

**FUJITSU Storage**  
**ETERNUS SF**  
**Express V16.0/**  
**Storage Cruiser V16.0**

**Event Guide**

# Preface

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## Purpose

This manual explains the events displayed on FUJITSU Storage ETERNUS SF Storage Cruiser or FUJITSU Storage ETERNUS SF Express of the following FUJITSU Storage ETERNUS SF products and these event types.

- FUJITSU Storage ETERNUS SF Express (hereafter referred to as "Express")
- FUJITSU Storage ETERNUS SF Storage Cruiser (hereafter referred to as "Storage Cruiser")
- FUJITSU Storage ETERNUS SF AdvancedCopy Manager (hereafter referred to as "AdvancedCopy Manager")

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. Refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide* for more information.

## 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 devices and networks is possessed.

## Organization

This manual is composed as follows:

### [Chapter 1 Notes about Common Traps for Devices](#)

This chapter describes the notes about common traps for devices.

### [Chapter 2 Server Node Events](#)

This chapter describes the server node events to be displayed by this software.

### [Chapter 3 Fibre Channel Switch Events](#)

This chapter describes the Fibre Channel switch events to be displayed by this software.

### [Chapter 4 Storage Device Events](#)

This chapter describes the storage device events to be displayed by this software.

### [Chapter 5 Tape Library Events](#)

This chapter describes the tape library events to be displayed by this software.

### [Chapter 6 Fibre Alliance MIB Support Device Events](#)

This chapter describes the Fibre Alliance MIB support device events to be displayed by this software.

### [Chapter 7 Performance Management Traps](#)

This chapter describes traps of the performance management function of this software.

### [Chapter 8 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<br>Microsoft(R) Windows Server(R) 2003, Standard x64 Edition<br>Microsoft(R) Windows Server(R) 2003, Enterprise Edition<br>Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition<br>Microsoft(R) Windows Server(R) 2003 R2, Standard Edition<br>Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition<br>Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition<br>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)<br>Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(TM) (32-bit)(64-bit)<br>Microsoft(R) Windows Server(R) 2008 Enterprise (32-bit)(64-bit)<br>Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM) (32-bit)(64-bit)<br>Microsoft(R) Windows Server(R) 2008 Datacenter (32-bit)(64-bit)<br>Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM) (32-bit)(64-bit)                                   | Windows Server 2008    |                       |
| Microsoft(R) Windows Server(R) 2008 R2 Foundation<br>Microsoft(R) Windows Server(R) 2008 R2 Standard<br>Microsoft(R) Windows Server(R) 2008 R2 Enterprise<br>Microsoft(R) Windows Server(R) 2008 R2 Datacenter   | Windows Server 2008 R2 |                       |
| Microsoft(R) Windows Server(R) 2012 Standard<br>Microsoft(R) Windows Server(R) 2012 Datacenter   | Windows Server 2012    |                       |
| Microsoft(R) Windows Server(R) 2012 R2 Standard<br>Microsoft(R) Windows Server(R) 2012 R2 Datacenter   | Windows Server 2012 R2 |                       |
| Windows Vista(R) Home Basic<br>Windows Vista(R) Home Premium<br>Windows Vista(R) Business<br>Windows Vista(R) Enterprise<br>Windows Vista(R) Ultimate  | Windows Vista          |                       |
| Windows(R) 7 Home Basic<br>Windows(R) 7 Home Premium<br>Windows(R) 7 Professional<br>Windows(R) 7 Enterprise<br>Windows(R) 7 Ultimate  | Windows 7              |                       |
| Windows(R) 8<br>Windows(R) 8 Pro   | Windows 8              |                       |
| Windows(R) 8.1<br>Windows(R) 8.1 Pro   | Windows 8.1            |                       |
| Solaris(TM) 9 Operating System   | Solaris 9              | Solaris or Solaris OS |
| Oracle Solaris 10  | Solaris 10             |                       |
| Oracle Solaris 11  | Solaris 11             |                       |
| Red Hat(R) Enterprise Linux(R) AS (v.4 for x86)<br>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)<br>Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)   | RHEL-ES4               |                       |
| Red Hat(R) Enterprise Linux(R) 5 (for x86)<br>Red Hat(R) Enterprise Linux(R) 5 (for Intel64)   | RHEL5                  |                       |
| Red Hat(R) Enterprise Linux(R) 6 (for x86)<br>Red Hat(R) Enterprise Linux(R) 6 (for Intel64)   | RHEL6                  |                       |

| Formal Name   | Abbreviation                    |        |
|---|---------------------------------|--------|
| SUSE(R) Linux Enterprise Server 11 for x86<br>SUSE(R) Linux Enterprise Server 11 for EM64T  | SUSE Linux Enterprise Server 11 |        |
| HP-UX 11i<br>HP-UX 11i v2<br>HP-UX 11i v3   | HP-UX                           |        |
| AIX(R) V6.1<br>AIX(R) V7.1  | AIX                             |        |
| VMware vSphere(R) 4 Essentials Kit<br>VMware vSphere(R) 4 Essentials Plus Kit<br>VMware vSphere(R) 4 Standard Edition(TM)<br>VMware vSphere(R) 4 Standard Plus Data Recovery<br>VMware vSphere(R) 4 Advanced Edition(TM)<br>VMware vSphere(R) 4 Enterprise Edition(TM)<br>VMware vSphere(R) 4 Enterprise Plus Edition(TM) | VMware vSphere 4                | VMware |
| VMware vSphere(R) 5 Essentials Kit<br>VMware vSphere(R) 5 Essentials Plus Kit<br>VMware vSphere(R) 5 Standard Edition(TM)<br>VMware vSphere(R) 5 Standard Plus Data Recovery<br>VMware vSphere(R) 5 Enterprise Edition(TM)<br>VMware vSphere(R) 5 Enterprise Plus Edition(TM)   | VMware vSphere 5                |        |

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

#### FUJITSU Storage ETERNUS

| Formal Name  | Abbreviation             |                                     |
|--|--------------------------|-------------------------------------|
| FUJITSU Storage ETERNUS DX60/DX60 S2<br>FUJITSU Storage ETERNUS DX80/DX80 S2<br>FUJITSU Storage ETERNUS DX90/DX90 S2 | -                        |                                     |
| FUJITSU Storage ETERNUS DX100 S3<br>FUJITSU Storage ETERNUS DX200 S3   |                          |                                     |
| FUJITSU Storage ETERNUS DX410<br>FUJITSU Storage ETERNUS DX440   | ETERNUS DX400 series     | ETERNUS DX400/<br>DX400 S2 series   |
| FUJITSU Storage ETERNUS DX410 S2<br>FUJITSU Storage ETERNUS DX440 S2   | ETERNUS DX400 S2 series  |                                     |
| FUJITSU Storage ETERNUS DX500 S3<br>FUJITSU Storage ETERNUS DX600 S3   | -                        |                                     |
| FUJITSU Storage ETERNUS DX8100<br>FUJITSU Storage ETERNUS DX8400<br>FUJITSU Storage ETERNUS DX8700                   | ETERNUS DX8000 series    | ETERNUS DX8000/<br>DX8000 S2 series |
| FUJITSU Storage ETERNUS DX8100 S2<br>FUJITSU Storage ETERNUS DX8700 S2   | ETERNUS DX8000 S2 series |                                     |
| FUJITSU Storage ETERNUS DX200F   | -                        |                                     |

Each individual device name in this document is listed with "FUJITSU Storage" omitted from it.

#### Software Products

| Formal Name                       | Abbreviation      |
|-----------------------------------|-------------------|
| Microsoft(R) Internet Explorer(R) | Internet Explorer |
| Mozilla(R) Firefox(R)             | Firefox           |
| Microsoft(R) Cluster Service      | MSCS              |

| Formal Name   | Abbreviation    |
|---|-----------------|
| Microsoft(R) Windows Server(R) Failover Clustering  | WSFC            |
| Microsoft(R) Exchange Server  | Exchange Server |
| Microsoft(R) SQL Server(R)  | SQL Server      |
| FUJITSU Software PRIMECLUSTER Global Disk Services  | GDS             |
| FUJITSU Software PRIMECLUSTER Global File Services  | GFS             |
| FUJITSU Software Symfoware Server Enterprise Extended Edition<br>FUJITSU Software Symfoware Server Enterprise Edition | Symfoware       |

## Manuals

| Formal Name  | Abbreviation                               |
|--|--|
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Quick Reference              | ETERNUS SF Quick Reference                 |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Release Notes                | ETERNUS SF Release Notes                   |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Installation and Setup Guide | ETERNUS SF Installation and Setup Guide    |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Migration Guide              | ETERNUS SF Migration Guide                 |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Web Console Guide            | ETERNUS SF Web Console Guide               |
| FUJITSU Storage ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Cluster Environment Setup Guide                   | ETERNUS SF Cluster Environment Setup Guide |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Messages                     | ETERNUS SF Messages                        |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser Event Guide  | ETERNUS SF Event Guide                     |
| FUJITSU Storage ETERNUS SF Express / ETERNUS SF Storage Cruiser / ETERNUS SF AdvancedCopy Manager Glossary                     | ETERNUS SF Glossary                        |

Besides the above-mentioned, each individual manual name in this document is listed with "FUJITSU Storage" omitted from it.

## Others

- In this document, "ETERNUS LT20/LT40/LT60" includes ETERNUS LT20 S2/LT40 S2/LT60 S2.
- In this document, unless there is a special explanatory note, ETERNUS DX200 S3 indicates ETERNUS DX200 S3 and ETERNUS DX200F. In addition, ETERNUS Disk storage system includes ETERNUS DX200F All Flash Arrays. However, the following functions are not supported in ETERNUS DX200F:
  - Energy saving operation for storage device
  - NAS operation for storage device
  - Automated Storage Tiering operation at multiple tiers (two or more)

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## 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 also 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  |

| Japan      | Other Countries        |
|------------|------------------------|
| 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.

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## Update History

| Content of Update  | Updated Section     | Revision |
|--|---------------------|----------|
| The information related to ETERNUS DX200F was described. | "Others" in Preface | 1.1      |

## 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 (*1) |     |     | Explanation  |
|---------------------|---------------------------------|-----------------------|-----|-----|--|
|                     |                                 | EXP                   | SC  | ACM |  |
| Before installation | Quick Reference                 | Yes                   | Yes | Yes | This manual is common for all products.  |
|                     | Release Notes                   | Yes                   | Yes | Yes | This manual is common for all products.  |
|                     | Overview                        | -                     | -   | Yes | This manual is unique for the product.   |
| During installation | Installation and Setup Guide    | Yes                   | Yes | Yes | This manual is common for all products.  |
|                     | Cluster Environment Setup Guide | -                     | Yes | Yes | This manual is common for Storage Cruiser and AdvancedCopy Manager.  |
|                     | Migration Guide                 | Yes                   | Yes | 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"> <li>- Express Operation Guide</li> <li>- Storage Cruiser Operation Guide</li> <li>- Storage Cruiser Operation Guide for Optimization Function</li> <li>- AdvancedCopy Manager Operation Guide (for Windows)</li> </ul> |

| When to Read | Related Manuals (Abbreviated) | Related Products (*1) |     |     | Explanation  |
|--------------|-------------------------------|-----------------------|-----|-----|--|
|              |                               | EXP                   | SC  | ACM |  |
|              |                               |                       |     |     | <ul style="list-style-type: none"> <li>- AdvancedCopy Manager Operation Guide (for Solaris)</li> <li>- AdvancedCopy Manager Operation Guide (for Linux)</li> <li>- AdvancedCopy Manager Operation Guide (for HP-UX)</li> <li>- AdvancedCopy Manager Operation Guide (for AIX)</li> <li>- AdvancedCopy Manager Operation Guide for Copy Control Module</li> </ul> |
|              | Web Console Guide             | Yes                   | Yes | Yes | This manual is common for all products.  |
| Anytime      | Event Guide                   | Yes                   | Yes | -   | This manual is common for Express and Storage Cruiser.   |
|              | Messages                      | Yes                   | Yes | Yes | This manual is common for all products.  |
|              | Glossary                      | Yes                   | Yes | Yes | This manual is common for all products.  |

