</i> 00 Controller Module# <i>m</i> (<i>zz</i>) PCH Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM QSFP | Error | P 2A <i>SSMM</i> <i>v</i> <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) QSFP# <i>v</i> # <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| FRT | Error | P 4000 <i>MM</i> 00 FRT# <i>n</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : FRT No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT | Error | P 5000 <i>MM</i> 00 BRT# <i>n</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : BRT No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT Out Port | Error | P 5100 <i>MM</i> 0 <i>P</i> BRT# <i>n</i> Out Port# <i>P</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : BRT No. <i>p</i> : Port No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT In Port | Error | P 5200 <i>MM</i> <i>v</i> <i>P</i> BRT# <i>n</i> InPort# <i>P</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>v</i> : EXP No. <i>p</i> : Port No. <i>n</i> : BRT No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT EXP | Error | P 5300 <i>MM</i> 0 <i>v</i> BRT# <i>n</i> EXP# <i>v</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>v</i> : EXP No. <i>n</i> : BRT No. <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|---------------|-------|--|---|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT QSFP | Error | P 5A00MM0P BRT# <i>n</i> QSFP# <i>P</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : BRT No. <i>P</i> : Port No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SVC | Error | P 6000MM00 SVC# <i>n</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : SVC No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SVC LAN Port | Error | P 6100MM0P SVC# <i>n</i> LAN PORT# <i>P</i> Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>P</i> : Port No. <i>n</i> : SVC No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SVC PCIe SW | Error | P 6200MM00 SVC# <i>n</i> PCIe SW Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : SVC No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SVC RCI board | Error | P 6300MM00 SVC# <i>n</i> RCI board Fault < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : SVC No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CE FAN UNIT | Error | P 71000 <i>n</i> 00 CE FAN UNIT# <i>n</i> Fault < <i>pp ss rr</i> > | <i>n</i> : Slot No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| PANEL UNIT | Error | P 72000000 PANEL UNIT Fault < <i>pp ss rr</i> > | <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CPSU | Error | P 73000 <i>n</i> 00 Power Supply Unit/CPSU# <i>n</i> Fault < <i>pp ss rr</i> > | <i>n</i> : Slot No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SCCB | Error | P 74000 <i>n</i> 00 SCCB# <i>n</i> Fault < <i>pp ss rr</i> > | <i>n</i> : Slot No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BBU | Error | P 75000 <i>n</i> 00 BBU# <i>n</i> Fault < <i>pp ss rr</i> > | <i>n</i> : Slot No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BCU | Error | P 75000 <i>n</i> 00 BCU# <i>n</i> Fault < <i>pp ss rr</i> > | <i>n</i> : Slot No. <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|---|-------|--|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BTU | Error | P 76000 <i>n</i> 00 BTU# <i>n</i> Fault < <i>pp ss rr</i> > | <i>n</i> : Slot No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| 3.5 Inch DISK | Error | P 80. <i>SSUU</i> 0 <i>N</i> HDD 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 3.5 Inch Disk (Failed Usable) | Error | P 80. <i>SSUU</i> 0 <i>N</i> HDD 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Failed Usable < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 3.5 Inch Disk (Disk abnormal performance) | Error | P 80. <i>SSUU</i> 0 <i>N</i> HDD 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Slow Down < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 2.5 Inch DISK | Error | P 81. <i>SSUUN</i> NHDD 2.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <i>xxx</i> : Disk capacity <i>yy</i> : Disk rotation <i>cc</i> : Disk information <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|--|-------|---|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 2.5 Inch Disk (Failed Usable) | Error | P 81. <i>SSUUNNHDD</i> 2.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Failed Usable < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 2.5 Inch Disk (Disk abnormal performance) | Error | P 81. <i>SSUUNNHDD</i> 2.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Slow Down < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 3.5 Inch SSD | Error | P 84. <i>SSUUNSSD</i> 3.5 DE# <i>UU</i> -Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 3.5 Inch SSD (Failed Usable) | Error | P 84. <i>SSUUNSSD</i> 3.5 DE# <i>UU</i> -Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Failed Usable < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 |

| Target | Level | Event display | Remarks |
|----------------------------------|-------|--|---|
| | | | <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 2.5 Inch SSD | Error | P 85. <i>SSUUNN</i> SSD 2.5 DE# <i>UU</i> -Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 2.5 Inch SSD (Failed Usable) | Error | P 85. <i>SSUUNN</i> SSD 2.5 DE# <i>UU</i> -Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Failed Usable < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 3.5 Inch DISK (Compare Error) | Error | P 88. <i>SSUU0N</i> HDD 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| 2.5 Inch DISK (Compare Error) | Error | P 88. <i>SSUUNN</i> HDD 2.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yykrpm cc</i>) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |

| Target | Level | Event display | Remarks |
|---------------------------------|-------|---|--|
| 3.5 Inch SSD (Compare Error) | Error | P 88.SS UU0N SSD 3.5 DE#UU-Slot#n(SAS xxxGB yykrpm cc) Fault <pp ss rr tt uu> | SS : Parts subtype UU : DE-ID N : Slot No.(hexadecimal notation) n : Slot No.(decimal notation) xxx : Disk capacity yy : Disk rotation cc : Disk information pp : Parts No. ss : Serial No. rr : Revision tt : Date Code uu : Config Code |
| 2.5 Inch SSD (Compare Error) | Error | P 88.SS UU0N SSD 2.5 DE#UU-Slot#n(SAS xxxGB yykrpm cc) Fault <pp ss rr tt uu> | SS : Parts subtype UU : DE-ID N : Slot No.(hexadecimal notation) n : Slot No.(decimal notation) xxx : Disk capacity yy : Disk rotation cc : Disk information pp : Parts No. ss : Serial No. rr : Revision tt : Date Code uu : Config Code |
| IOM6 | Error | P 90.SS UU0n IOM6 DE#UU/IOM#n Fault <pp ss rr> | SS : Parts subtype UU : DE-ID n : EXP No. pp : Parts No. ss : Serial No. rr : Revision |
| IOM6 Port | Error | P 91.SS UU0np IOM6 Port DE#UU/IOM#n/Port#p Fault <pp ss rr> | SS : Parts subtype UU : DE-ID n : EXP No. p : Port No. pp : Parts No. ss : Serial No. rr : Revision |
| IOM6 QSFP | Error | P 9A.SS UU0np IOM6 QSFP DE#UU/IOM#n/Port#p Fault <pp ss rr> | SS : Parts subtype UU : DE-ID n : EXP No. p : Port No. pp : Parts No. ss : Serial No. rr : Revision |
| PSU | Error | P D2.SS UU0n Power Supply Unit DE#UU/PSU#n Fault <pp ss rr> | SS : Parts subtype UU : DE-ID n : Slot No. pp : Parts No. ss : Serial No. rr : Revision |

- Warning (temperature alarm)

| Target | Level | Event display | Remarks |
|--|---------|--|--------------------------------|
| CE Abnormal exhaust gas temperature (FATAL) | Error | P 7A000000 CE Exhaust temperature Fatal | |
| CE Abnormal exhaust gas temperature (Sensor failure) | Error | P 7A000000 CE Exhaust temperature sensor Fault | |
| CE Abnormal exhaust gas temperature (WARNING) | Warning | J 7A000000 CE Exhaust temperature Warning | |
| CE Abnormal intake temperature (Sensor failure) | Error | P 7B000000 CE Intake temperature sensor Fault | |
| CE Abnormal intake temperature (WARNING) | Warning | J 7B000000 CE Intake temperature Warning | |
| DE Abnormal exhaust gas temperature (FATAL) | Error | P DA.SSU00 DE Exhaust temperature DE#UU Fatal | SS: Parts subtype UU: DE-ID |
| DE Abnormal exhaust gas temperature (Sensor failure) | Error | P DA.SSU00 DE Exhaust temperature sensor DE#UU Fault | SS: Parts subtype UU: DE-ID |
| DE Abnormal exhaust gas temperature (WARNING) | Warning | J DA.SSU00 DE Exhaust temperature DE#UU Warning | SS: Parts subtype UU: DE-ID |
| DE Abnormal intake temperature (Sensor failure) | Error | P DB.SSU00 DE Intake temperature sensor DE#UU Fault | SS: Parts subtype UU: DE-ID |
| DE Abnormal intake temperature (WARNING) | Warning | J DB.SSU00 DE Intake temperature DE#UU Warning | SS: Parts subtype UU: DE-ID |

- Warning (expiration)

| Target | Level | Event display | Remarks |
|---|---------|--|--|
| Six months before battery life expiration | Warning | J 70060n00 BATTERY#b 6MONTH WARNING YYYY/MM | n: Slot No. b: BTU No. YYYY/MM: Term of validity (year/month) |
| One week before battery life expiration | Warning | J 70070n00 BATTERY#b 1WEEK WARNING WARNING YYYY/MM | n: Slot No. b: BTU No. YYYY/MM: Term of validity (year/month) |
| N days before battery life expiration | Warning | J 70070n00 BATTERY#b MDAY WARNING WARNING YYYY/MM | n: Slot No. b: BTU No. N: Days YYYY/MM: Term of validity (year/month) |
| Battery life expiration | Warning | J 70FE0n00 BATTERY#b EXPIRATION ALARM YYYY/MM | n: Slot No. b: BTU No. YYYY/MM: Term of validity (year/month) |