\*1: "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  | Manual                          | Main Contents  | How to Read  |
|--|---------------------------------|--|--|
| Acquiring a product overview and basic operation knowledge                             | Quick Reference                 | <ul style="list-style-type: none"> <li>- Product overview</li> <li>- Installation decision</li> <li>- Overview of the necessary tasks from installation to first use</li> </ul>    | 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. |
|  | AdvancedCopy Manager Overview   | <ul style="list-style-type: none"> <li>- Main functions</li> <li>- Linkable applications</li> <li>- Procedure overview for Advanced Copy of ETERNUS Disk storage system</li> </ul> |  |
| Confirming the updated contents  | Release Notes                   | <ul style="list-style-type: none"> <li>- New function overview</li> <li>- Incompatibilities with previous version</li> <li>- Fixed bugs</li> </ul>                                 | Please read if you want to know the updated contents from a previous version and if you perform the upgrade.                         |
| Deciding if a version upgrade is required  | Migration Guide                 | <ul style="list-style-type: none"> <li>- Notes and cautions about version upgrade</li> <li>- Version upgrade procedure</li> </ul>  | Please read if you want to upgrade from a previous version.  |
| Installing and correctly operating the product<br><br>Setting up operating environment | Installation and Setup Guide    | <ul style="list-style-type: none"> <li>- Operating environment</li> <li>- Installation procedure</li> <li>- Setup procedure</li> <li>- Uninstallation procedure</li> </ul>         | Please read if you want to install and setup the product.  |
|  | Cluster Environment Setup Guide | <ul style="list-style-type: none"> <li>- Supported cluster software</li> </ul>   | Please read if you want to install and setup the product on a clustered system.  |



| Purpose  | Manual  | Main Contents  | How to Read   |
|--|---|--|---|
| depending on purpose   |   | <ul style="list-style-type: none"> <li>- Installation procedure for a clustered system</li> <li>- Setup procedure for a clustered system</li> <li>- Uninstallation procedure for a clustered system</li> </ul>   |   |
| Administration and operation of the installed system         | Express Operation Guide                                   | <ul style="list-style-type: none"> <li>- Starting and stopping the software</li> <li>- Device monitoring</li> <li>- Data copy inside the storage system</li> <li>- Necessary tasks after an architectural modification of the system as well as product maintenance</li> </ul> | Please read if you want to start or shutdown the system, monitor the operation status, do backup/restore operations, etc. |
|  | Storage Cruiser Operation Guide                           | <ul style="list-style-type: none"> <li>- Starting and stopping the software</li> <li>- Device monitoring</li> <li>- Necessary tasks after an architectural modification of the system as well as product maintenance</li> <li>- Command reference</li> </ul>                   |   |
|  | Storage Cruiser Operation Guide for Optimization Function | <ul style="list-style-type: none"> <li>- Operating environment construction</li> <li>- Operating status monitoring</li> <li>- Necessary tasks after an architectural modification of the system as well as product maintenance</li> <li>- Command reference</li> </ul>         |   |
|  | AdvancedCopy Manager Operation Guide (for Windows)        | <ul style="list-style-type: none"> <li>- Starting and stopping the software</li> </ul>   |   |
|  | AdvancedCopy Manager Operation Guide (for Solaris)        | <ul style="list-style-type: none"> <li>- Data backup/restore inside the storage system</li> </ul>  |   |
|  | AdvancedCopy Manager Operation Guide (for Linux)          | <ul style="list-style-type: none"> <li>- Necessary tasks after an architectural modification of the system as well as product maintenance</li> <li>- Command reference</li> </ul>  |   |
| AdvancedCopy Manager Operation Guide (for HP-UX)             |   |  |   |
| AdvancedCopy Manager Operation Guide (for AIX)               |   |  |   |
| AdvancedCopy Manager Operation Guide for Copy Control Module |   |  |   |
| Web Console Guide  |   | <ul style="list-style-type: none"> <li>- Operating environment</li> <li>- Screen layout description</li> </ul>   | Please read if you want to understand the ETERNUS SF Web Console.   |

| Purpose   | Manual      | Main Contents  | How to Read   |
|---|-------------|--|---|
| Dealing with messages issued by the software  | Messages    | <ul style="list-style-type: none"> <li>- Messages and their explanations</li> <li>- Parameter (variable information) description</li> <li>- System action</li> <li>- Countermeasures</li> </ul>  | Please read if you want a practical way of investigating and dealing with messages issued by the software.                    |
| Dealing with events issued by the software  | Event Guide | <ul style="list-style-type: none"> <li>- Phenomenon of event</li> <li>- Countermeasures</li> </ul>   | 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 | Glossary    | <ul style="list-style-type: none"> <li>- Product specific terminology explanation</li> <li>- Explanation of important terminology appearing in the manual</li> <li>- Synonyms and related terms</li> <li>- Proper form of abbreviated terms</li> </ul> | Please read if you want to learn the meaning of important terms, product specific terms or abbreviations used in the manuals. |

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# Chapter 1 Notes about Common Traps for Devices

When Express or Storage Cruiser receives an event notification such as a 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 1.1 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 trap reception       | Information | EGP Neighbor Loss Trap      |

# Chapter 2 Server Node Events

## 2.1 Windows Server Node

### Fujitsu Multipath Disk Control Mechanism Asynchronous Events (SNMP Trap)

| Failure Event  | Level   | Event Display (*1)  | Troubleshooting   |
|--|---------|---|---|
| One path inhibition  | Warning | [mpType: 403] "Access path (pPbBtT) fault"                  | Refer to the multipath driver manual and take required actions. Generally, the connection to storage devices and the cable connections must be checked. |
|  |         | [mpType: 1010] "Access path (pPbBtT) fault"                 |   |
| Some paths could not be detected at a server node startup. (Multipath operation could not be started.) | Warning | [mpType: 301] "Access path (pPbBtT) could not be detected." |   |

\*1: The *mpType* displays "GRMPD" or "MPHD". The *P*, *B*, and *T* 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 problem is connection (cable disconnected, switch problem, etc) or in the storage device.                         |
| Path switching was failed | Warning | [MPIO:32] Fail-over failed.  | Path switching has occurred, but it has been failed. Check whether the problem is connection (cable disconnected, switch problem, etc) or in the storage device. |

## 2.2 Solaris Server Node

### Asynchronous Event by Monitoring 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 (PollingTime parameter in the Correlation.ini file), these events are reported to Manager only once.

- Multipath Asynchronous Events

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

| Monitoring Keyword                             | Level   | Event Display                                  | Troubleshooting  |
|--|---------|--|--|
| .*NOTICE: mphpd.*I/O path switchover succeed.* | Warning | One-line message including monitoring keywords | Refer to the multipath driver manual and take required actions. Generally, the connection to |

| Monitoring Keyword                                       | Level | Event Display | Troubleshooting  |
|--|-------|---------------|--|
| . *NOTICE: mplb.*I/O path failed, and standby.*          |       |               | storage devices and the cable connections must be checked. |
| . *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

".\*" in the monitoring keywords is a regular expression (which indicates that any character 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

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

| Monitoring Keyword  | Level       | Event Display                                  | Troubleshooting   |
|---|-------------|--|---|
| NOTICE: sfx<br>NOTICE: sfc<br>NOTICE: sfd<br>. *SDX.*INFO.*       | Information | One-line message including monitoring keywords | Refer to the manual for the corresponding middleware product.   |
| WARNING: sfx<br>WARNING: sfc<br>WARNING: sfd<br>. *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. |

| Monitoring Keyword   | Level | Event Display | Troubleshooting |
|--|-------|---------------|-----------------|
| PANIC: sfx<br>PANIC: sfc<br>ERROR: sfd<br>HALT: sfd<br>.*SDX:.*HALT:.*<br>.*SDX:.*ERROR:.* | Error |               |                 |

- Sun MPxIO Asynchronous Event

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

| Monitoring Keyword                                  | Level   | Event Display                                  | Troubleshooting   |
|---|---------|--|---|
| ./scsi_vhci/<br>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.*       |         |  |   |

## 2.3 Linux Server Node

### Asynchronous Event by Monitoring 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 the 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 (PollingTime parameter in the Correlation.ini file), these events are reported to Manager only once.

- Multipath Asynchronous Events

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

| Failure Event   | Level   | Event Display                                  | Troubleshooting   |
|---|---------|--|---|
| .*mplb_mod:.*WARNING.*I/O error.*<br>.*PATHDIAG:.*WARNING.*Auto Path.*<br>.*MPD.*WARNING.* (*1) | Warning | One-line message including a monitored keyword | Refer to 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 character appears 0 times and more).

| Failure Event   | Level   | Event Display                                  | Troubleshooting   |
|---|---------|--|---|
| .*multipathd:.*remove.*path.*(uevent).*<br>.*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 character appears 0 times and at more).

| Failure Event  | Level       | Event Display                                  | Troubleshooting   |
|--|-------------|--|---|
| NOTICE: sfx<br>NOTICE: sfc<br>NOTICE: sfd<br>.*SDX:.*INFO:.*                               | Information | One-line message including monitoring keywords | Refer to the manual for the corresponding middleware product.   |
| WARNING: sfx<br>WARNING: sfc<br>WARNING: sfd<br>.*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<br>PANIC: sfc<br>ERROR: sfc<br>HALT: sfd<br>.*SDX:.*HALT:.*<br>.*SDX:.*ERROR:.* | Error       |  |   |

## 2.4 HP-UX Server Node

### Asynchronous Event by Monitoring 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 (PollingTime parameter in the Correlation.ini 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 character appears 0 times and more).

| Monitoring Keyword   | Level | Event Display                                  | Troubleshooting                                      |
|--|-------|--|--|
| .*LVM: Path.*!<br>.*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 character 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. |

## 2.5 AIX Server Node

### Asynchronous Event by Monitoring Keywords

The error 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 (PollingTime parameter in the Correlation.ini file), these events are reported to Manager only once.



- MPIO Asynchronous Events

"^" in the monitoring keywords is a regular expression (beginning of line). "\s+" is a regular expression (which indicates that a space character appears 1 times and more). ".\*" is a regular expression (which indicates that any character appears 0 times and more).

| Monitoring Keyword | Level   | Event Display                                  | Troubleshooting                                      |
|--------------------|---------|--|--|
| ^DE3B8540\s+.*     | Warning | One-line message including monitoring keywords | Take appropriate action as described in the message. |

# Chapter 3 Fibre Channel Switch Events

## 3.1 SN200 (Brocade)

From the Fibre Channel switch whose firmware version is 2.2 or later, the trap with the asterisk ("\*") is not 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. <i>number</i> FAULT                     |
|   | FC port online                      | Information                       | FC Port No. <i>number</i> Online                    |
|   | FC port offline                     | Information                       | FC Port No. <i>number</i> Offline                   |
| * | Power supply failure                | Error                             | Power Supply # <i>number</i> FAULT                  |
| * | Power-off                           | Error                             | Power Supply # <i>number</i> FAULT                  |
| * | Power loss                          | Warning                           | Power Supply # <i>number</i> Absent                 |
| * | Fan failure                         | Error                             | Fan # <i>number</i> FAULT                           |
| * | Fan rotational speed decrease error | Error                             | Fan # <i>number</i> Below Minimal Threshold         |
| * | Fan loss                            | Warning                           | Fan # <i>number</i> Absent                          |
| * | Temperature sensor failure          | Error                             | Temp # <i>number</i> FAULT                          |
| * | Temperature decrease error          | Error                             | Temp # <i>number</i> Below Minimal Threshold        |
| * | Temperature rise error              | Error                             | Temp # <i>number</i> Above Maximum Threshold        |
| * | Temperature sensor loss             | Warning                           | Temp # <i>number</i> Absent                         |
|   | Trap event                          | Error,<br>Warning,<br>Information | The unit trap message is output without any change. |

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 does not 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]

## 3.2 Brocade VDX series

| Failure Event | Level       | Event Display                     | Remarks            |
|---------------|-------------|-----------------------------------|--------------------|
| Port failure  | Error       | FC Port No. <i>number</i> FAULT   | *1, *2, *3, and *4 |
| Port Online   | Information | FC Port No. <i>number</i> Online  |                    |
| Port Offline  | Information | FC Port No. <i>number</i> Offline |                    |

| Failure Event | Level                             | Event Display   | Remarks |
|---------------|-----------------------------------|---|---------|
| Event traps   | Error,<br>Warning,<br>Information | The message notified from the device is output as is. |         |

\*1

As for the Ethernet 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 Ethernet port displayed by "show fabric islports" command
- Port number of FCOE IF output by "show fcoe interface brief" command

For example, when last index value of the Ethernet 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   |
|------------------|---|
| <i>XX YY/ZZ</i>  | The explanation of <i>XX</i> , <i>YY</i> , and <i>ZZ</i> is as follows: <ul style="list-style-type: none"> <li>- <i>XX</i>: VCS ID</li> <li>- <i>YY</i>: RBridgeID</li> <li>- <i>ZZ</i>: Port number</li> </ul> |

\*2

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

\*3

For the Ge port, the following events of "Table 1.1 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 to the target device and check the status of all Ge ports.

\*4

When the firmware version is NOS v3.0.1 or later, the following events of "Table 1.1 Trap Common to Devices" are displayed for all the ports.

- 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 to the target device and check the status of all the ports.

### 3.3 PRIMERGY Fibre Channel Switch Blade

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Refer to "3.1 SN200 (Brocade)".

### 3.4 PRIMERGY BX Ethernet Fabric Switch

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Refer to "3.2 Brocade VDX series".

# Chapter 4 Storage Device Events

## Information

The event traps disabled by the event notification setting of the storage device are not notified.

## 4.1 ETERNUS DX60/DX60 S2/DX80/DX90

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

### Notification of Component Blockage

| Target              | Level | Event Display  | Remarks   |
|---------------------|-------|--|---|
| CM Unit             | Error | P 01.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>Fault < <i>pp ss rr</i> >                                    | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                             |
| CM BE Expander      | Error | P 06.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>BE Expander Fault < <i>pp ss rr</i> >                        | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                             |
| CM DI PORT          | Error | P 08.SSMM0 <i>n</i> Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>DI Port# <i>n</i> Fault < <i>pp ss rr</i> >          | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>n</i> : Port No.(0-1)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| CM SAS Port         | Error | P 09.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>SAS Port Fault < <i>pp ss rr</i> >                           | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                             |
| CM BE Expander Port | Error | P 0A.SSMM0 <i>n</i> Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>BE Expander Port# <i>n</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)   |

| Target             | Level | Event Display  | Remarks   |
|--------------------|-------|--|---|
|                    |       |  | <i>n</i> : Port No.(0-2)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| CM Memory          | Error | P 0B.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>Cache(MEM) Fault < <i>pp ss rr</i> >             | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>MEM</i> : Memory capacity<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| CM Flash ROM       | Error | P 0C.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>Flash ROM Fault < <i>pp ss rr</i> >              | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                                 |
| CM NAND Controller | Error | P 0E.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>NAND Controller Fault < <i>pp ss rr</i> >        | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                                 |
| SCU                | Error | P 0F.SSMM00 Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>Super Capacitor Unit Fault < <i>pp ss rr</i> >   | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                                 |
| CA Port            | Error | P 11.SSMM0 <i>n</i> Controller Module# <i>m</i> ( <i>zz xx</i> Hz)<br>Port# <i>n</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>n</i> : Port No.(0-1)<br><i>m</i> : CM No.<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.   |

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

| Target                           | Level | Event Display   | Remarks   |
|----------------------------------|-------|---|---|
|                                  |       |   | <i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| 3.5 Inch DISK<br>(Compare Error) | Error | P 88. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Fault < <i>pp ss rr</i> >            | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 2.5 Inch DISK                    | Error | P 81. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Fault < <i>pp ss rr</i> >            | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 2.5 Inch Disk<br>(Failed Usable) | Error | P 81. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Failed Usable<br>< <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 2.5 Inch DISK<br>(Compare Error) | Error | P 88. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SAS <i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Fault < <i>pp ss rr</i> >            | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 3.5 Inch DISK                    | Error | P 82. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SATA <i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >                          | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                              |
| 3.5 Inch Disk<br>(Failed Usable) | Error | P 82. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SATA <i>xxx</i> GB <i>cc</i> ) Failed Usable < <i>pp ss rr</i> >                  | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)   |

| Target                           | Level | Event Display   | Remarks  |
|----------------------------------|-------|---|--|
|                                  |       |   | <i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| 3.5 Inch DISK<br>(Compare Error) | Error | P 88. <i>SSDDNN</i> Disk Drive DE# <i>DD</i> -<br>Disk# <i>n</i> (SATA <i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >    | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 3.5 Inch SSD                     | Error | P 84. <i>SSDDNN</i> SSD 3.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS<br><i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >         | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 3.5 Inch SSD<br>(Failed Usable)  | Error | P 84. <i>SSDDNN</i> SSD 3.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS<br><i>xxx</i> GB <i>cc</i> ) Failed Usable < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 3.5 Inch SSD<br>(Compare Error)  | Error | P 88. <i>SSDDNN</i> SSD 3.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS<br><i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >         | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> >         | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| 2.5 Inch SSD<br>(Failed Usable)  | Error | P 85. <i>SSDDNN</i> SSD 2.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS<br><i>xxx</i> GB <i>cc</i> ) Failed Usable < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)  |



| Target                          | Level | Event Display  | Remarks  |
|---------------------------------|-------|--|--|
|                                 |       |  | <i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| 2.5 Inch SSD<br>(Compare Error) | Error | P 88 <i>SSDDNN</i> SSD 2.5 DE# <i>dd</i> -Slot# <i>n</i> (SAS<br><i>xxx</i> GB <i>cc</i> ) Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| EXP                             | Error | P 9000 <i>DDN</i> Expander DE# <i>DD</i> /EXP# <i>N</i> Fault<br>< <i>pp ss rr</i> >                                 | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| EXP Port                        | Error | P 9100 <i>DDN</i> Expander Port DE# <i>DD</i> /EXP# <i>N</i> /<br>Port# <i>n</i> Fault < <i>pp ss rr</i> >           | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1<br><i>n</i> : Port No.(0-1)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| PSU                             | Error | P D200 <i>DD0n</i> Power Supply Unit DE# <i>DD</i> /<br>PSU# <i>n</i> Fault < <i>pp ss rr</i> >                      | <i>DD</i> : DE-ID<br><i>n</i> : Slot No.(0-1)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |

### Warning (Temperature Alarm)

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

## Warning (Other)

| Target                            | Level   | Event Display  | Remarks  |
|-----------------------------------|---------|--|--|
| CM Check1                         | Warning | J C1MM0000 Controller Module#m(zz xxHz)<br>Reboot <pp ss rr>                       | MM: Module ID(10-11)<br>m: CM No.<br>zz: Model(FC/SAS/iSCSI)<br>xx: Frequency (800MHz/<br>1.2GHz)<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                             |
| Multiple memory collectable error | Warning | J C301MM00 Controller Module#m(zz xxHz)<br>Cache(MEM) Correctable Error <pp ss rr> | MM: Module ID(10-11)<br>m: CM No.<br>zz: Model(FC/SAS/iSCSI)<br>xx: Frequency (800MHz/<br>1.2GHz)<br>MEM: Memory capacity<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision     |
| CM Warning                        | Warning | J 01SSMM00 Controller Module#m(zz xxHz)<br>Warning factor(ww) <pp ss rr>           | SS: Parts subtype<br>m: CM No.<br>zz: Model(FC/SAS/iSCSI)<br>xx: Frequency (800MHz/<br>1.2GHz)<br>ww: Factor Code<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision             |
| CM BE Expander Warning            | Warning | J 06SSMM00 Controller Module##m(zz xxHz)<br>BE Expander Warning <pp ss rr>         | SS: Parts subtype<br>MM: Module ID(10-11)<br>m: CM No.<br>zz: Model(FC/SAS/iSCSI)<br>xx: Frequency (800MHz/<br>1.2GHz)<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision        |
| CM SAS Port Warning               | Warning | J 09SSMM0n Controller Module#m(zz xxHz)<br>SAS Port#n Warning <pp ss rr>           | SS: Parts subtype<br>MM: Module ID(10-11)<br>n: Port No.(0-1)<br>zz: Model(FC/SAS/iSCSI)<br>xx: Frequency (800MHz/<br>1.2GHz)<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision |
| CM BE Expander Port Warning       | Warning | J 0A.SSMM0n Controller Module#m(zz xxHz)<br>BE Expander Port#n Warning <pp ss rr>  | SS: Parts subtype<br>MM: Module ID(10-11)<br>n: Port No.(0-2)<br>zz: Model(FC/SAS/iSCSI)<br>xx: Frequency (800MHz/<br>1.2GHz)<br>pp: Parts No.                                   |

| Target   | Level   | Event Display  | Remarks   |
|--|---------|--|---|
|  |         |  | <i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| CM FLASH ROM                                       | Warning | J 0C.SSMM00 Controller Module# <i>m</i> ( <i>zz xxHz</i> )<br>Flash ROM Warning < <i>pp ss rr</i> >              | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| CM NAND Controller                                 | Warning | J 0E.SSMM00 Controller Module# <i>m</i> ( <i>zz xxHz</i> )<br>NAND Flash Warning < <i>pp ss rr</i> >             | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID(10-11)<br><i>zz</i> : Model(FC/SAS/iSCSI)<br><i>xx</i> : Frequency (800MHz/<br>1.2GHz)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| SMART notice from Disk<br>(3.5inch)                | Warning | J 80.SSDDNNDisk Drive DE# <i>DD</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) SMART < <i>pp ss rr</i> >   | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NV</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| Disk preventative separation<br>SMART<br>(3.5inch) | Warning | J 80.SSDDNNDisk Drive DE# <i>DD</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NV</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SMART notice from Disk<br>(2.5inch)                | Warning | J 81.SSDDNNDisk Drive DE# <i>DD</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) SMART < <i>pp ss rr</i> >   | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NV</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| Disk preventative separation<br>SMART<br>(2.5inch) | Warning | J 81.SSDDNNDisk Drive DE# <i>DD</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) Warning < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NV</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation  |

| Target  | Level   | Event Display   | Remarks  |
|---|---------|---|--|
|   |         |   | <i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| SATA Disk notice from Disk<br>(3.5inch)                 | Warning | J 82.SSDDNV Disk Drive DE#DD-<br>Disk#n(SATA xxxGB cc) SMART <pp ss rr>   | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SATA Disk preventative<br>separation SMART<br>(3.5inch) | Warning | J 82.SSDDNV Disk Drive DE#DD-<br>Disk#n(SATA xxxGB cc) Warning <pp ss rr> | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SMART notice from SSD<br>(3.5inch)                      | Warning | J 84.SSDDNV SSD 3.5 DE#dd-Slot#n(SAS<br>xxxGB cc) SMART <pp ss rr>        | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SSD preventative separation<br>SMART<br>(3.5inch)       | Warning | J 84.SSDDNV SSD 3.5 DE#dd-Slot#n(SAS<br>xxxGB cc) Warning <pp ss rr>      | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-0b)<br><i>n</i> : Slot No.(00-11)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SMART notice from SSD<br>(2.5inch)                      | Warning | J 85.SSDDNV SSD 2.5 DE#dd-Slot#n(SAS<br>xxxGB cc) SMART <pp ss rr>        | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SSD preventative separation<br>SMART<br>(2.5inch)       | Warning | J 85.SSDDNV SSD 2.5 DE#dd-Slot#n(SAS<br>xxxGB cc) Warning <pp ss rr>      | <i>SS</i> : Parts subtype<br><i>DD</i> : DE-ID<br><i>NN</i> : Slot No.(00-17)<br><i>n</i> : Slot No.(00-23)<br><i>xxx</i> : Disk capacity  |

| Target                       | Level   | Event Display  | Remarks   |
|------------------------------|---------|--|---|
|                              |         |  | <i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| EXP Alarm<br>(Warning Level) | Warning | J 9000 <i>DD</i> <i>N</i> Expander DE# <i>DD</i> / <i>EXP</i> # <i>n</i><br>Warning < <i>pp ss rr</i> >                        | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                             |
| EXP Port<br>(Warning Level)  | Warning | J 9100 <i>DD</i> <i>Nn</i> Expander Port DE# <i>DD</i> / <i>EXP</i> # <i>N</i> /<br>Port# <i>n</i> Warning < <i>pp ss rr</i> > | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1<br><i>n</i> : Port No.(0-1)<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |

### Event Notification (M Messages)

| Target                             | Level | Event Display  | Remarks   |
|------------------------------------|-------|--|---|
| Write Bad Data                     | Error | M E0050 <i>xxx</i> WRITE BAD DATA  | <i>xxx</i> : RLU No.                              |
| PINNED Data                        | Error | M E10300 <i>MM</i> PINNED DATA   | <i>MM</i> : CM module ID where<br>PINNED occurred |
| NRDY (Factor 01)                   | Error | M E2070001 NOT READY(01:Configuration<br>Error)  |   |
| NRDY (Factor 02)                   | Error | M E2070002 NOT READY(02:CM F/W<br>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<br>Incomplete)                                  |   |
| NRDY (Factor 12)                   | Error | M E207000C NOT READY(12:Backup Fail)   |   |
| NRDY (Factor 13)                   | Error | M E207000D NOT READY(13:Multi CM<br>Down)  |   |
| NRDY (Factor 14)                   | Error | M E207000E NOT READY(14:Machine Down<br>Recovery End)                                  |   |
| NRDY (Factor 15)                   | Error | M E207000F NOT READY(15:Machine Down<br>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<br>Shortage)   |   |
| NRDY (Factor 21)                   | Error | M E2070015 NOT READY(21:Configuration<br>Data restored from System Disk)               |   |
| NRDY (Factor 22)                   | Error | M E2070016 NOT READY(22:No Version)  |   |
| End of rebuild to HS<br>(Bad Data) | Error | M 21810 <i>xxx</i> RAID Group#0 <i>xxx</i> recovered end<br>of Rebuild processing      | <i>xxx</i> : RLU No.                              |
| End of rebuild to DV<br>(Bad Data) | Error | M 21810 <i>xxx</i> RAID Group#0 <i>xxx</i> recovered end<br>of Rebuild processing      | <i>xxx</i> : RLU No.                              |
| Disconnected intra-cabinet<br>path | Error | M 0732 <i>xyyy</i> Remote Copy Path (MID# <i>xx</i><br>PORT# <i>yy</i> ) Not Available | <i>xx</i> : MID<br><i>yy</i> : Port               |

| Target                                     | Level | Event Display   | Remarks   |
|--|-------|---|---|
| REC automatic HALT occurrence              | Error | M 13CF11 $xx$ REC Automatic HALT or ERROR occurred.( $xx$ )                       | $xx$ : 00 - path error, 01 - heavy load, 02 - ERROR                         |
| Copy session<br>[Active -> Error]          | Error | M 13CE0001 Error session was detected.<br>(Local: $xxxxx$ Remote: $xxxxx$ )       | $xxxxx$ : Number of copy sessions that status is Error                      |
| Copy session<br>[Suspend -> Error]         | Error | M 13CE0002 Foreseen error session was detected. (Local: $xxxxx$ Remote: $xxxxx$ ) | $xxxxx$ : Number of copy sessions that status changed from Suspend to Error |
| Copy session<br>[Active -> Halt]           | Error | M 13CE0003 Halt session was detected.<br>(Remote: $xxxxx$ )                       | $xxxxx$ : Number of copy sessions that status is Halt                       |
| Copy session<br>[Error -> Idle]            | Error | M 13CE0004 Error session was cleared.   |   |
| Copy session<br>[Suspend -> Error -> Idle] | Error | M 13CE0005 Foreseen error session was cleared.                                    |   |
| Copy session<br>[Halt -> Active]           | Error | M 13CE0006 Halt session was cleared.  |   |

## Recovery Notification

| Target                                   | Level       | Event Display  | Remarks   |
|--|-------------|--|---|
| CM BE Expander Warning recovery          | Information | R 06. $SSMM00$ Controller Module# $n$ ( $zz$ $xx$ Hz)<br>BE Expander Normal < $pp$ $ss$ $rr$ > | $SS$ : Parts subtype<br>$MM$ : CM Mid(10-11)<br>$n$ : Port No.(0-1)<br>$zz$ : Model(FC/SAS/iSCSI)<br>$xx$ : Frequency (800MHz/<br>1.2GHz)<br>$pp$ : Parts No.<br>$ss$ : Serial No.<br>$rr$ : Revision |
| EXP Warning recovery                     | Information | R 9000 $DDnn$ Expander DE# $DD$ /EXP# $n$<br>Normal < $pp$ $ss$ $rr$ >                         | $DD$ : DE-ID<br>$nn$ : Port No.(00-01)<br>$n$ : Port No.(0-1)<br>$pp$ : Parts No.<br>$ss$ : Serial No.<br>$rr$ : Revision   |
| PSU Alarm recovery (AC-Fail clear)       | Information | R D200 $DD0N$ Power Supply Unit DE# $DD$ /<br>PSU# $N$ Normal < $pp$ $ss$ $rr$ >               | $DD$ : DE-ID<br>$N$ : Side 0, side 1<br>$pp$ : Parts No.<br>$ss$ : Serial No.<br>$rr$ : Revision  |
| DE exhaust temperature alarm recovery    | Information | R DA0 $tDD00$ DE OUT TEMP Normal   | $DD$ : DE-ID<br>$t$ : Type(1:3.5"DE / 2:2.5"DE)   |
| DE intake air temperature alarm recovery | Information | R DB0 $tDD00$ DE IN TEMP Normal  | $DD$ : DE-ID<br>$t$ : Type(1:3.5"DE / 2:2.5"DE)   |