- Warning (other)

| Target | Level | Event display | Remarks |
|---------------------|---------|---|--|
| CM Warning | Warning | J 01.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) Warning factor(<i>ww</i>) < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>ww</i> : Factor Code <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM DMA Port Warning | Warning | J 02.SSMM0 <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) DMA PORT# <i>p</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM BIOS Warning | Warning | J 03.SSMM0 <i>v</i> Controller Module# <i>m</i> (<i>zz</i>) BIOS# <i>v</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM RTC Warning | Warning | J 04.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) RTC Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM NVRAM Warning | Warning | J 05.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) NVRAM Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM MMC Warning | Warning | J 0600MM00 Controller Module# <i>m</i> (<i>zz</i>) MMC Warning < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Expander Warning | Warning | J 06.SSMM0 <i>v</i> Controller Module# <i>m</i> (<i>zz</i>) EXP# <i>v</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>v</i> : Device No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |

| Target | Level | Event display | Remarks |
|------------------------------|---------|---|---|
| CM DI PORT Warning | Warning | J 08.SSMMvp Controller Module#m(zz) DI Port#p Warning <pp ss rr> | SS: Parts subtype MM: Module ID v: Device No. p: Port No. m: CM No. zz: Model pp: Parts No. ss: Serial No. rr: Revision |
| CM Expander In Port Warning | Warning | J 09.SSMMvp Controller Module#m(zz) EXP#v In Port#p Warning <pp ss rr> | SS: Parts subtype MM: Module ID v: Device No. p: Port No. m: CM No. zz: Model pp: Parts No. ss: Serial No. rr: Revision |
| CM Expander Out Port Warning | Warning | J 0A.SSMMvp Controller Module#m(zz) EXP#v Out Port#p Warning <pp ss rr> | SS: Parts subtype MM: Module ID v: Device No. p: Port No. m: CM No. zz: Model pp: Parts No. ss: Serial No. rr: Revision |
| CM BUD Warning | Warning | J 0C.SSMM00 Controller Module#m(zz) BUD(#xxGB) Warning <pp ss rr> | SS: Parts subtype MM: Module ID m: CM No. zz: Model xx: Capacity pp: Parts No. ss: Serial No. rr: Revision |
| CM FAN Warning | Warning | J 0D.SSMM00 Controller Module#m(zz) FAN Warning <pp ss rr> | SS: Parts subtype MM: Module ID m: CM No. zz: Model pp: Parts No. ss: Serial No. rr: Revision |
| CM NAND Controller Warning | Warning | J 0E.SSMM00 Controller Module#m(zz) NAND Controller Warning <pp ss rr> | SS: Parts subtype MM: Module ID m: CM No. zz: Model pp: Parts No. ss: Serial No. rr: Revision |
| CM SCU Warning | Warning | J 0F.SSMM00 Controller Module#m(zz) SCU Warning <pp ss rr> | SS: Parts subtype MM: Module ID m: CM No. zz: Model pp: Parts No. |

| Target | Level | Event display | Remarks |
|---------------------|---------|---|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CA Warning | Warning | J 10.SSMM00 CA Slot# <i>n</i> - <i>v</i> (<i>zz</i>) (on CM# <i>m</i>) Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CA Port Warning | Warning | J 11.SSMM0 <i>p</i> CA Slot# <i>n</i> - <i>v</i> (<i>zz</i>) (on CM# <i>m</i>) Port# <i>p</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM FPGA Warning | Warning | J 21.SSMM00 Controller Module# <i>m</i> (<i>zz</i>) FPGA Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM LAN Port Warning | Warning | J 22.SSMM0 <i>p</i> Controller Module# <i>m</i> (<i>zz</i>) LAN PORT# <i>p</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>p</i> : Port No. <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM PCH Warning | Warning | J 2300MM00 Controller Module# <i>m</i> (<i>zz</i>) PCH Warning < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| FRT Warning | Warning | J 4000MM00 FRT# <i>n</i> Warning < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : FRT No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT Warning | Warning | J 5000MM00 BRT# <i>n</i> Warning < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : BRT No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |

| Target | Level | Event display | Remarks |
|----------------------|---------|---|---|
| BRT Out Port Warning | Warning | J 5100MM0P BRT#n Out Port#P Warning <pp ss rr> | MM: Module ID n: BRT No. P: Port No. pp: Parts No. ss: Serial No. rr: Revision |
| BRT In Port Warning | Warning | J 5200MMvP BRT#n In Port#P Warning <pp ss rr> | MM: Module ID v: EXP No. n: BRT No. P: Port No. pp: Parts No. ss: Serial No. rr: Revision |
| BRT EXP Warning | Warning | J 5300MM0v BRT#n EXP#v Warning <pp ss rr> | MM: Module ID v: EXP No. n: BRT No. pp: Parts No. ss: Serial No. rr: Revision |
| BRT QSFP Warning | Warning | J 5A00MM0P BRT#n QSFP#P Warning <pp ss rr> | MM: Module ID n: BRT No. P: Port No. pp: Parts No. ss: Serial No. rr: Revision |
| SVC Warning | Warning | J 6000MM00 SVC#n Warning <pp ss rr> | MM: Module ID n: SVC No. pp: Parts No. ss: Serial No. rr: Revision |
| CE FAN UNIT | Warning | J 71000n00 CE FAN UNIT#n Warning <pp ss rr> | n: Slot No. pp: Parts No. ss: Serial No. rr: Revision |
| PANEL UNIT | Warning | J 72000000 PANEL UNIT Warning <pp ss rr> | pp: Parts No. ss: Serial No. rr: Revision |
| CPSU Warning | Warning | J 73000n00 Power Supply Unit/CPSU#n Warning <pp ss rr> | n: Slot No. pp: Parts No. ss: Serial No. rr: Revision |
| BBU Warning | Warning | J 75000n00 BBU#n Warning <pp ss rr> | n: Slot No. pp: Parts No. ss: Serial No. rr: Revision |
| BCU Warning | Warning | J 75000n00 BCU#n Warning <pp ss rr> | n: Slot No. pp: Parts No. ss: Serial No. rr: Revision |
| BTU Warning | Warning | J 76000n00 BTU#n Warning <pp ss rr> | n: Slot No. pp: Parts No. |