## 4.2 ETERNUS DX80 S2/DX90 S2

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

### Notification of Component Blockage

| Target      | Level | Event Display  | Remarks  |
|-------------|-------|--|--|
| CM Unit     | Error | P 01.SSMM00 Controller Module# <i>m</i> ( <i>zz</i> ) Fault<br>< <i>pp ss rr</i> >                                   | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                          |
| CM DMA Port | Error | P 02.SSMM0 <i>p</i> Controller Module# <i>m</i> ( <i>zz</i> ) DMA<br>PORT# <i>p</i> Fault < <i>pp ss rr</i> >        | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                        |
| CM BIOS     | Error | P 03.SSMM0 <i>v</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>BIOS# <i>v</i> Fault < <i>pp ss rr</i> >            | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                      |
| CM RTC      | Error | P 04.SSMM00 Controller Module# <i>m</i> ( <i>zz</i> ) RTC<br>Fault < <i>pp ss rr</i> >                               | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CM NVRAM    | Error | P 05.SSMM00 Controller Module# <i>m</i> ( <i>zz</i> )<br>NVRAM Fault < <i>pp ss rr</i> >                             | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CM MMC      | Error | P 0600MM00 Controller Module# <i>m</i> ( <i>zz</i> ) MMC<br>Fault < <i>pp ss rr</i> >                                | <i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CM Expander | Error | P 06.SSMM0 <i>v</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>EXP# <i>v</i> Fault < <i>pp ss rr</i> >             | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>v</i> : Device No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| CM DI PORT  | Error | P 08.SSMM <i>v</i> <i>p</i> Controller Module# <i>m</i> ( <i>zz</i> ) DI<br>Port# <i>p</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>v</i> : Device No.<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model   |

| Target               | Level | Event Display   | Remarks   |
|----------------------|-------|---|---|
|                      |       |   | <i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CM Expander In Port  | Error | P 09. <i>SSMMvp</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>EXP# <i>v</i> In Port# <i>p</i> Fault < <i>pp ss rr</i> >          | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>v</i> : Device No.<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| CM Expander Out Port | Error | P 0A. <i>SSMMvp</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>EXP# <i>v</i> Out Port# <i>p</i> Fault < <i>pp ss rr</i> >         | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>v</i> : Device No.<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| CM Memory            | Error | P 0B. <i>SSMMmn</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>Cache(MEM # <i>x</i> GB) Slot# <i>nn</i> Fault < <i>pp ss rr</i> > | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>nn</i> : Slot No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>x</i> : Capacity<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| CM BUD               | Error | P 0C. <i>SSMM00</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>BUD(# <i>xx</i> GB) Fault < <i>pp ss rr</i> >                      | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>xx</i> : Capacity<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                         |
| CM FAN               | Error | P 0D. <i>SSMM00</i> Controller Module# <i>m</i> ( <i>zz</i> ) FAN<br>Fault < <i>pp ss rr</i> >                                      | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CM NAND Controller   | Error | P 0E. <i>SSMM00</i> Controller Module# <i>m</i> ( <i>zz</i> )<br>NAND Controller Fault < <i>pp ss rr</i> >                          | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |



| Target            | Level | Event Display   | Remarks   |
|-------------------|-------|---|---|
| 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<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CA                | Error | P 10.SSMM00 CA Slot# <i>n-v</i> ( <i>zz</i> ) (on CM# <i>m</i> ) Fault < <i>pp ss rr</i> >                                      | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CA Port           | Error | P 11.SSMM0 <i>p</i> CA Slot# <i>n-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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                                  |
| SFP for FC-CA     | Error | P 1A.SSMM0 <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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>oo</i> : Other Information |
| SFP for FCLink-CA | Error | P 1B.SSMM0 <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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>oo</i> : Other Information |
| SFP+ for FC-CA    | Error | P 1C.SSMM0 <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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model  |

| Target   | Level | Event Display   | Remarks   |
|--|-------|---|---|
|  |       |   | <i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>oo</i> : Other Information   |
| SFP+ for 10G-iSCSI-CA<br>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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>oo</i> : Other Information |
| SFP+ Copper for 10G-iSCSI-CA<br>SFP+ for FCoE-CA | Error | P 1E00 <i>MM</i> 0 <i>p</i> iSCSI FCoE SFP+Cp CA Slot#S( <i>zz</i> ) (on CM# <i>m</i> ) Port# <i>p</i> Fault < <i>pp ss rr oo</i> >             | <i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>oo</i> : Other Information  |
| SFP+ Longwave for FC-CA                          | Error | P 1900 <i>MM</i> 0 <i>p</i> FC SFP+ Longwave CA Slot#S( <i>zz</i> ) (on CM# <i>m</i> ) Port# <i>p</i> Fault < <i>pp ss rr oo</i> >              | <i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><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<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CM LAN Port                                      | Error | P 22. <i>SSMM</i> 0 <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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>m</i> : CM No.  |

| Target       | Level | Event Display  | Remarks   |
|--------------|-------|--|---|
|              |       |  | <i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>MM</i> : Module ID<br><i>v</i> : Device No.<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>n</i> : FRT No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>n</i> : BRT No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>n</i> : BRT No.<br><i>p</i> : Port No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>v</i> : EXP No.<br><i>p</i> : Port No.<br><i>n</i> : BRT No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>v</i> : EXP No.<br><i>n</i> : BRT No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| BRT QSFP     | Error | P 5A00 <i>MM</i> 0 <i>P</i> BRT# <i>n</i> QSFP# <i>P</i> Fault < <i>pp ss rr</i> >   | <i>MM</i> : Module ID<br><i>n</i> : BRT No.<br><i>P</i> : Port No.<br><i>pp</i> : Parts No.   |

| Target        | Level | Event Display  | Remarks   |
|---------------|-------|--|---|
|               |       |  | <i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| SVC           | Error | P 6000 <i>MM00</i> SVC# <i>n</i> Fault < <i>pp ss rr</i> >                       | <i>MM</i> : Module ID<br><i>n</i> : SVC No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                        |
| SVC LAN Port  | Error | P 6100 <i>MM0P</i> SVC# <i>n</i> LAN PORT# <i>P</i> Fault<br>< <i>pp ss rr</i> > | <i>MM</i> : Module ID<br><i>P</i> : Port No.<br><i>n</i> : SVC No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| SVC PCIe SW   | Error | P 6200 <i>MM00</i> SVC# <i>n</i> PCIe SW Fault < <i>pp ss rr</i> >               | <i>MM</i> : Module ID<br><i>n</i> : SVC No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                        |
| SVC RCI board | Error | P 6300 <i>MM00</i> SVC# <i>n</i> RCI board Fault < <i>pp ss rr</i> >             | <i>MM</i> : Module ID<br><i>n</i> : SVC No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                        |
| CE FAN UNIT   | Error | P 71000 <i>n00</i> CE FAN UNIT# <i>n</i> Fault < <i>pp ss rr</i> >               | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| PANEL UNIT    | Error | P 72000000 PANEL UNIT Fault < <i>pp ss rr</i> >                                  | <i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| CPSU          | Error | P 73000 <i>n00</i> Power Supply Unit/CPSU# <i>n</i> Fault<br>< <i>pp ss rr</i> > | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| SCCB          | Error | P 74000 <i>n00</i> SCCB# <i>n</i> Fault < <i>pp ss rr</i> >                      | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| BBU           | Error | P 75000 <i>n00</i> BBU# <i>n</i> Fault < <i>pp ss rr</i> >                       | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| BCU           | Error | P 75000 <i>n00</i> BCU# <i>n</i> Fault < <i>pp ss rr</i> >                       | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| BTU           | Error | P 76000 <i>n00</i> BTU# <i>n</i> Fault < <i>pp ss rr</i> >                       | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |

| Target                                    | Level | Event Display   | Remarks  |
|---|-------|---|--|
| 3.5 Inch DISK                             | Error | P 80.SSUU0NHDD 3.5 DE#UU-Disk#n(SAS xxxGB yykrpm cc) Fault <pp ss rr tt uu>         | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 3.5 Inch Disk (Failed Usable)             | Error | P 80.SSUU0NHDD 3.5 DE#UU-Disk#n(SAS xxxGB yykrpm cc) Failed Usable <pp ss rr tt uu> | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 3.5 Inch Disk (Disk abnormal performance) | Error | P 80.SSUU0NHDD 3.5 DE#UU-Disk#n(SAS xxxGB yykrpm cc) Slow Down <pp ss rr tt uu>     | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 2.5 Inch DISK                             | Error | P 81.SSUNNHDD 2.5 DE#UU-Disk#n(SAS xxxGB yykrpm cc) Fault <pp ss rr tt uu>          | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |

| Target                                       | Level | Event Display   | Remarks  |
|--|-------|---|--|
| 2.5 Inch Disk<br>(Failed Usable)             | Error | P 81.SSUNN HDD 2.5 DE#UU-Disk#n(SAS xxxGB yykrpm cc) Failed Usable <pp ss rr tt uu> | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 2.5 Inch Disk<br>(Disk abnormal performance) | Error | P 81.SSUNN HDD 2.5 DE#UU-Disk#n(SAS xxxGB yykrpm cc) Slow Down <pp ss rr tt uu>     | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 3.5 Inch SSD                                 | Error | P 84.SSUUNSSD 3.5 DE#UU-Slot#n(SAS xxxGB yykrpm cc) Fault <pp ss rr tt uu>          | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 3.5 Inch SSD<br>(Failed Usable)              | Error | P 84.SSUUNSSD 3.5 DE#UU-Slot#n(SAS xxxGB yykrpm cc) Failed Usable <pp ss rr tt uu>  | SS: Parts subtype<br>UU: DE-ID<br>N: Slot No.(hexadecimal notation)<br>n: Slot No.(decimal notation)<br>xxx: Disk capacity<br>yy: Disk rotation<br>cc: Disk information<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision<br>tt: Date Code<br>uu: Config Code |
| 2.5 Inch SSD                                 | Error | P 85.SSUNNSSD 2.5 DE#UU-Slot#n(SAS xxxGB yykrpm cc) Fault <pp ss rr tt uu>          | SS: Parts subtype<br>UU: DE-ID   |

| Target                           | Level | Event Display   | Remarks  |
|----------------------------------|-------|---|--|
|                                  |       |   | <i>N</i> : Slot No.(hexadecimal notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code   |
| 2.5 Inch SSD<br>(Failed Usable)  | Error | P 85. <i>SSUU</i> NNSSD 2.5 DE# <i>UU</i> -Slot# <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<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| 3.5 Inch DISK<br>(Compare Error) | Error | P 88. <i>SSUU</i> 0NHDD 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<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| 2.5 Inch DISK<br>(Compare Error) | Error | P 88. <i>SSUU</i> NNHDD 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<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| 3.5 Inch SSD<br>(Compare Error)  | Error | P 88. <i>SSUU</i> 0NSSD 3.5 DE# <i>UU</i> -Slot# <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<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal notation)<br><i>n</i> : Slot No.(decimal notation)   |

| Target                          | Level | Event Display   | Remarks  |
|---------------------------------|-------|---|--|
|                                 |       |   | <i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code   |
| 2.5 Inch SSD<br>(Compare Error) | Error | P 88. <i>SSUU</i> NSSD 2.5 DE# <i>UU</i> -Slot# <i>n</i> (SAS<br><i>xxx</i> GB <i>yy</i> krpm <i>cc</i> ) Fault < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| IOM6                            | Error | P 90. <i>SSUU</i> <i>n</i> IOM6 DE# <i>UU</i> /IOM# <i>n</i> Fault < <i>pp ss rr</i> >  | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>n</i> : EXP No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| IOM6 Port                       | Error | P 91. <i>SSUU</i> <i>n</i> <i>p</i> IOM6 Port DE# <i>UU</i> /IOM# <i>n</i> /<br>Port# <i>p</i> Fault < <i>pp ss rr</i> >                  | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>n</i> : EXP No.<br><i>p</i> : Port No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| IOM6 QSFP                       | Error | P 9A. <i>SSUU</i> <i>n</i> <i>p</i> IOM6 QSFP DE# <i>UU</i> /IOM# <i>n</i> /<br>Port# <i>p</i> Fault < <i>pp ss rr</i> >                  | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>n</i> : EXP No.<br><i>p</i> : Port No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| PSU                             | Error | P D2. <i>SSUU</i> <i>n</i> Power Supply Unit DE# <i>UU</i> /<br>PSU# <i>n</i> Fault < <i>pp ss rr</i> >                                   | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : 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.SS.UU00 DE Exhaust temperature DE#UU Fatal        | SS : Parts subtype<br>UU : DE-ID |
| DE Abnormal exhaust gas temperature (Sensor failure) | Error   | P DA.SS.UU00 DE Exhaust temperature sensor DE#UU Fault | SS : Parts subtype<br>UU : DE-ID |
| DE Abnormal exhaust gas temperature (WARNING)        | Warning | J DA.SS.UU00 DE Exhaust temperature DE#UU Warning      | SS : Parts subtype<br>UU : DE-ID |
| DE Abnormal intake temperature (Sensor failure)      | Error   | P DB.SS.UU00 DE Intake temperature sensor DE#UU Fault  | SS : Parts subtype<br>UU : DE-ID |
| DE Abnormal intake temperature (WARNING)             | Warning | J DB.SS.UU00 DE Intake temperature DE#UU Warning       | SS : Parts subtype<br>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.<br>b : BTU No.<br>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.<br>b : BTU No.<br>YYYY/MM : Term of validity (year/month)             |
| N days before battery life expiration     | Warning | J 70070n00 BATTERY#b NDAY WARNING WARNING YYYY/MM  | n : Slot No.<br>b : BTU No.<br>N : Days<br>YYYY/MM : Term of validity (year/month) |
| Battery life expiration                   | Error   | J 70FE0n00 BATTERY#b EXPIRATION ALARM YYYY/MM      | n : Slot No.<br>b : BTU No.  |

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

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

| Target              | Level   | Event Display   | Remarks  |
|---------------------|---------|---|--|
| CM SCU Warning      | Warning | J 0FSSMM00 Controller Module# <i>m</i> ( <i>zz</i> ) SCU Warning < <i>pp ss rr</i> >                                | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| CA Warning          | Warning | J 10SSMM00 CA Slot# <i>n-v</i> ( <i>zz</i> ) (on CM# <i>m</i> ) Warning < <i>pp ss rr</i> >                         | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision                        |
| CA Port Warning     | Warning | J 11SSMM00 <i>p</i> CA Slot# <i>n-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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>n</i> : Slot No.<br><i>v</i> : Device No.<br><i>zz</i> : Model<br><i>m</i> : CM No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |
| CM FPGA Warning     | Warning | J 21SSMM00 Controller Module# <i>m</i> ( <i>zz</i> ) FPGA Warning < <i>pp ss rr</i> >                               | <i>SS</i> : Parts subtype<br><i>MM</i> : Module ID<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| CM LAN Port Warning | Warning | J 22SSMM00 <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<br><i>MM</i> : Module ID<br><i>p</i> : Port No.<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><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<br><i>m</i> : CM No.<br><i>zz</i> : Model<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |
| FRT Warning         | Warning | J 4000MM00 FRT# <i>n</i> Warning < <i>pp ss rr</i> >  | <i>MM</i> : Module ID<br><i>n</i> : FRT No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision   |

| Target               | Level   | Event Display   | Remarks   |
|----------------------|---------|---|---|
| BRT Warning          | Warning | J 5000MM00 BRT#n Warning <pp ss rr>                       | MM: Module ID<br>n: BRT No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                              |
| BRT Out Port Warning | Warning | J 5100MM0P BRT#n Out Port#P Warning<br><pp ss rr>         | MM: Module ID<br>n: BRT No.<br>P: Port No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision               |
| BRT In Port Warning  | Warning | J 5200MMvP BRT#n In Port#P Warning <pp ss<br>rr>          | MM: Module ID<br>v: EXP No.<br>n: BRT No.<br>P: Port No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision |
| BRT EXP Warning      | Warning | J 5300MM0v BRT#n EXP#v Warning <pp ss<br>rr>              | MM: Module ID<br>v: EXP No.<br>n: BRT No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                |
| BRT QSFP Warning     | Warning | J 5A00MM0P BRT#n QSFP#P Warning <pp ss<br>rr>             | MM: Module ID<br>n: BRT No.<br>P: Port No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision               |
| SVC Warning          | Warning | J 6000MM00 SVC#n Warning <pp ss rr>                       | MM: Module ID<br>n: SVC No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                              |
| CE FAN UNIT          | Warning | J 71000n00 CE FAN UNIT#n Warning <pp ss<br>rr>            | n: Slot No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision  |
| PANEL UNIT           | Warning | J 72000000 PANEL UNIT Warning <pp ss rr>                  | pp: Parts No.<br>ss: Serial No.<br>rr: Revision   |
| CPSU Warning         | Warning | J 73000n00 Power Supply Unit/CPSU#n<br>Warning <pp ss rr> | n: Slot No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision  |
| BBU Warning          | Warning | J 75000n00 BBU#n Warning <pp ss rr>                       | n: Slot No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision  |
| BCU Warning          | Warning | J 75000n00 BCU#n Warning <pp ss rr>                       | n: Slot No.<br>pp: Parts No.  |

| Target   | Level   | Event Display  | Remarks   |
|--|---------|--|---|
|  |         |  | <i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| BTU Warning  | Warning | J 76000 $\alpha$ 00 BTU# <i>n</i> Warning < <i>pp ss rr</i> >  | <i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision  |
| SMART notice from Disk<br>(3.5inch)                | Warning | J 80 $SSUU0NHDD$ 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) SMART < <i>pp ss rr tt uu</i> >    | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| Disk preventative separation<br>SMART<br>(3.5inch) | Warning | J 80 $SSUU0NHDD$ 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) Warning < <i>pp ss rr tt uu</i> >  | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| Disk abnormal performance<br>SMART<br>(3.5inch)    | Warning | J 80 $SSUU0NHDD$ 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) WarnSlow < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| Disk abnormal performance<br>notice<br>(3.5inch)   | Warning | J 80 $SSUU0NHDD$ 3.5 DE# <i>UU</i> -Disk# <i>n</i> (SAS<br><i>xxxGB yykrpm cc</i> ) SlowDown < <i>pp ss rr tt uu</i> > | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.   |

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

| Target  | Level   | Event Display  | Remarks   |
|---|---------|--|---|
|   |         |  | <i>tt</i> : Date Code<br><i>uu</i> : Config Code  |
| SMART notice from SSD<br>(3.5inch)                | Warning | J 84.SSU0N SSD 3.5 DE#UU-Slot#n(SAS<br>xxxGB yykrpm cc) SMART <pp ss rr tt uu>   | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| SSD preventative separation<br>SMART<br>(3.5inch) | Warning | J 84.SSU0N SSD 3.5 DE#UU-Slot#n(SAS<br>xxxGB yykrpm cc) Warning <pp ss rr tt uu> | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| SMART notice from SSD<br>(2.5inch)                | Warning | J 85.SSU0N SSD 2.5 DE#UU-Slot#n(SAS<br>xxxGB yykrpm cc) SMART <pp ss rr tt uu>   | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |
| SSD preventative separation<br>SMART<br>(2.5inch) | Warning | J 85.SSU0N SSD 2.5 DE#UU-Slot#n(SAS<br>xxxGB yykrpm cc) Warning <pp ss rr tt uu> | <i>SS</i> : Parts subtype<br><i>UU</i> : DE-ID<br><i>N</i> : Slot No.(hexadecimal<br>notation)<br><i>n</i> : Slot No.(decimal notation)<br><i>xxx</i> : Disk capacity<br><i>yy</i> : Disk rotation<br><i>cc</i> : Disk information<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision<br><i>tt</i> : Date Code<br><i>uu</i> : Config Code |



| Target                            | Level   | Event Display   | Remarks  |
|-----------------------------------|---------|---|--|
| IOM6 Warning                      | Warning | J 90.SS UU0n IOM6 DE#UU/IOM#n Warning<br><pp ss rr>   | SS: Parts subtype<br>UU: DE-ID<br>n: EXP No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                                |
| IOM6 Port Warning                 | Warning | J 91.SS UU np IOM6 Port DE#UU/IOM#n/<br>Port#p Warning <pp ss rr>                               | SS: Parts subtype<br>UU: DE-ID<br>n: EXP No.<br>p: Port No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                 |
| IOM6 QSFP Warning                 | Warning | J 9A.SS UU np IOM6 QSFP DE#UU/IOM#n/<br>Port#p Warning <pp ss rr>                               | SS: Parts subtype<br>UU: DE-ID<br>n: EXP No.<br>p: Port No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                 |
| IOM6 Check1                       | Warning | J C190 UU np IOM6 DE#UU/IOM#n Reboot<br><pp ss rr>  | UU: DE-ID<br>n: EXP No.<br>p: Port No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                                      |
| CM Check1                         | Warning | J C1MM0000 Controller Module#m(zz) Reboot<br><pp ss rr>   | MM: Module ID<br>m: CM No.<br>zz: Model<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                                     |
| CA Check1                         | Warning | J C1MM0000 CA Slot#n- v(zz) (on CM#m)<br>Reboot <pp ss rr>                                      | MM: Module ID<br>n: Slot No.<br>v: Device No.<br>zz: Model<br>m: CM No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision     |
| BRT Check1                        | Warning | J C1MM0000 BRT#n Reboot <pp ss rr>  | MM: Module ID<br>n: BRT No.<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision   |
| Multiple memory collectable error | Warning | J C3.SS MM00 Controller Module#m(zz)<br>Cache(MEM #xGB) Slot#nn Correctable Error<br><pp ss rr> | SS: Parts subtype<br>MM: Module ID<br>m: CM No.<br>zz: Model<br>x: Capacity<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision |

| Target      | Level   | Event Display   | Remarks  |
|-------------|---------|---|--|
| PSU Warning | Warning | J D2.SS/UU <i>n</i> Power Supply Unit DE#UU/<br>PSU# <i>n</i> Warning < <i>pp ss rr</i> > | SS : Parts subtype<br>UU : DE-ID<br><i>n</i> : Slot No.<br><i>pp</i> : Parts No.<br><i>ss</i> : Serial No.<br><i>rr</i> : Revision |

### RAID Recovery Notification

| Target  | Level | Event Display   | Remarks                     |
|---|-------|---|-----------------------------|
| Start failure of rebuild to HS (non HS)             | Error | M A0110 <i>xxx</i> RAID Group#0 <i>xxx</i> start failure of Rebuild processing                                | <i>xxx</i> : RAID group No. |
| Start of rebuild to HS                              | Error | M A0410 <i>xxx</i> RAID Group#0 <i>xxx</i> start procedure of Rebuild processing                              | <i>xxx</i> : RAID group No. |
| End of rebuild to HS                                | Error | M A0810 <i>xxx</i> RAID Group#0 <i>xxx</i> normal end of Rebuild processing                                   | <i>xxx</i> : RAID group No. |
| Abnormal end of rebuild to HS (source disk problem) | Error | M A0A10 <i>xxx</i> RAID Group#0 <i>xxx</i> abnormal end of Rebuild processing because of source disk problem  | <i>xxx</i> : RAID group No. |
| Abnormal end of rebuild to HS                       | Error | M A0B10 <i>xxx</i> RAID Group#0 <i>xxx</i> abnormal end of Rebuild processing                                 | <i>xxx</i> : RAID group No. |
| Retry of rebuild to HS                              | Error | M A0C10 <i>xxx</i> RAID Group#0 <i>xxx</i> retry procedure of Rebuild processing                              | <i>xxx</i> : RAID group No. |
| Start of rebuild to DV                              | Error | M A1410 <i>xxx</i> RAID Group#0 <i>xxx</i> start procedure of Rebuild processing                              | <i>xxx</i> : RAID group No. |
| End of rebuild to DV                                | Error | M A1810 <i>xxx</i> RAID Group#0 <i>xxx</i> normal end of Rebuild processing                                   | <i>xxx</i> : RAID group No. |
| Abnormal end of rebuild to DV (source disk problem) | Error | M A1A10 <i>xxx</i> RAID Group#0 <i>xxx</i> abnormal end of Rebuild processing because of source disk problem  | <i>xxx</i> : RAID group No. |
| Abnormal end of rebuild to DV                       | Error | M A1B10 <i>xxx</i> RAID Group#0 <i>xxx</i> abnormal end of Rebuild processing                                 | <i>xxx</i> : RAID group No. |
| Retry of rebuild to DV                              | Error | M A1C10 <i>xxx</i> RAID Group#0 <i>xxx</i> retry procedure of Rebuild processing                              | <i>xxx</i> : RAID group No. |
| Start of Copyback                                   | Error | M A3420 <i>xxx</i> RAID Group#0 <i>xxx</i> start procedure of Copyback processing                             | <i>xxx</i> : RAID group No. |
| End of Copyback                                     | Error | M A3820 <i>xxx</i> RAID Group#0 <i>xxx</i> normal end of Copyback processing                                  | <i>xxx</i> : RAID group No. |
| Abnormal end of Copyback (source disk problem)      | Error | M A3A20 <i>xxx</i> RAID Group#0 <i>xxx</i> abnormal end of Copyback processing because of source disk problem | <i>xxx</i> : RAID group No. |
| Abnormal end of Copyback                            | Error | M A3B20 <i>xxx</i> RAID Group#0 <i>xxx</i> abnormal end of Copyback processing                                | <i>xxx</i> : RAID group No. |
| Retry of Copyback                                   | Error | M A3C20 <i>xxx</i> RAID Group#0 <i>xxx</i> retry procedure of Copyback processing                             | <i>xxx</i> : RAID group No. |
| Start failure of Redundant Copy (non HS)            | Error | M A4130 <i>xxx</i> RAID Group#0 <i>xxx</i> start failure of Redundant Copy processing                         | <i>xxx</i> : RAID group No. |