| Target | Level | Event display | Remarks |
|--|---------|--|---|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| SMART notice from Disk (3.5inch) | Warning | J 80SSUU0NHDD 3.5 DE#UU- Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) SMART < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| Disk preventative separation SMART (3.5inch) | Warning | J 80SSUU0NHDD 3.5 DE#UU- Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Warning < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| Disk abnormal performance SMART (3.5inch) | Warning | J 80SSUU0NHDD 3.5 DE#UU- Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) WarnSlow < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| Disk abnormal performance notice (3.5inch) | Warning | J 80SSUU0NHDD 3.5 DE#UU- Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) SlowDown < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |

| Target | Level | Event display | Remarks |
|--|---------|---|--|
| SMART notice from Disk (2.5inch) | Warning | J 81.SSUUNNHDD 2.5 DE#UU- Disk#n(SAS xxxGB yykrpm cc) SMART <pp ss rr tt uu> | SS: Parts subtype UU: DE-ID N: Slot No.(hexadecimal notation) n: Slot No.(decimal notation) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision tt: Date Code uu: Config Code |
| Disk preventative separation SMART (2.5inch) | Warning | J 81.SSUUNNHDD 2.5 DE#UU- Disk#n(SAS xxxGB yykrpm cc) Warning <pp ss rr tt uu> | SS: Parts subtype UU: DE-ID N: Slot No.(hexadecimal notation) n: Slot No.(decimal notation) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision tt: Date Code uu: Config Code |
| Disk abnormal performance SMART (2.5inch) | Warning | J 81.SSUUNNHDD 2.5 DE#UU- Disk#n(SAS xxxGB yykrpm cc) WarnSlow <pp ss rr tt uu> | SS: Parts subtype UU: DE-ID N: Slot No.(hexadecimal notation) n: Slot No.(decimal notation) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision tt: Date Code uu: Config Code |
| Disk abnormal performance notice (2.5inch) | Warning | J 81.SSUUNNHDD 2.5 DE#UU- Disk#n(SAS xxxGB yykrpm cc) SlowDown <pp ss rr tt uu> | SS: Parts subtype UU: DE-ID N: Slot No.(hexadecimal notation) n: Slot No.(decimal notation) xxx: Disk capacity yy: Disk rotation cc: Disk information pp: Parts No. ss: Serial No. rr: Revision tt: Date Code uu: Config Code |
| SMART notice from SSD (3.5inch) | Warning | J 84.SSUU0NSSD 3.5 DE#UU-Slot#n(SAS xxxGB yykrpm cc) SMART <pp ss rr tt uu> | SS: Parts subtype UU: DE-ID |

| Target | Level | Event display | Remarks |
|---|---------|---|--|
| | | | <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| SSD preventative separation SMART (3.5inch) | Warning | J 84.SSUU0NSSD 3.5 DE#UU-Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Warning < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| SMART notice from SSD (2.5inch) | Warning | J 85.SSUUNNSSD 2.5 DE#UU-Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) SMART < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| SSD preventative separation SMART (2.5inch) | Warning | J 85.SSUUNNSSD 2.5 DE#UU-Slot# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i>) Warning < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>N</i> : Slot No.(hexadecimal notation) <i>n</i> : Slot No.(decimal notation) <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 <i>tt</i> : Date Code <i>uu</i> : Config Code |
| IOM6 Warning | Warning | J 90.SSUU0 <i>n</i> IOM6 DE#UU/IOM# <i>n</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>n</i> : EXP No. <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|-----------------------------------|---------|--|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |
| IOM6 Port Warning | Warning | J 91 <i>SSUU</i> <i>np</i> IOM6 Port DE# <i>UU</i> /IOM# <i>n</i> / Port# <i>p</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>n</i> : EXP No. <i>p</i> : Port No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| IOM6 QSFP Warning | Warning | J 9A <i>SSUU</i> <i>np</i> IOM6 QSFP DE# <i>UU</i> /IOM# <i>n</i> / Port# <i>p</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>n</i> : EXP No. <i>p</i> : Port No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| IOM6 Check1 | Warning | J C190 <i>UU</i> <i>np</i> IOM6 DE# <i>UU</i> /IOM# <i>n</i> Reboot < <i>pp ss rr</i> > | <i>UU</i> : DE-ID <i>n</i> : EXP No. <i>p</i> : Port No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CM Check1 | Warning | J C1 <i>MM</i> 0000 Controller Module# <i>m</i> (<i>zz</i>) Reboot < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| CA Check1 | Warning | J C1 <i>MM</i> 0000 CA Slot# <i>n</i> - <i>v</i> (<i>zz</i>) (on CM# <i>m</i>) Reboot < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : Slot No. <i>v</i> : Device No. <i>zz</i> : Model <i>m</i> : CM No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| BRT Check1 | Warning | J C1 <i>MM</i> 0000 BRT# <i>n</i> Reboot < <i>pp ss rr</i> > | <i>MM</i> : Module ID <i>n</i> : BRT No. <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| Multiple memory collectable error | Warning | J C3 <i>SSMM</i> 00 Controller Module# <i>m</i> (<i>zz</i>) Cache(MEM # <i>x</i> GB) Slot# <i>nn</i> Correctable Error < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>MM</i> : Module ID <i>m</i> : CM No. <i>zz</i> : Model <i>x</i> : Capacity <i>pp</i> : Parts No. <i>ss</i> : Serial No. <i>rr</i> : Revision |
| PSU Warning | Warning | J D2 <i>SSUU</i> 0 <i>n</i> Power Supply Unit DE# <i>UU</i> / PSU# <i>n</i> Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype <i>UU</i> : DE-ID <i>n</i> : Slot No. <i>pp</i> : Parts No. |