| Target   | Level | Event Display   | Remarks  |
|--|-------|---|--|
| Start of Redundant Copy                              | Error | M A4430 $xxx$ RAID Group#0 $xxx$ start procedure of Redundant Copy processing                                     | $xxx$ : RAID group No.   |
| 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.<br>$UU$ : DE-ID<br>$nn$ : Slot No.<br>$xx$ : Disk capacity<br>$yy$ : Disk rotation<br>$cc$ : Disk information<br>$pp$ : Parts No.<br>$ss$ : Serial No.<br>$rr$ : 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.<br>$UU$ : DE-ID<br>$nn$ : Slot No.<br>$xx$ : Disk capacity<br>$cc$ : Disk information<br>$pp$ : Parts No.<br>$ss$ : Serial No.<br>$rr$ : 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.<br>$UU$ : DE-ID<br>$nn$ : Slot No.<br>$xx$ : Disk capacity<br>$cc$ : Disk information<br>$pp$ : Parts No.<br>$ss$ : Serial No.<br>$rr$ : 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 (Occurred) | Error | M E10300 $MM$ PINNED DATA was created CM# $m$ -CPU# $v$ | $MM$ : CM module ID where PINNED occurred<br>$m$ : CM No.<br>$v$ : CM CPU No. |
| PINNED Data (Cleared)  | Error | M E1FF00 $MM$ PINNED DATA was cleared CM# $m$ -CPU# $v$ | $MM$ : CM module ID where PINNED cleared<br>$m$ : CM No.<br>$v$ : 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)           |   |

| Target  | Level       | Event Display   | Remarks  |
|---|-------------|---|--|
| 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 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)                        |  |
| NRDY (Factor 26)  | Error       | M E207001A NOT READY(26:TPV Table Restore Fail from System Area)      |  |
| NRDY (Factor 27)  | Error       | M E207001B NOT READY(27:TPV Table Restore Fail to BUD)                |  |
| 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<br>pp : Port No.<br>xx : CM No.<br>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.<br>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.<br>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)            |

| Target  | Level       | Event Display   | Remarks   |
|---|-------------|---|---|
| Use capacity of Ftier Pool has changed.<br>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.<br>NORMAL or CAUTION -> WARNING | Information | M E8080xxx FTRP#xxx turned to WARNING(decrease of available capacity)                     | xxx : FTRP No. (hexadecimal notation)                                     |
| Lack of Ftier pool capacity   | Information | M E8090xxx FTRP#xxx was all allocated   | xxx : FTRP No. (hexadecimal notation)                                     |
| Copy session<br>[Active -> Error]                                       | Error       | M 13CE0001 Error session was detected. (Local:xxxxx Remote:xxxxx)                         | xxxxx : Number of copy sessions that status is Error                      |
| Copy session<br>[Suspend -> Error]                                      | Error       | M 13CE0002 Foreseen error session was detected. (Local:xxxxx Remote:xxxxx)                | xxxxx : Number of copy sessions that status changed from Suspend to Error |
| Copy session<br>[Active -> Halt]  | Error       | M 13CE0003 Halt session was detected. (Remote:xxxxx)                                      | xxxxx : Number of copy sessions that status is Halt                       |
| Copy session<br>[Error -> Idle]   | Error       | M 13CE0004 Error session was cleared.   |   |
| Copy session<br>[Suspend -> Error -> Idle]                              | Error       | M 13CE0005 Foreseen error session was cleared.  |   |
| Copy session<br>[Halt -> Active]  | Error       | M 13CE0006 Halt session was cleared.  |   |
| Key Management Server communication Error                               | Error       | M E928xyyy Key Management Server communication Error (Key Server ID #xx)(Key Group ID#yy) | xx : Key server ID<br>yy : Key group ID                                   |

## Recovery Notification

| Target                       | Level       | Event Display  | Remarks  |
|------------------------------|-------------|--|--|
| CM Warning recovery          | Information | R 01.SSMM00 Controller Module#m(zz)<br>Normal <pp ss rr>       | SS : Parts subtype<br>UU : Module ID<br>m : CM No.<br>zz : Model<br>pp : Parts No.<br>ss : Serial No.<br>rr : Revision                   |
| CM Expander Warning recovery | Information | R 01.SSMM0v Controller Module#m(zz)<br>EXP#v Normal <pp ss rr> | SS : Parts subtype<br>UU : Module ID<br>v : Device No.<br>m : CM No.<br>zz : Model<br>pp : Parts No.<br>ss : Serial No.<br>rr : Revision |
| IOM6 Warning recovery        | Information | R 90.SSUU0n IOM6 DE#UU/IOM#n Normal<br><pp ss rr>              | SS : Parts subtype<br>UU : DE-ID<br>n : EXP No.<br>pp : Parts No.<br>ss : Serial No.<br>rr : Revision                                    |

| Target                                   | Level       | Event Display  | Remarks  |
|--|-------------|--|--|
| CPSU Alarm recovery (AC-Fail clear)      | Information | R 73000n00 Power Supply Unit/CPSU#n<br>Normal <pp ss rr>       | N: Side 0, side 1<br>pp: Parts No.<br>ss: Serial No.<br>rr: Revision                                   |
| PSU Alarm recovery (AC-Fail clear)       | Information | R D2SSUU0n Power Supply Unit DE#UU/<br>PSU#n Normal <pp ss rr> | SS: Parts subtype<br>UU: DE-ID<br>N: Side 0, side 1<br>pp: Parts No.<br>ss: Serial No.<br>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<br>DE#UU Normal             | SS: Parts subtype<br>UU: DE-ID   |
| DE intake air temperature alarm recovery | Information | R DB.SSUU00 DE Intake temperature DE#UU<br>Normal              | SS: Parts subtype<br>UU: DE-ID   |

#### CA Port Link Status Notification

| Target              | Level       | Event Display  | Remarks   |
|---------------------|-------------|--|---|
| CA port link status | Information | I 03000001 The status of Link became \$a in<br>CM#\$b CA#\$c Port#\$d. | \$a: Link Status (LinkUp,<br>LinkDown)<br>\$b: CM No. (0-7)<br>\$c: CA No. (0-3)<br>\$d: Port No. (0-3) |

## 4.3 ETERNUS DX100 S3/DX200 S3

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

Express and Storage Cruiser receive event traps that are described in the hardware manual.

#### Specific Trap (Extended Trap)

| Trap No. | Explanation  |
|----------|--|
| 2        | This Trap is sent to notify that a component fails or degrades.                            |
| 5        | This Trap is sent to notify that a component requires preventive maintenance.              |
| 6        | This Trap is sent to notify that a temperature error is detected.                          |
| 7        | This Trap is sent to notify that an event requires maintenance or preventive maintenance.  |
| 10       | This trap is sent to notify that the link status of a CA port is changed.                  |
| 22       | This Trap is sent to notify that an event notified by Trap No. 2 returns to normal status. |
| 25       | This Trap is sent to notify that an event notified by Trap No. 5 returns to normal status. |
| 26       | This Trap is sent to notify that an event notified by Trap No. 6 returns to normal status. |
| 50       | This Trap is sent to notify Error-level events.  |
| 51       | This Trap is sent to notify Warning-level events.  |

To change the event traps to be received, refer to "SNMP Trap XML Definition File" in the *ETERNUS SF Storage Cruiser Operation Guide* to modify the SNMP Trap XML definition file.

## 4.4 ETERNUS DX400 series, DX8000 series

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

### Notification of Component Blockage

| Target                | Level | Event Display   | Remarks  |
|-----------------------|-------|---|--|
| CM Unit               | Error | P 010tMM00 CM#MMFault   | t : Type(1-3)<br>MM: Module ID(10-11)  |
| CM Mantaray SP        | Error | P 030tMMnn CM#MMDMA PORT Alarm                                | t : Type(1-3)<br>MM: Module ID(10-17)<br>nn : Chip No.(0-1)  |
| CM DI NP              | Error | P 040tMMnn CM#MMDI Alarm                                      | t : Type(1-3)<br>MM: Module ID(10-17)<br>nn : Chip No.(0-1)  |
| CM DI SP              | Error | P 0500MMnn CM#MMDI PORT Alarm                                 | MM: Module ID(10-17)<br>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(10-17)   |
| CM DI SP/Path         | Error | P 0A00MMnn CM#MMDI PORT/PATH Alarm                            | MM: Module ID(10-11)<br>nn : Port No.(0-7)   |
| CM Memory:512MB       | Error | P 0B1tMMnn CM#MMMEMORY(512MB) Fault                           | t : Type(1-2)<br>MM: Module ID(10-17)<br>nn : Slot No.(0-3)  |
| CM Memory:1GB         | Error | P 0B2tMMnn CM#MM MEMORY(1024MB) Fault                         | t : Type(1-2)<br>MM: Module ID(10-17)<br>nn : Slot No.(0-3)  |
| CM Memory:2GB         | Error | P 0B4tMMnn CM#MM MEMORY(2048MB) Fault                         | t : Type(1-2)<br>MM: Module ID(10-17)<br>nn : Slot No.(0-3)  |
| CM Memory:4GB         | Error | P 0B8tMMnn CM#MM MEMORY(4096MB) Fault                         | t : Type(1-2)<br>MM: Module ID(10-17)<br>nn : Slot No.(0-3)  |
| Compact Flash         | Error | P 0C0tMM00 CM#MMCOMPACT FLASH Fault                           | t : Type(1-3)<br>MM: Module ID(10-17)  |
| CM FAN UNIT           | Error | P 0D00MM00 CM#MMFAN UNIT Fault                                | MM: Module ID(10-17)   |
| CA                    | Error | P 10ttMM00 CA#MM(on CM#XX) CaType Fault                       | tt : Type(00-19)<br>MM: CA Module ID(40-4F,,,70-7F)<br>XX: CM Module ID(10-17)                         |
| CA Port               | Error | P 11ttMMnn CA#MM(on CM#XX) CaType PORT Alarm                  | tt : Type(00-19)<br>MM: CA Module ID(40-4F,,,70-7F)<br>XX: CM Module ID(10-17)<br>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)<br>MM: CA Module ID(40-4F,,,70-7F)  |

| Target                         | Level | Event Display   | Remarks   |
|--------------------------------|-------|---|---|
|                                |       |   | <i>XX</i> : CM Module ID(10-17)<br><i>nn</i> : Port No.(00-01)  |
| SFP Optical Longwave           | Error | P 1B <i>ttMMnn</i> CA# <i>MM</i> (on CM# <i>XX</i> ) <i>CaType</i><br>SFP OPTICAL LONGWAVE Fault        | <i>tt</i> : Type(00,18)<br><i>MM</i> : CA Module ID(40-4F,,,70-7F)<br><i>XX</i> : CM Module ID(10-17)<br><i>nn</i> : Port No.(00-01)                                  |
| XFP (UndefCA)                  | Error | P 1C <i>ttMMnn</i> CA# <i>MM</i> (on CM# <i>XX</i> ) <i>CaType</i><br>XFP Fault                         | <i>tt</i> : Type(00-0F)<br><i>MM</i> : CA Module ID(40-4F,,,70-7F)<br><i>XX</i> : CM Module ID(10-17)<br><i>nn</i> : Port No.(00-01)                                  |
| SFP+ Optical Shortwave         | Error | P 1C <i>ttMMnn</i> CA# <i>MM</i> (on CM# <i>XX</i> ) <i>CaType</i><br>SFP+ OPTICAL SHORTWAVE Fault      | <i>tt</i> : Type(00-09)<br><i>MM</i> : CA Module ID(40-4F,,,70-7F)<br><i>XX</i> : CM Module ID(10-17)<br><i>nn</i> : Port No.(00-01)                                  |
| SFP Optical Longwave           | Error | P 1D <i>ttMMnn</i> CA# <i>MM</i> (on CM# <i>XX</i> )<br><i>CaType</i> SFP OPTICAL LONGWAVE Fault        | <i>tt</i> : Type(00-06)<br><i>MM</i> : CA Module ID(40-4F,,,70-7F)<br><i>XX</i> : CM Module ID(10-17)<br><i>nn</i> : Port No.(00-01)                                  |
| SFP Unknown                    | Error | P 1F <i>ttMMnn</i> CA# <i>MM</i> (on CM# <i>XX</i> ) SFP<br>Type Unknown Fault                          | <i>tt</i> : Type(03-06)<br><i>MM</i> : CA Module ID(40-4F,,,70-7F)<br><i>XX</i> : CM Module ID(10-17)<br><i>nn</i> : Port No.(00-01)                                  |
| FRT                            | Error | P 400 <i>tMM00</i> FRT Fault  | <i>t</i> : Type(0,1)<br><i>MM</i> : Module ID(F0-F1)  |
| BRT                            | Error | P 5000 <i>MM00</i> BRT Fault  | <i>MM</i> : Module ID(B0-B7)  |
| BRT Port/Path                  | Error | P 5100 <i>MMnn</i> BRT PORT/PATH Alarm  | <i>MM</i> : Module ID(B0-B7)<br><i>nn</i> : Port No.(00-07)   |
| SFP Optical Shortwave<br>(BRT) | Error | P 5A00 <i>MMnn</i> BRT SFP OPTICAL<br>SHORTWAVE Fault   | <i>MM</i> : Module ID(B0-B7)<br><i>nn</i> : Port No.(00-07)   |
| SVC                            | Error | P 6000 <i>MM00</i> SVC Fault  | <i>MM</i> : Module ID(E0-E1)  |
| CE FAN UNIT                    | Error | P 710 <i>tnn00</i> CE FAN UNIT Fault  | <i>t</i> : Type(1,2)<br><i>nn</i> : Slot No.  |
| OPNL UNIT                      | Error | P 720 <i>0000</i> PANEL UNIT Fault  | <i>t</i> : Type(1,2)  |
| CPSU                           | Error | P 730 <i>tnn00</i> CPSU Fault   | <i>t</i> : Type(1,2)<br><i>nn</i> : Slot No.  |
| SCCI                           | Error | P 740 <i>tnn00</i> SCCI CABLE Fault   | <i>t</i> : Type(1,2)<br><i>nn</i> : Slot No.  |
| BCU                            | Error | P 7500 <i>nn00</i> BCU Fault  | <i>nn</i> : Slot No.  |
| BTU                            | Error | P 760 <i>tnn00</i> BTU Fault  | <i>t</i> : Type(1,2)<br><i>nn</i> : Slot No.  |
| BBU Signal CABLE               | Error | P 7700 <i>MM00</i> BBU SIG CABLE Fault  | <i>MM</i> : Module ID(10-11)  |
| 3.5 Inch DISK                  | Error | P 80 <i>ttDDnn</i> <i>PP</i> <i>xx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> Fault | <i>tt</i> : Type<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-0E)<br><i>PP</i> : Product ID(Disk)<br><i>xx</i> : Disk capacity<br><i>cccccc</i> : Disk information |



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

| Target                            | Level | Event Display   | Remarks   |
|-----------------------------------|-------|---|---|
|                                   |       |   | <i>xx</i> : Disk capacity<br><i>cccccc</i> : Disk information   |
| Solid State Drive                 | Error | P 84 <i>ttDDnn PP xx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> Fault     | <i>tt</i> : Type<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-0E)<br><i>PP</i> : Product ID(Disk)<br><i>xx</i> : Disk capacity<br><i>cccccc</i> : Disk information |
| Solid State Drive (Failed Usable) | Error | P 84 <i>ttDDnn PP xx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> FailedUse | <i>tt</i> : Type<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-0E)<br><i>PP</i> : Product ID(Disk)<br><i>xx</i> : Disk capacity<br><i>cccccc</i> : Disk information |
| Solid State Drive (Compare Error) | Error | P 84 <i>ttDDnn PP xx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> Fault     | <i>tt</i> : Type<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-0E)<br><i>PP</i> : Product ID(Disk)<br><i>xx</i> : Disk capacity<br><i>cccccc</i> : Disk information |
| PBC (15DE)                        | Error | P 9001 <i>DD0N</i> PBC Fault  | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1  |
| PBC (30DE)                        | Error | P 9002 <i>DD0N</i> PBC Fault  | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1  |
| PBC Port                          | Error | P 9100 <i>DDNn</i> PBC PORT Alarm   | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1<br><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<br><i>N</i> : Side 0, side 1<br><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<br><i>N</i> : Side 0, side 1<br><i>n</i> : Port No.(0-3)  |
| DEI CABLE                         | Error | P 9C00 <i>DD0N</i> DEI CABLE Fault  | <i>DD</i> : DE-ID<br><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>tDD0N</i> DPSU Fault   | <i>t</i> : Type(1-3)<br><i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1  |
| BBU CABLE                         | Error | P D300 <i>DD0N</i> BBU CABLE Fault  | <i>DD</i> : DE-ID<br><i>N</i> : Side 0, side 1  |

### Warning (Temperature Alarm)

| Target                                 | Level   | Event Display                  | Remarks                            |
|--|---------|--------------------------------|------------------------------------|
| CE exhaust temperature alarm (FATAL)   | Error   | P 7A00 <i>EEEE</i> CE OUT TEMP | <i>EEEE</i> : Position information |
| CE exhaust temperature alarm (WARNING) | Warning | J 7A00 <i>EEEE</i> CE OUT TEMP | <i>EEEE</i> : Position information |

| Target   | Level   | Event Display          | Remarks                     |
|--|---------|------------------------|-----------------------------|
| CE intake air temperature alarm (WARNING)        | Warning | J 7B00EEEE CE IN TEMP  | EEEE : Position information |
| 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.<br>N : Battery No. (0 - 7)<br>YYYY/MM : Term of validity (year/month)                     |
| One week before battery life expiration   | Warning | J 7007nn00 BATTERY N1WEEK WARNING YYYY/MM    | nn : Slot No.<br>N : Battery No. (0 - 7)<br>YYYY/MM : Term of validity (year/month)                     |
| N day before battery life expiration      | Warning | J 7007nn00 BATTERY N zDAY WARNING YYYY/MM    | nn : Slot No.<br>N : Battery No. (0 - 7)<br>z : Days (1 - 6)<br>YYYY/MM : Term of validity (year/month) |
| Battery life expiration                   | Error   | J 70FEnn00 BATTERY NEXPIRATION ALARM YYYY/MM | nn : Slot No.<br>N : Battery No. (0 - 2)<br>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)<br>MM : CM Module ID(10-17)<br>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)<br>MM : CM Module ID(10-17)<br>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)<br>MM : CM Module ID(10-17)<br>nn : Slot No.(0-7) |

| Target   | Level   | Event Display   | Remarks  |
|--|---------|---|--|
| Frequent occurrence of a correctable memory error: 4GB         | Warning | J C38tMMnn CM#MM<br>MEMORY(4096MB) Correctable Error      | t: Type(1,2)<br>MM: CM Module ID(10-17)<br>nn: Slot No.(0-7)   |
| CM warning (statistics/other)                                  | Warning | J 01tEEEE CM#MM Warning                                   | tt: Type<br>EEEE: Position information<br>MM: CM Module ID(10-17)  |
| CM Warning (MCE Correctable)                                   | Warning | J 01tEEEE CM#MM MCE Correctable Error                     | tt: Type<br>EEEE: Position information<br>MM: CM Module ID(10-17)  |
| CM Warning (FAN)   | Warning | J 01tEEEE CM#MM FAN Alarm                                 | tt: Type<br>EEEE: Position information<br>MM: CM Module ID(10-17)  |
| CM Warning (IN TEMP ALARM)                                     | Warning | J 01tEEEE CM#MM IN TEMP Alarm                             | tt: Type<br>EEEE: Position information<br>MM: CM Module ID(10-17)  |
| CM Warning (IN TEMP SENSOR)                                    | Warning | J 01tEEEE CM#MM IN TEMP SENSOR Alarm                      | tt: Type<br>EEEE: Position information<br>MM: CM Module ID(10-17)  |
| CM Warning (RTC ALARM)   | Warning | J 01tEEEE CM#MM RTC Alarm                                 | tt: Type<br>EEEE: Position information<br>MM: CM Module ID(10-17)  |
| CF Warning   | Warning | J 0C0tMM00 CM#MM COMPACT FLASH Warning                    | t: Type(1-3)<br>MM: CM Module ID(10-17)  |
| CA Warning (Undefined)   | Warning | J 10tMM00 CA#MM(on CM#XX) CaType Warning                  | tt: Type(00-19)<br>MM: CA Module ID(40-4F,,,70-7F)<br>XX: CM Module ID(10-17)  |
| FRT Warning  | Warning | J 400tMM00 FRT Warning                                    | t: Type(1,2)<br>MM: FRT Module ID(F0,F1)   |
| BRT Warning  | Warning | J 5000MM00 BRT Warning                                    | MM: BRT Module ID(B0-B7)   |
| SMART notification from a disk (3.5-inch)                      | Warning | J 80tEEEE PP xxxGB DISK(cccccc)<br>DE#DD/Slot#nn SMART    | tt: Type<br>EEEE: Position information<br>PP: Product ID(Disk)<br>cccccc: Disk information<br>DD: DE-ID<br>nn: Slot No.(00-0E) |
| SMART: Preventive disk disconnection (3.5-inch)                | Warning | J 80tEEEE PP xxxGB DISK(cccccc)<br>DE#DD/Slot#nn Warning  | tt: Type<br>EEEE: Position information<br>PP: Product ID(Disk)<br>cccccc: Disk information<br>DD: DE-ID<br>nn: Slot No.(00-0E) |
| SMART: Disk performance abnormal (3.5-inch)                    | Warning | J 80tEEEE PP xxxGB DISK(cccccc)<br>DE#DD/Slot#nn WarnSlow | tt: Type<br>EEEE: Position information<br>PP: Product ID(Disk)<br>cccccc: Disk information<br>DD: DE-ID<br>nn: Slot No.(00-0E) |
| Detection notification of disk performance abnormal (3.5-inch) | Warning | J 80tEEEE PP xxxGB DISK(cccccc)<br>DE#DD/Slot#nn Slowdown | tt: Type<br>EEEE: Position information<br>PP: Product ID(Disk)   |

| Target   | Level   | Event Display  | Remarks  |
|--|---------|--|--|
|  |         |  | <i>cccccc</i> : Disk information<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-0E)   |
| SMART notification from a disk (2.5-inch)            | Warning | J 81 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> SMART   | <i>tt</i> : Type<br><i>EEEE</i> : Position information<br><i>PP</i> : Product ID(Disk)<br><i>cccccc</i> : Disk information<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-1D) |
| SMART: Preventive disk disconnection (2.5-inch)      | Warning | J 81 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> Warning | <i>tt</i> : Type<br><i>EEEE</i> : Position information<br><i>PP</i> : Product ID(Disk)<br><i>cccccc</i> : Disk information<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-1D) |
| SMART notification from a SATA disk (3.5-inch)       | Warning | J 82 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> SMART   | <i>tt</i> : Type<br><i>EEEE</i> : Position information<br><i>PP</i> : Product ID(Disk)<br><i>cccccc</i> : Disk information<br><i>DD</i> : DE-ID<br><i>nn</i> : Slot No.(00-1D) |
| SMART: Preventive SATA disk disconnection (3.5-inch) | Warning | J 82 <i>ttEEEE PP xxx</i> GB DISK( <i>cccccc</i> )<br>DE# <i>DD</i> /Slot# <i>nn</i> Warning | <i>tt</i> : Type<br><i>EEEE</i> : Position information<br><i>PP</i> : Product ID(Disk)<br><i>cccccc</i> : Disk information<br><i>DD</i> : DE-ID<br><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)   |  |
| NRDY (cause 11) | Error | M E207000B NOT READY(11:Power Off/Fail Incomplete)      |  |

| Target  | Level       | Event Display   | Remarks   |
|---|-------------|---|---|
| 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<br>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.<br>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.<br>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.<br>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.<br>CAUTION or WARNING -> NORMAL | Information | M E8040xxx Pool#xxx returned to NORMAL(increase of available capacity)  | xxx : Thin Provisioning Pool No. (hexadecimal notation) |

## 4.5 ETERNUS DX400 S2 series, DX8000 S2 series

Refer to "4.2 ETERNUS DX80 S2/DX90 S2".

## 4.6 ETERNUS DX500 S3/DX600 S3

Refer to "4.3 ETERNUS DX100 S3/DX200 S3".

## 4.7 ETERNUS VS850

An event trap is a message that is sent from the device. Refer to the relevant hardware manual for information on these messages, and take appropriate action.

| Level       | Event Display  | Failure Event                 |
|-------------|--|-------------------------------|
| Information | ErrorCode=\$1, ErrorID=\$2, Node=\$3, FRU=\$4, Msg=\$5 | A warning 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.  |

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.

## 4.8 NetApp FAS Series and V-Series

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the relevant hardware manual and then 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: |

| Failure Event  | Level       | Event Display  |
|--|-------------|--|
|  |             | userDefined == 20670538 priority == informational  |
| User definition (caution)                                  | Error       | The device trap message is output as is. Display example is as follows:<br>userDefined == 20670538 priority == informational                         |
| User definition (important)                                | Error       | The device trap message is output as is. Display example is as follows:<br>userDefined == 20670538 priority == informational                         |
| User definition (error)                                    | Error       | The device trap message is output as is. Display example is as follows:<br>userDefined == 20670538 priority == informational                         |
| User definition (warning)                                  | Warning     | The device trap message is output as is. Display example is as follows:<br>userDefined == 20670538 priority == informational                         |
| User definition (notice)                                   | Information | The device trap message is output as is. Display example is as follows:<br>userDefined == 20670538 priority == informational                         |
| User definition (information)                              | Information | The device trap message is output as is. Display example is as follows:<br>userDefined == 20670538 priority == informational                         |
| User definition (debug)                                    | Information | The device trap message is output as is. Display example is as follows:<br>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:<br>data disk in RAID group /voll/plex0/rg0 is broken.<br>Halting system now. |
| Disk failure   | Error       | The device trap message is output as is. Display example is as follows:<br>data disk in RAID group /voll/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:<br>Multiple chassis fan enclosures have failed: Fans 1/2<br>Fans 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:<br>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:<br>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:<br>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:<br>Power supply 2 is powered off   |
| Power supply recovery                                      | Information | The device trap message is output as is. Display example is as follows:  |



| Failure Event  | Level       | Event Display   |
|--|-------------|---|
|  |             | 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:<br>Cluster monitor: takeover started  |
| Cluster node takeover                                | Information | The device trap message is output as is. Display example is as follows:<br>Cluster monitor: takeover completed  |
| Cluster recovery notification                        | Information | The device trap message is output as is. Display example is as follows:<br>Cluster monitor: giveback completed  |
| Volume usage rate warning (98%)                      | Warning     | The device trap message is output as is. Display example is as follows:<br>/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:<br>/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:<br>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:<br>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:<br>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:<br>Disk shelf fault.  |
| global Status NonCritical                            | Warning     | The device trap message is output as is. Display example is as follows:<br>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:<br>The system's global status is normal.  |

| Failure Event   | Level       | Event Display   |
|---|-------------|---|
| "soft Quota" threshold exceeded   | Warning     | The device trap message is output as is. Display example is as follows:<br>Threshold exceeded for user 1008, tree 0 on volume voll  |
| "soft Quota" normal   | Information | The device trap message is output as is. Display example is as follows:<br>Soft block limit returned to normal for user 1008, tree 0 on volume voll   |
| autosupport transfer error  | Warning     | The device trap message is output as is. Display example is as follows:<br>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:<br>Autosupport cannot connect to host lavender (Unknown mhost)  |
| autosupport transmission  | Information | The device trap message is output as is. Display example is as follows:<br>System Notification mail sent  |
| UPS power being supplied  | Warning     | The device trap message is output as is. Display example is as follows:<br>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:<br>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:<br>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:<br>Quota Event: status=exceeded, type=threshold, volume=voll, 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:<br>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:<br>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:<br>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.  |

| Failure Event   | Level       | Event Display                            |
|---|-------------|--|
| Volume offline  | Information | The device trap message is output as is. |
| 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. |