| Target | Level | Event display | Remarks |
|--------|-------|---------------|--|
| | | | <i>ss</i> : Serial No. <i>rr</i> : Revision |

- RAID Recovery notification

| Target | Level | Event display | Remarks |
|--|-------|---|----------------------|
| Start failure of rebuild to HS (non HS) | Error | M A0110xxx RAID Group#0xxx start failure of Rebuild processing | xxx : RAID group No. |
| Start of rebuild to HS | Error | M A0410xxx RAID Group#0xxx start procedure of Rebuild processing | xxx : RAID group No. |
| End of rebuild to HS | Error | M A0810xxx RAID Group#0xxx normal end of Rebuild processing | xxx : RAID group No. |
| Abnormal end of rebuild to HS (source disk problem) | Error | M A0A10xxx RAID Group#0xxx abnormal end of Rebuild processing because of source disk problem | xxx : RAID group No. |
| Abnormal end of rebuild to HS | Error | M A0B10xxx RAID Group#0xxx abnormal end of Rebuild processing | xxx : RAID group No. |
| Retry of rebuild to HS | Error | M A0C10xxx RAID Group#0xxx retry procedure of Rebuild processing | xxx : RAID group No. |
| Start of rebuild to DV | Error | M A1410xxx RAID Group#0xxx start procedure of Rebuild processing | xxx : RAID group No. |
| End of rebuild to DV | Error | M A1810xxx RAID Group#0xxx normal end of Rebuild processing | xxx : RAID group No. |
| Abnormal end of rebuild to DV (source disk problem) | Error | M A1A10xxx RAID Group#0xxx abnormal end of Rebuild processing because of source disk problem | xxx : RAID group No. |
| Abnormal end of rebuild to DV | Error | M A1B10xxx RAID Group#0xxx abnormal end of Rebuild processing | xxx : RAID group No. |
| Retry of rebuild to DV | Error | M A1C10xxx RAID Group#0xxx retry procedure of Rebuild processing | xxx : RAID group No. |
| Start of Copyback | Error | M A3420xxx RAID Group#0xxx start procedure of Copyback processing | xxx : RAID group No. |
| End of Copyback | Error | M A3820xxx RAID Group#0xxx normal end of Copyback processing | xxx : RAID group No. |
| Abnormal end of Copyback (source disk problem) | Error | M A3A20xxx RAID Group#0xxx abnormal end of Copyback processing because of source disk problem | xxx : RAID group No. |
| Abnormal end of Copyback | Error | M A3B20xxx RAID Group#0xxx abnormal end of Copyback processing | xxx : RAID group No. |
| Retry of Copyback | Error | M A3C20xxx RAID Group#0xxx retry procedure of Copyback processing | xxx : RAID group No. |
| Start failure of Redundant Copy (non HS) | Error | M A4130xxx RAID Group#0xxx start failure of Redundant Copy processing | xxx : RAID group No. |
| Start of Redundant Copy | Error | M A4430xxx RAID Group#0xxx start procedure of Redundant Copy processing | xxx : RAID group No. |