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

| Failure Event  | Level       | Event Display                            |
|--|-------------|--|
| LUN clone created  | Information | The device trap message is output as is. |
| 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 failure  | 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. |
| Cutover phase of volume move job has been deferred   | Warning     | The device trap message is output as is. |
| Cutover phase of volume move job attempt resulted in failure                                   | Error       | The device trap message is output as is. |
| A volume move job completed successfully   | Information | The device trap message is output as is. |
| A volume move is waiting for the user to trigger cutover                                       | Information | The device trap message is output as is. |
| The anti-virus software update failed.   | Error       | The device trap message is output as is. |
| The anti-virus software license validation failed.   | Error       | The device trap message is output as is. |
| McAfee product has expired.  | Error       | The device trap message is output as is. |
| Remedy action taken. The file has been repaired, deleted or quarantined.                       | Information | The device trap message is output as is. |
| License validation was successful.   | Information | The device trap message is output as is. |
| Remedy action failed. The file was not repaired, deleted or quarantined.                       | Error       | The device trap message is output as is. |
| McAfee engine has expired.   | Error       | The device trap message is output as is. |
| McAfee product is expiring.  | Warning     | The device trap message is output as is. |
| A file larger than 2GB is not scanned and marked as clean.                                     | Warning     | The device trap message is output as is. |
| McAfee engine is expiring.   | Warning     | The device trap message is output as is. |

| Failure Event  | Level       | Event Display                            |
|--|-------------|--|
| Virus found while scanning.                                      | Warning     | The device trap message is output as is. |
| McAfee anti-virus license activation failed.                     | Error       | The device trap message is output as is. |
| The anti-virus service disabling failed in the clustered system. | Error       | The device trap message is output as is. |
| The anti-virus service is disabled in the clustered system.      | Information | The device trap message is output as is. |
| McAfee anti-virus license is about to expire.                    | Warning     | The device trap message is output as is. |
| The anti-virus service is enabled in the clustered system.       | Information | The device trap message is output as is. |
| Spyware found while scanning.                                    | Warning     | The device trap message is output as is. |
| The anti-virus service enabling failed in the clustered system.  | Error       | The device trap message is output as is. |
| The anti-virus software cannot be rolled back.                   | Error       | The device trap message is output as is. |
| The anti-virus software is rolled back.                          | Information | The device trap message is output as is. |
| The anti-virus software is updated.                              | Information | The device trap message is output as is. |

# Chapter 5 Tape Library Events

## 5.1 ETERNUS LT20/LT40/LT60

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

## 5.2 ETERNUS LT200

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the relevant hardware manual and then 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<br>or<br>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   |

## 5.3 ETERNUS LT210/LT220/LT230

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

| Failure Event               | Level | Event Display                                  |
|-----------------------------|-------|--|
| Library error (Fatal error) | Error | emergency: controller: ROBOT01 Broken CHK=XXXX |



| Failure Event                                 | Level       | Event Display  |
|---|-------------|--|
| 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<br>or<br>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   |

## 5.4 ETERNUS LT250

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the relevant hardware manual and then 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.   |
| 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.   |

| Failure Event                      | Level   | Event Display  |
|------------------------------------|---------|--|
| 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.   |
| 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.   |

## 5.5 ETERNUS LT270

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the relevant hardware manual and then 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=xxxxx)   |
| 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.         |
| 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.   |

| Failure Event                | Level   | Event Display   |
|------------------------------|---------|---|
| 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:xxxx).                  |
| Reach Media Life             | Warning | Media reached at the end of life (Barcode Label:xxxx).                |
| Reach ROBOT life             | Warning | Robot#number reached at the end of life.                              |
| Reach Drive Life             | Warning | Drive#number reached at the end of life.                              |

## 5.6 ETERNUS LT270 S2

Event traps are messages reported from a device. If you have any questions about the message contents, refer to the relevant hardware manual and then 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,Cabinet Number=number). |
| Barcode reader error       | Warning | Barcode reader in robot #number of cabinet #number failed.  |
| CM error                   | Warning | An error occurred in media error (CM fail) (Barcode Label=xxxxx, cabinet #number).                                      |
| CAS cell error             | Warning | CAS unit #number of cabinet #number failed.   |
| Cell error                 | Warning | Cell unit of cabinet #number failed (Barcode Label: xxxxx).   |
| CIC sensor error           | Warning | CIC sensor in robot #number of cabinet #number failed.  |
| Battery alarm              | Warning | Battery unit in LCT of cabinet #number failed.  |
| Shelf 0 fan alarm          | Warning | Shelf FAN 0 of cabinet #number failed.  |
| Shelf 1 fan alarm          | Warning | Shelf FAN 1 of cabinet #number failed.  |
| Shelf 2 fan alarm          | Warning | Shelf FAN 2 of cabinet #number failed.  |
| CAS open error             | Warning | An open error occurred in CAS unit #number of cabinet #number.  |
| FC/SCSI adapter card error | Warning | Adapter #number failed.   |
| Firmware BOOTUP alarm      | Warning | The LCT of cabinet #number bootup alarm occurred.   |
| EEPROM error               | Warning | EEPROM failed.  |
| PSU alarm                  | Warning | PSU unit #number of cabinet #number failed.   |
| PSU power off alarm        | Warning | Power-off occurred in PSU unit #number of cabinet #number.  |
| PSU FAN alarm              | Warning | PSU unit #number of cabinet #number FAN failed.   |
| Temperature alarm          | Warning | Cabinet #number temperature increased (temperature degree C), leading to an alarm.                                      |

| Failure Event  | Level   | Event Display  |
|--|---------|--|
| Temperature abnormality error                          | Error   | Cabinet #number temperature increased abnormally (temperature degree C), leading to a library system fail.                           |
| Humidity alarm   | Warning | Cabinet #number humidity (humidity %) is abnormal.   |
| ROBOT Down alarm                                       | Warning | Robot #number of cabinet #number failed.   |
| Front door open (during operation)                     | Warning | Front door of cabinet #number was opened.  |
| Nearing no cleaning tape                               | Warning | The installed cleaning cartridges of cabinet #number will reach a limit soon.  |
| Expired deadline for cleaning                          | Warning | Maximum number of uses of cleaning cell #number of cabinet #number (Barcode Label: xxxxx) was reached.                               |
| Cleaning cartridge none                                | Warning | Cleaning cartridge of cabinet #number is not available.  |
| ROBOT Serdes alarm                                     | Warning | Serdes in robot #number of cabinet #number failed.   |
| Power control card alarm                               | Warning | Power control card failed.   |
| LCD power off alarm                                    | Warning | Power-off occurred in operation panel of cabinet #number.  |
| Drive hardware error                                   | Error   | An error occurred in drive #number of cabinet #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: xxxxx).   |
| Fan alarm  | Warning | A FAN alarm occurred in drive #number of cabinet #number.  |
| Cleaning request                                       | Warning | Drive #number of cabinet #number needs cleaning. Perform cleaning.   |
| LCT/DCT IF failure                                     | Warning | Interface between LCT and DCI (drive cluster #number of cabinet #number) failed.   |
| DCI failure  | Warning | DCI in drive cluster #number of cabinet #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).   |
| Nearing ROBOT Life                                     | Warning | Robot #number of cabinet #number soon will be end of life.   |
| Reach ROBOT life                                       | Warning | Robot #number of cabinet #number reached at the end of life.   |
| Nearing Drive Life                                     | Warning | Drive #number of cabinet #number soon will be end of life.   |
| Reach Drive Life                                       | Warning | Drive #number of cabinet #number reached at the end of life.   |
| Encryption key delivery abnormality over threshold     | Warning | Key send retry threshold over.   |
| Standby ROBOT patrol failure                           | Warning | Standby robot of cabinet #number patrol warning occurred.  |
| Robot RPS over threshold                               | Warning | Robot of cabinet #number hang down warning occurred.   |
| Cabinet through has reached end of life                | Warning | Cabinet through #number reached at the end of life.  |
| Cabinet through stopped because the front door is open | Warning | Cabinet through stopped because of front door opened.  |
| Cabinet through down alarm                             | Warning | Cabinet through #number failed.  |
| Standby cabinet through down alarm                     | Warning | Standby cabinet through #number failed.  |
| LAN HUB0 error   | Warning | LAN HUB0 of cabinet #number failed.  |
| LAN HUB1 error   | Warning | LAN HUB1 of cabinet #number failed.  |
| Library firmware mismatch                              | Warning | Library firmware unmatch occurred in cabinet #number.  |
| Library cabinet down                                   | Warning | Cabinet fail occurred in cabinet #number.  |
| I2C connection error                                   | Warning | I2C connection error has occurred.   |

| Failure Event            | Level   | Event Display                          |
|--------------------------|---------|--|
| Cabinet connection error | Warning | Cabinet connection error has occurred. |

## 5.7 ETERNUS CS800/CS800 S2/CS800 S3

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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.

## Chapter 6 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:

- The *status* is replaced with any of "Unknown", "Online", "Offline", "Bypassed", or "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/ <i>status</i>        |
| The status of the unit has changed to warning.                                     | Warning                           | The status of the unit has changed to Warning/ <i>status</i>   |
| The status of the unit has changed to unknown.                                     | Warning                           | The status of the unit has changed to Unknown/ <i>status</i>   |
| The status of the unit has changed to error.                                       | Error                             | The status of the unit has changed to FAILED/ <i>status</i>    |
| The status of the power supply, fan, or temperature sensor has changed to normal.  | Information                       | The status of the sensor has changed to OK/ <i>status</i>      |
| The status of the power supply, fan, or temperature sensor has changed to warning. | Warning                           | The status of the sensor has changed to Warning/ <i>status</i> |
| The status of the power supply, fan, or temperature sensor has changed to unknown. | Warning                           | The status of the sensor has changed to Unknown/ <i>status</i> |
| The status of the power supply, fan, or temperature sensor has changed to error.   | Error                             | The status of the sensor has changed to FAILED/ <i>status</i>  |
| The status of the Fibre Channel port has changed to normal.                        | Information                       | The status of the port has changed to Ready/ <i>status</i>     |
| The status of the Fibre Channel port has changed to warning.                       | Warning                           | The status of the port has changed to Warning/ <i>status</i>   |
| The status of the Fibre Channel port has changed to unknown.                       | Warning                           | The status of the port has changed to Unknown/ <i>status</i>   |
| The status of the Fibre Channel port has changed to error.                         | Error                             | The status of the port has changed to FAILURE/ <i>status</i>   |
| Event trap   | Error,<br>Warning,<br>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.

# Chapter 7 Performance Management Traps

## Failure Event of Performance Monitoring

| Failure Event                             | Level       | Event Display                          | Troubleshooting  |
|---|-------------|--|--|
| Performance data collection failure       | Error       | Performance data collecting failure    | Confirm the device and the status 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= <i>reportNumber</i> / Threshold value exceed : LogicalVolumeXXXX Response Time over YYms | Check the configuration according to the contents of the event message. |
| Abnormal CM load                     | Warning | Report-ID= <i>reportNumber</i> / Threshold value exceed : CMXX Busy Rate over YY%                   |   |
| Abnormal RAID group load             | Warning | Report-ID= <i>reportNumber</i> / Threshold value exceed : RAIDGroupXXXX Busy Rate over YY%          |   |
| Abnormal Port Throughput load        | Warning | Report-ID= <i>reportNumber</i> / Threshold value exceed : PortX Throughput over YY%                 |   |



## Chapter 8 Device Polling Event

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



### Note

When the status change of device is detected by executing [Reload Conf.] operation, the following events are not displayed.

| Event                                     | Level       | Event Display                   | Troubleshooting   |
|---|-------------|---------------------------------|---|
| When the status changes into error        | Error       | Unit status changed:<br>Error   | Please confirm the status of the device.  |
| When the status has changed warning       | Warning     | Unit status changed:<br>Warning | Please confirm the status of the device.  |
| When the status has changed normal        | Information | Unit status changed:<br>OK      | None.   |
| When the status has changed unmonitored   | Warning     | Connection Timeout              | <p>Please confirm whether the LAN between Manager and the device is operating normally. Please confirm whether the status 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 the following method to reconfigure the system.</p> <ul style="list-style-type: none"> <li>- Change the SNMP community name. Refer to "Change ETERNUS Disk Storage System Information" in the <i>ETERNUS SF Web Console Guide</i> for details.</li> </ul>  |
| When communication has been recovered     | Information | Connection OK                   | None.   |
| When error occurs in the polling function | Error       | [Polling] (Error event)         | <p>Take appropriate action for each event message as follows:</p> <ul style="list-style-type: none"> <li>- Command could not be executed: <i>commandName</i> <p>This event occurs when command processing fails to start because of a resource shortage on the Management Server.</p> <p>If it is a temporary event, no special action need be taken. If it occurs regularly, however, check whether system resources (memory and file descriptors) on the Management Server have been depleted.</p> </li> <li>- XML File can not read: <i>fileName</i> <p>This event occurs when reading of the XML definition file fails. Check for an error in the definition contents.</p> </li> <li>- XML File not found: <i>fileName</i> <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> </li> <li>- Other</li> </ul> |

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

When communication is 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 any of "Unit status changed: OK", "Unit status changed: Warning", or "Unit status changed: Error".

- Communication status polling method

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



See

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 Refer to "Device Polling" in "Function Outline" in the *ETERNUS SF Storage Cruiser Operation Guide* for information on polling methods.  
 .....