| Target | Level | Event display | Remarks |
|--|-------|---|--|
| End of Redundant Copy (Disk) | Error | P 21830 xxx Disk Drive DE# uu -Disk# nn (SAS xx GB yy krpm cc) Redundant Copy end < pp ss rr > | xxx : RAID group No. UU : DE-ID nn : Slot No. xx : Disk capacity yy : Disk rotation cc : Disk information pp : Parts No. ss : Serial No. rr : Revision |
| End of Redundant Copy (SSD 3.5inch) | Error | P 21830 xxx SSD 3.5 DE# uu -Slot# nn (SAS xx GB cc) Redundant Copy end < pp ss rr > | xxx : RAID group No. UU : DE-ID nn : Slot No. xx : Disk capacity cc : Disk information pp : Parts No. ss : Serial No. rr : Revision |
| End of Redundant Copy (SSD 2.5inch) | Error | P 21830 xxx SSD 2.5 DE# uu -Slot# nn (SAS xx GB cc) Redundant Copy end < pp ss rr > | xxx : RAID group No. UU : DE-ID nn : Slot No. xx : Disk capacity cc : Disk information pp : Parts No. ss : Serial No. rr : Revision |
| Abnormal end of Redundant Copy (source disk problem) | Error | M A4A30 xxx RAID Group#0 xxx abnormal end of Redundant Copy processing because of source disk problem | xxx : RAID group No. |
| Abnormal end of Redundant Copy | Error | M A4B30 xxx RAID Group#0 xxx abnormal end of Redundant Copy processing | xxx : RAID group No. |
| Retry of Redundant Copy | Error | M A4C30 xxx RAID Group#0 xxx retry procedure of Redundant Copy processing | xxx : RAID group No. |

- Event notification (M messages)

| Target | Level | Event display | Remarks |
|------------------|-------|--|---|
| Write Bad Data | Error | M E0050 xxx WRITE BAD DATA | xxx : RLU No. |
| PINNED Data | Error | M E10300 MM PINNED DATA was created CM# m -CPU# v | MM : CM module ID where PINNED occurred m : CM No. v : CM CPU No. |
| 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) | |

| Target | Level | Event display | Remarks |
|---|-------------|---|--|
| 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 19) | Error | M E2070013 NOT READY(19:FRT Fault) | |
| NRDY (Factor 20) | Error | M E2070014 NOT READY(20:BRT Fault) | |
| NRDY (Factor 21) | Error | M E2070015 NOT READY(21:Auto CFD) | |
| NRDY (Factor 22) | Error | M E2070016 NOT READY(22:No Version) | |
| NRDY (Factor 23) | Error | M E2070017 NOT READY(23:AC Input Shortage) | |
| NRDY (Factor 24) | Error | M E2070018 NOT READY(24:Configuration Data restored from System Disk) | |
| NRDY (Factor 25) | Error | M E2070019 NOT READY(25:BUD Capacity Shortage) | |
| 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. |
| Disconnected intra-cabinet path | Error | M 0732MMpp Remote Copy Path (CM#xx CA#yy PORT#pp) Not Available | MM : Module ID pp : Port No. xx : CM No. yy : CA Slot No. |
| REC automatic HALT occurrence | Error | M 13CF11xx REC Buffer HALT occurred. (xx) | xx : 00 - path error, 01 - heavy load, 02 - ERROR |
| Use capacity of Pool has changed. NORMAL -> CAUTION | Information | M E8010xxx TPP#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 TPP#xxx turned to WARNING(decrease of available capacity) | xxx : Thin Provisioning Pool No. (hexadecimal notation) |
| Lack of pool capacity | Information | M E8050xxx TPP#xxx was all allocated | xxx : Thin Provisioning Pool No. (hexadecimal notation) |
| Use capacity of Ftier Pool has changed. NORMAL -> CAUTION | Information | M E8070xxx FTRP#xxx turned to CAUTION(decrease of available capacity) | xxx : FTRP No. (hexadecimal notation) |
| Use capacity of Ftier Pool has changed. NORMAL or CAUTION -> WARNING | Information | M E8080xxx FTRP#xxx turned to WARNING(decrease of available capacity) | xxx : FTRP No. (hexadecimal notation) |

| Target | Level | Event display | Remarks |
|-----------------------------|-------------|---------------------------------------|---------------------------------------|
| Lack of Ftier pool capacity | Information | M E8090xxx FTRP#xxx was all allocated | xxx : FTRP No. (hexadecimal notation) |

- Recovery notification

| Target | Level | Event display | Remarks |
|--|-------------|---|--|
| CM Warning recovery | Information | R 01.SSMM00 Controller Module#m(zz) Normal <pp ss rr> | SS : Parts subtype UU : Module ID m : CM No. zz : Model pp : Parts No. ss : Serial No. rr : Revision |
| CM Expander Warning recovery | Information | R 01.SSMM0v Controller Module#m(zz) EXP#v Normal <pp ss rr> | SS : Parts subtype UU : Module ID v : Device No. m : CM No. zz : Model pp : Parts No. ss : Serial No. rr : Revision |
| IOM6 Warning recovery | Information | R 90.SSUU0n IOM6 DE#UU/IOM#n Normal <pp ss rr> | SS : Parts subtype UU : DE-ID n : EXP No. pp : Parts No. ss : Serial No. rr : Revision |
| CPSU Alarm recovery (AC-Fail clear) | Information | R 73000n00 Power Supply Unit/CPSU#n Normal <pp ss rr> | N : Side 0, side 1 pp : Parts No. ss : Serial No. rr : Revision |
| PSU Alarm recovery (AC-Fail clear) | Information | R D2.SSUU0n Power Supply Unit DE#UU/ PSU#n Normal <pp ss rr> | SS : Parts subtype UU : DE-ID N : Side 0, side 1 pp : Parts No. ss : Serial No. rr : Revision |
| CE exhaust temperature alarm recovery | Information | R 7A000000 CE Exhaust temperature Normal | |
| CE intake air temperature alarm recovery | Information | R 7B000000 CE Intake temperature Normal | |
| DE exhaust temperature alarm recovery | Information | R DA.SSUU00 DE Exhaust temperature DE#UU Normal | SS : Parts subtype UU : DE-ID |
| DE intake air temperature alarm recovery | Information | R DB.SSUU00 DE Intake temperature DE#UU Normal | SS : Parts subtype UU : DE-ID |

2.3.6 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 | Error | "Acute Event (REFCODE=xxxxx Parts=yyyyy)" |
| Faulty part operation stop error | Error | "Serious Event (REFCODE=xxxxx Parts=yyyyy)" |
| Partial error | Error | "Moderate Event (REFCODE=xxxxx Parts=yyyyy)" |
| Minor error | Error | "Service Event (REFCODE=xxxxx Parts=yyyyy)" |

Table 2.2 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 |
| "DKCHWBattery" | DKC battery |
| "DKCHWFan" | DKC fan |
| "DKCHWEnvironment" | DKC environment system |
| "DKUHWPS" | DKU power supply |
| "DKUHWFan" | DKU fan |
| "DKUHWEnvironment" | DKU environment system |
| "DKUHWDrive" | DKU drive |

2.3.7 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. |

2.3.8 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 ETERNUS LT270 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 |
|-------------------------------|---------|--|
| Library hardware error | Error | 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 | Error | Tape library temperature increased abnormally (temperature degrees C), leading to a library system fail. |

| Failure event | Level | Event display |
|------------------------------------|---------|--|
| 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. |
| 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 ETERNUS LT250 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 |
|------------------------|---------|---|
| 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. |

| Failure event | Level | Event display |
|------------------------------------|---------|--|
| 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. |
| 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. |

| Failure event | Level | Event display |
|---------------------------|---------|--|
| 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 ETERNUS LT210/LT220/LT230 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 |
|---|-------------|--|
| Library error (Fatal error) | Error | emergency: controller: ROBOT01 Broken CHK=XXXX |
| Library error (Others) | Warning | warning: controller: ROBOT01 Warning CHK=XXXX |
| Drive#1 error (Fatal error) | Error | emergency: drive1: DRIVE01 Broken CHK=XXXX |
| Drive#1 error (Others) | Warning | warning: drive1: DRIVE01 Warning CHK=XXXX |
| Drive#2 error (Fatal error) | Error | emergency: drive2: DRIVE02 Broken CHK=XXXX |
| Drive#2 error (Others) | Warning | warning: drive2: DRIVE02 Warning CHK=XXXX |
| Request for replacement of Cleaning Cartridge | Warning | warning: controller: ROBOT01 Exchange Cleaning Cartridge |
| Library Maintenance | Warning | warning: controller: ROBOT01 Library Maintenance |
| Reception of a Cleaning request from drive#1 | Warning | warning: drive1: DRIVE01 CleaningRequest |
| Reception of a Cleaning request from drive#2 | Warning | 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 ETERNUS LT200 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 |
|---|-------------|--|
| Autoloader error (Fatal error) | Error | emergency: controller: ACCESSOR Broken CHK=XXXX |
| Autoloader error (Others) | Warning | warning: controller: ACCESSOR Warning CHK=XXXX |
| Drive error (Fatal error) | Error | emergency: drive1: DRIVE01 Broken CHK=XXXX |
| 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 ETERNUS LT20/LT40/LT60 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.

2.4.6 ETERNUS CS800 Traps

Event traps are messages reported from a device. When a warning event or an error event occurs, check the device status and contact your Fujitsu engineer.

2.5 Other Devices

2.5.1 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).

Information

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% |
| 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.

2.5.2 NetApp FAS Series and V-Series 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. 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. |

| Failure event | Level | Event display |
|--|-------------|---|
| | | 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. |
| 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. |

| Failure event | Level | Event display |
|---|-------------|---|
| | | 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. |
| 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 |

| Failure event | Level | Event display |
|---|-------------|---|
| 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. |
| 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. |

| Failure event | Level | Event display |
|---|-------------|--|
| Volume made restricted | Information | The device trap message is output as is. |
| wafI_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 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. |

| Failure event | Level | Event display |
|---|-------------|--|
| 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. |
| At least one volume usage rate recovery | Information | The device trap message is output as is. |
| Directory size limit nearly reached | Warning | The device trap message is output as is. |
| Domain controller connected | Information | The device trap message is output as is. |
| Module warning in the shelf | Warning | The device trap message is output as is. |
| Multiple power supply fan failure | Error | The device trap message is output as is. |
| System down detection by system remote management | Error | The device trap message is output as is. |
| System down detection by system remote management | Warning | The device trap message is output as is. |
| System down instruction by system remote management | Warning | The device trap message is output as is. |
| Periodic trap from system remote management | Information | The device trap message is output as is. |
| Test trap from system remote management | Information | The device trap message is output as is. |
| Multipath disk connected to one switch | Warning | The device trap message is output as is. |
| Multipath disk not detected for the partner | Warning | The device trap message is output as is. |
| Multipath disk not multipathed | Warning | The device trap message is output as is. |
| Disk disable | Error | The device trap message is output as is. |
| HBA offline | Warning | The device trap message is output as is. |
| LUN Snap restore notice | Information | The device trap message is output as is. |
| LUN clone created | Information | The device trap message is output as is. |

| Failure event | Level | Event display |
|--|-------------|--|
| LUN Clone Split started | Information | The device trap message is output as is. |
| LUN Clone Split completed | Information | The device trap message is output as is. |
| Flex Clone Split started | Information | The device trap message is output as is. |
| Flex Clone Split completed | Information | The device trap message is output as is. |
| Created a Volume Clone | Information | The device trap message is output as is. |
| Snapshot Autodeleted | Information | The device trap message is output as is. |
| Volume is Autogrown | Information | The device trap message is output as is. |
| All connections to domain controllers in the preferred domain controllers list have been lost | Error | The device trap message is output as is. |
| External cache card failur | Information | The device trap message is output as is. |
| External cache is taken offline | Information | The device trap message is output as is. |
| The remaining number of Snapshot copies for a backup schedule is below warning limit specified | Warning | The device trap message is output as is. |
| NTP Time Daemon lost contact with the configured target | Error | The device trap message is output as is. |
| Trend Micro antivirus license has expired | Warning | The device trap message is output as is. |
| Trend Micro antivirus license is about to expire | Information | The device trap message is output as is. |

2.6 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 data re-collecting start | None. |
| Success of performance data re-collection | Information | Performance data re-collecting success | |

- Failure event of performance threshold monitoring

| Failure event | Level | Event display | Troubleshooting |
|--------------------------------------|---------|---|---|
| Logical volume response time failure | Warning | Report-ID=reportnumber / Threshold value exceed : <i>LogicalVolume-number</i> Response Time over <i>times</i> | Check the configuration according to the contents of the event message. |
| Abnormal CM load | Warning | Report-ID=reportnumber / Threshold value exceed : <i>CMnumber</i> Busy Rate over <i>XX%</i> | |

| Failure event | Level | Event display | Troubleshooting |
|-------------------------------|---------|--|-----------------|
| Abnormal RAID group load | Warning | Report-ID=reportnumber / Threshold value exceed : <i>Raidgroup-number</i> Busy Rate over <i>XX</i> % | |
| Abnormal Port Throughput load | Warning | Report-ID=reportnumber / Threshold value exceed : <i>PortX</i> Throughout over <i>XX</i> % | |

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 [Reload Conf.] operation, the following events are not displayed.

| Event | Level | Event display | Troubleshooting |
|---|-------------|---------------------------------|--|
| When the state changes into error | Error | Unit status changed: Error | Please confirm the state of the device. |
| When the state has changed warning | Warning | Unit status changed: Warning | Please confirm the state of the device. |
| When the state has changed normal | 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, perform either of the following methods to reconfigure the system.</p> <ul style="list-style-type: none"> - If you use the ETERNUS SF Web Console: Change the SNMP community name. For details, refer to "Change ETERNUS Disk storage system information" in the "ETERNUS SF Web Console Guide". - If you edit the configuration file directly: This method can be performed only when Storage Cruiser is operated. For details, refer to "sanma.conf Parameter" in the "ETERNUS SF Storage Cruiser Operation Guide". <ul style="list-style-type: none"> 1. Set the "SNMP_COMMUNITY_NAME_FOR_IP" parameter in the sanma.conf file. 2. Reflect the contents of the file on the system. |
| 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"> - Command could not be executed: <command name> This event occurs when command processing fails to start because of a resource shortage on the Management Server. If it is a temporary event, no special action need be taken. If it occurs regularly, however, check whether |

| Event | Level | Event display | Troubleshooting |
|-------|-------|---------------|--|
| | | | <p>system resources (memory and file descriptors) on the Management Server have been depleted.</p> <ul style="list-style-type: none"> - XML File can not read: <file name> <p>This event occurs when reading of the XML definition file fails. Check for an error in the definition contents.</p> <ul style="list-style-type: none"> - XML File not found: <file name> <p>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.</p> <ul style="list-style-type: none"> - Other <p>Collect the message and other information for an investigation, and contact your Fujitsu certified service engineer.</p> |

When communication is re-established, 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

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